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Having a strategy for new service development – does it really matter?

Edvardsson, Bo, Thomas Meiren, Adrienne Schäfer and Lars Witell

INTRODUCTION

New Service Development (NSD) has frequently been criticised as being an ad hoc process associated with improvisation (Rathmel, 1974; Edvardsson et al., 1995; Dolfsma, 2004) and hidden costs (Oldenboom and Abratt, 2000). As a response, companies have felt the need to create more systematic and formal processes and methods to develop new services (Edvardsson et al., 1995; 2000). Together with practitioners, researchers have developed several frameworks for NSD that have been shared through academic publications (such as Edvardsson and Olsson (1996) and Lee and Chen (2009)), management books (such as Bettencourt (2010) and Gustafsson and Johnson (2003)) and teaching materials (such as Edvardsson et al. (2000)). The adoption of development processes in the service sector is now on the same level as in the manufacturing sector (Griffin, 1997), but the failure rate for new services remains as high as before (Stevens and Burley, 2003). One conclusion is that the current understanding of the strategies, methods and critical resources and activities used to develop new services is inadequate given NSD's importance as a driver of service competitiveness. Hauser et al. (2006) suggested that more research is needed to better understand NSD in practice. In particular, the need exists for research on the key strategic factors that influence NSD performance.

If the introduction of new development processes has not solved the problem of high failure rates, what key strategic factors have the potential to influence NSD performance? Previous research showed that the use of integrated development teams (Froehle et al., 2000) and customer co-creation (Witell et al., 2011) are important. In addition, Melton and Hartline (2010) argued that the inclusion of both employees and customers in a development project is

important in succeeding with NSD. But they do not test the effects of such an approach on NSD performance. In addition, our knowledge is limited about what key strategic factors that managers believe will have an effect on NSD performance. Managers' beliefs are put into practice and the need exists to better understand how the knowledge of managers overlaps with our current knowledge in academia.

The aim of the present paper was to identify the key strategic factors that influence NSD performance. This study undertook an empirical investigation of more than 500 service development projects in Germany, Sweden and Switzerland. In particular, the study focused on what happens when both customers and employees are involved in a development project and how management beliefs and knowledge overlap with the current state of knowledge in academia. The study focused on key strategic factors, such as service development strategy, a formalised development process, customer co-creation and the use of integrated development teams. These are factors that managers can decide on and change to improve NSD performance. The paper ends with theoretical and managerial implications of the research study.

THEORETICAL FRAMEWORK

New Service Development

The literature on NSD consists of three research streams: (1) the service research stream, (2) the product development stream and (3) the innovation stream. The service research stream is based on the service characteristics and conceptualisations of service production (see, for example, Edvardsson (1997), Tax and Stuart (1997), Goldstein et al. (2002) and Edvardsson et al. (2000)). The product development stream uses models and frameworks from product development and usually suggests stage-based models (see, for example, Johne and Storey (1998), Bitran and Pedrosa (1998), Scheuing and Johnson (1989), Martin and Horne (1995), Cooper (1993), Storey and Kelly (2001), Bullinger et al. (2003), Kim and Meiren (2010)).

The innovation stream, largely based on Schumpeter (1974), forms the basis for Miles (1996), Gallouj (2002), Alam (2002), Gallouj and Weinstein (1997) and Pieres et al. (2008) and discusses what a service innovation is and how it develops in an organisation. The three research streams have different theoretical underpinnings; however, the focus is on the same phenomenon of how NSD occurs or should occur in practice. Through an empirical investigation of NSD, Froehle et al. (2000) showed that some of the doubts about the transfer of knowledge from product development to NSD might be unfounded. The research streams overlap and the present study builds on knowledge from the service research and product development streams.

To identify in which areas to search for the key strategic factors that influence NSD performance, empirical research on NSD was further reviewed. In their study of 70 large service firms, Storey and Hull (2010) investigated the role of knowledge strategy in NSD, which included teams, in-process design controls and information technology. Their results showed that the influence of NSD on innovation performance is dependent on the service strategy used. Shunzhong (2009) collected data through personal interviews with 192 organisations and investigated issues related to organisational culture and NSD in knowledge-intensive business services in China. The study concluded that various organisational cultures must be fostered together to enhance the performance of NSD activities. In particular, the study pointed out that strategic attention to NSD has an effect on service innovation. This strategic approach to NSD can be viewed as being very different from the strategic managerial-control approach based on sequential stage-based models of NSD.

Froehle et al. (2000) investigated the role of teams, IT and a development process for development speed and effectiveness. The conclusion from this empirical investigation of 175 US service firms was that all three factors have an effect on NSD performance. However,

whereas the development process has an effect on speed, teams and IT have an influence on the effectiveness of the development process. Menor and Roth's (2008) study on financial services argued that success in NSD comes from building skills in the management of service development resources and organisational routines. They conceptualised NSD competence as a multidimensional system of four interrelated and complementary dimensions: (1) formalised NSD processes, (2) market acuity, (3) NSD strategy and (4) information technology use and experience. Contrary to conventional wisdom, Menor and Roth (2008) found that formalised processes play a less important role in the success of NSD than the other three dimensions. Instead, the most important indicator of NSD competence was market acuity, which captures the firm's ability to see clearly the competitive environment and to anticipate and respond to customers' evolving needs and wants.

