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MANAGING AND ORGANIZING FOR INNOVATION IN SERVICE FIRMS

A literature review with annotated bibliography

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About VINNOVA

VINNOVA, Swedish Governmental Agency for Innovation Systems.

VINNOVA´s mission is to *promote sustainable growth*
by funding *needs-driven research*
and developing *effective innovation systems*.

Through its activities in this field, VINNOVA aims to make a significant contribution to Sweden´s development into a leading centre of economic growth.

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Research and Innovation for Sustainable Growth.

Managing and Organizing for Innovation in Service Firms

A literature review with annotated bibliography

by

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Foreword

VINNOVA (Swedish Governmental Agency for Innovation Systems) is a State authority that aims to promote growth and prosperity throughout Sweden. Our particular area of responsibility comprises innovations linked to research and development. Our tasks are to fund needs-driven research and to strengthen the networks that are a necessary part of an effective innovation system.

VINNOVAs commitments in the field of work life development aim to strengthen business and public sectors contribution for a sustainable development by enlightening the importance of the employee as an actor and a creative resource. Focus lies on the organisation of work, and on management and leadership that increase the ability to develop a long-term sustainable working life. The objective is global competitiveness.

The number of companies that supply services increases. Services are thus an increasingly important part of the labour market with significant potential to contribute to Sweden's growth. Knowledge about the role of work organisation and leadership in business development and innovation rests today mainly on experience from large Swedish industrial companies. This literature review was initiated in order to identify knowledge gaps in the scientific literature on how service work can be organized and led in order to safeguard and promote the innovation potential of employees.

The literature review is written by two scientists. Annika Schilling is Assistant Professor in Business Administration, working at the Stockholm School of Economics and Uppsala University. In spring 2008 she defended the thesis: Can consultants merge? A study of the importance of identity in a merger between the consultants. Her research has focused on communications consultants and their role in medialized businesses, HRM in professional services and innovation in service companies.

Andreas Werr is Associate Professor and acting head of the Center for People and Organization at the Stockholm School of Economics. Werr’s research has mainly focused on different aspects of management consulting, knowledge work and professional service firms. Current projects focus on knowledge integration in knowledge intensive services, innovation through solutions oriented services and HRM in professional service firms. His research has been published in e.g. Organizations Studies, Organization and the Sloan Management Review.

The authors show that there are significant gaps in knowledge and a great need for research on how service work can be designed, organized and led in order to promote the innovation potential of employees. Schilling and

Werr identified and elaborate the following knowledge gaps and needs for further research:

- Understanding the dynamics of the service innovation process
- Using contextualized models of service innovation
- Exploring and comparing different types of service firms
- Service innovation in business networks
- Knowledge and knowledge processes in service innovation
- Innovative climate and HRM practices
- Communication and "talk" in the service innovation.
- Power and politics in the service innovation
- Gender studies of service innovation

In spring 2009 VINNOVA launches almost 40 million on research and development to help fill some of the identified knowledge gaps. The literature review is part of the preparatory work on the announcement. In addition, an interview study is initiated and will be released during spring.

VINNOVA in February 2009

Pär Larsson & Kerstin Waldenström
Programme managers
Working Life Department

Content

1 Introduction

Services are a growing part of the economy and in many countries a dominant source of employment. While new product development in traditional industrial firms is generally a well organized and managed activity, studied and supported by a large array of research, the development of new services in service firms is often more of an ad-hoc happening. Research has also been scarce when it comes to understanding and developing the processes by which new services emerge in service firms, even though research on service innovation and new service development has grown into a respectable and vibrant field of its own in the past 20 years (see Figure 1). This growth of research has gone hand in hand with a change in the view of services, from being seen as non-innovative, to a view that highlights innovation potential in services. Information technology has been a strong driver in this development (Miles, 2000).

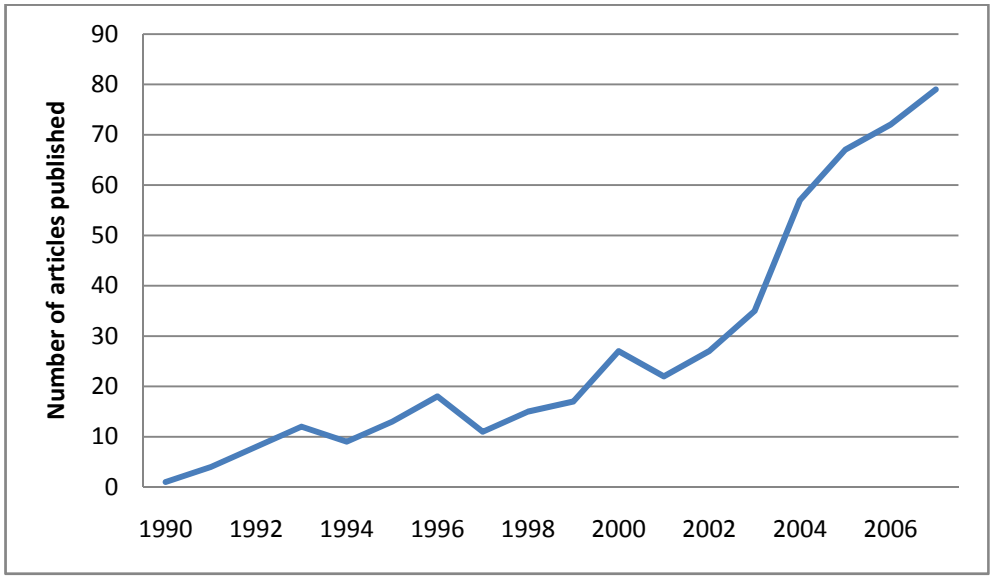
While services may vary significantly in character, they have a number of characteristics that distinguish them from traditional products and which create specific challenges in relation to the development of new offerings. These characteristics are generally summarized under the aspects of intangibility, heterogeneity, inseparability and perishability (Johne & Storey, 1998). *Intangibility* implies that services consist of ideas and experiences rather than physical artifacts. Services are about processes rather than “things”. As such service innovations may be hard to protect against competitors, but also for customers to judge and evaluate and to test in concept. Furthermore, services are generally produced in interaction with the customer, often in the customer’s local and varying context, making services *heterogeneous*. Every service delivered is in some aspect unique and under the control of the individual service worker, at the same time as consistency may be an important aspect of service quality. Controlling both the stability of the service offering as well as its change and development thus provides a challenge. Furthermore, the production and consumption of services are generally *inseparable* making the customer a potentially essential part in the creation of new services. Following from the integrated nature of production and consumption, services are *perishable* in the sense that they cannot be stored. They cannot be produced to stock and sold at a later time, which makes capacity planning an important and challenging task.

While these characteristics imply specific conditions for the development and delivery of services it has been questioned whether it is possible to make the clear distinction between products and services implied by the

above. Recent developments instead propose to go beyond the product-service distinction by introducing a "service-dominant logic" (Vargo & Lusch, 2004, Lusch *et al.*, 2007). A service dominant logic "recognizes the firm and its exchange partners who are engaged in the co-creation of value through reciprocal service provision." (Lusch *et al.*, 2007, p5). It suggests that all exchange (be it goods, services, money, etc) is fundamentally about the application of specialized skills and knowledge and involves the customer as well as other stakeholders as important co-creators of value.

Both these perspectives emphasize the importance of the knowledge, skills and motivation of the individuals involved in service delivery processes for the perceived value of a service, but also for the processes of developing and launching new services (Johne & Storey, 1998; Edvardsson *et al*., 2006). A growing field of research has emerged around the issue of service innovation and new service development in the past 2 decades. Innovation is most often defined as the creation of something new – an artifact, an idea or a method – which is also put into use. In this paper we review research focusing on the development of new services or work processes in service firms. The field is however still rather young with a large growth in research activity since about 2000 (see Figure 1). The current paper reviews this literature with a focus on organizational and management practices aimed at exploiting the ideas and knowledge of the service workers in the service firm for the creation of new services.

Figure 1 Number of articles including the terms "new service development" or "service innovation" in the EBSCO literature database 1990-2007



1.1 Purpose

This study reviews the scientific literature on service innovation and new service development with a focus on what is known about the role of service workers in the innovation process and the organizational and management practices by which their knowledge may be exploited in the development of new services. It provides an overview of the literature, a thematic analysis of the key themes covered by the literature as well as a discussion of research gaps and the need for further research.

The study is based on a search of the EBSCO journal database as well as a review of the content of 10 scientific journals in different areas during the past 11 years (1998-2008). All in all, 74 articles were identified as relevant given the scope of the review. In addition to the journal articles a systematic search for dissertations on the topic published in Sweden in the past 11 years was carried out. Through this search five dissertations were identified as relevant.

1.2 Limitations

The review focuses on service innovations in firms that mainly produce services and thus may be labeled service firms. This excludes studies of service innovations within traditional product-oriented organizations or other types of service organizations, such as health care and public sector, unless these were included in the service firm category. Second, the review is focused on the role of the service workers' knowledge and ideas in the creation of new services. This excludes for example studies with a sole focus on technology or marketing as main drivers of service innovation. Third, our focus has been on organizational and processual aspects of service innovation and new service development, thus excluding studies focusing mainly on corporate strategy aspects of innovation in service firms. Since the focus is on service innovation – i.e. the development of new service offerings – studies of other types of change and development processes have been excluded.

