Customer Value Co-Creation in KIBS Firms’ New Service Development: Patterns and Antecedents

Susan (Sixue) Jia¹, Fei Li ²

ABSTRACT

This paper investigates the patterns and antecedents of customer value co-creation (CVC) in knowledge-intensive business services (KIBS) firms’ new service development (NSD) process. In-depth interviews with three typical KIBS firms were conducted to explore the similarities and differences between firms. Qualitative analysis was then performed to construct a theoretic model regarding patterns and antecedents. Findings suggest that (1) NSD for KIBS is redefined as the development of a new servicing method, or the solution to a new issue which is intangible and highly customized; (2) CVC in KIBS NSD is categorized into customer as co-developer (Pattern 1), customer as definer (Pattern 3), and balanced (Pattern 2); (3) an integrated CVC-NSD model for KIBS is established. The novelty of this study is embodied in the redefinition of NSD for KIBS, as well as the identification of the three CVC patterns and their consequences.

Keywords: Customer Value Co-Creation, Knowledge-Intensive Business Services, New Service Development.

JEL Codes: D47, M31, O13.

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1. Introduction

New service development (NSD) has been crucial to corporations which intend to outperform their rivals in competitions (Menor et al., 2002; Menor & Roth, 2007; Bitner et al., 2008; Oliveira et al., 2014). Domino’s Pizza, the second largest U.S. pizza chain, has gained double-digit growth in both revenue and stock price in 2016, partially owing to its new service of pizza-ordering-via-Facebook-Messenger (Curtis, 2016). The significance of NSD study has been addressed in the extensive literatures in recent years, ranging from product-centric firms (Kindström et al., 2013) to service dominated industries (Ordanini & Parasuraman, 2011), from local small businesses (Parris et al., 2016) to international service giants (Hu et al., 2009).

NSD in knowledge-intensive business services (KIBS) firms has been an important research topic in recent years (Wang, Wei & Deng, 2010; Tseng, Pai & Hung, 2011; Santos-Vijande, Gonzalez-
Mieres & Lopez-Sanchez, 2013). KIBS firms are “private companies or organizations who rely heavily on professional knowledge, i.e., knowledge or expertise related to a specific discipline or functional domain, to supply intermediate products and services that are knowledge based” (den Hertog, 2000). Because of the strong interactive or client-related character of the service provided by KIBS (Muller & Zenker, 2001; Strambach, 2008), NSD in KIBS inevitably involves customers.

Involving customers in corporate innovation campaigns (Lagrosen, 2005; Pee, 2016), as well as routine operations (Yi & Gong, 2013; Awuor et al., 2015; Chae & Ko, 2016), has been a common practice nowadays, during which customer value co-creation (CVC) takes place. CVC is defined as an active dialogue between a customer and a company, featuring joint effort of problem definition and solving, and co-construction of product or service experiences that suit the customer’s context (Prahalad & Ramaswamy, 2004). Benefits of CVC include satisfaction of customers (Bendapudi & Leone, 2003), effectiveness of innovation (Fang et al., 2008), and boosted sales performance (Chae & Ko, 2016). With the development of digital technologies, some lighter forms of CVC practices, like blogs (Nicolalsen et al., 2016) and online reviews (Eloranta, 2016), are also generating positive and substantial outcomes.

While existing studies have provided insights into the significances (Magnusson et al., 2003; Matthing et al., 2004) and mechanisms (Kindström et al., 2013; Ommen et al., 2016) of CVC in NSD, research specific to the patterns and antecedents of CVC in NSD remains underdeveloped (needless to say in a KIBS scenario), which is achievable only by means of in-depth qualitative studies (Alam, 2002; Möller et al., 2008). Against this background, the purpose of this article is to investigate the customer-provider interactive patterns, as well as the antecedents of these patterns, during the process of CVC in NSD campaigns of KIBS firms.

More specifically, this paper unfolds as follows. The “theoretical background and research questions” section provides a comprehensive literature review regarding the KIBS, NSD, and CVC, and raises the 4 research questions. The “methods” section details the selection of company and the implement of interviews. The “findings” section highlights the NSD of the 3 companies, and the “discussion” section gives in-depth analyses. Finally, the “conclusion” section summarizes the whole paper and offers future study suggestions.

