INCREMENTAL SERVICE INNOVATIONS IN A MANUFACTURING FIRM'S DELIVERY CHAIN

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ABSTRACT

Manufacturing companies that provide services for consumers deliver service offerings through a retailer network. In such cases, the engagement of the various actors in the delivery chain provides multidimensional information required for successful development of services and innovations. Although the need to use delivery chain actors' differing potential in innovation has been widely recognized, the different actors' contribution to generating ideas to improve existing services is missing. This paper contributes to the literature by discussing the potential for creating these types of incremental service innovations in different parts of the delivery chain. The data were collected by interviews and questionnaires among customers, retailers and sales persons who are part of a product-related service delivery chain in three countries. The study shows that ideas for improvement were expressed infrequently by all the actors, but particularly by consumers, even though the service users' role in developing services has been emphasized in the literature. The different actors provided recurring but also some different improvement ideas. The consumers' typical ideas were general and rather self-evident, whereas the salespeople focused more on improving the service promotion and service process and retailers, in turn, took a broader approach. As the different stakeholders in the delivery chain offer different improvement idea contents for the manufacturing firm and cover service innovation dimensions only partly, manufacturing firms need a holistic strategy for incremental service innovations.

Keywords: Service improvement, consumer, retailer, sales personnel

INTRODUCTION

Service innovations in a delivery chain

Companies typically deliver services through a delivery chain that emphasizes the need for engaging the different stakeholders in developing services (Paton and McLaughlin, 2008). Scholars have shown that the successful development of services requires the involvement of customers, employees and suppliers in the innovation process (Panesar and Markeset, 2008) as they all have divergent potential and competences for creating service ideas (Kindström and Kowalkowski, 2014; Melton and Hartline, 2010; Paton and McLaughlin, 2008). The actors in the delivery chain are a remarkable resource for

providing information, for example, about the customers, service operations and the market (Kindström and Kowalkowski, 2014). Identifying the best role for different actors in the delivery chain in service development also enables efficient use of available resources and improves the results of service development projects (Melton and Hartline, 2010). Thus, involving the whole service delivery chain can ensure that different views are captured and a service is created in line with customers' needs and can be marketed and sold effectively.

The interactions of different players in service innovations are complex (Perks et al., 2012) but are necessary for the innovations to succeed. The literature has extensively discussed user involvement in service innovations (Alam and Perry, 2002; Gustafsson et al., 2012; Magnusson et al., 2003) and co-creation in particular in radical service innovations (Perks et al., 2012). In many cases, not only end-customers but also other external stakeholders such as retailers are involved in the delivery chain. The literature has widely discussed the benefits of engaging frontline employees who are in direct contact with customers in service development (Gebauer et al., 2008; Melton and Hartline, 2010; van der Heijden et al., 2013) but has neglected the role of sales personnel who operate with the frontline employees in the service innovation. Many studies discuss the importance of internal service development teams and dedicated individuals, but sales personnel who are not part of these development teams and are not in direct contact with end-customers have not received the same kind of attention. Additionally, studies that compare what kind of ideas these different actor groups can provide have not been conducted. Therefore, the overall picture of the different delivery chain actors in service development remains somewhat limited.

Further, the focus on the involvement of different actors in service development has largely been on creating new services. In this context, it has been noted that different actor groups have the potential to contribute to the development of services even though the actors have divergent potential in different stages of the service development process (e.g., Melton and Hartline, 2010; Panesar and Markeset, 2008). However, the improvement of existing services has been studied much less extensively. Therefore, even if the involvement of different actors has been observed as beneficial for new service development and service success, scholars have not really considered how these actors could benefit in incremental service innovations while improving existing service offerings.

Research objectives

Previous research has not covered the perspectives of different delivery chain actors in generating ideas for incremental service innovations. Therefore, this paper examines the potential to create these innovations in different parts of the delivery chain. The paper increases knowledge on what companies can gain by involving their delivery chain actors and how companies should focus their idea collection efforts in incremental service innovations. The focus is on two primary research questions:

1) What kinds of ideas can manufacturing firms collect for incremental service innovations in their delivery chain?
2) How do the delivery chain actors' viewpoints differ in their incremental service innovation ideas?

Additionally, we consider the usefulness of the acquired ideas and the involvement of the whole delivery chain in the incremental service innovation process.

The focus is on incremental service innovations particularly in the improvement stage of an existing product-related service. Based on this type of a post-launch assessment, a service provider can make decisions related to continuation of the service or required modifications (Melton and Hartline, 2010).