2 Approach

The literature review is mainly based on articles in scientific journals. A search for relevant Swedish dissertations provided a number of additional sources. The review of journal articles was carried out in four steps.

First, the EBSCO database was searched, for the time period 1998 through 2008, using the keywords “service firm” combined with “innovation”, “new service development”, “human resource management”, “knowledge management” and “learning”. Given our focus on the exploitation of the service worker’s knowledge and ideas in the service development process, the initial search was deliberately wide including aspects such as knowledge management and learning in service firms and HRM more generally.

Second, based on the outcome of this broad search 10 journals which were well represented among the articles, and in which we thus expected to find a deeper discussion of new service development and the role of service workers in this process, were identified for closer study (see Table 1). The journals were chosen to cover different disciplines and approaches to services and service development, including service management, innovation management, human resource management and organizational behavior and psychology. The results show that three journals seem to dominate the literature – Service Industries Journal, International Journal of Innovation Management and the Journal of Product Innovation Management. These are specialized journals focusing on the service industry and innovation respectively. Less research seems to have been carried out from a more organizational or HR perspective. This motivates the inclusion of the Human Resource Management Journal in the study as we wanted to make sure that the lack of research in this area wasn’t a consequence of different keywords being used in the area. Although the first broad search identified a number of articles dealing with service work more generally, non of them explicitly discussed innovation or the development of new services.

The content of these journals for the period of the past 11 years (1998-2008) was then reviewed in more detail to find further relevant articles which might not have been identified by the keyword search in step 1.

Table 1 Number of articles in the reviewed journals

Journal	Number of articles	Article references
Service Industries Journal	15	(Abramovici & Bancel-Charensol, 2004; Björlin Lidén & Sandén, 2004; Cainelli *et al.*, 2004; Camacho & Rodríguez, 2005; Chan *et al.*, 1998; Czarnitzki & Spielkamp, 2003; Djellal & Gallouj, 2006, 2007; Gadrey & Gallouj, 1998; Howells, 2004; McCabe, 2000; Perks & Riihela, 2004; Ramirez, 2004; Storey & Kelly, 2001; Wong & He, 2005)
International Journal of Innovation Management	11	(Bower *et al.*, 2000; de Jong & Kemp, 2003; den Hertog, 2000; Dolfsma, 2004; Hipp *et al.*, 2000; Hull, 2003; Lawson & Samson, 2001; McMeekin & Coombs, 1999; Miles, 2000; Uchupalanen, 2000; Wyatt, 2000)
Journal of Product Innovation Management	10	(Avlonitis *et al.*, 2001; de Brentani, 2001; Ettlie & Kubarek, 2008; Kristensson *et al.*, 2004; Leiponen, 2006; Mascitelli, 2000; Meyer & DeTore, 2001; Song *et al.*, 2000; van Riel *et al.*, 2004; Verganti & Buganza, 2005)
Journal of Service Research	6	(Berry & Lampo, 2000; Froehle *et al.*, 2000; Hull, 2004; Lievens *et al.*, 1999; Lievens & Moenaert, 2000a; Magnusson *et al.*, 2003)
International Journal of Service Industries Management	6	(Gustafsson *et al.*, 1999; Kelly & Storey, 2000; Kristensson *et al.*, 2008; Matear *et al.*, 2004; Matthing *et al.*, 2004; van Riel & Lievens, 2004)
Human Relations	4	(Fitzgerald *et al.*, 2002; Heusinkveld & Benders, 2005; McCabe, 2002; Osborne, 1998)
Journal of Management Studies	2	(Damanpour & Gopalakrishnan, 2001; Lievens & Moenaert, 2000b)
Research in Organizational Behavior	1	(Hargadon, 2002)
Journal of Occupational and Organizational Psychology	1	(Fay *et al.*, 2006)
Human Resource Management Journal	0	
Other[1]	18	(Alam, 2006a, 2006b; Anand *et al.*, 2007; Björkman, 2004; Blindenbach-Driessen & van den Ende, 2006; de Jong & Vermeulen, 2003; Froehle & Roth, 2007; Johne & Storey, 1998; Kristensson *et al.*, 2002; Leiponen, 2005; Matthing *et al.*, 2006; Menor & Roth, 2008; Oke, 2007; Tether, 2003; Tether & Tajar, 2008; Tsai *et al.*, 2008; van den Ende, 2003; van der Aa & Elfring, 2002)

Based on a scanning of identified articles in step 1 and 2, 74 articles falling into the scope of the review were identified. In a third step these articles were read through, categorized in terms of methodological approach,

[1] Academy of Management Journal (1), Creativity and Innovation Management (2), Economy, Innovations and New Technology (1), European Journal of Marketing (1), Industry and Innovation (1), Industrial Marketing Management (1), International Journal of Operations & Production Management (1), International Marketing Review (1), Journal of Service Marketing (1), Management Decision (1), Personnel Review (1), Production & Operations Management (2), Research Policy (3) and Scandinavian Journal of Management (1).

geographical focus and kind of service covered. A brief summary of each article was also produced (see Appendix – Annotated Bibliography).

Following the reading and summarization of these articles, in a fourth step themes in the literature were identified as to what was discussed as important enablers and aspects of new service development. Ten broad themes were identified, which provide the basic structure for this report and are discussed in more detail in section 5.

In addition to the review of articles in scientific journals, dissertations within the discipline business administration and presented at Swedish universities between 1998 and 2008 were scanned to identify further sources within the scope of the review. This search generated five additional sources (see Table 2).

Table 2 Swedish dissertations between 1998 and 2008

Dissertation	Research method	Service sector	Focus
Björkman, Hans. (2005). *Learning from members. Tools for strategic positioning and service innovation in trade unions.* Stockholm School of Economics, EFI.	Interviews and focus groups	Trade union	Learning from members as a tool for service innovation in trade unions
Gottfridsson, Patrik. (2001). *Småföretags tjänsteutveckling - en studie av hur småföretag utvecklar individuellt anpassade tjänster.* Stockholms universitet, Företagsekonomiska institutionen.	Interviews	Small service firms	Development of customized services in small service firms
Magnusson, Peter. (2003). *Customer-oriented product development. Experiments involving users in service innovation.* Stockholm School of Economics, EFI.	Experiments and interviews	Telecom-munication	Customer involvement in new service development
Matthing, Jonas. (2004). *Customer involvement in new service development.* Karlstad University, Division for Business and Economics Service Research Center.	Experiments	Telecom-munication	Customer involvement in new service development
Sonesson, Olle. (2007). *Tjänsteutveckling med personalmedverkan.* Karlstad university, Fakulteten för ekonomi, kommunikation och IT.	Interviews	Financial services	Front-line employee involvement in new service development

3 An overview of the field of research

Research on the service workers' role in new service development and service innovation has been carried out from different perspectives using different approaches and covered different kinds of services. Starting of with the applied methodologies, our review points at a slight preference for quantitative approaches using questionnaires or database data as a basis for different kinds of regression and cluster analyses. A majority of these studies deals with the broader (industry or national) patterns of service firms' innovative behavior and the links between innovative behavior and performance. A little less than half of the identified studies were based on quantitative data. About one third of the articles and dissertations were based on a qualitative approach, mostly reporting single or multiple case studies. The rest of the articles were either combinations of qualitative and quantitative approaches or literature reviews/conceptual discussions (see Table 3).

Table 3 Number of articles using different research methods

Research method	Number of articles	Article references
Quantitative	37	(Alam, 2006a; Avlonitis *et al.*, 2001; Cainelli *et al.*, 2004; Camacho & Rodríguez, 2005; Chan *et al.*, 1998; Czarnitzki & Spielkamp, 2003; Damanpour & Gopalakrishnan, 2001; de Brentani, 2001; de Jong & Kemp, 2003; Ettlie & Kubarek, 2008; Fay *et al.*, 2006; Froehle *et al.*, 2000; Hipp *et al.*, 2000; Hull, 2003, 2004; Kelly & Storey, 2000; Kristensson *et al.*, 2002; Kristensson *et al.,* 2004; Leiponen, 2005, 2006; Lievens *et al.*, 1999; Lievens & Moenaert, 2000a, 2000b; Magnusson *et al.*, 2003; Matear *et al.*, 2004; Matthing, 2004; Matthing *et al.*, 2006; Matthing *et al.*, 2004; Menor & Roth, 2008; Oke, 2007; Osborne, 1998; Song *et al.*, 2000; Tether, 2003; Tether & Tajar, 2008; Tsai *et al.*, 2008; van Riel *et al.*, 2004; Wong & He, 2005)
Qualitative, mostly case studies	25	(Abramovici & Bancel-Charensol, 2004; Alam, 2006b; Anand *et al.*, 2007; Björkman, 2004, 2005; Björlin Lidén & Sandén, 2004; Blindenbach-Driessen & van den Ende, 2006; Bower *et al.*, 2000; Fitzgerald *et al.*, 2002; Gottfridsson, 2001; Gustafsson *et al.*, 1999; Heusinkveld & Benders, 2005; Kristensson *et al.*, 2008; McCabe, 2000, 2002; McMeekin & Coombs, 1999; Perks & Riihela, 2004; Ramirez, 2004; Sonesson, 2007; Uchupalanen, 2000; van den Ende, 2003; van der Aa & Elfring, 2002; van Riel & Lievens, 2004; Verganti & Buganza, 2005; Wyatt, 2000)
Quantitative and qualitative	3	(Froehle & Roth, 2007; Magnusson, 2003; Storey & Kelly, 2001)
Literature review/theoretical discussion	14	(Berry & Lampo, 2000; de Jong and Vermeulen, 2003; den Hertog, 2000; Djellal & Gallouj, 2006, 2007; Dolfsma, 2004; Gadrey & Gallouj, 1998; Hargadon, 2002; Howells, 2004; Johne & Storey, 1998; Lawson & Samson, 2001; Mascitelli, 2000; Meyer & DeTore, 2001; Miles, 2000)