The theoretical significance of this study is embodied in the enrichment of NSD theory. Previously research has rarely focused on the patterns and antecedents of CVC in KIBS NSD. Because KIBS differs greatly from traditional service firms in terms of the importance of knowledge, existing theories may not fully cover the scope of KIBS. This study fills the theoretic gap by concentrating on KIBS firms. Meanwhile, the managerial significance of this study manifests as a practical guideline for KIBS CVC campaigns. Having established the criteria that can explicitly help KIBS firms to select the best CVC strategy, the managerial implication of this study is expected to substantially improve the effectiveness of customer communication and collaboration for KIBS firms.

2. Theoretical background and research questions

2.1 NSD in KIBS

Johne & Storey (1998) defined NSD as the development of service products which are new to the supplier, and further distinguished NSD from NPD (new product development) regarding intangibility, heterogeneity and simultaneity. Comparisons to NPD allow better understanding of NSD, with some researchers focusing on the similarities (e.g. Song et al., 2009), trying to apply existing NPD knowledge to NSD studies, and others exploring the differences (e.g. Nijssen et al., 2006), hoping to achieve more accurate predictions.

Another popular definition of NSD was given by Johnson et al. (2000), in which a new service takes the form of addition of offerings, radical changes or incremental improvements to the delivery process. Snyder et al. (2016) adopted the idea and suggested categorizing NSD by degree of change, type of change, newness and means of provision. Other variations of NSD definition have been reported and summarized by Witell et al. (2016) into three perspectives: assimilation, demarcation and synthesis.

Despite the variety of definitions available, the definition of NSD for KIBS firms remains vague. Amara et al. (2009) established the conceptual framework of KIBS NSD, including 6 forms of
innovation: product, process, delivery, strategic, managerial and marketing innovations. Hauknes (1998) provided an enriched definition, stressing that KIBS firms can be a facilitator, a transmitter, or source of innovation. Meanwhile, Bettiol et al.’s (2012) discussion on the trade-off of codification and creativity in KIBS NSD has suggested increased difficulty of the definition. Hence, the first research question (RQ) to exploit involves the following.

▪ RQ 1: What is the definition of NSD in a KIBS scenario?

When studying NSD, researchers often divide it into stages. The 4-stage model established by Johnson et al. (2000) is the most frequently cited one, while Alam’s (2002) 10-stage model is an expansion of the 4-stage model. Other models fall in between, e.g., the 5-stage model by Song et al. (2009). NSD usually starts with idea generation and screening, followed by analysis and development, and ends with execution and feedback collection. From stage to stage, the pattern of company-client interaction can vary greatly (Alam, 2002). However, this variation of interactive pattern has not been explored sufficiently. This constitutes the second RQ of this study.

▪ RQ 2: What are the patterns of interaction between a KIBS firm and its client in different stages of NSD?

2.2 CVC in NSD

The central idea of Prahalad & Ramaswamy’s (2004) definition of CVC is “freeing the creativity and know-how of consumers while channelling these consumer activities in ways desired by the marketers” (Zwick et al., 2008). On one hand, it suggests customers can be very creative and are highly likely to contribute to firms during CVC (Ostrom et al., 2010). This has been proved by many researches in which customers are found to act as sources of information (Fang et al., 2008), idea bringers (Pee, 2016), co-developers and innovators (Cui & Wu, 2016). It is thereupon reasonable to speculate that the activeness of customer has an influence on the CVC pattern (RQ3).

▪ RQ 3: Is activeness of customer an antecedent for CVC pattern in KIBS NSD?

On the other hand, the controllability of CVC is emphasized, suggesting that CVC could be a double-edged sword. Fang (2008) reported the trade-off between new product innovativeness and speed to market caused by customer participation. Chan et al. (2010) observed increased employees’ job stress and reduced job satisfaction introduced by customer participation. This indicates that the pattern of CVC needs to fit the service to be co-developed on a case-by-case basis. Therefore, the final RQ of this study investigates type of service as another impact factor.

▪ RQ 4: Is type of service an antecedent for CVC pattern in KIBS NSD?