Ordanini and Maglio (2009) investigated the role of market orientation, internal processes and external networks for the success of NSD in 39 Italian luxury hotels. Using a fuzzy-set method, the authors identified that proactive market orientation is an important factor for success in NSD, but that it is not a sufficient condition. In a similar vein, Hull and Tidd (2002) analysed 62 service companies and found that the simultaneous involvement of multiple functions has the strongest effect on NSD performance in the early stages of the development process.

A conceptual model of NSD

A review of empirical investigations of key strategic factors revealed that four factors have been identified consistently as having an effect on NSD performance. But, they were previously not included in the same study and their effect was not compared with managers' beliefs in practice. In our terminology, these factors are service development strategy (compare Storey and Hull (2010) and Shunzhong (2009)), formalised service development process (compare Froehle et al. (2000) and Menor and Roth (2008)), integrated development

teams (compare Froehle et al. (2000) and Hull and Tidd (2002)) and customer co-creation (compare Ordanini and Maglio (2009) and Menor and Roth (2008)). Instead of investigating IT as a key strategic factor, this study controls for the effect of technology on NSD performance.

If a manager provides the right prerequisites for the development project, then the project should have a higher success rate in NSD. One key strategic factor is the service development strategy that provides the goals, available resources and the market window for which to aim. A formalised development process based on a stage-gate model, with a suggestion on the methods to use in different stages, provides the framework for service development. An integrated development team captures the skills and capabilities of the employees, and the team should be comprised of individuals representing a diverse set of skills. Customer co-creation captures the way that knowledge is developed about the customer, and often includes a strategy for how to interact with the customer during different stages of the development process. In addition, the development project acts as an arena for employee and customer interaction. The key strategic factors act together to provide strong NSD performance. This study argues that a number of control factors influence the success of NSD, of which the two most important are the amount of available resources and the dependence on technology (see Froehle et al. (2000) and Storey and Hull (2010)).

- Insert Figure 1 about here –

Development of hypotheses

This section presents five hypotheses concerning the relationship between the four identified key strategic factors and their influence on NSD performance and expands the discussion on the conceptual model of NSD.

Jiménez-Zarco et al. (2006, p. 265) argued that the high failure rate of new services means that 'managerial decisions about services development become critical'. In their research on NSD, Johne and Storey (1998) suggested that one key strategic factor is to have a clear strategy for new services and, on the whole, to aim beyond short-term financial objectives. Companies that adhere to this concept tend to concentrate on their existing strengths, fit new services to their current service portfolio and are able to balance development work and existing resources (Johne and Storey, 1998). Project managers must be able to understand the content of the service development strategy to be able to implement it through practices and methods in ongoing development projects. Essentially, the implementation of a particular service development strategy is a process of organisational adaptation to the market environment (Matsuno and Mentzer, 2000). Given that a large proportion of service companies lack a clear service development strategy and service development process (Martin and Horne, 1995), the present paper argues that the existence of a strategy for service development – including how to integrate a new service in an existing service system (Tax and Stuart, 1997) – can improve NSD performance.

Hypothesis 1: The existence of a service development strategy has a positive impact on NSD performance.

Much of the research on NSD looked at the design and control of different stages in the development process (Bitran and Pedrosa, 1998; Scheuing and Johnson, 1989; Johne and Storey, 1998). Shostack (1984) developed one of the earliest linear models for NSD by deconstructing a development process into 10 discrete stages. Reidenbach and Moak (1986) suggested a development process based on six stages, including idea generation/evaluation, concept development and testing, economic analysis, product testing, market testing and

commercialisation. In contrast to such linear models, Edvardsson and Olsson (1996) abandoned the traditional structure in their quality-based model of NSD. By focusing on design quality, they posited that service development should aim 'to create the prerequisites for services which the customer perceives have an attractive added value'. Johnson et al. (2000) synthesised past research on service development and created a general four-stage NSD process model involving the stages of design, analysis, development and full launch. They added non-linear elements to the NSD model, emphasising the interdependence of design and development as well as the cyclical aspects of service development. Over time, the average number of phases in NSD processes have decreased and it is often less than in processes for product development.

Menor and Roth (2008) found that formalised processes in NSD are more successful than less formalised development processes. Previous research indicated that a firm *not* having a systematic approach towards the development of new services is more common. Martin and Horne (1993) even claimed that 'the process of new service development is not well defined, and does not adhere to conventional empirical mechanisms. Yet, new services come on the market every day. "How?" remains the critical question' (Martin and Horne, 1993, p. 62). However, the adoption of a development process for service development seems to be reaching the same level as that for product development (Griffin, 1997).

Johne and Storey (1998) showed that companies that have adopted a systematic approach to NSD experience better performance at both the service and the program levels. Froehle et al.'s (2000) empirical investigation showed that more formalised service development processes contribute directly to the speed of a firm's NSD. A systematic approach usually incorporates common rules, service platforms, integrated subsystems and other key building blocks (Johne and Storey, 1998). A formalised development process tends to produce higher NSD performance because it is able to reduce miscommunication,

eliminate non-value-added activities and improve project flow (Froehle et al., 2000). The present paper argues that the consequences of using a formalised development process are not only limited to speed in the development process, but that they can also lead to better service development performance.

Hypothesis 2: A higher degree of formalisation of the development process has a positive impact on NSD performance.