Second, the research field may be discussed in terms of the kinds of services studied. While we have discussed a number of common key characteristics of services, they may vary significantly in character beyond these general similarities. Schmenner (1986) distinguishes between four types of service operations based on the degree of labor intensity (defined as the ratio of the labor cost to the value of the plant and equipment) on the one hand and the degree of customization and interaction with the customer on the other. These four types of service operations are: the Service factory, the Service shop, the Mass service and the Professional service (see Figure 2).

Figure 2 Different kinds of service operations (based on Schmenner 1986)

Degree of labor \ Degree of interaction and customization	***Low***	***High***
Low	Service Factory • Airlines • Trucking • Hotels • Retail banking	Service shop • Hospitals • Auto repair • Other repair services
High	Mass service • Retailing • Wholsaling • Schools	Professional service • Doctors • Lawyers • Accountants

Further dimensions that are often used to differentiate different kinds of services include capital intensity, knowledge intensity, people connection, technology connection and customer participation (Edvardsson *et al.*, 2000). Variations along these dimensions create different conditions for the new service development process. Looking at the research identified in this review a bias towards some service industries emerges. Telecom and IT services hold the top position. They are followed by financial services, including insurance and reinsurance services and knowledge intensive service firms. The dominance of these service sectors indicates a main focus on technology and knowledge intensive services while less knowledge intensive services are less well represented in the identified research (see Table 4). In Schmenners (1986) terminology, the current research has mainly focused on the extreme kinds of service businesses – i.e. Service factories (low customization and degree of labour) and Professional services (high customization and degree of labour), leaving innovation in mass services and service shops less well studied.

Table 4 Number of articles focusing on different service sectors

Service sector	Number of articles	Article references
Telecom and IT	14	(Kristensson *et al.*, 2002; Kristensson *et al.,* 2004; Kristensson *et al.*, 2008; Lawson & Samson, 2001; Magnusson, 2004; Magnusson *et al.*, 2003; Matthing, 2004; Matthing *et al.*, 2006; Matthing *et al.*, 2004; Ramirez, 2004; Tsai *et al.*, 2008; van den Ende, 2003; van Riel and Lievens, 2004; Verganti & Buganza, 2005)
Financial services	13	(Alam, 2006a, 2006b; Avlonitis *et al.*, 2001; Damanpour & Gopalakrishnan, 2001; Lievens *et al.*, 1999; Lievens & Moenaert, 2000a, 2000b; McCabe, 2000, 2002; Menor & Roth, 2008; Meyer & DeTore, 2001; Sonesson, 2007; Uchupalanen, 2000)
Knowledge intensive services	9	(Anand *et al.*, 2007; Blindenbach-Driessen & van den Ende, 2006; de Jong & Kemp, 2003; den Hertog, 2000; Gadrey & Gallouj, 1998; Heusinkveld & Benders, 2005; Leiponen, 2005, 2006; Wong & He, 2005)
Public services/health care	6	(Bower *et al.*, 2000; Djellal & Gallouj, 2006; Fay *et al.*, 2006; Fitzgerald *et al.*, 2002; Osborne, 1998; Wyatt, 2000)
Other[2]	4	(Björkman, 2004, 2005; Gustafsson *et al.*, 1999; Perks & Riihela, 2004)
Several different sectors	6	(Chan *et al.*, 1998; Kelly & Storey, 2000; Oke, 2007; Storey & Kelly, 2001; Tether, 2003; van der Aa & Elfring, 2002)
Not specified/ no specific	27	(Abramovici & Bancel-Charensol, 2004; Berry & Lampo, 2000; Björlin Lidén & Sandén, 2004; Cainelli *et al.*, 2004; Camacho & Rodríguez, 2005; Czarnitzki & Spielkamp, 2003; de Brentani, 2001; de Jong & Vermeulen, 2003; Djellal & Gallouj, 2007; Dolfsma, 2004; Ettlie & Kubarek, 2008; Froehle & Roth, 2007; Froehle *et al.*, 2000; Gottfridsson, 2001; Hargadon, 2002; Hipp *et al.*, 2000; Howells, 2004; Hull, 2003, 2004; Johne & Storey, 1998; Mascitelli, 2000; Matear *et al.*, 2004; McMeekin & Coombs, 1999; Miles, 2000; Song *et al.*, 2000; Tether & Tajar, 2008; van Riel *et al.*, 2004)

Thirdly, we may comment on the geographical distribution of the studies identified in the review. It shows a dominance for Europe with 39 of the studies having been carried out in Europe, 3 in Asia and 2 in the US (although it may be expected that the majority of the "not specified" studies are carried out in a US context) (see Table 5).

[2] Aviation (1), trade union (2) and postal services (1).

Table 5 Number of articles focusing on different countries/regions

Country/region	Number of articles	Article references
UK	10	(Bower *et al.*, 2000; Fay *et al.*, 2006; Fitzgerald *et al.*, 2002; Kelly & Storey, 2000; McCabe, 2000; Oke, 2007; Osborne, 1998; Perks & Riihela, 2004; Ramirez, 2004; Storey & Kelly, 2001)
Sweden	14[3]	(Björkman, 2004, 2005; Björlin Lidén & Sandén, 2004; Gottfridsson, 2001; Gustafsson *et al.*, 1999; Kristensson *et al.*, 2002; Kristensson *et al.,* 2004; Kristensson *et al.*, 2008; Magnusson, 2003; Magnusson *et al.*, 2003; Matthing, 2004; Matthing *et al.*, 2006; Matthing *et al.*, 2004; Sonesson, 2007)
Rest of Europe[4]	15	(Cainelli *et al.*, 2004; Czarnitzki & Spielkamp, 2003; Hipp *et al.*, 2000; Lievens & Moenaert, 2000a, 2000b; Tether, 2003; Tether & Tajar, 2008; van Riel & Lievens, 2004; Verganti & Buganza, 2005) (Abramovici & Bancel-Charensol, 2004; Avlonitis *et al.*, 2001; Camacho & Rodríguez, 2005; Leiponen, 2005; van den Ende, 2003; van der Aa & Elfring, 2002)
Asia[5]	3	(Chan *et al.*, 1998; Uchupalanen, 2000; Wong & He, 2005)
US	2	(Damanpour & Gopalakrishnan, 2001; Froehle *et al.*, 2000)
New Zealand	1	(Matear *et al.*, 2004)
Several different	4	(Alam, 2006a; Song *et al.*, 2000; van Riel *et al.*, 2004; Wyatt, 2000)
Not specified/ no specific	30	(Alam, 2006b; Anand *et al.*, 2007; Berry & Lampo, 2000; Blindenbach-Driessen & van den Ende, 2006; de Brentani, 2001; de Jong & Kemp, 2003; de Jong & Vermeulen, 2003; den Hertog, 2000; Djellal & Gallouj, 2006, 2007; Dolfsma, 2004; Ettlie & Kubarek, 2008; Froehle & Roth, 2007; Gadrey & Gallouj, 1998; Hargadon, 2002; Heusinkveld & Benders, 2005; Howells, 2004; Hull, 2003, 2004; Johne & Storey, 1998; Lawson & Samson, 2001; Leiponen, 2006; Lievens *et al.*, 1999; Mascitelli, 2000; McCabe, 2002; McMeekin & Coombs, 1999; Menor & Roth, 2008; Meyer & DeTore, 2001; Miles, 2000; Tsai *et al.*, 2008)

[3] Of which 5 are Swedish dissertations.
[4] Europe (3), Italy (2), Germany (2), Belgium (2), the Netherlands (2), Finland (1), France (1), Spain (1) and Greece (1).
[5] Thailand (1), Hong Kong (1) and Singapore (1).

4 Innovation in service firms

In this section we comment on patterns in how previous research has conceptualized service innovation in general terms. These patterns will serve as a background and reference point for the next section identifying a number of themes in the research on managing and organizing the service innovation process. Two conceptualizations are here discussed more deeply: typologies of different kinds of innovations in service firms and innovations in different service sectors. Additionally some comments will be made regarding studies of the performance benefits of innovation in service firms.

