

Innovation-related knowledge from customers for new financial services: A conceptual framework

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Abstract: Customers are reported to be providers of innovation-related knowledge for the development of new services. In order to benefit from this source of innovation-related knowledge, a company requires the organizational capability to identify and use it, denoted as its absorptive capacity. This research provides a conceptual framework for the co-creation of new financial services, which is driven by the underlying organizational learning mechanisms of a company's absorptive capacity. The context of financial services, which are characterized as being knowledge-intensive, should provide an interesting area of research for testing this conceptual framework.

Keywords: Absorptive capacity, co-creation, customer involvement, new financial service development.

1 Introduction

The objective of this paper is to develop a conceptual model for the co-creation of new service innovations within the financial sector. Involving customers in these companies' innovation process should allow accessing their innovation-related knowledge, which is vital for new service developments. This model can be used in subsequent research to propose testable constructs. To the best of our knowledge, this model is among the first to propose a knowledge view for the innovation process within financial services companies.

Solid empirical evidence on how new services are developed or how the characteristics of its development can predict the organization's innovation, are scarce (Stevens and Dimitriadis, 2004, Jaw et al., 2010). However a recent review found that research on new service development is gaining maturity (Papastathopoulou and Hultink, 2012). Relationships in general, customer-centricity in particular, are pivotal in explaining a possible co-creation of new services (Normann and Ramirez, 1993, Normann, 2001, Vargo and Lusch, 2004, Vargo et al., 2008). Customers can serve as a source of external knowledge (Greer and Lei, 2012) to leverage internal knowledge, accelerating the company's innovation process. The involvement of customers during the development (i.e. co-creation) of new financial services, known to be knowledge intensive (European Commission, 2012), will be the context of this research.

Various modes of customer involvement, ranging from the seminal contribution on lead users (von Hippel, 1986) to the consultation of expert users, have been studied and represent a major research stream within open innovation (Greer and Lei, 2012).

Open innovation is also a structural component of the current evolution towards a more knowledge-based economy (White et al., 2013).

The company's absorptive capacity allows it to identify, internalize and exploit knowledge (Cohen and Levinthal, 1990, Zahra and George, 2002). This organizational capability can be the source of a competitive advantage (Liao et al., 2010), leading to innovative outputs (Tsai, 2001) and increased firm performance (Kostopoulos et al., 2011) while being essential for the innovativeness of new products and services (Melkas et al., 2010). Absorptive capacity is basically an internal feature because it's supported by organizational structures (Tu et al., 2006). It's the result of continuous learning through internal R&D (Cohen and Levinthal, 1990) or collaborations with customers (Dierickx and Cool, 1989). Companies should therefore be susceptible to innovation-related knowledge from their customers (Lane and Lubatkin, 1998, Zahra and George, 2002) and methods that help understand customer requirements during the innovation process (Hannola et al., 2013).

We will make three contributions to the literature on innovation management:

- Innovation for, and within, financial services generally requires more research attention (Mention and Torkkeli, 2012) and service innovations are understudied compared to research on product innovations (Ettlie and Rosenthal, 2011).
- The significance of customer involvement in new service development (de Brantani, 1993, de Brantani, 1995, Edvardsson et al., 2012) and the company's external knowledge exploration with customers (Grimpe and Sofka, 2009, Greer and Lei, 2012) has been emphasized before, yet the role of customers in the development of new financial services (Akamavi, 2005) and their co-creation (Oliveira and von Hippel, 2011, Martovoy and Dos Santos, 2012) is not extensively studied.
- Different sectors as organizational contexts for the innovation process and absorptive capacity needs more research (Flier et al., 2003, Jansen et al., 2005, Easterby-Smith et al., 2008, Fraga et al., 2008).