An integrated development team exists when responsibility for a development project is assigned to a formalised personnel team from multiple functional areas (Sethi et al., 2001). In product development, integrated development teams have been used as a development strategy since the introduction of concurrent engineering in the 1980s (Smith, 1997). The primary benefits of using integrated development teams are increased communication and the ability to view an opportunity or a challenge from several different perspectives. The different specialties of the personnel within the integrated development team provide a variety of resources and knowledge to the development project. Integrated development teams can be beneficial for a development project in terms of the improved creativity and breadth of ideas associated with the diversity and use of various resources (Froehle et al., 2000).

Jiménez-Zarco et al. (2006) found that a firm's organisational culture, including all of the principles, approaches and orientations that guide its organisational philosophy, strategy and activities, should be integrated into the service development process through teams. The integrated team approach also refers to marketing factors and the use of the organisation's marketing skills, including the knowledge of the agents implied in the

innovation processes – both directly and indirectly – as well as marketing channel support and managerial operations system.

Hypothesis 3: A higher degree of usage of integrated development teams has a positive impact on NSD performance.

Lusch et al. (2007) argued that an organization needs to comprehend knowledge about the customer through an absorptive competence to renew its value propositions. Melton and Hartline (2010) suggested that 'to produce successful new services, firms should involve customers in the design and development stages to help identify market opportunities, generate and evaluate new service ideas, define desired benefits and features of the potential service, and provide extensive feedback for product and market testing'. To gain access to the knowledge created by the customer as a primary resource integrator, Witell et al. (2011) suggest activating the customer in a process of co-creation for others. While a customer performs co-creation for use for his or her own benefit, co-creation for others is intended to create value for other customers by aiming to provide an idea, share knowledge or participate in the development of a product or service. In an experiment in which customers were invited to engage in co-creation through interviews, focus groups or active participation, the methods that enabled the customer to be an active co-creator produced significantly more original ideas (Witell et al., 2011). Engaging customers in active dialogues to access their skills and knowledge (Prahalad and Ramaswamy, 2000) enables the service development project to better understand and anticipate latent customer needs (Matthing et al., 2004)

Obtaining customer information throughout the development process is beneficial for service development. The present study focuses on the concept of customer co-creation for others; that is, activities in which customers actively participate in service development by

contributing information about their own needs and/or suggesting ideas for future services that they would place value on being able to use. This concept has three specific characteristics: (a) it is ongoing throughout the development process, (b) the novelty of customer knowledge at each development stage arises from interaction with the customer and (c) it entails an action-based, trial-and-error mode of organisational learning about the customer (Joshi and Sharma, 2004). In the present study, we operationalise customer co-creation through the development of customer knowledge (Joshi and Sharma, 2004). Customer co-creation for others can occur through various methods and practices in which knowledge about the customer is gained through the use of information and the active involvement of customers.

Hypothesis 4: A higher degree customer co-creation for others has a positive impact on NSD performance.

Von Hippel (1994) argued that customer use-related information is often 'sticky', meaning that to acquire, transfer and use the information in a new situation, such as in the service development process, is difficult and costly. Given that customer co-creation for others occurs in an organisational context – a specific service development project – the way in which NSD is organised is expected to influence the benefits of customer co-creation. Customers can be invited to co-creation activities using open source platforms (Prahalad and Ramaswamy, 2000) or integrated development teams (Melton and Hartline, 2010). Grönroos (2006) argued that information and experiences from both customers and employees play a key role in NSD performance. Consistent with this argument, Griffin (1997) showed that the use of integrated development teams enhances the pace of learning in new product development projects. It can be assumed that knowledge provided by customers is more

likely to be understood and used in a fruitful way by integrated service development teams. Such teams should include members that are capable of identifying, analysing and further developing customer information and knowledge into useful and actionable knowledge. The variety of resources and knowledge represented in an integrated development team provides an alternative interpretation of customer information and can influence different aspects of the service design. The full potential of customer co-creation for others can be utilised if the individuals on a development team are encouraged to participate or observe customer co-creation activities (Stevens and Dimitriadis, 2004).

Melton and Hartline (2010) tested a model of NSD that enhances performance by prescribing specific roles for customers and frontline employees in the NSD process. Their findings were based on in-depth managerial interviews and survey data collected from 160 organisations across a variety of service sectors. In addition to customers, frontline employees need to be involved in a development process to ensure a successful development project. Although, the inclusion of both employees and customers in a development project sounds theoretically justified, previous research has not empirically tested the effect of this practice. We hypothesize that the inclusion of both employees and customers in the development project improves NSD performance.

Hypothesis 5: The greater the use of integrated development teams, the stronger the positive effect of customer co-creation for others on NSD performance.

METHODOLOGY

Population and sample

Data for the empirical investigation was obtained from service firms in Germany, Switzerland and Sweden. These countries were selected since they are in the forefront in

focusing on NSD performance and a number of government programs to improve awareness and management competence on NSD have been initiated. The data was collected during a six months period in mid 2009. The research team generated a list of service industries eligible for the study and then decided on the rules for conducting the study. In their review of previous research on NSD, de Jong and Vermeulen (2003) argued that much of the empirical research on NSD was performed in specific sectors such as financial services, logistics services and wholesale. Although some noteworthy exceptions were found (such as Froehle et al. (2000) and Melton and Hartline (2010)), Hauser et al. (2006) claimed that almost no empirical research was conducted on NSD covering multiple sectors. The sample used by this study included service firms in industries such as banking, insurance, healthcare, hotels, transport, rental accommodation and real estate, construction services and business services. The typical service firm in the survey sells 49 per cent of its services on the B2C market, 31 per cent on the B2B market and 20 per cent to governmental agencies.