3. Methods

3.1 Company selection

Three KIBS firms were selected for this study. Per anonymity request from the companies, we designate them by Company A, B, and C, respectively. All three firms had had NSD practices in recent years, with CVC playing substantial roles. Company A is a global accounting firm; company B is a global industrial designing firm; company C is a global computer software supplier. Though they are all KIBS firms, the three companies differ in terms of tangibility of the service they provide and category of the knowledge they utilize, as indicated in Figure 1. The interviewee from each firm had had at least 3 years of work experience there and had participated in the NSD.

Figure 1: Service tangibility and knowledge category
3.2 Interviews
The interviews in this study followed a semi-structured protocol. Each interview lasted for around 60 minutes. During the interview, we asked each interviewee a total of 20 questions grouped into 4 subtopics (Table 1). After throwing out each question, we carefully listened to the answer without interrupting before moving into the next one. In this way, we were able to balance the convergence of the dialogue as well as the initiative of the interviewees.

Table 1: Questions for interview

<table>
<thead>
<tr>
<th>Subtopics</th>
<th>Questions</th>
<th>RQ 1</th>
<th>RQ 2</th>
<th>RQ 3</th>
<th>RQ 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm and new service</td>
<td>Please describe the regular service your firm provides for your customers.</td>
<td>●</td>
<td>●</td>
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<td>Please describe the new service your firm developed.</td>
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<td></td>
<td>Why did your firm decide to develop this new service?</td>
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<td></td>
<td>Was the innovation incremental or radical? Why?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Was the new service a success? Why?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Pattern of interaction</td>
<td>Did you invite the customers to participate in NSD, or did they come to you in the first place?</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td></td>
<td>Please divide the NSD into several stages with important milestones.</td>
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<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>Which stage(s) did the customers participate in?</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>Did the customers realize they were co-creating?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Were the customers actively involved?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>What role(s) did the customers play?</td>
<td>●</td>
<td>●</td>
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<td></td>
<td>Did the customers allocate additional resources to NSD? Why?</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Activeness of customer</td>
<td>Did the customers clearly know what they needed? Did it change very often?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>How urgent were the customers?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>How were the customers willing to learn new things?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Type of service</td>
<td>During NSD, how much information did you need from the customer? Why?</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>How customized was the new service?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>Did you have a tight schedule for NSD? Why?</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td></td>
<td>How often did you interact with the customers during the NSD?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>How knowledgeable were the customers?</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

4. Findings

4.1 Company A: New customer means new service
Company A is a global accounting firm. The interviewee works at its Toronto office in Canada. One of the regular services of Company A is tailoring taxation administration plans for clients. Although
each project follows almost the same service protocol, the interviewee believes that:

... because of the highly customized nature of our service, serving a new customer often means delivering a new service...

In 2014, a client came to Company A for suggestions on taxation administration, shortly after the Canadian government released a new tax bill. Considering the fast-changing policy environment and the limited time period, the interviewee described the new service as “radical”. Within one month, the company came up with a combination of counterstrategies towards the new tax bill. The client accepted the deliverables and was very satisfied.

The new service had gone through 3 stages: analysis, development and delivery. In the analysis stage, the client was actively involved and acted mainly as service demander. The client also provided critical information to Company A during this stage to generate a correct estimation of the scope and feasibility of the potential new service.

In the development stage, the client was involved, though in a less active pattern, and acted mainly as information provider, such that Company A can have access to important facts and figures when building mathematical models or optimizing strategies.

The interviewee mentioned another collaborative pattern (in another project) for this stage in which the client was more actively involved. This happened when the client had comparable development skills, or cared about the development process, or simply yearned to participate and learn. The interviewee elaborated that:

... some clients treat us as a “black box”, meaning they only care about the final result. “We are busy; don’t bother us”, they say. In contrast, other clients hold that “we pay not only for deliverables, but we also need to know how they are done”...

In the delivery stage, the client was involved mainly as a listener. While Company A reviewed the whole project and presented the deliverables, the client listened and sometimes asked extended questions. It is very likely that a new project is initiated while closing the previous one.

4.2 Company B: Hit the target by fast iteration

Company B is a global industrial designing firm. The interviewee works at its San Francisco office in US. The company offers enterprise management and coordinated business solutions. In 2013, a world-class supermarket giant came to Company B for front-end design service. The supermarket giant wished to have quick solutions to new branch opening.