2 Literature Review

The following streams of literature will be considered in this section: the logic of value and value constellations (Normann and Ramírez, 1993, Michel et al., 2008b), the co-creation of new services with customers (Michel et al., 2008a, Edvardsson et al., 2011, Edvardsson et al., 2012, Ford et al., 2012, Perks et al., 2012) and the Service-Dominant (S-D) logic (Vargo and Lusch, 2004, Vargo and Lusch, 2006, Vargo and Lusch, 2008a, Vargo et al., 2008, Lusch et al., 2010).

2.1 The Strategic Interest of Involving Customers

Involving customers can result in innovations is reported in the literature on key users (von Hippel, 2005, Bogers et al., 2010), co-creation (Alam, 2002, Alam and Perry, 2002, Nambisan, 2002, Prahalad and Ramaswamy, 2004b, Bogers and West, 2012) and the external sources of innovation for companies (Hollenstein, 2003, West and Bogers, 2014). There is a wide variety of sectors in which customer involvement led to innovation, see for example Bogers et al. (2010). Recently an overview for the financial services sector was made available (Oliveira and von Hippel, 2011). The latter research found that important financial services innovations were first created and used by a type of customer which is actually able to self-service his needs. Hence customer involvement is important for new financial services innovations. Customer involvement in financial services is also reported to be understudied (Akamavi, 2005). Multiple definitions for innovation are proposed in the literature, each emphasizing

the presence of something new (Garcia and Calantone, 2002), adding value for the customer (O'Sullivan and Dooley, 2009). Creating value is at the heart of a company's strategy and strategy links together the company's resources in order to achieve it. Knowledge and relationships are part of these essential resources and may alternatively be defined as the company's competencies and customers (Normann and Ramírez, 1993).

A company's competences refer to its accumulated knowledge over time, which is embodied in its business processes, techniques and technology used. Without these competences (i.e. knowledge), the company would not be able to dispose of its current service offer. Of course a company needs customers that actually want to this service offer, otherwise their competences (i.e. knowledge) would be futile. The company's customer base, which is a relationship with another entity, is hence essential for the going concern of the company. The customers are part of a value constellation with the company, and as such they are neither external nor internal, but rather both. The involvement of customers does not only bring (new) knowledge that shapes the company's (future) service offer, but also information (Lusch et al., 2007) and new relationships (Hunt and Derozier, 2004, Edvardsson et al., 2011).

There is an interactive loop between the company's knowledge (competences) and relationships (customers). New knowledge pushes companies forward into new business systems with new customers, who will in turn co-create new offerings that leverage the company's knowledge base, leading to the establishment of new relationships. The investments in the enlarged knowledge base (e.g. new technologies and expertise) must be recouped and this pushes companies to look for new customers, in order to dispose of a larger customer base to exploit their acquired knowledge. This restarts the loop, pushing the acquisition of new customers, stimulating the innovation process of the company.

A company's strategy aims at relentlessly increase the needed fit between its competencies (knowledge) and the value creating activities for its customers (relationships). It's about the perpetual design and redesign of the intertwined business systems (Normann and Ramírez, 1993). This requires a continuous dialogue between the company and the customers, because their role will be reconfigured during the process of value creation. This reconfiguration is a key task, changing the roles and relationships in the business system itself which can lead to strategic innovation, meaning significant customer value improvements, new business systems or the remodeling of the markets (Christensen et al., 2002). Because the environment is changing, adaptations to the strategy are required in order to survive, emphasizing the importance of reinventing value instead of limiting oneself to adding value (Normann and Ramírez, 1993).