4.1 Types of innovation in service firms

Several of the articles suggest and use typologies of what is included in the concept "innovation" in service firms. Some of these typologies specify in what part of the service firm innovation takes place. Hipp *et al*. (2000) make a distinction between three types of innovations:

1 *Service innovations*, which include innovation in the service offer *per se* in the form of introductions of new or significantly improved services;
2 *process innovations*, which include new and improved work methods in the process by which a specific service is produced; and
3 *organizational innovation*, which is not limited to the individual service production process but includes significant improvements in wider organizational structures or processes.

Similar typologies appear in other articles. In these the category "service innovation" has also been referred to as *product innovation* (Damanpour & Gopalakrishnan, 2001), *service product innovation* (Oke, 2007) and *innovation in the service concept* (den Hertog, 2000). These typologies however do not make a distinction between innovation in the process specific to a service and innovation in the organization as a whole. These two innovation types, process and organizational innovation, are instead collapsed and labeled *process innovation* (Damanpour & Gapalakrishnan, 2001), *service innovation* (Oke, 2007) or *innovation in the service delivery system/organization* (den Hertog, 2000). However, to simplify the discussion Hipp *et al.*'s typology of service innovation, process innovation and organizational innovation can be said to capture the basics of the distinction of different types of innovation in the literature.

Hipp *et al.*'s (2000) typology can further be linked to three different modes of innovation activities identified by Tether & Tajar (2008). Activities oriented towards the development of new products/services, which can be

linked to service innovation, are here allocate to *the product-research mode* of innovation. Activities oriented to the development of new production processes, which thus can be linked to process innovation, are allocated to *the process-technologies mode* of innovation. Lastly, activities oriented toward organizational change and consequently linked to organizational innovation, are allocated to *the organizational-cooperation mode* of innovation. Tether & Tajar call the two first modes two forms of technical innovation and the third a form of organizational innovation. The mode of innovation can also take the form of *ad hoc processes*, *expert driven processes* or *formal processes* (Gadrey & Gallouj, 1998).

Some articles focus mainly on process innovations and specifically *innovations in technology* supporting the production of services. For example, Bower *et al.* (2000) investigate innovations in information and communication technologies in healthcare services and Wyatt (2000) examines attempts to develop information networks in government administration. Uchupalanan (2000) talks about innovations based on information technology, both in relation to service and process innovations.

Other articles focus mainly on organizational innovation. McCabe (2000, 2002) has examined organizational innovation in the financial sector. He has focused on innovation in work organizations and specifically new standardized methods of management control such as TQM and BPR (McCabe, 2000). The service management model "lean services" could be another more recent such method for management control in service firms. Van der Aa & Elfring (2002) argue that organizational innovations play a significant role in services, alongside more technical innovations, and identify three forms of organizational innovation:

1 *multi-unit organizations*, in which a management system used in one part of the organization is reproduced in multiple units;
2 *new combinations of services*, which implies the creation of new combinations of service activities, service parts and service segments; and
3 *customer as co-producer*, which implies redefining the role of the customer as co-producer of services.

Some studies further stress the importance of innovations in the *relationship with the customer*. Such innovations may either regard the customer needs the service addresses or the interaction processes with the customer in service delivery. den Hertog (2000), for example, mentions innovations in the client interface as one type of innovation in service firms alongside service innovation, process innovation and organizational innovation. Futhermore, Osborne (1998) identifies four archetypes of change in social policy implementation of which three are seen as innovative. These

archetypes are further plotted out in a diagram as being distinct in the degree of change in service and degree of change in the relationship to the customers. *Total change* includes new services and new relations to the customers. *Expansionary change* includes no change in services but new relations to the customers. *Evolutionary change* includes new services but no changes in the relations to the customers. *Developmental change*, which is not seen as innovative, includes no changes in neither services nor relations to the customers.

Looking at patterns of innovative behavior in service firms Damanpour & Gapalakrishnan (2001) have found that service firms, like companies in the manufacturing sector, emphasize the adoption of service innovations over process innovations. Service innovations are adopted at a greater rate and speed than process innovations. Furthermore, it is likely that an innovation in the service is followed by a later innovation in the service process. In addition Oke (2007) found that service innovations are emphasized more in the telecommunications and financial sectors while process innovations are emphasized in the retail and transport sectors.

Another common theme in previous research concerns different types of *innovative strategies* in service firms. Specifically it is emphasized that service firms vary according to the degree of innovativeness in their service development. Tether (2003) has, for example, found a significant difference between service sectors when it comes to the extent to which the service firms innovate and the extent to which they engage in R&D and collaborative arrangements targeted at innovation.

Based on this, another set of typologies distinguishes between innovations with different degree of novelty/innovativeness. The most commonly used typology distinguishes between six types of innovation which can be positioned on a scale from the one highest on innovativeness to the one lowest (see Avlonitis *et al.*, 2001 and Alam, 2006a):

1 *new-to-the market services*, which are new to everyone,
2 *new-to-the-company services*, which are new to the specific company but already offered by other companies,
3 *new delivery processes*, which can be compared to process innovations above,
4 *service modifications*, which include changes in existing services that do not change the core of the service,
5 *service line extension*, which means adding new services that are similar to existing services, and
6 *service repositioning*, which means repositioning an existing service to meet new customer needs.

Others talk about a scale between radical innovation and incremental innovation (Oke, 2007) or really new and incrementally new services (de Brentani, 2001).

According to the findings of Alam (2006) less innovative strategies, such as new to the company innovations, are lower in cost and less risky than highly innovative "new-to-the-world services", which is why non-radical innovations also often are seen as the most popular option. Contrary to this, Oke (2007) has found that the formal management practices supporting innovation in service firms tend to be biased toward the development of radical innovations on the expense of non-radical, incremental innovations.

Some articles have however focused mainly on less innovative new service development. Berry & Lampo **(2000)** look at how service firms can be innovative with what they have through service redesign. They identify five approaches to service redesign:

1 *self-service*, where the customer assumes the role of producer,
2 *direct service*, where the service is delivered to the customers' location,
3 *pre-service*, where the activities of the service are streamlined,
4 *bundled service*, where multiple services are combined into a package and
5 *physical service*, where tangibles associated with the service are manifested.

Ettlier & Kubarek (2008) look at design reuse in both manufacturing and service firms. They found that unlike manufacturing firms service firms may produce novel services although the percentage of design reuse is high.

To summarize, previous research makes a distinction between on the one hand different types of innovations in service firms and on the other new services with different degree of innovativeness. From these studies we can draw the conclusion that it is relevant to talk about three types of innovations in service firms: service innovation, process innovation including innovations in supporting technology and organizational innovation. The degree of innovativeness can vary from radical/new-to-the-world innovations to incremental changes in the offered services or in supporting processes and organization.

One distinction that we have not seen in the service innovation literature concerns the innovation patterns in smaller versus larger service firms. Only Gottfriedsson (2001) makes the distinction of firm size a relevant variable in his study. Distinguishing between service firms of various sizes when studying service innovation is relevant since it is reasonable to assume that small, medium and large service firms could have different approaches

toward organizing the innovation process. For that reason future studies should consider taking the size of the service firm into consideration.

4.2 Innovation in different service sectors

Many of the previous studies claim that it is reasonable to assume that service firms in different sectors demonstrate different innovative behaviors. A few studies also show significant differences between service sectors. For example, Tether (2003) has investigated innovation patterns in five service sectors: wholesales trades, transport services, financial services, computer services and technical services. His results show significant differences between service sectors in the extent to which firms innovate and engage in innovative activities. Camacho & Rodriguez (2005) further identify three clusters of sectors varying in degree of innovation. They argue that service firms focusing on research and development, software and other computer activities are high-innovative. Service firms in telecom, financial services and other business services were found to be medium-innovative. Among low-innovative service firms they found wholesale, transport and public services. However, Tether (2003) also found significant differences within different sectors, which shows that despite differences between sectors they should not be seen as homogenous.

More common than comparative studies are, however, articles that focus on innovation patterns in one specific service sector. As illustrated in table 4, four sectors have received extra attention in the articles: financial services, knowledge intensive services, telecom and IT services and public services/health care. In most of these articles the pattern of service innovation found in one service sector is treated as potentially generalizable to all types of service firms. However, articles focusing on different sectors tend also to focus on different issues in relation to service innovation, partly depending on the specific dynamics of service delivery in that sector.

Among the articles focusing on *the financial service sector* we have found that some focus on the existence of different types of innovation (Alam, 2006a; Avlonitis *et al.*, 2001) and the dynamics of the innovation process including the adoption of different types of innovations (Damanpour & Gopalakrishnan, 2001; McCabe, 2000, 2002; Menor & Roth, 2008; Uchupalanen, 2000). Other studies emphasize the importance of communication (Lievens et al., 1999; Lievens & Moenaert, 2000a, 2000b), of using cross-functional teams (Avlonitis *et al.*, 2000) and of involving both customers (Alam, 2006b) and front-line employees in the development of new bank services (Sonesson, 2007).