LITERATURE REVIEW

Incremental service innovations

Service innovations represent new and useful prerequisites or resource constellations to ensure value co-creation in the future (Perks et al., 2012). According to Edvardsson and Olsson (1996), the main task of service development is to create the right generic prerequisites for the service, including an efficient customer process. The success factors in new service development have been studied extensively (e.g., de Brentani, 2001; Kuester et al., 2013), with the conclusion that various success factors exist at the level of the service, process, company and market (Kuester et al., 2013).

The research focus of service innovations is predominantly on new service development, i.e., developing service products that are new to the supplier, but service innovation can also deal with improvements and revisions to an existing service or replacement services that provide improved performance or greater perceived value (Johne and Storey, 1998). Service innovations differ from each other significantly depending on the novelty of the technology exploited in the service and the novelty of the service on the market (de Brentani, 2001). Where disruptive or radical service innovations depart "from previous practices and lead to significant changes in organizational activities and the service system" (Perks et al., 2012), incremental service innovations build on and enhance existing service offerings and related processes. According to a study by de Brentani (2001), incremental and discontinuous service innovations have several similar success factors but also have significant differences. Particularly for incremental innovations, strategy and resource fit has a more central role in success than for discontinuous innovations, whereas discontinuous innovations benefit more from an innovative culture and management and service quality evidence. In this study, the focus is on incremental service innovations that are based on earlier service concepts, existing technologies and the intent to improve the customer's service experience. These innovations can also be considered service improvements that generate changes in the features of services currently offered to customers (Hsieh et al., 2013).

In addition to novelty, service innovations can be characterized by more details about their properties. Researchers have presented several different classifications for service innovations. For example, innovations have been divided according to their benefits and separability (Berry et al., 2006) and innovation newness (Avlonitis et al., 2001). This paper adopts the classification of service innovations presented by den Hertog et al. (2010) as it best suits the context of incremental innovations regarding service improvements that are not novel to the market or necessarily to the service provider. In den Hertog et al.'s (2010) classification, service innovations can be characterized in six dimensions: new service concept; new customer interaction; new business partners; new revenue models; new delivery system - personnel, organization and culture; and new

delivery system - technological. The importance of these dimensions and their interaction depends on the service in question as well as the company offering the service to the market. First, a new service concept or a new service offering includes ideas for ways to provide a solution to customers' problems or needs. An example of a new service concept is integrated bundles. Second, new customer interaction describes the interaction process between the service provider and the customer, such as the introduction of self-service. Third, new business partners or a new value system means the actors involved in the joint production of a service innovation, because services are increasingly realized in collaboration between various providers. Next, a new revenue model deals with finding the right revenue model to fit a new service concept, for example, when turning from a hardware provider to a service-contracts provider. Further, new delivery system - personnel, organization and culture involves management and organization needed for service employees to perform their tasks, for example, by empowering employees. Last, the new service delivery system - technological aspects includes innovations related to the technology of a service, such as new ICT systems or logistical solutions (den Hertog et al., 2010).

Role of different actors in the delivery chain for service innovations

According to Perks et al. (2012), managers should focus on activating innovative behaviors and interactions to promote service innovation. Smith and Fischbacher (2005) emphasize that new service development should be seen as collaborative projects where various different organizations are involved and their interests and bargaining processes have an important role in the implementation and success of the service innovation. According to Hakanen and Jaakkola (2012), successful service development requires that the perceptions of multiple suppliers are aligned well with those of the customers, in terms of content, processes, customer experience and solution value. Our interest is in how key players in the delivery chain - customers, front-line employees and sales personnel - are involved in service innovations. The literature has not reviewed the role of sales personnel in service innovations separately but these personnel can be included among the frontline employees as sales personnel have retailers as customers instead of end-customers.

Customer participation. A strong stream of research claims that a high level of customer participation positively affects the success of service innovation projects (e.g. Alam, 2002, 2006; Martin and Horne, 1995; Magnusson et al., 2003; Melton and Hartline, 2010). Panesar and Markeset (2008) even see customer feedback as the most important factor driving service innovations, and Snyder et al. (2016) remark that service value can be evaluated only by customers. It has been also perceived that the involvement of users in innovation is particularly important in the case of services (Magnusson et al., 2003). Magnusson et al. (2003), who studied user involvement in service innovation in telecom services, found that users present quality and useful service ideas that provide a high level of value. The ideas were more original when users were innovating without professional help. In this case, users did not adopt a way of thinking or considered possible technical limitations but shared ideas that reached beyond. (Magnusson et al., 2003). However, Magnusson et al. (2003) conclude that ideas generated with professional help were more producible; thus, managing user involvement requires balance.