The extent of customer involvement during the new financial service development initiative is reported to be different according to the type of financial service being co-created and the specific phase of this involvement in the development process. It is possible that more profitable, financial services can be created for one group of customers and that deeper relationships can be developed through other services, targeting different customers (Cheung and To, 2011). Despite this varying effectiveness of involving customers, doing so has a positive effect on the performance of the new financial service development process (Chien and Chen, 2010) and it is critical for its success (Carbonell et al., 2009). The benefit of involving customers, users or final beneficiaries in the development process of a new product or service has not been without critique. The co-creation is challenging because it requires the assimilation of knowledge and expectation management at the same time (Magnusson et al., 2003, Ford et al., 2012). There is also a risk that the involved customer shares (i.e. leaks) knowledge to competitors, leading to knowledge spillovers that are contingent on future and existing customer involvement (Dyer and

Hatch, 2006). Research even found that customer involvement could be potentially harmful or of limited added value since innovative ideas do not always emerge from the customer himself and trying to satisfy the customer's wishes at all costs could lead to an impasse. This could be the case because customers' perception is limited to their actual situation yet formulating their needs can be limited to what is technically feasible for the company (Leonard and Rayport, 1997). This difficulty regarding customer needs is not new (Bonner, 2010). The requirements proposed by the customer to meet his need could also have changed by the time development is ready (Bennett and Cooper, 1981). Other critical views on customer involvement in innovation projects for financial services can be found in the literature, see for example (Avlonitis et al., 2001, Vermeulen, 2005). Retail segment customers were found to be more costly to get involved than corporate customers (Walter, 2009). Other factors that are essential for involving customers in new financial services innovation are local regulations and customer preferences (Grant and Venzin, 2009). This implies that customer needs' collection, and meeting those needs, can lead to a competitive advantage for national (retail) markets. Differentiation for the customers is of course driven by the various groups of customers. Retail banking offers a wide product range and multiple customer segments, therefore any internationalization involves making trade-offs between the different requirements of different business entities. The incentives of the involved customer must be known and the company should estimate its opportunity costs when engaging a specific group of customers. There can be agency costs resulting from the misaligned interests since customers want to acquire exactly what they need, whilst companies focus on as low as possible development costs and synergy effects by incorporating solution elements that they already possess (i.e. its current competences) (von Hippel, 2005).

Services and products shouldn't be regarded as two distinct elements that a company can offer (Normann, 2001, Vargo and Lusch, 2008b). They have a common element, namely the exchange of something during a process which is beneficial for the other entity and done with that entity. This means that the tangible elements in a service are an integral part of the service that is offered. If products are present in a service offer, then they are a construct of applied knowledge making it a support to the service provision itself (Vargo and Lusch, 2008b). This research positions itself in the stream which synthesizes product and service constituents during the exchange between entities. Knowledge is a central element, creating and facilitating this exchange, as part of the innovation process.

The characteristics of goods and services can be described by distinguishing between (Vargo and Lusch, 2004): "...*operant resources (those that act upon other resources), such as knowledge and ... operand resources (those that an act or operation is performed on, such as goods).*" A further discussion regarding the assumptions, rationale and implications of this distinction, coupled with the evolution of an economy based on the exchange of goods towards one based on the exchange of services, can be found in the literature (Vargo and Lusch, 2004, Michel et al., 2008b, Vargo and Lusch, 2008b, Vargo and Lusch, 2008a, Edvardsson et al., 2012).

An overview of the main differences between goods and services can be found in Table 1.

Table 1: Goods versus services

	Goods	Services	Reference
The resources used	Primarily operand resources	Primarily operant resources, sometimes transferred by embedding them in operand resources-goods.	Vargo et al. (2008), p. 148
The role of customers	Receives a good. Marketing tries to categorize, promote and distribute to customers. The customer is an operand resource.	Co-producer of service. Marketing is a means to interact with the customers. The customer is mainly an operant resource, sporadically being involved as an operand resource.	Vargo and Lusch (2004), p. 7
The firm-customer interaction	The customer is acted upon to generate transactions with other resources.	The customer is actively involved in relational exchanges and co-production.	Vargo and Lusch (2004), p. 7
Creator of value	Firm, often with input from other firms in a supply chain.	Firm, network partners and customers.	Vargo et al. (2008), p. 148

Technology is omnipresent in the financial services sector due to its early adoption of it (Chiasson and Davidson, 2005) and because it is at the centre of structural change in this sector (Consoli, 2005). Furthermore financial services can be considered as a good example of a service industry because its core business is using its competences for processing information and dealing with intangible aspects (Baets, 1996, Avison et al., 2004), which implies the use of (mainly) operant resources. Therefore it is rightfully classified as a knowledge intensive sector (European Commission, 2012).