Having understood the efficiency-first philosophy of the client, Company B tailored the solution based on an existing software module, which the interviewee recalled as an “incremental innovation”. The interviewee agreed that “serving a new customer often means delivering a new service”. In the end, the client was satisfied with the solution.

The new service had gone through 2 main stages: investigation and development. In the investigation stage, the client was passively involved and acted mainly as information provider. Company B was not familiar with the operation status of the client at the beginning. However, the client was unable to explicitly describe the requirement. Therefore, Company B sent analysts to the supermarket for on-site observation of client brand, slogan, strategy and habit. The analysts also initiated in-depth discussion with client employees for technical details such as branch location, branch size, default parameters, et al. Finally, the analysts asked the employees for an outlook into the human-computer interface.

The development stage featured a highly interactive and iterative pattern, as the interviewee elaborated:

... design service is evaluated with subjective judgment, which is why the ultimate target of such a service is satisfying the customer. Therefore, bring the customer’s idea in as early as possible, and keep tracking the evolution of his/her idea...

... design service has very large degrees of freedom, which means you need to frequently interact with the client to make sure you two are aligned, especially at some cross roads where you have plan A and plan B but have to make a choice to proceed. Otherwise, there could be a huge deviation of what you offer from what he or she needs...
The development stage was further divided into two sub-stages: concept design and human-computer interface implement. Throughout these sub-stages, the client was actively involved as co-developers. During concept design, Company B depicted the design philosophy on a story board, and the two parties held frequent meetings to improve and lock the design. During human-computer interface implement, the client sent employees to Company B for collaborative development. The interviewee gave an example:

... the client told us that most of the employees do not have offices, which is how the cost is reduced (i.e., efficiency-first). Similarly, the human-computer interface was supposed to be as plain as possible...

After dozens of rounds of fast iterations, Company B successfully delivered the solution to the client. The client also reported that “we feel we did not simply buy the solution; we kind of co-created it”.

4.3 Company C: Co-definition, a lighter form of co-creation

Company C is a global computer software supplier. The interviewee works at its Shanghai office in China. Company C supplies operating systems to a great number of clients, which in turn rely on Company C for data safety precautions and disaster rescues. Before 2009, Company C responded to technical service requests only on working hours, i.e. 9 am to 5 pm. If a client reported an emergent issue beyond the working hours, either the issue would be put off to the next working day, or an employee would be assigned to handle the issue by working overtime. In 2009, the company came up with a new service idea of “respond-in-one-hour” by synergizing global technical resources to form a round-the-clock service team, such that service requests would be redirected to a global team on shift and could start solving the issue instantly. The interviewee regarded the service innovation as technically incremental, but it actually received extremely warm welcome from the clients.

Instead of demanded by clients, the new service idea came up from inside Company C, where they believed that

... time is money. A mistake that lasts for even a single second may bring about millions of dollars loss. We need to continually improve our strategy to respond to clients’ requests, such that we can always keep the leading position in the industry...

It took Company C 2 years to prepare and officially launch the program, during which it went through 3 stages: estimation, development and trial-run. In the estimation stage, Company C invited major clients to assess the necessity of such a program. The clients were actively involved in the estimation, not only by reviewing past cases to endorse the significance and urgency of the supposed program, but also by anticipating the intensity of service and predicting the extra budget they would allocate. Therefore, the new service was co-defined by Company C and its clients.

The development stage was more like a monologue of Company C. The reason why the clients were hardly involved in this stage was that the new service had no coupling effect with existing services. Therefore, once Company C and its clients agreed on the input (service request) and output (service response) of the program, things in between were left for Company C to fully take charge. In trial-run stage, several of the major clients came back and actively participated in evaluating the new service and suggesting improvements. At the end of this stage, the new service was fully ready to be officially launched towards all clients.