Alam (2002) reported that user involvement in generating innovations has various benefits. For example, similar to Magnusson et al. (2003), Alam considered that users provide better service ideas that respond to customer needs. Next, Alam saw that user involvement reduces the service development time and enhances service acceptance in the market. In addition, user education about the new service features was seen easier if users were involved in innovation.

Melton and Hartline (2010) observed in their study about customer and frontline employees' influence on new service development performance that customer participation is beneficial in the service design and development stages, as well as in pilot testing and post-launch evaluation of a service. Involvement of customers in the front-end stages helps in identifying market opportunities and evaluating service ideas and benefits. However, customer feedback during the launch stage shows whether the service responds to customer needs and provides the opportunity to correct potential failures and innovate future modifications. In addition, Alam (2006), who studied customer involvement in the business-to-business (B2B) context, reported that engaging customers in the front end of service development helps diminish the vagueness related to this development stage. Further, Alam (2002) stated that users can be involved in all stages of service development; however, user impact is most important in the front-end phases, as well as in the testing and piloting of the service.

Although a vast number of studies have emphasized the importance of customer involvement in service innovation and the positive effect on service success, some studies have been more critical about the benefits and argued user input has limited value for innovations (Magnusson et al., 2003). Magnusson et al. (2003) found that Bennet and Cooper (1981) and Christensen and Bower (1996), for example, criticize the involvement of users in service development. Bennet and Cooper (1981) claimed that innovative ideas are rarely generated by customers due to limitations in customer perceptions and their ability to express their needs and possibilities that their needs are changed by the time the innovation is launched (according to Magnusson et al., 2003; Bennet and Cooper, 1981). Christensen and Bower (1996) stated that customer involvement may steer companies to stay in comfortable innovations instead of those enabled by disruptive technologies.

Frontline employees. The importance of frontline employees, i.e., actors who have direct contact with customers, in service innovation has been pointed out in several studies (e.g. de Brentani, 2001; Gebauer et al., 2008; Santos-Vijande, 2015; van der Heijden et al., 2013). The significant role of frontline employees in generating ideas has been reasoned by their direct contact and multiple encounters with customers (Gebauer et al., 2008; van der Heijden et al., 2013). The customer contacts give frontline employees the opportunity to follow the customers' reactions and to obtain insights from customer preferences and thus create ideas for improving services (van der Heijden et al., 2013; Santos-Vijande, 2015). Frontline employees who have frequent contact with customers can evaluate the customers' reaction to new services according to their impression of customers' viewpoint (Melton and Hartline, 2010). Frontline employees' perceptions of customers' diverse reactions to the service are important because many customers do not give direct feedback to the service provider or they are incapable of expressing their needs (Gebauer et al., 2008). The role of frontline employees is even emphasized because in many cases these employees are the company's only contact point with customers (Hartline et al., 2000), and therefore, frontline employees are the only actors capable of

gathering information about customer needs for service improvement (Lages and Piercy, 2012).

Furthermore, frontline employees are typically the actual deliverers of the service; thus, they have practical knowledge about service implementation practices and related technology aspects. In addition to innovations based on customers' reactions, frontline employees can provide ideas based on their own experiences and insights (Engen and Magnusson, 2015). Engen and Magnusson (2015) state that frontline employees' knowledge is not held by the upper management and thus provides the company new perspectives for service innovation. Ordanini and Parasuraman (2011) also claim that involving frontline employees in service development increases the volume of service innovations. At the same time, the involvement of frontline employees increases their creativity and commitment to the company (Santos-Vijande, 2015).