2.2 Co-creation with Customers

Customers can refer to users, lead users, intermediate users or the final beneficiaries of a service. These can provide crucial inputs for what they need and play an important role in new product and service development (von Hippel, 1986, Magnusson et al., 2003, Bogers et al., 2010, Edvardsson et al., 2011). The role of customers has also been changing due to a shift from a production economy to a service economy (Normann, 2001, Vargo and Lusch, 2008a), being a source of service innovations (Vargo and Lusch, 2004, Oliveira and von Hippel, 2011). A possible application to the financial services sector and a classification of types of customers through their involvement was researched (Pallister et al., 2007) whilst other classifications of customers, in non-financial services, are also available (Edvardsson et al., 2012). The customer can also develop new service ideas themselves and take the initiative to introduce it to an interested producer (von Hippel, 1978). This is also referred to as the democratization of innovation (von Hippel, 2005) because the user (i.e. customer) is put at the centre of interaction with

the company, the customer is actually the locus of search for innovation.

Co-creating new services represents an innovation activity where the interactions and relations between customer and company are central (Ramaswamy and Gouillart, 2010). The involvement of customers in the value co-creation should be done actively (Nuttavuthisit, 2010) since their relationship is believed to be a fruitful originating environment for innovations (Hult et al., 2007). The customer can always be a co-creator of value (Vargo and Lusch, 2006), emphasizing the intertwined business system where entities iteratively exchange (Vargo and Lusch, 2008a). This value is contextual and phenomenological determined by the beneficiary of the service (Vargo and Lusch, 2008a), implying that it has many possible manifestations.

The assessment of value is therefore done on the basis of the value in that specific context through co-creating it with the customer (Flint, 2006, Edvardsson et al., 2011). Co-creation is not the same as co-production because co-creation can lead to something which seemed valuable innovation during co-creation but which isn't after production because the customer can't or won't use it (Ford et al., 2012). Co-production is a phase of the service co-creation (Vargo and Lusch, 2008a), requiring entities in the business system to possess divergent knowledge to generate innovative combinations, making them a potential source of value co-creation. This co-creation is also embedded in a social context where the actors learn and adapt their roles. Communication is essential for this interaction, being paramount for the transfer of information between the customer and the company (Edvardsson et al., 2011) in the innovation process.

To conclude, this concept of co-creation refers to the part of a company's capability in developing and commercializing new services through knowledge-driven interactions with its customers. During these interactions, innovation-related knowledge can lead to a reconfiguration of existing competences in the company to provide the new service offer that delivers value to its customers. When the new service is commercialized, it will create relationships with new customers and reinforce those in the existing customer base. This growth of customer relationships will enhance new knowledge exchanges to keep delivering value for the enlarged customer base. The symbiosis between a company's competences (knowledge) and relationships (customers) restarts when the required value-in-use of the renewed service offer is co-created again. Therefore this reconfiguration of a company's competences does not only lead to service innovations, but also changes in its organizational structure and even its competitive landscape. For example new companies can be created that have a different strategy, one that does fit between the required competences (knowledge) and relationships (customers) to deliver value (Normann and Ramírez, 1993, Normann, 2001).