Within the group of articles focusing on *knowledge-intensive business services* other issues are raised. For example we found a number of articles

looking at knowledge creation and learning in the innovation process (Anand et al., 2007; Leiponen, 2005, 2006), and the process of commoditization of knowledge intensive services (Heusinkveld & Benders, 2005). Further, some articles investigated drivers of innovative behavior of individual employees (de Jong & Kemp, 2003) and the interface between the customer and service provider as a potential source of innovation (Gadrey & Gallouj, 1998). Also general success factors for innovation in these kinds of firms, in comparison to those in other types, have been investigated (Blindenbach-Driessen & van den Ende, 2006). Yet another theme focused on knowledge intensive business firms as potential facilitators of innovation in their client firms (den Hertog, 2000).

Because of their reliance on employees' expertise in everyday operations, knowledge intensive service firms are often researched with a focus on how to create and manage knowledge. This also seems to be the case in the reviewed literature which emphasizes both how to manage knowledge collectively and how to optimize the knowledge possessed by individual employees. When focusing on the *telecom and IT service sectors* a number of articles investigate the benefits and dynamics of involving different actors in the service innovation process. This includes benefits of involving customers (Kristensson et al., 2002; Kristensson et al., 2004; Kristensson et al., 2008; Magnusson, 2003; Magnusson et al., 2003; Matthing, 2004; Matthing et al., 2006; Matthing et al., 2004), the dynamics of involving and motivating employees (Ramirez, 2004; Tsai et al., 2008) and the role of managers' cognitive structures and communication attempts for service innovation success (van Riel & Lievens, 2004). Other articles have stressed the benefits of making the service firm's innovative capacity a part of the overall organizational capacity (Lawson & Samson, 2001). They also stress the relevance of looking at sources of innovation inertia in the service innovation process (Verganti & Buganza, 2005). Also the use of different modes of governance in different phases of the lifecycle of telecom services has been investigated (van den Ende, 2003).

Telecom and IT services are currently in a phase of rapid service development, which is partly driven by knowledgeable and demanding users. Against this background the focus on customer involvement and an overall organizational capacity for constant innovation makes sense. However, the technical base in these services has meant a main focus on innovations in service offerings and their technical components. Less research has been carried out on innovations in organization and processes.

Lastly, among the articles focusing on *the public service sector* quite a few have investigated problems associated with diffusing and implementing IT-related innovations in healthcare operations (Bower *et al.*, 2000; Fitzgerald *et al.*, 2002; Wyatt, 2000). Some of the articles focusing on public services

have contributed with typologies of service innovations specific to a special kind of social service, such as social policy formulation (Osborne, 1998) and elderly care (Djellal & Gallouj, 2006).

The organizations in the public service sector, and specifically in healthcare, are often large with a hierarchical division of labor. In these organizations, the development of new services or new delivery processes takes place far away from many of those who in the end will work with the new service or process. Furthermore, the complexity of innovation in these settings is increased by the co-existence of numerous different professions. This makes the diffusion of innovations challenging. As a consequence the research on innovation in the public service sector has to a great extent focused on challenges when implementing innovations in the organization. To summarize, the main focus in previous research has been on the financial service sector, the knowledge intensive service sector, the telecom and IT service sector and the public service sectors. As argued in section 3 of this report current research has mainly focuses on two of Schmenners types of services:

1 *service factories* with low customization and degree of labor, and
2 *professional services* with a high customization and degree of labour.

Services with a high degree of labor intensity and low customization (e.g. mass services such as retailing and wholesale) and those with high customization and low degree of labour intensity (e.g. auto-repair, hairdressers) have gotten less attention.

4.3 Innovation performance in service firms

A few studies comment on the effects of innovating on the performance of service firms. Storey & Kelly (2001) investigate how new service development activities are *evaluated*. They found a difference between highly innovative and less innovative firms. They show that "truly" innovative firms measure new service development performance along a number of softer internal dimensions such as the cost and speed of development and the effectiveness of the process. In contrast less innovative firms most often use solely financial measures to evaluate their service development activities. Storey & Kelly also show that even though new services are an important source of revenue, firms are often not satisfied with their ability to develop new services.

Other studies evaluate service firms' innovative performance based on both financial measures and productivity measures. Cainelli *et al.* (2004) explore the relationship between innovation and financial performance in service firms. Their results show that innovating firms out-perform non-innovating

firms in terms of productivity levels and economic growth. Productivity was also found to be linked to the amount of innovation expenditure. Matear *et al.* (2004) come to a similar conclusion in a study of performance effects of different sources of market advantage. They found that new service development, alongside brand investment, contribute to the attainment of positional advantage and consequently to service firms' performance.

These studies thus show that being innovative can have positive effects on service firms' performance. However, they do not make a distinction between different types of innovations and only to a limited extent between firms with different levels of innovativeness.

5 Managing the service innovation process

The focus of the review is to examine what is known about the role of service workers in the innovation process and the organizational and management practices by which their knowledge may be exploited in the development of new services. When focusing on managing and organizing for innovation in service firms the service innovation process is central.

The service innovation process is in many studies divided into different phases (see e.g. Gottfriedsson, 2001; Sonesson, 2007). In an initial phase ideas for new services or processes are generated and chosen in line with a strategic plan for innovation. Thereafter project teams for designing the innovation are assigned and the innovation process is formalized. In a third phase the new service or process is designed and tested. Finally the innovation is implemented which also includes training employees to deliver the service and commercialization and launch on the market.

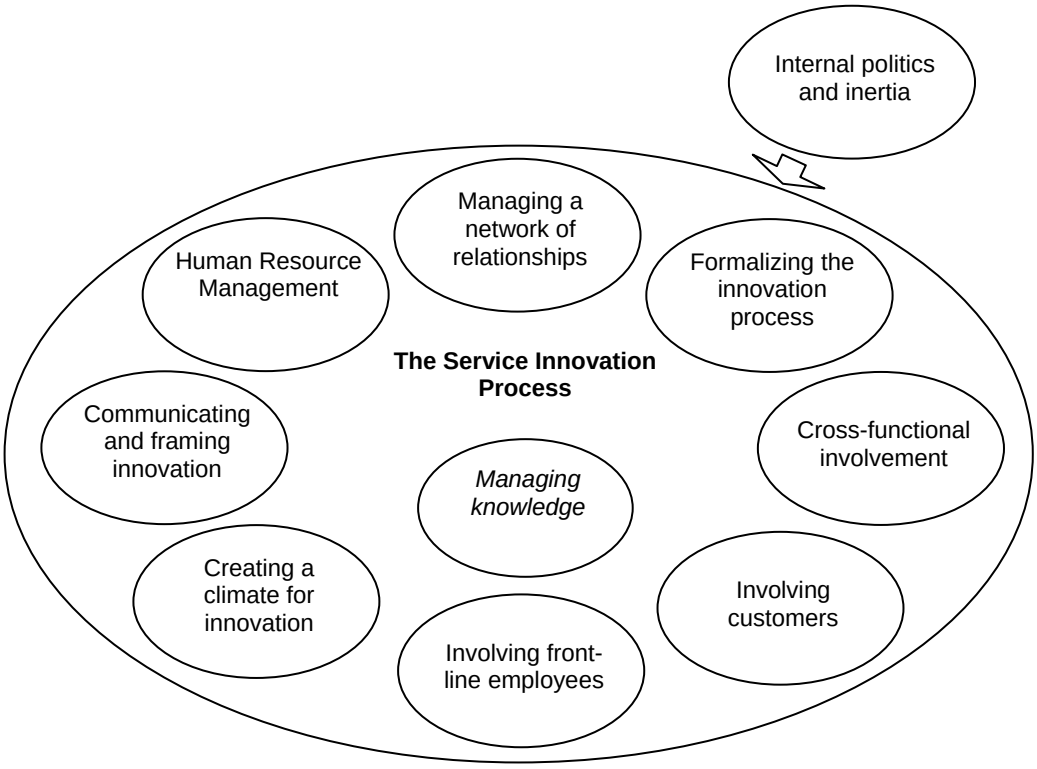
How to manage the service innovation process is discussed in a large share of the articles. Among these we have identified a number of partly overlapping themes related to managing the service innovation process. These themes are:

1 Managing knowledge
2 Managing a network of relationships
3 Formalizing the innovation process
4 Cross-functional involvement
5 Involving customers
6 Involving front-line employees
7 Creating a climate for innovation
8 Communicating and framing innovation
9 Human Resource Management
10 Internal politics and inertia

As illustrated in Figure 3, the management of knowledge stands in the center of the innovation process since achieving innovation to a large extent involves creating and managing knowledge in order to create something new. The surrounding eight themes represent tools to use in order to manage knowledge and become innovative in the service innovation process. The tenth theme (Internal politics and inertia) touches upon problems that can

hinder or complicate the service innovation process. The research within these different themes will be reviewed and discussed below.