Thus, frontline employees have great potential in providing service innovation (Engen and Magnusson, 2015), but they also significantly affect the success of service innovations. Innovations will be successful only if frontline employees adopt the innovations and promote them to customers (Cadwallader et al., 2010). De Brentani (2010), who studied the success of service innovations, noted that expert frontline staff can influence innovation performance positively in different stages of the service development process. In the case of highly innovative services, frontline employees can gain insights into customer needs, aid in customization-level decisions and educate customers about service benefits. Frontline employees are valuable in the development of incremental service; these employees help customers see the benefits of the service and differentiate it from competitive services (de Brentani, 2001). However, Melton and Hartline (2010), who studied the influence of customer and frontline employees on the performance of the development of new services, observed that frontline employees can best utilize their innovation potential in the service launch stage in promoting and delivering new services. The scholars also contend that frontline employees have less potential for providing completely new service ideas (Melton and Hartline, 2010).

van der Heijden et al. (2013) point out challenges related to engaging frontline employees in innovation. The study focused on frontline employees' role and the benefits of their participation in innovation and states that followed customers' reactions to the service. Absorbing all this knowledge consumes the employees' resources from their actual tasks. Therefore, it is questionable whether the involvement of frontline employees in service innovation is actually valuable for the company (van der Heijden et al., 2013).

Conclusions from the literature and discussion of the research gap

The focus in this study is the improvement of a product-related service offering provided by a traditional goods manufacturer through a retailer network. In addition, in general, manufacturing firms are increasingly considering ways to complement their goods-based offerings with services, to create new revenue and improve their competitiveness. Services and service delivery differ from goods and their delivery, particularly in terms of customer involvement and input (Edvardsson and Olsson, 1996; Alam and Perry, 2002). Service innovations become relevant in these kinds of service-oriented manufacturing firms and may concern their delivery chains.

The previous literature has limitations regarding the topic. First, these studies did not take the whole delivery chain into consideration. For example, Melton and Hartline

(2010), in one of the rare studies discussing customers and frontline employees' role in service innovation in the same context, observed that these two actor groups were most useful in the different stages of the innovation process. Therefore, it could be assumed that sales personnel, neglected in previous studies, could have a unique role in different stages of service development. Second, similar to Melton and Hartline (2010), most of the studies do not report what kinds of ideas the different actors provided. The lack of specific examples of the ideas is a typical limitation in studies that discuss the dimensions of service innovations as noted by Hsieh et al. (2013). Third, the studies that analyzed different actors' input in service innovations have focused on new service development and left the service improvement stage out of scope. However, these kinds of incremental service innovations that arise in the delivery chain are important for the provision of services valuable for customers. The fourth limitation is related to the context of the previous literature; so far, the focus has been mainly in the B2B context. As Bogers et al. (2010) noted, the majority of consumer-related research has been conducted in the sports domain leaving the viewpoint of product-related services provided by an industrial manufacturer in a minor role.

RESEARCH METHODS

Research design

This study was conducted to chart the viewpoints of different actors in a service delivery chain on the improvement needs of a product-related service. To examine the service improvement needs in a real-world context, we focused on one case company, namely, a consumer durables manufacturer. The case was selected based on its own interest in service innovations, its exemplary nature concerning product-related services and its multiple delivery channels, enabling the study of delivery chain involvement in service improvements. The case company is a large consumer durables manufacturer whose goods are directed at regular customers (distributed via retailers) and professionals. The company has a long history as a manufacturer and has offered services for only a few years. Now the company is trying to get closer to end-customers by developing its service business further. The service covered in this study is a complimentary guarantee-type service offered to customers who buy certain types of goods. Use of the service requires registration.

This study employed a mixed methods research design using interviews and questionnaires in data collection, with the intent of reaching three target groups across three countries.

Data collection

This study was conducted with the delivery chain stakeholders of one manufacturing firm in three countries. Data were collected among sales personnel, retailers and consumers to identify improvement ideas for an already launched service. In two countries, the consumers included only customers who registered for the service, and in the third country, service registrants and potential customers aware of the service. Retailers distribute the goods and this service to consumers and thus have a direct contact with the end-customers. Retailers are also the customers of the case company's sales personnel. Thus, sales persons' contact with end-customers goes through retailers.

Sales personnel and retailer questionnaires were realized as online surveys similarly to the consumer questionnaires in two countries, but in the third country, consumers were interviewed to gain deeper understanding of their opinions on the service. The content of the interviews and questionnaire forms was constructed in cooperation with the case company considering the previous studies on the topic. The interviews and questionnaires included questions related to the different aspects of the service, for example, perceptions of the service and its feasibility, marketing of the service, implementation of the service, as well as improvement needs related to the service. This paper focuses on the open-ended responses concerning incremental service innovations related to the studied service.

The consumer interviews were realized at five retailer stores selected by the case company among users of the service who visited the retailers to purchase new goods or services related to the goods currently in use. The interviews were recorded, except in a few cases where the interviewee did not permit the recording; in those cases, notes were written. An invitation to participate in the consumer questionnaire was sent to all customers included in the service user registry in two countries. The participating sales persons and retailers were those who informed their customers about the service and were selected by the case company.