2.3 The Value Co-creating Process with Customers

Value co-creation is an iterative process (Prahalad and Ramaswamy, 2004a, Ramaswamy and Gouillart, 2010) of a knowledge-driven reconfiguration of the company's internal resources (Normann, 2001, Hunt and Derozier, 2004, Lusch et al., 2007, Edvardsson et al., 2011) This requires an organizational capability (i.e. absorptive capacity) to acquire new knowledge and reinvent value, through co-creation with customers. Knowledge is an essential element due to its in- and outflows between the involved actors (Bogers and West, 2012). Finally the probability of cooperation between innovation partners was also reported to be significantly influenced by their absorptive capacity (Guisado-Gonzalez et al., 2013).

Because of the presence of tangible elements (i.e. goods or operand resources) in any service offer, various definitions of "What is a service?" can exist (Spohrer and Maglio, 2008). An overview and its conceptualizations are available in the literature

and we follow the service and S-D logic's stream of research (Normann and Ramírez, 1993, Normann, 2001, Vargo and Lusch, 2006, Vargo and Lusch, 2008b, Vargo and Lusch, 2008a, Merz et al., 2009).

The difference between knowledge and information is that the latter refers to a (Lusch et al., 2007, p. 10): "... specialized operand resource which can be exchanged relatively independently of the operand resources – pure information". Knowledge is broader since it includes technologies, specialized expertise, business processes and techniques (Normann and Ramírez, 1993), making it less transferrable as a whole. This is also made apparent by the need to "liquefy" existing service offers, meaning unembedding operand resources (such as information or technology) from the operand resource in order to use it for reconfiguring it into a new service offer during co-creation with the customer (Normann, 2001). The company must therefore also be able to unlearn which can also be referred to as desorptive capacity (Lichtenthaler and Lichtenthaler, 2010).

The intangible nature of services requires a more extensive exchange of information with the customers during new financial service development (Vermeulen, 2004). Consecutive collaborative interactions with customers (Kristensen, 1992) during new service development are part of problem-solving exercises where recurrent meetings help build a shared understanding (Peters et al., 2010). The information needed is generally time-consuming to collect, transfer and use. This is costly and is also referred to as "sticky information" (von Hippel, 1994) or the "tacitness" of knowledge (Grant, 1996, Nielsen and Nielsen, 2009), reported to influence the locus of problem-solving during the innovation process (Simon, 1999). The type and amount of knowledge needed to innovate will contribute to the stickiness and innovation costs of information (von Hippel, 2005). This stickiness can be related to the characteristics of the specific information itself and the features of the involved actors (von Hippel, 1994). However the embeddedness of involved the actors can foster the development of new services by reducing this stickiness or tacitness (Granovetter, 1985, Uzzi, 1997, Uzzi and Lancaster, 2003, De Smet, 2012).

3 Learning Theory as a Theoretical Background

Organizational learning is all about achieving strategic renewal in the organization itself (Sambrook and Roberts, 2005). The co-creation with customers is part of this strategic renewal since the objective of strategy is to relentlessly increase the fit between the company's capabilities and the value creating activities for its customers. Organizational learning is an essential element of new service development (Stevens and Dimitriadis, 2004) whilst the organizational learning process can also be viewed as an innovation process (Simon, 1999). The mechanisms that connect the organizational learning (i.e. structural, cultural, psychological and policy) influence its absorptive capacity (Knoppen et al., 2011) and absorptive capacity drives innovation (Lichtenthaler, 2009). Learning theory is therefore inherently driving the concept of absorptive capacity (Easterby-Smith et al., 2008), being part of the innovation process. These mechanisms that connect the learning process in an organization, leading to new knowledge stocks, are contingent on the relational context (Lipshitz et al., 2002, Naot et al., 2004, Knoppen et al., 2011). This importance of relationships was emphasized before for the co-creation of new services, where the interactions between the customer and the company are central (Prahalad and Ramaswamy, 2004a, Ramaswamy and Gouillart, 2010).