To test the hypotheses of this study, the unit of analysis was NSD projects. Since no opportunity existed to screen whether a firm conducted NSD, managers were asked to respond if their firm conducted NSD and if they were responsible for service development. Reminders were mailed to non-respondents one and two weeks after the initial mailing, for a response rate of 13 per cent (550 respondents). This response rate is in line with other cross-sectional studies of NSD (Melton and Hartline, 2010). Studies of NSD that experienced a higher response rate (such as Storey and Hull (2010) and Ordanini and Parasuraman (2011)) commonly focused on one industry and instead suffered from problems associated with a small sample. Following the procedure recommended by Armstrong and Overton (1977), t-tests indicated that there were no statistically significant differences in the survey data between early and late respondents. The typical key informant was employed for 15 years at his or her firm, indicating adequate experience and knowledge (Gebauer et al., 2010).

Items and questionnaire

Theory guided item generation and selection for the different key strategic factors of NSD (Churchill, 1979). The items in the final questionnaire were generated through a review of academic and practitioner-oriented literature, discussions with experienced professionals and reviews of existing constructs for NSD practices. The final questionnaire included several constructs and items, which were divided into five areas. These areas covered the context of service development, organisational aspects of NSD, the NSD process, customer co-creation in NSD and NSD performance. Following Churchill (1979), we adopted, modified and extended existing constructs whenever needed. Since the study was conducted in Germany, Sweden and Switzerland, the survey instrument was provided in German, English and Swedish. Having agreed on an English version of all questions in the survey, it was then translated to Swedish and German. The German, English and Swedish questionnaires were then compared to ensure that the questions meant the same in the three languages. Where the meaning of a question had become lost in translation, a discussion of the meaning was held and the questionnaire was changed before agreeing on the final version.

For the four key constructs of our conceptual model, existing scales from Joshi and Sharma (2004) were used to measure integrated development teams and customer co-creation for others. Customer co-creation for others that comes through customer knowledge development captures the role of iterations based on customer feedback, as well as learning from customers through interaction with them throughout the development process. Integrated development teams were built by including individuals representing different functional areas, by viewing functional areas as resource pools and by giving teams a budget and responsibilities for NSD. The items for the formalisation of the service development process and service development strategy were adapted from previous studies of service development in Germany (Fähnrich et al., 1999). The formalisation of the service

development process was operationalised as a two-item construct, while service development strategy was operationalised as a single item construct measuring whether or not the firm had a service development strategy. Most items were measured on a 10-point Likert scale (1 = strongly disagree, 10 = strongly agree) except for service development strategy, which was measured as a dichotomous variable (non-existent or existent).

For control variables, technology factors (adapted from Moorman and Miner (1997)) were included to control for an industry's dependence on technology. The amount of resources was measured according to the size of the development project and was included to control for available resources. The last control variable was country, and it was included to control for possible differences between the different countries included in the study.

The construct for NSD performance was adapted from Moorman and Rust (1999) and it captures how the new services were performing in relation to the service development objectives. The dimensions of NSD performance ranges from financial, to customer to innovative dimensions of the resulting services, see Storey and Kelly (2001). Appendix A includes all measures.

Analysis

Following Gustafsson, Johnson and Roos (2005), this study used principal component analyses to operationalise the constructs in the empirical investigation. For each set of measures, the first principal component was extracted to create the constructs for use in subsequent regression analyses. For all of the constructs, only one principal component had an eigenvalue larger than one. Cronbach's alpha was calculated for each construct, with a range between 0.62 and 0.86. Although Cronbach's alpha should ideally be over 0.7 for all constructs, a level of 0.6 was deemed sufficient for explorative research (Nunnally, 1967). The constructs had good discriminant validity, given that the AVEs of the factors were greater than the square of the correlations among the factors (Chin, 1998). To identify the real

effects of the four key strategic factors on NSD performance, several control variables were included in the regression model. The study controlled for country, the amount of resources available and the role of technology.

A general linear (analysis of variance) model was estimated to test the hypotheses, where the dependent variable was NSD performance, while the independent variables were service development strategy, formalised service development process, integrated development teams and customer co-creation. The model included the direct effect of the four constructs, as well as a two-way interaction term that involved integrated development teams and customer co-creation.

RESULTS

The results are presented in the following way. First, some descriptive statistics on how service development is performed in practice are provided, followed by managers' perceptions of the importance of the key strategic factors. The section ends with the tests of the five hypotheses regarding the role of key strategic factors for NSD performance.

Descriptive statistics of NSD projects

A service firm in the study developed an average of seven new services over a three-year period, four of which survived the first three months on the market. The 42 per cent of the services that were removed from the market after only a short period was in line with previous empirical investigations (see e.g. Cooper (1993) Stevens and Burley (2003)). The typical NSD project involved five people and took seven to nine months to complete. Of the companies in the sample, 38 per cent invested little or nothing (a maximum of 1 per cent of total turnover) in the development of new services. One interpretation of these statistics is that NSD is not seen as a strategic priority in most service firms. One of the key issues was where the ideas for new services originated. The results show that customers were viewed as the most important source of ideas (8.9 out of 10) followed by employees (7.2), competitors

(6.5) and suppliers (6.4). Customer information was mainly gathered through traditional methods, such as interviews, surveys and focus groups.