5. Discussion

5.1 Re-defining NSD for KIBS

The interviews with Company A, B, and C have shed new light on the definition of NSD for KIBS from three perspectives. Some of the existing definitions still apply while others have to be amended. Firstly, delivery process innovation was regarded as an important constituent for traditional NSD (Johnson et al., 2000). However, neither Company A nor Company B incorporates delivery process innovation in NSD, indicating it is not a requisite for KIBS. Secondly, KIBS’s service shows more significant intangibility and heterogeneity, because the service is barely tied up with tangible product, and is usually highly customized. Thirdly, KIBS enriches the meaning for “new service”. NSD in KIBS not
only involves finding a new method to solve an old problem (Mode I, e.g. Company C), but also more importantly features using a standardized method to tackle a new issue (Mode II, e.g. Company A and B). It is worth mentioning that Mode II is also a tentative answer to Bettiol et al.'s (2012) dilemma of codification and creativity. Based on the above discussion, we propose a renewed definition of NSD for KIBS as “the development of a new servicing method, or the solution to a new issue which is intangible and highly customized”.

5.2 Antecedents for CVC pattern

The interviews revealed the effect of type of service on CVC pattern. Customers are more likely to be service requestors when the new service involves using an old method to solve a new issue (Mode II). This is reasonable because new issues are often raised by customers and are sometimes highly customized. Mode II is also more likely to have the customers deeply involved as information providers or/and program co-developers. Another dimension of service type is explicitness of requirement. When the customers can clearly state the requirement of the program, in which case the tangibility of the new service might be relatively higher, they would intend to pick up the role of deliverable definers.

CVC pattern is also affected by customer activeness in three ways. Firstly, if the customers initiate the new service, it stands to reason for them to be service requestors. Secondly, the more knowledgeable the customers are, the more likely they fulfil the role of deliverable definers, because a clear definition of program deliverables is based on sufficient understanding of the technical details. Finally, the more willing the customers are to learn during NSD, the larger the chance for them to become program co-developers.

5.3 An integrated CVC-NSD model for KIBS

Based on the findings, we propose an integrated CVC-NSD model for KIBS, as is shown in Figure 2. The model categorizes CVC into three typical patterns: customer as co-developer (Pattern 1), customer as definer (Pattern 3), and balanced (Pattern 2). Each pattern is associated with corresponding combination of type of service and activeness of customer. The model provides a helpful guideline for KIBS firms to plan the implementation of CVC.

Figure 2: Patterns of CVC: customer’s roles in NSD
6. Conclusion

NSD has been crucial to KIBS firms which intend to outperform their rivals in competitions. However, research specific to the patterns and antecedents of CVC in KIBS NSD remains underdeveloped. This study successfully reduced the research gap by investigating the customer-provider interactive patterns, as well as the antecedents of these patterns, during the process of CVC in NSD campaigns of KIBS firms. Results from in-depth review suggest that NSD for KIBS is redefined as the development of a new servicing method, or the solution to a new issue which is intangible and highly customized. Moreover, CVC in KIBS NSD is categorized into customer as co-developer (Pattern 1), customer as definer (Pattern 3), and balanced (Pattern 2), all of which constitute an integrated CVC-NSD model for KIBS.

Theoretically, the definition of NSD for KIBS was once vague. This study has provided a clear and comprehensive definition that rules out the ambiguity and alleviates the codification-creativity dilemma. Based on the renewed definition, this study elucidates the patterns and antecedents of CVC and builds the theoretic model shown in Fig. 2. The model is an important foundation for further studies. Managerially, this study has revealed the three typical patterns of CVC in KIBS NSD. Managers are encouraged to select the most suitable pattern based on type of service and activeness of customer to achieve the best CVC outcome. If Pattern 1 is chosen, it means the manager needs to involve the customer more in the new service development stage as co-developer. If Pattern 3 is chosen, it would be a wiser choice to have the customer define the deliverables and then leave the rest of the task to the provider side. There also exists a balanced pattern.

6.1 Limitations
One of the limitations of this study is the number of interviewee companies. Although three typical KIBS firms have been investigated, it would be beneficial to incorporate more cases. Future studies may also use empirical methods to validate the theoretic model proposed by this study.

7. Declarations

- List of abbreviations:
  - CVC, Customer value co-creation
  - KIBS, Knowledge-intensive business services
  - NSD, New service development
  - NPD, New product development
- Availability of data and materials: Not applicable.
- Endnotes: Not applicable.

8. Acknowledgement

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