Figure 3 Illustration of central themes on managing the service innovation process



5.1 Managing knowledge towards innovation

A big part of being innovative is to be able to manage and create knowledge that results in new ideas for services or organizational practices. Hargadon (2002) talks about “knowledge brokering” as a practice that explains how some organizations are able to routinely recombine their past knowledge in new ways and thus be continually innovative. He distinguishes between a number of steps in knowledge brokering:

1 the potential inherent in recombinant innovations where existing ideas, artifacts, and individuals are drawn from across many small worlds,
2 the bridging strategies that can expose organizations to the local resources of these different worlds,
3 the learning activities that bring knowledge of these resources into organizations,
4 the linking activities that recognize how knowledge and learning in one context could be valuable in another, and
5 the building activities that construct new networks around the emerging innovations.

In conclusion, managing knowledge towards innovation involves identifying ideas and valuable knowledge already present in the organization, encouraging the sharing of ideas and knowledge and facilitating knowledge creation and creative processes.

The most common issue when investigating the role of knowledge management in service innovation processes is how to balance the management of *knowledge held by individuals* and *knowledge held collectively* in an organization or a project team. This issue also relates to whether *tacit* (experience based and unarticulated) or *explicit* (codified and articulated) knowledge contributes more to accomplishing service innovations. Mascitalli (2000) argues that breakthrough innovations result from exploiting tacit knowledge possessed by both individuals and project teams. The challenge is to capture the creative power of this tacit knowledge, something which can be achieved if the members of the innovation design team are emotionally committed and personally involved in the innovation process. The organization thus needs to facilitate this personal commitment by a suitable atmosphere and supporting practices. Mascitalli suggests two techniques which can serve as catalysts: using prototypes to support breakthrough thinking and sharing knowledge face-to-face.

Leiponen (2005; 2006) emphasizes the potential contribution of collective knowledge in the service innovation process. In her study of knowledge-intensive business service firms in Finland she shows that collective application of knowledge is more likely to lead to innovation than individual application of knowledge (Leiponen, 2005). According to Leiponen, collectively held knowledge includes both codified knowledge in relation to service solutions and team-based competences and procedures. Relying solely on knowledgeable and creative individuals to come up with innovative ideas might hamper innovation (Leiponen, 2006). Leiponen also shows that service innovations are more likely to come from tacit collective knowledge while explicit collective knowledge leads to service improvements (Leiponen, 2006).

Furthermore Leiponen (2005) argues that the likelihood of accomplishing innovation is higher if efforts are made to acquire external knowledge from, for example, customers and competitors than if innovation efforts are based only on internal incremental learning. One way to acquire external knowledge, and hence support service innovation, is to hire highly educated employees who can bring knowledge into the organization.

Anand *et al*. (2007) have investigated how structures supporting knowledge and innovation can emerge and become embedded in knowledge intensive firms. They emphasize four elements and how these are managed as crucial

for building innovative knowledge structures in knowledge intensive service firms:

1 professionals with a *socialized agency* who can act on behalf of the company,
2 the presence of *differentiated expertise* and a constant development of new knowledge,
3 creating a *defensible turf* where there is internal and external legitimacy for the new practice area and
4 *organizational support* through available resources in the form of personnel and political support.

As a conclusion, they claim that building and using internal networks of practitioners and external networks of customers and the market is beneficial for the emergence of innovative knowledge structures.

To summarize what previous studies on knowledge management toward innovation in service firms have said it is important to exploit both collective and individual knowledge and both explicit and tacit knowledge in the service innovation process. Managing the innovation process thus involves managing the potential knowledge input and integration of actors in an internal and external network of relationships. Internally this involves including representatives of different functions in the organization such as R&D experts and service line employees in for example a project team. Externally this may involve including representatives from existing or new customer groups. As we will see previous research has suggested including front-line employees in the innovation process as mediators between customers and the rest of the service innovation process.

As mentioned above we have put managing knowledge as the most central theme in the innovation process since all the other aspects of the service innovation process can be seen as tools for motivating and facilitating the sharing and creation of knowledge and ideas. Managing knowledge towards innovation is thus supported by the practices discussed below: formalizing the knowledge management and innovation process, cross-functional involvement in the innovation process which includes involving customers and front-line employees, creating an organizational climate for innovation, communicating and framing innovations appropriately, and motivating through the appropriate use of Human Resource Management.

5.2 Managing a network of relationships

In previous research service innovation has been seen as taking place in a network of relationships with different actors. This is a theme that has been emphasized by a number of studies. In 2000, Miles identified a move in the

service innovation research away from studying innovations in individual service firms towards studying service innovations as created in innovation networks and systems (Miles, 2000).

It has been emphasized that service firms that want to be innovative need to think of themselves as part of *innovation networks*. Service firms can interact and exchange resources, knowledge and ideas with actors in their environment such as customers and innovation partners. den Hertog (2000) talks about a symbiotic relationship between service firms and their clients. Through these relationships service firms can function as co-producers of innovation with their clients. This is particularly relevant for those knowledge intensive business services and professional service firms which act as advisors or knowledge providers for other firms, including service firms. Czarbutzki & Spielkamp (2003) have found that these kinds of firms often have a sound innovative capacity as they possess knowledge, creativity and skills in marketing and management, all necessary for successful innovation. In this respect they suggest seeing business service firms as *bridges for innovation* as they take on the role of knowledge brokers for client firms.

But at the same time as some service firms help clients become innovative, customers have been found to be important contributors to innovation in service firms. As we will see in a later section, actively *involving customers* has been used as part of the innovation strategy in service firms. As co-producers of the services consumed customers also have part in co-producing service innovations. Furthermore they can contribute to service innovation by providing ideas for new services or service improvements (Gustafsson *et al.*, 1999; Magnusson *et al.*, 2003; Matthing *et al.*, 2004; Kristensson *et al.*, 2008). *Involving font-line employees*, who have the daily contact with customers, as actors in the service innovation network has been suggested as one way of incorporating the ideas of the customers in the innovation process.

Research has also argued for the importance of *communication* between different actors in the innovation network. Lievens *et al*. (1999), who have studied financial services in banks, conclude that the close cooperation that is needed for innovation and learning to take place must involve strong integration and a central position within a communication network. They suggest that a potentially important condition for obtaining a good learning environment is to focus on boundary-spanning communication and individuals with a position in loosely coupled networks.

Also internally in the service firm innovation can be seen as a result of the contribution and interaction of a network of different actors and practices. In a study of innovation in the British healthcare sector Fitzgerald *et al*. (2002)

show that innovation and its diffusion depends on the interlocking interactions of actors and context. In order for innovation to take place the knowledge of a number of internal actors is needed. Some studies suggest that in order to facilitate constant innovation in a service firm the network of actors and practices needs to be organized as *a formalized process* (Chan *et al*., 1998; Foehle *et al*., 2000). The goal is to make the service innovation process predictable, manageable and coordinated. As we will also see below, service firms often use formalized *cross-functional teams* as a tool for coordinating actors and knowledge in the service innovation process (Hull, 2003; Fay *et al.*, 2006).

Managing a network of relationships as part of the service innovation process can also potentially be supported by an innovative *climate*. Previous studies suggest that in order to become innovative there is a need for an organizational climate that fosters communication and cooperation between different internal functions and with customers and other external actors (Mascielli, 2000; McCabe, 2002). Studies have also suggested that communication and cooperation initiatives can be further supported by *Human Resource Management* practices such as rewards and career structures (McMeekin & Coombs, 1999; de Jong & Kemp, 2003).

To summarize, previous research has pointed to the need of seeing the innovation process as taking place in a network of relationships between both external and internal actors. In order to manage this network innovative service firms should consider how to involve these different actors in a formalized and structured way. Also knowing how to communicate and create a climate in which actors feel motivated to contribute and be creative is central.

5.3 Formalizing the innovation process

A number of studies have focused on the presence and need for formalization of the innovation process in service firms. One benefit of a more formalized innovation process is claimed to be a more predictable and manageable process. Research has however shown that formalization of the innovation process is *relatively rare* in service firms, specifically in comparison with manufacturing firms. Kelly & Storey (2000) have investigated whether service firms use systematic procedures to generate and screen ideas for new services. They found that only half the sample of firms in different service sectors in the UK has a formal new service development strategy. Chen *et al*. (1998) come to similar results in a study of service firms in Hong Kong where they find that the majority of the firms do not have an established system to control the innovation process. Instead of formalized processes to support innovation the service development

attempts are often ad hoc and integrated in the everyday operations (Dolfsma, 2004; Kelly & Storey, 2000). Gottfriedsson (2001) further argues that specifically in small service firms the service development process is largely unstructured and organized informally around specific individuals in the service firm. These conditions support the development of customized services in small service firms.

As a result, unstructured attempts to idea screening and generation tend to fail to support the creation of service innovations (Kelly & Storey, 2000). Chan *et al*. (1998) also conclude that the lack of established systems is linked to an attitude among managers to confine their service development to incremental or distinctive innovations and to not attempt to develop breakthrough innovations. Some studies have further shown *proven benefits of formalization*. Foehle *et al*. (2000), for example, have shown that a more formalized innovation process can contribute to increased speed of new service development and that formalized cross-functional innovation teams in particular positively influence the effectiveness of service firms new service development efforts. Also de Brentani (2001) has identified formal and planned programs for launching service innovations as a success factor governing the outcome of new service projects.