In total, 1904 responses were obtained from the three actor groups, sales (n=27), retailers (n=961) and consumers (n=916). Of these respondents, 248 (13.0%) brought up improvement ideas for the service. Table 1 includes more information about the respondents and explanations of statistically significant differences found between the actor groups.

Table 1 Background information of the respondents

	n (% of respondents)	Differences between actor groups
Actors		
Sales	27 (1%)	
Retailers	961 (50%)	
Consumers	916 (48%)	
Country		
Country A	523 (27%)	Fewer consumers in Country A and
Country B	587 (31%)	fewer retailers in Country B compared
Country C	794 (42%)	with the other countries.
Gender		
Male/Female	93% / 7%	All sales personnel were male.
Age		On average, the consumers were
Range	18–84 years	slightly older than the sales personnel
Average	49 years	and retailers.
Service experience		Among the retailers, fewer service
Registered as a service user	1039 (55%)	registrants, but those who registered
Registrants who have used the service	110 (6%)	have utilized service more commonly compared with consumers or sales personnel.

Data analysis

The data were content analyzed, using a structured coding approach. The coding was based on den Hertog et al.'s (2010) classification so that the improvement ideas presented by the respondents were categorized according to the following six dimensions: service concept; customer interaction; business partner; revenue model; delivery system - personnel, organization, culture; and delivery system - technological. About a dozen of the ideas were presented so vaguely that the main view did not become clear or they did not smoothly drop into any of these six dimensions due to the irrelevance to the studied topic. These ideas were discarded from further analysis.

Due to the qualitative nature of the data and the use of open-ended questions in collecting respondents' ideas for service improvement, actual statistical testing was not carried out. Still, the respondent groups were compared, and the clear differences that emerged are reported in the results section.

RESULTS

The ideas for improvement

The interviews and the questionnaires yielded 239 usable ideas for service improvement. The most common ideas were related to service concept improvements, as almost half of the respondents' ideas dealt with service concept issues. The next most common improvement ideas were related to customer interaction and organizational aspects of the delivery chain, mentioned by about 25% and 15% of the respondents, respectively. Technology aspects of the delivery chain gained about 7% of the mentions, but business partner and revenue model–related viewpoints were considered by only a few respondents. Some respondents considered that improving the service was not worth the effort, and the manufacturer should abandon the service completely. The improvement ideas shared by the respondents are discussed in more detail in the following sections and are summarized in the Table 2 at the end of this section.

Service concept

Respondents who suggested that the concept of the service could be improved brought up various aspects related to the theme. However, the most commonly mentioned improvement ideas were related to the extent and validity of the service. The respondents considered most commonly that the service should be offered to a broader selection of goods than currently and the validity period should be extended. A few respondents suggested increasing the value of the service by including additional features. However, a couple of respondents thought that some of the current features could be reduced so that the service would include only the most essential features. Many of the respondents highlighted the importance of the ease of registering as a service user. They mentioned that registering should be made as easy as possible and suggested that registering should be abandoned completely or wished for helpful modifications of the registering process. These improvement ideas were reasoned by stating that registering is easily forgotten or that many consumers do not want to give their personal information to the service provider during the registering process. In addition, the utilization of the service received improvement ideas. The majority of these recommendations were related to the utilization of the service if the registration was forgotten or the purchase receipt that

showed the purchase data was missing. A few mentioned that utilization should be as easy as possible without mentioning detailed examples of the means to achieve this. In addition, a few respondents recommended clarification of the service content, so that consumers could understand easily what the service is about and when it can be utilized. A few other sporadic mentions, such as general statements about the need for simplicity, were given.

Customer interaction

The majority of the respondents who considered that service-related customer interaction should be improved focused on marketing and promotion aspects. These respondents thought the service should appear more extensively in the media so that information about the service would reach consumers on a wide scale. Some respondents discussed the topic in more detail and hoped for different kinds of compelling and eye-catching advertisement material. The next most common ideas about customer interaction improvement were related to the self-service nature of registering for the service. Respondents suggested that registering as a service user could be implemented by retailers instead of consumers. Respondents who highlighted this alternative method of registering suggested this way registering would certainly take place and it would give consumers a better impression of the company. In addition, a couple of respondents perceived that customer service could be improved in general, so that help would be easily and quickly available when needed.