The structural mechanisms refer to the established routines during exploration and the social integration mechanisms that foster it and a subsequent exploitation (Dyer and Singh, 1998). The financial services sector is generally characterized by a more

conservative environment (Vermeulen, 2004) with more rigid hierarchical lines of control (Johne, 1993) and more formal rules and procedures as micro-regulative forces (Vermeulen et al., 2007). This can lead us to believe that the structural mechanisms should be more developed, to facilitate institutional control. These could be beneficial for financial services companies since a centralization of the approach for innovation, offering more control, fosters organizational knowledge capitalization (Yeoh, 2009). On the other hand the organizational structures can have impeding effects on the innovation process (Vermeulen and Dankbaar, 2002) while the financial services is argued to be less innovative (Volberda et al., 2001, Vermeulen, 2005).

Policy mechanisms refer to decision making managers, how they want innovation initiatives to be handled and choices in directing the learning process, especially regarding the partner to learn with (Easterby-Smith et al., 2008), a customer for example. Insights into the specific policies (Lane et al., 2006) which focus on involving customers as a source of external knowledge, should be interesting. The influence of managers in steering the inter-organizational relationships for innovations (e.g. with a customer) was also found to be important (Easterby-Smith et al., 2008).

Cultural mechanisms of organizational learning refer to norms and values that encourage learning such as for example transparency, integrity and accountability (Knoppen et al., 2011). The psychological mechanisms refers to the psychological safety fostering risk taking in order to learn something new (i.e. deviating from routinization) and the commitment to share knowledge with others (Lipshitz et al., 2002). Within the financial service sector, micro institutional factors (regulative, normative and cultural/cognitive) were researched before, showing the presence of risk avoiding and various different meanings associated to knowledge exchanges during co-creation (Vermeulen et al., 2007). The social context around the customer and company during new service developments also need to be taken into account (Edvardsson et al., 2011) because otherwise knowledge exchanges will not be possible (Nicolajsen and Scupola, 2011). This is also related to the need for trust, another social characteristic, in the interactions between customers and the company (Roberts et al., 2005).

3.1 Absorptive Capacity and Innovation-related Knowledge

There have been many discussions regarding the conceptualization of absorptive capacity (Cohen and Levinthal, 1990, Lane et al., 2006, Easterby-Smith et al., 2008, Volberda et al., 2010) and this research will follow the description by Zahra and George (2002) because their internal process approach is aligned with the research need of this study. The process of absorptive capacity drives innovation but its internal composition is always debatable because its components are expected to be strongly interrelated (Knoppen et al., 2011). Absorptive capacity is composed of two elements: potential and realized absorptive capacity (Zahra and George, 2002). Potential absorptive capacity describes the company's organizational capabilities to acquire and assimilate external knowledge (Lane and Lubatkin, 1998). The acquisition capability describes the identification and acquisition of external knowledge that is critical for the company (Zahra and George, 2002). The assimilation capability refers to the routines in place to analyze, interpret and understand information obtained from an external source.

Absorptive capacity is a multifaceted concept with a broader empirical support (Lim, 2009, Murovec and Prodan, 2009, Flatten et al., 2011, Jiménez-Barrionuevo et al., 2011, Kostopoulos et al., 2011). It has moderating effects on the relationship between technological opportunity and innovative effort (Nieto and Quevedo, 2005). The industry was found to have a moderating effect on the knowledge acquisition and

innovation capability (Liao et al., 2010). The knowledge acquisition was also found to be able to increase the innovativeness of the involved company (Cepeda-Carrion et al., 2012). Absorptive capacity plays an important role in organizational learning and the reconfiguration of resources to better fit the company with its strategy and environment (Lewin and Volberda, 1999).

Within the context of knowledge intensive financial services, customers were reported to be important sources of innovations (de Jong and Vermeulen, 2003). Meeting latent customer needs (Avlonitis et al., 2001) requires tapping into their knowledge and initiate the process of absorptive capacity (Lane et al., 2006). The acquisition capability was found to have positive effects on absorptive capacity (Liao et al., 2010), confirming its theoretical relevance, therefore likely to facilitate the reconfiguration of the company's resources to address strategic opportunities identified with the customers. The path dependency between the phases of organizational learning (i.e. exploration, assimilation and exploitation) within the process of absorptive capacity should provide interesting venues of research (Lane et al., 2006).