A few studies have been a little more specific about what a formalized innovation process should include. Oke (2007), who has investigated management practices in different types of innovations in the UK service sector, lists the following *formal management practices* as important for supporting innovation: an innovation strategy, routines for creativity and idea management, appropriate practices for Human Resource Management, routines for managing and implementing service portfolio and new service selection. Hull (2004) stresses the importance of a system that organizes people from diverse functions, a defined common process and available tools for them to use. Furthermore, Foehle & Roth (2007) emphasize that an important part of formalizing the innovation process is to provide key resources for innovation. This includes investing in the intellectual, organizational and physical resources necessary to fully exploit the different phases of the innovation process.

Lawson & Samson (2001) argue that service innovativeness is an organizational condition that should permeate the entire organization. They suggest that innovation management is a form of *organizational capacity* and that the goal should be to make the service firm an “innovation engine”. If this innovation capacity is well developed it can be one of the most important factors contributing to the wealth creation of the service firm, they argue. An innovation capacity includes formalizing a vision and strategy focusing on innovation, the competence base and organizational

intelligence needed, structures for creativity and idea management, an innovative culture and climate and investments in supporting technology.

To summarize, researchers are relatively unanimous that a formalized process is beneficial when trying to achieve innovation. However, previous studies are still vague about what this means in terms of specific practices and routines. There is also little discussion of different needs and forms of formalization in different service sectors.

5.4 Cross-functional involvement in the innovation process

As mentioned above cross-functional involvement – i.e. to include people from different functions or different professions in the innovation process – has been suggested by Froehle *et al*. (2000) and by Hull (2004) as appropriate elements when formalizing the service innovation process. Avlonitis *et al*. (2001) also include cross-functional involvement as a critical factor in the innovation process. The reason for involving people from different functions or professions is that they can bring different knowledge and competences to the innovation process which could facilitate creativity, learning and knowledge development for innovation.

Cross-functional involvement has also been the specific focus of a few articles. In one article Hull (2003) examines cross-functional involvement in service development and shows that simultaneous involvement of *multiple functions* has a strong positive effect on innovation performance in terms of speed and cost, at least in the early phases of the service innovation process. Moreover, cross-functional involvement is found to have the largest effects when the service firm is aiming at a relatively high level of innovation.

Also Fay *et al*. (2006) have investigated the benefits of cross-functional involvement. In a study of the health care sector in the UK they specifically focus on whether multidisciplinarity in teams, increases team innovation or not. The results show that multidisciplinarity is positively related to the quality of team innovation, given that the teams have good team processes.

Finally, in a case study of a UK postal service organization Perks & Riihela (2004) explore the nature of cross-functional integration in new service development. They found that decisions about which functional stakeholders to include and when to include them were a critical factor underlying innovative cross-functional activities. Other critical factors were the relationships developed with external stakeholders, the distribution of authority and process ownership, the creation of a shared understanding of innovation goals and the influence of changes in the organizational context over time.

To summarize, there is some support for the effectiveness of working with cross-functional involvement in the innovation process in service firms. However, studies investigating cross-functional innovation teams close up are still rare.

5.5 Involving customers in the innovation process

Making use of the potential input of customers in the service innovation process is another tool for innovation that has been the focal point of a number of previous studies. Service firms' relations to their customers are different than those of manufacturing firm. As Gadrey & Gallouj (1998) point out one often talks about "the moment of truth" in the service delivery process emphasizing that the value of the service is produced in interaction between the customer and the provider. How the customer experiences this interaction becomes part of the experienced value of the service. Based on this Gadrey & Gallouj argue that the interface between the customer and the service firm can be seen as "a moment of thrust for innovation" as the individual demands of customers may trigger the development of new services.

Abramovici & Bancel-Charensol (2004) have investigated how service firms can take customers into consideration in service innovation projects. They argue that customers can be a *valuable source of information* specifically for validating a chosen technical option or through participating in the construction or testing of a prototype. However, compared to the validation of product innovations, customers' involvement in the validation of service innovations appears to be more complex.

A number of studies with a Swedish link have focused on the benefits of customer involvement in service innovation. In a case study of Scandinavian Airlines (SAS) Gustafsson *et al*. (1999) examine how *customer focused service development* can be successfully practiced. In the study it is shown how SAS has developed new services and redesigned old ones based on feedback from customers. By observing customers' processes and trying to figure out what people want to do during their travel the airline involves the customers in designing the process instead of demanding that the customers adapt to some company designed process.

Magnusson et al. (2003) have also investigated the impact of customer involvement on service innovation based on empirical data from the Swedish telecom sector. The results of their study show that involving the users makes new service ideas more original and perceived as of higher value for the users than those services developed solely by professional developers. However, new service ideas suggested by customers tended to be, on average, less producible. Similar arguments focusing on user-driven

innovation are made in further articles written by some of the same authors (Kristensson *et al*., 2002; Kristensson et al., 2004; Kristensson *et al*., 2008; Magnusson, 2003; Matthing, 2004; Matthing *et al*., 2006; Matthing *et al*., 2004). They present results that support the belief that customer involvement in service innovation, if properly managed, makes it possible to obtain valuable customer information and has a positive effect on the innovativness of the new service ideas. In a study of market orientation in trade unions Björkman (2004; 2005) further argues that listening to members can contribute to the development of the service offering in these kinds of organizations.

Finally, based on a study of three case companies in Sweden Björlin Lindén & Sandén (2004) present an empirical description of how service guarantees may support service development. Service guarantees systematize customer involvement after service failures and complaints as these situations force service providers to come up with new and better services and service processes to save the relationship to the customer. Service guarantees contributed to service development through three processes:

1 the service process before the failure,
2 the process of recovery after the failure and 3) the long term development process.

To summarize, these studies show the relevance of involving customers in the service innovation process. However, more close up empirical studies of how service firms work with customer involvement are needed.

5.6 Involving front-line employees in the innovation process

Another possible element in a formalized service innovation process is to involve front-line employees – i.e. employees at the counter or customer service who have the daily contact with the customers – in the development of new services. Because of their exposure to customers and customer needs, front-line employees are assumed to possess knowledge that can be beneficial for achieving successful service innovation.

Involving front-line employees has been found to be beneficial for achieving service innovations that are valued by customers. de Brentani (2001) identifies the involvement of expert front-line personnel in the innovation process as one success factor governing the outcome of service innovation projects. This strategy should be combined with and contribute to both ensuring a good fit between the innovation and customer needs and implementing a formal and planned launch program where the new service is communicated to the customers.

In a case study of a telecom company in the UK, Ramirez (2004) investigates the dynamics of involving key employees from customer service in the innovation process. He concludes that integrating broader groups of employees in the innovation process can be vital for the outcome. Because of their relationship with the end users customer service employees are in a unique position to share their insight with developers and new service designers. However, Ramirez claims that involving employees from customer service in service development processes in many cases implies *breaking institutionalized authority* structures. Specifically it may involve moving to a less formal division of labour. For this reason involving front-line employees in the innovation process may be challenging for the organization and specifically for the management who needs to be willing to give up some of their formal power.

In his dissertation Olle Sonesson (2007) focuses on the active involvement of front-line employees in the service innovation process in a Swedish bank. His results show that the front-line employees were mainly involved in the later phases of the innovation process where the new services are designed and launched, but only partly in the earlier stages where ideas are generated and new service development projects are formed. Sonesson also found that the contribution of involving *front-line employees* in the innovation process lies in:

1 *testing prototypes*, giving employees an opportunity to communicate their view of the already developed material,
2 *development work* where employees may be involved in developing for example a process manual and
3 *improving efficiency*, where front-line employees' involvement simplified implementation and the launch of new service.

Sonesson further shows that one contribution to the quality of the service innovation *per se* was made as the front-line employees took part in the management of the customer process. Here they standardized work content and work methods in order to be able to deliver the new service in a good way. Furthermore, the front-line employees were found to contribute through building relationships with the customers. Sonesson concludes that service innovations benefit from the involvement of front-line employees but that it is important that their participation in the innovation process is supported by local managers who need to set aside the time and resources for the employees to take part in the development process.

To summarize, research has concluded that involving front-line employees can be an important factor for developing and launching service innovations that are well received by the customers. However, this can be challenging as it may go against existing institutional structures in the service firm. Also it

requires that the font-line employees are partly released from their ordinary tasks in order to spend time on the innovation process.

5.7 Creating a climate for innovation

In a number of articles the importance of the organizational climate for achieving innovation is emphasized. It is presupposed that the "right" climate would foster creativity, idea generation and knowledge sharing. When discussing favourable conditions for exploiting both collective and individual tacit knowledge in the service innovation process Mascitelli (2000) argues that a good "atmosphere" in the organization is the best condition for breakthrough innovation to occur. Also van Riel *et al*. (2004) stress the importance of a supportive climate.