Concerning how NSD is organised, 65 per cent of all firms relied on integrated development teams to develop new services. In about half of the firms, NSD was conducted within the marketing or sales department or by the management team. In a few cases, NSD was conducted through a specialised service development department or through external partners (see Figure 2). This provides empirical support for the inclusion of integrated development teams as a key strategic factor in our conceptual model.

- Insert Figure 2 about here –

The view of managers

The key informants were asked to indicate the extent to which the four key strategic factors included in the study influence NSD performance. Customer co-creation for others was identified as the most important key strategic factor (9.1 out of 10), followed by integrated development teams (7.2) and the existence of a service development strategy (6.9), while formalisation of the development process was considered the least important factor (5.1), see Figure 3.

Basically, customer co-creation stands out as the key to succeed with NSD, while the formalisation of the development process is of least concern for managers. The order of the key strategic factors according to the perception of the managers followed much of the previous research: customer co-creation (Menor and Roth, 2008) and the use of integrated development teams (Hull and Tidd, 2002) had a strong effect on development performance, while having formalised processes played a less important role (Menor and Roth, 2008). One interpretation of the perceived low importance of a formalised development process is that

most firms have a process for NSD, but what is problematic is its implementation and use in practice.

- Insert Figure 3 about here –

Test of hypotheses

Table 1 includes the results from the operationalisation of the conceptual model of NSD intended to explain NSD performance. The factors included in the model explain 14 per cent of the variation in NSD performance. The results are consistent with the hypotheses, in that service development strategy, formalised service development process, integrated development teams and customer co-creation for others were all shown to have a positive influence on NSD performance (Hypotheses 1 to 4 are supported). The regression coefficient for having a service development strategy was 0.24 ($p < 0.05$), almost twice the size of the regression coefficients for the other constructs in the model. However, having a formalised service development process (0.14, $p < 0.05$), integrated development teams (0.11, $p < 0.05$) and customer co-creation for others (0.10, $p < 0.05$) all contributed to NSD performance. The results also reveal a significant (0.12, $p < 0.01$) two-way interaction for integrated development teams and customer co-creation. The direction and size of the interaction effect supported Hypothesis 5 (see Table 1); that is, the greater the use of integrated development teams, the stronger the positive effect of customer co-creation on NSD performance.

- Insert Table 1 about here –

Comparing managers' views with empirical results

This study's empirical investigation of NSD projects showed that a firm can improve NSD performance by focusing on service development strategy, a formalised development process, customer co-creation for others and the use of integrated development teams. These key

strategic factors can be implemented individually or, preferably, in tandem to achieve an even larger improvement in NSD performance (see also Ordanini and Maglio (2009)).

Managers view customer co-creation as the key strategic factor, while the operationalization of the conceptual model reveals that customer co-creation is the least important factor. One interpretation of this over belief in customer co-creation is that most companies emphasize customer interviews (ranked number one out of seven methods), focus groups and surveys for understanding customer needs. These reactive methods provide a basic understanding of the present offerings of the firm, but do not provide new ideas and insights from customers on future offerings. Previous research clearly showed that interviews and focus groups elicit less original ideas than co-creation techniques (Witell et al., 2011). A change in the use of methods might help obtain a balance between management perceptions of customer co-creation and the influence of customer co-creation on NSD performance.

DISCUSSION AND CONCLUSIONS

Theoretical implications

This empirical investigation of NSD highlighted several key strategic factors that influence NSD performance. In general, the results contribute to the relatively rudimentary existing literature on NSD and provide empirical evidence of NSD in practice (Hauser et al., 2006). Previous research does not agree on the key strategic factors that are most important to succeed with NSD. By investigating several key strategic factors in the same study, this study contributes by identifying and analysing their roles and by comparing the results with managers' belief of what drives NSD performance.

First, the key factor with the greatest effect on new NSD performance was the adoption of a service development strategy. However, while the term is used frequently in NSD literature, surprisingly little has been written about service development strategy grounded in empirical studies, and the important role it plays in selecting and managing NSD

projects. Goldstein et al. (2002) claimed that the service concept could bring strategic intent into service design and planning, while this paper argues that the 'missing link' in research of NSD is a service development strategy. Such a strategy should fit the business context of existing services (and/or products) including value in use in the customer's context, the internal resources and the capabilities in the service system and the image and overall business strategy of the firm (Johne and Storey, 1998). In addition, the degree to which the resources and expertise required for the new service and the available delivery systems for existing services fit with the firm's other resources and offerings, and more importantly how well the new service addresses important customer needs and creates value in use as perceived by customers, is central. The results from our study suggest that customer co-creation is important but not as important as managers believe it to be. Moreover, not only collecting information from and about customers, but also what information, how it is collected and – maybe even more important – the ability to integrate and use often 'sticky' customer information (von Hippel, 1994), are important throughout the NSD process.