3.2 Conceptual Model on Co-Creation with Customers

The literature review and learning theory lead to the development of the following conceptual model (Figure 1), which will be used to define the research propositions.

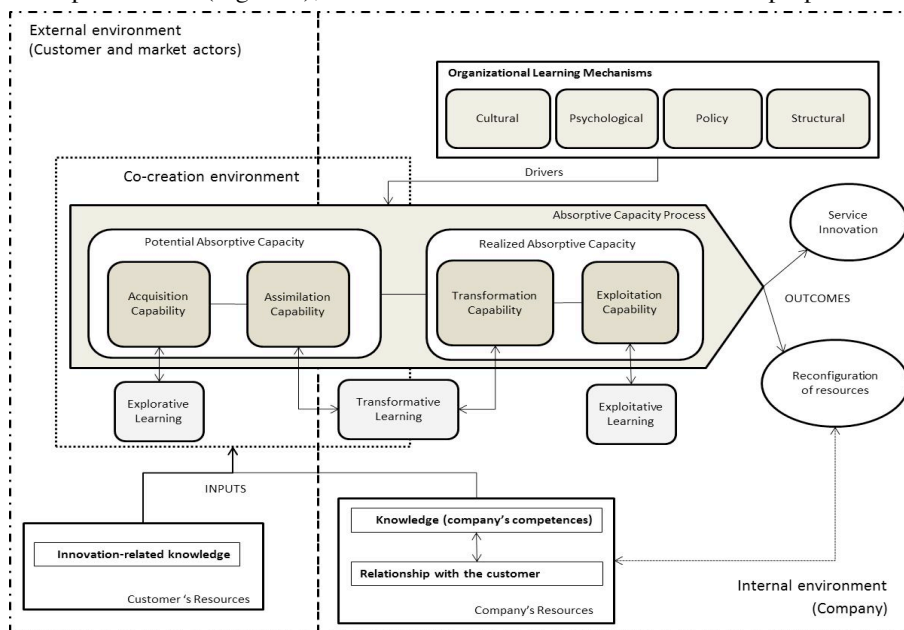


Figure 1: Conceptual Model

The customer is a source of critical knowledge (Greer and Lei, 2012), being the locus of search for the company's potential absorptive capacity. The current customer base will provide opportunities for knowledge exploration, requiring an acquisition capability within the company as part of its absorptive capacity (Zahra and George, 2002). The customer is a provider of innovation-related knowledge (Bogers et al., 2010) and the company's absorptive capacity helps to explore this knowledge, which can lead to creation of innovation after internalization and exploitation of this knowledge. Customer relationships can lead to new knowledge, initiating the value

co-creation process (because it's knowledge-driven), which is influenced by the organizational learning mechanisms affecting absorptive capacity.

The influence of co-creation initiatives within financial services companies on performance was found to be diverse, depending on its strategic type (Manion and Cherion, 2009). Favorable customer outcomes also require market orientation. However market and resource orientation are both needed for the company to achieve innovativeness (Paladino, 2007). Measures of co-creation require more research in general (Payne et al., 2008). However operational performance was found to be positively affected by leveraging customer knowledge (Yeung et al., 2008).

Co-creation through customer involvement is beneficial but much debate is ongoing regarding how this should be done as it also depends on the type of innovation being pursued (Gustafsson et al., 2012). It is also new within the financial services sector (Papastathopoulou and Hultink, 2012). Finally, the customer base of a company is often not considered as a resource for building capabilities during co-creation (Prahalad and Ramaswamy, 2004b, Zhang et al., 2011) and the decomposition of co-creation for service oriented companies has a capability has also been explored (Karpen et al., 2012).