Personnel, organization and culture in the delivery chain

Respondents mentioned different kinds of improvement ideas related to the personnel, organization and culture in the delivery chain. The majority of the ideas focused on training the retailers that promote the service to consumers or information about the service directed to retailers to support service promotion. These aspects were seen as ways to improve retailers' knowledge of the service and make promoting it easier. In contrast, some respondents talked about compensation they receive when they take care of the implementation of the service; they thought that compensation in different cases needed re-evaluation and compensation process facilitation. Some respondents also saw that service utilization should be less unambiguous and clear guidelines for different implementation situations would benefit the retailers and the consumers. A few respondents also wished that the implementation process could be simplified and speeded up.

Technology in the delivery chain

The technology aspects in the delivery chain received a few mentions. Most of the improvement ideas shared by the respondents were related to the introduction of an electronic system for service registration and implementation. The respondents considered that this kind of a system would ease retailers' work when they checked the validity of the registrations and when implementing the service. In addition, the consumers could see the validity of their service. Some respondents also suggested that the service registration could be as a whole automated and linked to the product purchase event.

<u>Business partner</u>

Respondents presented only a few improvement ideas related to business partners. Five respondents discussed this topic by suggesting the establishment of new service partner relationships to manage new service features or extending the current partner network in order to improve the fluency of the service implementation.

<u>Revenue model</u>

The revenue model received the lowest number of suggestions for improvement. Only three improvement ideas were presented. Two were related to the pricing of the service, and one dealt with a new service with novel revenue logic.

Table 2 Improvement idea types and highlighted improvement themes

Idea types (n)	Highlighted themes (n)
Service concept (110)	- Extent of the service (33) - Validity of the service (28) - Ease of registering (24) - Utilization of the service (14) - Specification of service content (7) - Other (4)
Customer interaction (61)	- Marketing (39) - Removal of self-registering (18) - Fitting consumer service (3) - Other (1)
Personnel, organization and culture in the delivery chain (38)	- Training/informing (20) - Compensation (8) - Clearness of implementation (3) - Realization of implementation (3) - Other (4)
Technology in the delivery chain (17)	- Electronic system (13) - Automatic registration (3) - Other (1)
Business partner (5)	- New partners for new services (3) - Extension of current partner network (2)
Revenue model (3)	- Pricing of the service (2) - Novel service (1)

When variations in the improvement ideas were reviewed according to the respondents' demographics and service experience, some clear differences were found. First, younger respondents shared more commonly thoughts about service improvement than older respondents. In addition, differences between nationalities were found. In some countries, the respondents were more interested in discussing improvement ideas than in others. Still, the content of the service ideas did not vary according to age or nationality. Gender did not appear to make any clear differences in idea-sharing. However, service registration and experience in service utilization affected the presentation of improvement ideas. Consumers who had registered as service users suggested fewer improvement ideas than respondents who had not registered. Further,

service registrants talked more often about improvement ideas related to the service concept whereas non-registrants talked about ideas related to customer interaction and personnel, organization and culture aspects of delivery chain. The respondents' experience in service utilization had a clear relation to the commonness of sharing improvement ideas but not the content of the ideas. Service registrants who had utilized the service presented improvement ideas more commonly than registrants who had not used the service.

Differences in different actors' viewpoints

Sales personnel were the most active in sharing their ideas; 56% of these actors mentioned how the service could be improved. The corresponding shares were significantly lower among retailers and consumers; slightly less than 20% of retailers and only 5% of consumers brought up development ideas.

Clear differences existed between the types of ideas brought up by different actor groups. First, retailers and consumers typically mentioned ideas related to the service concept. Of the ideas presented by consumers, almost three quarters were related to improving the service concept. The corresponding percentage among retailers was slightly more than 40%. In contrast, ideas related to the service concept were mentioned by only a couple of salespeople. Among the ideas related to the service concept, consumers highlighted clearly more commonly than retailers the extended validity period of the service. Even if these two actor groups both thought that the service could be offered more extensively, the retailers highlighted clearly the need to make registering easier for consumers. Furthermore, almost every tenth retailer thought that the service content could be clarified whereas none of the consumers mentioned these kinds of improvement needs.

Salespeople most commonly mentioned ideas related to customer interaction; almost half of their ideas were related to this theme. For retailers and consumers, this theme was the second most common. Only about a quarter of the retailers and less than 20% of the consumers who shared improvement ideas discussed customer interaction–related aspects. Improvement ideas related to promoting and marketing the service were emphasized by all three actor groups, but sales personnel most frequently presented improvement ideas related to this aspect. More than a third of the retailers recommended replacing service self-registration with a system in which retailers registered consumers when the consumer purchases goods that include the service. The same improvement was suggested by only one consumer and none of the sales personnel.