Second, an important contribution is the identified interaction effect between customer co-creation and the use of integrated development teams. Previous research showed that integrated development teams and customer co-creation for others are important, but did not show that the effect on NSD performance is even greater when using both practices. In a study of IT firms in Taiwan, Lee and Chen (2009) found that project performance was positively correlated with integrated development teams. This study argues that going beyond internally integrated development teams is necessary by integrating customers and other external actors knowledge and skills. Melton and Hartline (2010) suggested that both customers and frontline employees should be involved in integrated development teams, but they did not test that this actually has an impact on NSD performance. By facilitating knowledge sharing and transfer and organisational learning between team members and

customers throughout the development process, project managers can improve NSD performance. The results of this study suggest that project managers should focus their attention on the individual skills on the development team and how they interact with customers. Thus, the service development strategy and a formalised development process should enable and secure external and internal learning and the integration of different skills and customer knowledge in the right stage of the service development process. The successful management of this challenge will save time, energy and money (Stevens and Dimitriadis, 2004; Melton and Hartline, 2010). The identified interaction effect is a key contribution to research on NSD, since it can explain why the effect of customer co-creation on NSD often does not reach the full potential shown in research experiments (for example, see Matthing et al. (2004)).

Re-interpreting the results from a service logic

The understanding of service is undergoing a fundamental shift, from defining services as a category of market offerings with embedded value designed during NSD, to viewing services as resources in customers' value-creation processes (Vargo and Lusch, 2004; 2008). Customers assess the value of new services on the basis of value in their own context, which thus have a major impact on NSD performance. Whether or not a new service is successful has to do with the extent to which value is created in the customer's use context. Spohrer et al. (2007) argued that the customer's context could be understood as a service system including people with knowledge, skills, technology and other resources.

Since services are activities and interactions, some carried out by the provider, some by the customer and maybe some by other involved network actors, a service development strategy and the activities in the NSD process needs to take into account these factors, including the schemas (norms and rules) that shape actors in value-creation processes (Edvardsson et al., 2011). Thus, the role of the service development strategy should be to

develop and align the value proposition (the value that the provider promises the customer) with the design of a service system (here, integrated development teams play a key role) to enable and secure the promised customer value. Thus, a service development strategy has to do with the internal strategic alignment of resources, capabilities and organisational units, including value capture in a service system that enables and facilitates customers in their context-specific, value-creation situations and efforts. Without the support from internal capabilities, structures and a supportive service culture, success in NSD cannot be expected and market performance will not be achieved (for example, see Menor and Roth, 2008). Necessary strategic conditions need to be created, as well as the insight that the outcome of a NSD process is the prerequisite for the service (Edvardsson, 1997).

Managerial implications

This research on NSD practice showed that the level of new services put on the market and then withdrawn due to low sales remains as high as 43 per cent. This failure can be attributed to different activities in a service firm, such as marketing and sales and service operations, but some of these failures could have been avoided in NSD. A potential barrier to improving NSD performance can arise from a misperception of the actual complexity of NSD, and that service development strategy is the missing link. The low degree of investments in NSD signals that it is not of a strategic importance for many service firms. Managers often believe that they have NSD figured out, that they are already successfully managing NSD and that they know how to create and use customer knowledge.

A number of important managerial implications emerge when managers' beliefs are compared with the results of our research. The most important issue is that managers underestimate the role of having a NSD strategy and aligning NSD projects with internal resources and capabilities, while at the same time focusing on value creation with the new service. Having a strategy for NSD should obviously improve NSD performance, but that its

effect should be stronger than the other key strategic factors was less expected. Instead of treating NSD as something that just happens, managers must not only emphasise a NSD strategy that focuses on the value proposition and the firm's strategy, but must also take its point of origin in customers' value creation. By balancing this with the internal capabilities of the service system, service companies should be able to reduce the number of new services that fail when introduced on the market.

Limitations and further research

Although this study has its merits, it also has some limitations. One limitation of this research is the use of subjective measures of NSD performance. This study builds on existing scales of NSD performance that were validated in previous research (Moorman and Rust, 1999). Future studies could include objective measures of NSD performance and, ideally, track them over a longer period. Since companies invest limited resources in NSD and these are spread over a range of functional areas in service organisations, such an approach is not without difficulties.

The results of this study are based on a cross-sectional investigation of NSD in service companies in Germany, Switzerland and Sweden. Next step is to include companies in other countries in Europe as well as in Asia. Moreover, replicating and extending this study by investigating a diverse set of services (customisation versus standardisation, high-tech versus high-touch and service firms versus manufacturing firms) within the same study has the potential to make a significant contribution to the understanding of the key strategic factors in NSD. An additional limitation is the operationalization of service development strategy as a single item construct. More research is needed to understand how service companies put their service development strategy into practice.