4 Conclusions and Limitations

The extant body of literature on co-creation initiatives with customers for new service developments was reviewed. Specific attention was paid to the importance of customer resources (i.e. their innovation-related knowledge) and company resources (i.e. competences and customer relationships) as inputs for this format of new service developments in the financial services sector. A company's absorptive capacity will facilitate the exploration, transformation and exploitation of innovation-related knowledge. The organizational learning mechanisms within a company drive its absorptive capacity and the latter drives innovation in knowledge intensive sectors like financial services. This is synthesized in the conceptual model which has several implications for research and practice.

4.1 Academic implications

This conceptual model can be used to guide future research in co-creation initiatives within the financial service sector, by paying specific attention to the underlying organizational learning mechanisms.

A possible venue for new research would be the use of longitudinal case studies to get more detailed insights on how learning occurs, how financial services companies realize service innovations through their organizational learning mechanisms and hence develop and use their absorptive capacity. There are various theoretical frameworks that could be used for further empirically testing the proposed conceptual model. The use of social capital theory could provide interesting research propositions to explore the influence of reciprocity, trust and network ties on the organizational learning mechanisms. A single in-depth case study might also be used, where detailed insights are collected on a very specific financial service innovation. The level of innovativeness of the co-created services is another area to be explored, since good customer relationships might have negative effects on the innovativeness of the new service (Knudsen, 2007).

Future research could focus on the possible differences between first movers and first followers, regarding customer involvement for co-creating new financial services. The diffusion of financial service innovations is reported to be rapid amongst competitors since they can be copied quickly (Roberts and Amit, 2003), giving an

advantage to imitators (Molyneux and Shamroukh, 1999) and imitators' development costs can be halved compared to the first movers (Tufano, 1989).

4.2 Managerial implications

Innovation managers and executives of financial services companies can gain insights from this conceptual model. It emphasizes that the involvement of customers for their new services development requires an investment in elaborating a dedicated environment (Nonaka and Konno, 1998) to do so. They need to pay attention to the needed absorptive capacity and contextual organizational learning mechanisms that can help to improve this capacity for leveraging innovation-related knowledge from customers. In particular the policy and structural learning mechanisms can be stimulated to enhance the effectiveness of the co-creation initiatives with customers and even initiate the learning to co-create with them. The cultural and psychological learning mechanisms are also something that addresses executive leadership by emphasizing the importance of innovation (e.g. values), devising a strategy for innovation and by fostering an environment where risks can be taken for learning from customers. Vision is needed (Nonaka and Takeuchi, 1995, von Krogh et al., 2000) to generate new knowledge within the company and stimulate its search, fostering the involvement of external actors (Giroux and Taylor, 2002) such as customers.

4.3 Policy implications

Policymakers could stimulate innovation networks and support transversal exchanges with new customers since these can stimulate a company's absorptive capacity. The costs of organizing a space for co-creation and learning can be high, costs that private actors do not always want to bear, creating a possible role for policy makers to facilitate networks. Following this, the challenge of knowledge appropriability regimes for financial services companies emerges (Bader, 2008). The public authorities could develop new laws or guidelines to facilitate productive cooperation as innovation has important economic spillovers (Leahy and Neary, 2007). Other policy measures could be oriented towards stimulating the formulation of a strategy for innovation and associated initiatives.

4.4 Limitations

The objective of this paper is the formulation of a conceptual model that can be used as a basis for guiding empirical research. As such, the elaboration of targeted research hypotheses is excluded from this research. However various venues for future research have been formulated. Other industry or country characteristics could also be considered since these should influence service co-creation with customers due to its foundational differences (Fraga et al., 2008). The linking of the conceptual model with established service development models (Alam, 2002, Alam and Perry, 2002, Nambisan, 2002) is also left outside the scope and presents an additional future contribution to this research.

5 References

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