About every fourth salesperson mentioned ideas related to personnel, organization and culture aspects of the service delivery chain. Among retailers, this aspect was highlighted by slightly less than every fifth retailer who shared improvement ideas. Of the consumers only one talked about these development ideas. Of the improvement ideas related to personnel, organization or culture in the delivery chain, training and informing were emphasized by retailers; almost two thirds of the retailers' ideas within this idea group dealt with these aspects while only one consumer and none of the sales personnel considered that these issues require improvement. Retailers also most commonly shared ideas for improving service implementation practices. Still, compensation aspects were shared equally by sales personnel and retailers.

In addition, almost 10% of the retailers gave ideas related to the technological aspect of the service delivery system, but only a few consumers and none of the salespeople mentioned these improvement needs. In these two actor groups, the most common improvement ideas were related to the electronic system, but these kinds of ideas were emphasized among retailers.

Business partner–related ideas were mentioned only by a few retailers and a couple of consumers, and revenue model ideas were highlighted only by some retailers. Furthermore, consumers were the only group in which no one proposed terminating the service, even though in the other groups this was extremely rare.

The differences in the highlighted improvement ideas by idea type are presented in Table 3.

Table 3 Differences in the improvement ideas presented by different actors

Idea types	Highlighted by	Noteworthy issues
Service concept	Consumers, Retailers	Extent-related ideas common among consumers and retailers. Ease of registration highlighted by retailers, whereas consumers would appreciate lengthening the service validity period.
Customer interaction	Sales (Retailers, Consumers)	Marketing-related improvement ideas were typical in all actor groups. Removal of self-registering suggested mainly by retailers.
Personnel, organization and culture in the delivery chain	Sales, Retailers	Improvements in training and informing, as well as implementation practices commonly suggested by retailers. Compensation aspects discussed by the sales personnel and the retailers.
Technology in the delivery chain	(Retailers)	Technology-related improvements, mainly the electronic system, discussed almost solely by retailers.
Business partner	-	Not mentioned by any salespeople, and only by a few consumers and retailers.
Revenue model	-	Highlighted only by a few retailers.

DISCUSSION

Service improvement ideas

This study has sought new knowledge on the possibilities for incremental service innovations in the delivery chains of goods-related services. We inquired the types of ideas that manufacturing firms can collect in their delivery chains, and the differences between delivery chain actors' viewpoints in incremental service innovations. The study, thereby, complements previous research that has investigated customer information, involvement and co-creation from the perspective of new service development and radical service innovations (e.g. Alam and Perry, 2002; Gustafsson et al., 2012;

Magnusson et al., 2003; Perks et al., 2012) with the specific focus on incremental service innovations. In particular, we contribute by revealing the different incremental innovation inputs of sales personnel, retailers and consumers and showing specific examples of the types of ideas these different groups propose, which have been lacking in earlier research (Hsieh et al., 2013; Melton and Hartline, 2010).

Some recurring main ideas were similar throughout the groups, such as extending the service to provide additional value for consumers. However, the groups provided also somewhat different improvement ideas. Consumers offered more general and typical service improvement ideas that mainly focused on the service concept. In contrast, retailers seemed to have the most variety in their ideas as they covered all the idea types and, in addition to their own perspective, widely considered the consumer's point of view. The manufacturer's own salespeople then concentrated mostly on improvement ideas for marketing and compensation. This may reflect how the retailers working with service marketing and implementation have the broadest experience with the service as they have to handle it with the consumers and the manufacturer's salespeople. Therefore, they have gained the most extensive understanding about what in the service works and what does not and were able to cover different types of ideas for service improvement the most broadly.

Our study utilized den Hertog et al.'s (2010) classification system of service innovations and it seems that these dimensions can be well used in the context of service improvement ideas. In our results we included service implementation aspects in the service concept category, but these implementation aspects were highlighted there and differed clearly from most of the other aspects related to the service concept. Based on this in the context of service improvement, there is a need to add a seventh category: service implementation. In this context, as different stakeholders have had time to experience the service in action, ideas related to service implementation aspects were highlighted when compared to new service development.