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FIGURES AND TABLES

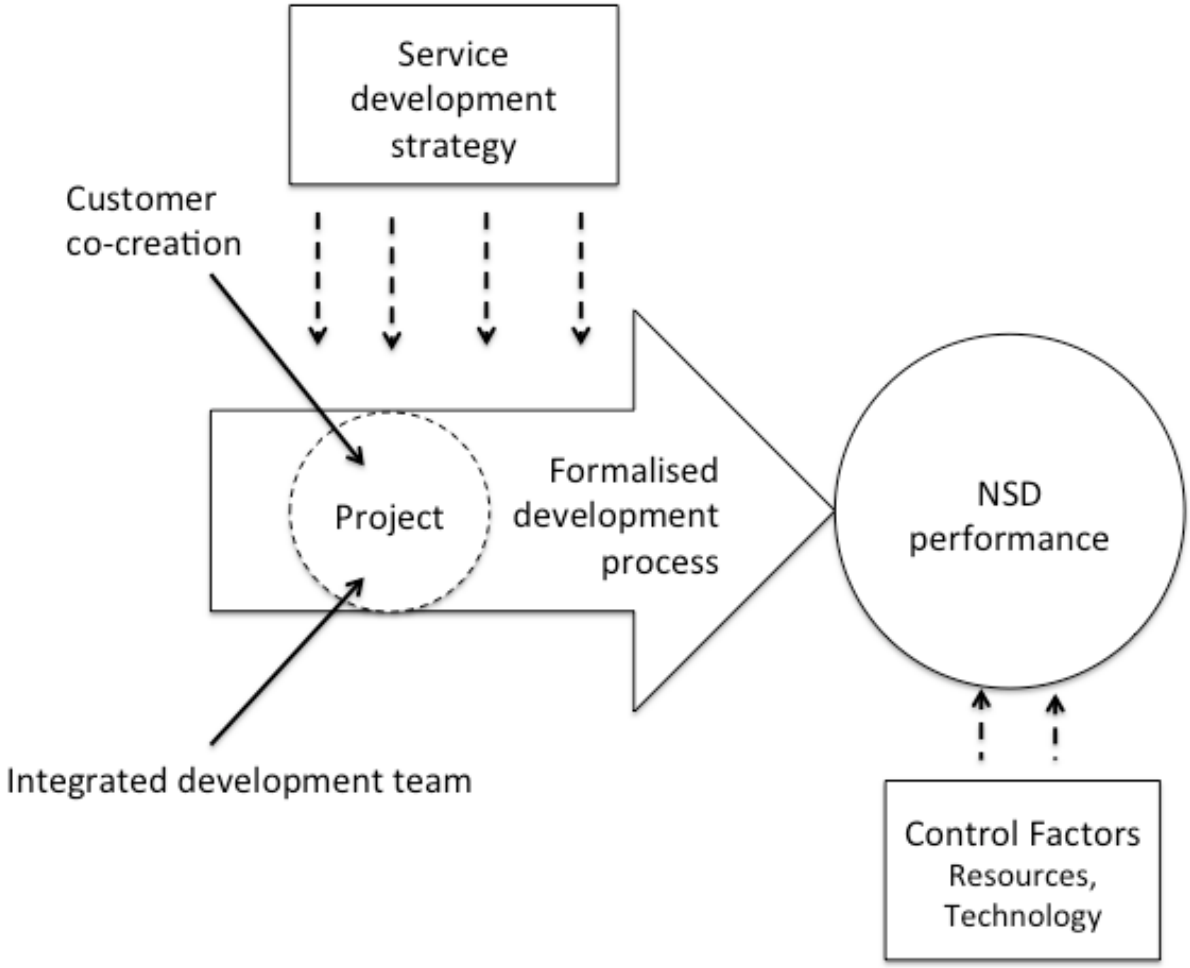

Figure 1: Conceptual model for NSD.

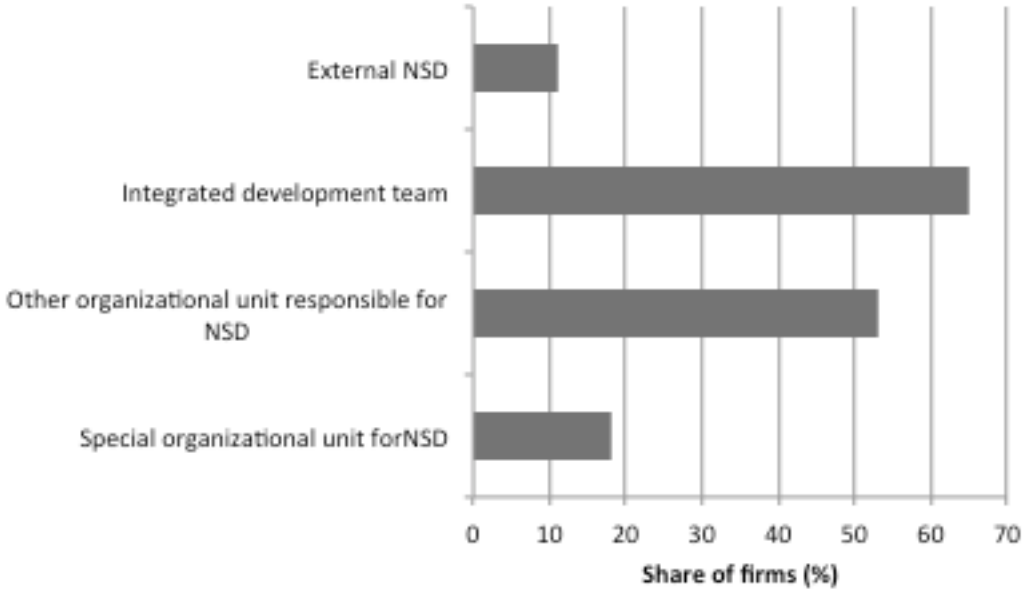

Figure 2: Organisation of NSD.