One interesting result was that some improvement ideas that are clearly related to consumers' ease were emphasized more by retailers than by consumers, for example, moving the service registration from consumers to retailers. This demonstrates well how the consumers in this case mostly represent those who are registered as service users whereas retailers have the feeling from the whole potential customer base. Thus, even though certain ideas were not highlighted by consumers in this case, they might still be needed to make the service better. This also reveals the significance of considering not only the consumers who use the service but also those who for one reason or another have not adopted the service.

Involvement of different actors in service innovation

Previous literature has disagreed somewhat about the benefits of involving consumers in service innovation. Our results suggest that it might not be very beneficial to involve consumers in service improvement through questionnaires and short interviews because the respondents provided ideas very rarely and the ideas they presented were rather self-evident. Therefore, in this form, but similarly to what Melton and Hartline (2010) noted about the post-launch evaluation of a service, it might be that consumer involvement can serve more as a way to provide certainty for the company about whether the service responds to customer needs and what small aspects could be improved. It might be

beneficial to include customers in service improvement innovation in some other way. For example, a study by Magnusson et al. (2003) about user involvement in service innovation pointed out that engaging customers by activating them in problem solving instead of merely asking them for ideas could provide more creative and valuable ideas.

Furthermore, it was surprising that only half of the sales people of the case company presented improvement ideas. This raises a question about why so few of those respondents who are supposed to be closest to the service had so little to say about it. Whether this is due to the sales personnel believing that the service is already at its best or the sales people had not accepted this service yet and therefore were not willing to comment on it is not known. This result might also demonstrate the poor fit of a questionnaire survey in collecting service improvement ideas.

CONCLUSIONS

Contributions
The results contribute to the research on incremental service innovations in manufacturing firms. We complemented previous research on radical service innovations with new knowledge about incremental service innovations, particularly in manufacturing firms while improving existing product-related services. As a key finding, our study suggests including service implementation as an additional dimension to studying service improvement innovations, which adds to an earlier framework (den Hertog et al. 2010).

In addition, the charting of service improvement ideas in the different parts of the delivery chain offers new knowledge on the roles of different stakeholders in the innovation processes. The findings showed that sales personnel, consumers and retailers express somewhat different improvement ideas in the categories of service concept, customer interaction and delivery chain, whereas incremental ideas for business partners and revenue models did not emerge as clearly and need to be sought elsewhere. The findings simplify the complexity associated with innovations in service delivery chains by highlighting what manufacturers can expect from their partners in service innovation activity. In order for the manufacturing firm to succeed in incremental service innovations, it needs a holistic strategy to harness the idea input throughout the delivery chain, and tactics to spark such new ideas that cannot be revealed through the questionnaire and interview methods.

Managerial implications
This research gives managers a clear message that just somehow involving different delivery chain stakeholders in service improvement is not enough. Companies must carefully plan how they want to engage different parties in productive innovation and what kinds of ideas they want to achieve with this engagement. For example, workshops and problem-solving practices could lead to better results than simply asking what needs to be improved when trying to gain more creative ideas.

Managers should consider the views of consumers who have decided not to utilize the service being improved. Often, the retailers can also reflect the point of view of these consumers in addition to those who have adopted the service, and the retailers' own perspective can have unique information about service implementation. Therefore, retailers seem to have a lot to offer for ideation, and they should be involved in service

innovation. Furthermore, when salespeople are involved, there is need to consider how their innovation can be directed. In our case, it seemed that if the sales people were able to generate ideas broadly so that they were not directed to focus on certain aspects, their ideas commonly related to how the current service could be better brought to consumers' knowledge and use.

Limitations and ideas for further research

The main limitation in this study is related to the single case study approach. The study focused on one manufacturer of certain types of consumer durable goods and one of their services. The special characteristics of this service, the related goods, and the manufacturer may affect the results. Studies with a broader focus with multiple companies and different types of services should be implemented to gain more generalizable results.

The data collection was delimited to three stakeholder groups. Despite the significant amount of data collected, this implies that the company's internal personnel were not covered. It is possible that the personnel designing and delivering the services are more active in idea generation or have other kinds of service improvement ideas than the target group. Further research is needed, to cover the sources of incremental service innovation ideas more thoroughly. For example different personnel groups and distribution channels could be added to the study.

As the results suggested, short interviews and questionnaires might not be the most suitable method for collecting ideas for improving services. Therefore, forthcoming studies on delivery chain stakeholder involvement in service innovation should utilize other involvement methods and compare these methods. This study serves as a starting point for future studies that discuss incremental innovations in the context of service improvement.

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