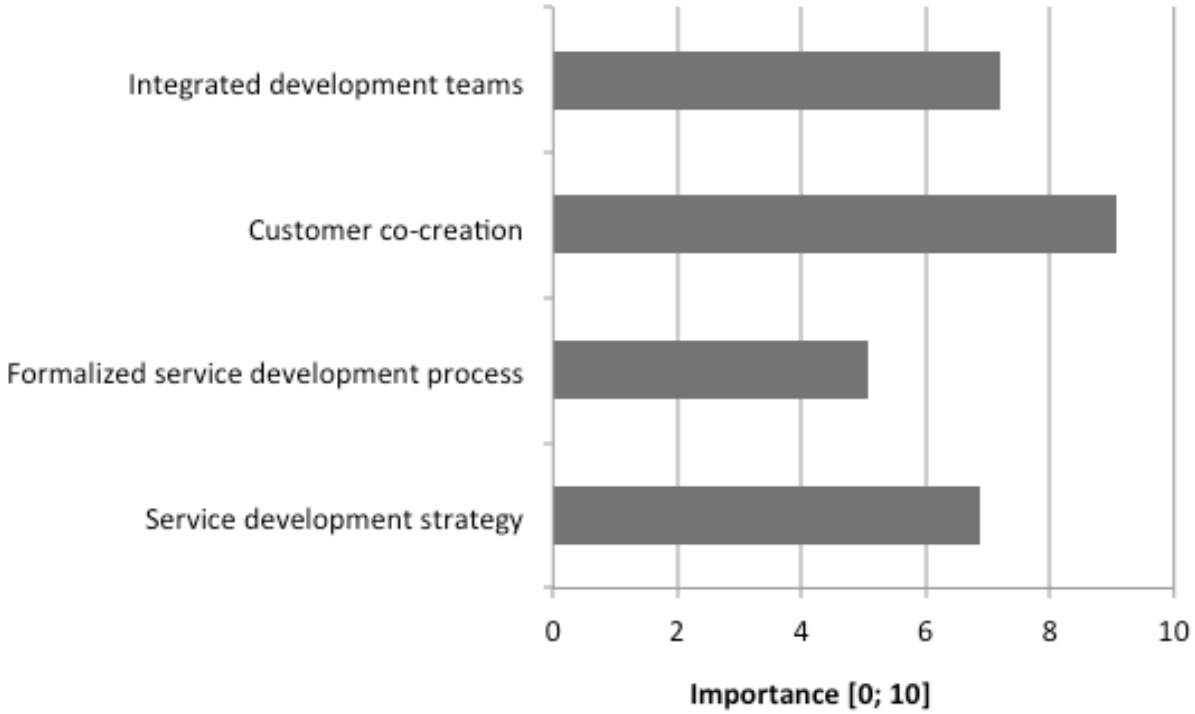

Figure 3: Managers' perception of the importance of key strategic factors for NSD.

Table 1: Regression results.

NSD performance		
Control variables	**Regression coefficients**	**t-value and hypotheses**
Country	–0.20	t = 2.4
Technology factors	–0.01	t = 0.8
Amount of resources	–0.01	t = -0.75
Independent variables		
Service development strategy	0.24	t = 2.3 (H1 supported)
Formalised service development process	0.14	t = -2.7 (H2 supported)
Integrated development teams	0.11	t = -2.0 (H3 supported)
Customer co-creation	0.10	t = -2.0 (H4 supported)
Integrated development teams x Customer co-creation	0.12	t = -2.8 (H5 supported)
F=8.33		$p < 0.01$
R^2	0.14	

Appendix 1: Constructs and items.

Control variables	**Country** (single item)
	Sweden
	Switzerland
	Germany
	Technological factors (alpha=0.71; Moorman and Miner, 1997)
	The technology in our industry is changing rapidly.
	Technological changes provide big opportunities in our industry.
	A large number of new service ideas have been made possible through technological breakthroughs in our industry.
	It is very difficult to forecast where the technology in this service area will be in the next three years.
	Amount of resources (single item)
	In a typical service development project, how many people are involved on average?
Key strategic factors	**Service development strategy** (single item)
	Does the firm have an explicit strategy for service development (new and existing services)?
	Integrated development teams (alpha=0.62; Joshi and Sharma, 2004)
	Our projects are comprised of individuals drawn from a number of different functional areas.
	In our organisation, functional areas are viewed as resource pools from which to draw personnel for cross-functional teams
	Our project teams are given a budget and have specific responsibilities in terms of service development.
	Formalised service development process (alpha=0.70)
	How important do you consider the following steps at the development of services?
	We have a formalised process for new service development with detailed task descriptions.
	Customer co-creation for others (alpha=0.70; Joshi and Sharma, 2004)
	We went through lots of iterations based on customer feedback prior to launching the service in the market.
	We developed and tested lots of new ideas over the course of this new service development process.
	The development project involved numerous failed experiments.
	We learned about customer needs as we worked with customers through new versions of the service.
	The actual new service that we took to market was very different from our initial expectation.
Results	**NSD performance (alpha=0.86; Moorman and Rust, 1999)**
	Relative to your service development objectives, how are your new services (launched in the last three years in the market) performing in terms of …
	Costs?
	Sales?
	Customer satisfaction?
	Profitability?
	Market share?
	Innovativeness?