However, trying to define *the "right" climate* is more difficult as most studies are quite vague on this point. For example, Mascitelli specifies an appropriate atmosphere in which divergent thinking, improvisation and artistic creativity can merge with the practical demands of the service development process. He points toward face-to-face interactions as particularly beneficial for an atmosphere where people can share knowledge. van Riel *et al*. (2004) argue for an organizational climate permeated by market orientation as it tends to favour information sharing and intelligence gathering in relation to the customer. Chan *et al*. (1998), on the other hand, emphasize a general organizational commitment to the practice of managing service innovation. Also Anand *et al*. (2007) touch upon this question as they conclude that success in generating new consulting practices depends on how the professional service providers are socialized to act on behalf of the company.

A good climate for innovation can also be said to imply good communication and information gathering. According to Lievens & Moenaert (2000b) successful innovation depends on the organization's ability to reduce the gap between the amount of information necessary to perform a task and the amount of information already available within the organization. By doing so the organization can reduce innovation uncertainty.

In a case study of an insurance company McCabe (2002) discusses organizations' ability to be innovative from a discursive point of view. According to him managers' ability to accept suggested innovations cannot be separated from the context in which they operate. Instead they are influenced by the embeddedness of their subjectivity within a particular cultural context. Specifically, McCabe shows how managers may resist new innovations that seem to threaten established ways of thinking and acting. This is of particular risk if the suggested innovation is of a breakthrough-

nature and thus quite different from what the organization is used to. As a result innovations have a tendency to mirror as well as reshape organizational conditions. Innovations reflect and reproduce the past, while simultaneously reshaping it, both in intended and unintended ways. Furthermore, innovations reflect and reproduce existing power structures in organizations.

Not everyone agrees on the importance of the climate for innovation. When investigating drivers for innovative behaviour of individual co-workers in knowledge-intensive service firms de Jong & Kemp (2003) find no support for the hypothesis that a supportive climate is a determinant of individual innovative behaviour. Instead the work conditions for the co-workers and the strategy and market position of the company were found to be stronger drivers for the individual's innovative behaviour.

To summarize, most studies come to the conclusion that it is important to have a supportive climate in order to achieve successful innovation. However, what a supportive climate includes and how it can be created is less studied. The results also suggest that the organizational climate is primarily important when innovations are produced collaboratively and hence demand knowledge sharing and collective learning. For individuals to behave innovatively it seemed to be of less importance.

5.8 Communicating and framing innovation

Yet another theme that has been discussed is the need to communicate both within the innovating service firm and with stakeholders in the innovation network. Two different areas that benefit from communication have been emphasized: communication in the service innovation process and communication of the innovation to stakeholders.

First, a number of studies have investigated the importance of *communication in the service innovation process*. Lievens *et al*. (1999) and Lievens & Moenaert (2000a; 2000b) have studied new service development in financial services. Lievens *et al*. (1999) argue that close cooperation and interpersonal communication is essential for learning to take place in the new service development process. Close cooperation involves strong integration and a central position within the communication network. To obtain a good learning environment the service firm should support boundary spanning communication across functions and professions. Also, it is potentially effective to have service firm representatives positioned in loosely coupled networks in which they can acquire knowledge from a wide range of actors.

Lievens & Moenaert (2000a, 2000b) further examine the role of communication during the innovation process of new financial services. Specifically they focus on communication and information processing in service innovation project teams. Based on their study they stress the importance of reducing innovation uncertainty in order to be successful in innovation efforts. Uncertainty is in this context described as the difference between the amount of information necessary to perform a task and the amount of information already available in the organization. Lievens & Moenaert (2000b) suggest that innovation uncertainty can be reduced through focusing on three types of project team communication:

1 *intra project communication* in which project team members share information with each other,
2 *extra- project communication involving organizational liaisons* in which project team members obtain information from contacts in other parts of the service firm, and
3 *extra-project communication involving gatekeepers of information* in which project team members obtain information from customer-contacts, front-line employees, etc.

Second, a number of studies have touched upon the importance of using communication to *conceptualize the new service innovation* in a productive way, both cognitively by individuals and verbally in communication within the organization and with end users. Bower *et al*. (2000), for example, highlight the importance of how the innovation is conceptualized and communicated. They focus on the perceptions of an innovation in a health care organization were the professional employees were asked to adapt to new information and communication technology. When comparing the perceptions of different professional groups, including policymakers, managers, physicians and nurses, they found that they tended to share the perception of what the critical problems were but had different views of issues underlying these problems. Furthermore, health care personnel were found to be well informed about what unscheduled problems might accompany the implementation of new ICT and less pessimistic and resistant to the change than expected. Bower *et al*.'s results point to the importance of communicating both benefits and possible problems when implementing new service innovations.

In a study of the effectiveness of managers decision-making in high-tech new service development projects van Riel & Lievens (2004) stress the importance of mental representations. Their study reveals that it is crucial that decision makers are flexible in their use of cognitive strategies. It is also concluded that they should have a proactive attitude toward the development process. In addition, they should develop a capability to

mentally represent various interfaces between service, customer, technology and the firm.

Also Wyatt (2000) recommends paying attention to how the innovation is conceptualized, specifically when communicating with the customers/users. Wyatt looks at two attempts to develop information networks in governmental administrations, one in the US and one in the UK. These attempts where however unsuccessful because not enough attention was given to communication with the users. Based on these results Wyatt argues that innovations should not be seen as only a matter of physical artifacts and the knowledge of how to use them but also as a matter of managing social relationships. Creating and implementing innovations also involves creating and communicating ideas about how they might be used.

To summarize, a number of studies have focused on the importance of communication in service innovation. Communication is important both for sharing knowledge and information across different functions, professions and stakeholders in the service innovation process and for the conceptualization of the innovation to customers and employees in the implementation phase.

5.9 Human Resource Management for innovation

A few articles have focused on how Human Resource Management (HRM) practices can influence organizational members to act towards innovation in service firms. HRM involves practices that aim at aligning the personal goals of individual employees with those of the organization. In the innovation process this means that managers and employees need to be motivated in different ways to behave innovatively and contribute to the firm's innovation process. The studies under this theme mainly try to find out which motivational techniques work best to foster innovative behavior in service firms.

In a case study of R&D functions in four companies McMeekin & Coombs (1999) examine the links between HRM and the *motivation* of technical professionals. They find that if the technical work is "interesting" motivation tends to be intrinsic and deeply rooted in the culture of the technical professionals. Short-term rewards such as salary improvements and other incentives also effect motivation, as long as the reward system is transparent. Motivation is also found to be affected by the long-term vision of a career structure in which stages and the process of development are mapped out.

Also de Jong & Kemp (2003) have looked at what drives individuals towards innovative behavior in knowledge-intensive service firms. They

argue that specifically individual innovative behavior is a major determinant of incremental innovation. Their analysis reveales that individual employees tend to behave innovatively when the perceived job challenge is in balance, when they feel they have autonomy, when the firm gives strategic attention to innovation, when the employees have external contact with customers and/or competitors and when they operate in a market were firms compete on differentiation.

Tsai *et al*. (2008) have also studied the relevance of the *pay policy* for innovative service firms. They investigate whether firm performance can be improved by matching pay policy with innovation strategy. They distinguish between strategies where the organization is a pay leader, a pay follower and holder of an average position in the labor market. Their examinations revealed that combining pay policy with the expenditure on innovation had little positive effect on performance and therefore should not be regarded as a preferred way toward improving firm performance.

To summarize, a few studied have looked at how different kinds of HRM-practices can influence innovation in service firms. However these studies are limited and mostly focusing on aggregated relationships. In-depth investigations into how HRM is practiced as part of the service innovation process are mainly lacking.

5.10 Internal politics and inertia in the innovation process

Two articles have focused on political factors that can hinder innovation to take place in service firms. Heusinkveld & Benders (2005) seek to understand the process of commoditization in relation to new concept development in management consulting. The focus is on the internal elements that may inhibit or encourage the development of new knowledge products. Their study reveals that although consultants are eager to present themselves as innovative knowledge producers, there are a number of important factors that inhibit the development of new commodities. Specifically, developing new ideas does not necessarily fit with established practices in the consultancies and does not automatically enjoy support and collaboration within the organization. Also, Heusinkveld & Benders show that *political struggles* about involvement and legitimacy are an inherent part of service innovation efforts in consulting firms.

In two case studies of Internet-bases service companies Verganti & Buganza (2005) investigate design *inertia* in the face of need for continuous redesign and innovation in services. They found that flexibility in the innovation process can be influenced by inertia involved in technology and technical changes, by internal or external organizational inertia and by customer

inertia toward change in either the service package or the service interaction design.

To summarize, political processes, struggles with inertia and other impeding factors are likely to influence the service innovation process. Politics and other factors and processes impeding service innovation is yet an under-researched area that needs more attention.

6 Knowledge gaps and need for further research

This review has focused on the role of the service workers and their knowledge, skills and energy in the service innovation process. The review reveals considerable knowledge in some areas but also shows that few studies have been conducted which explicitly investigate the role of the service workers in innovation processes. As we have seen many of the studies have focused on different organizational aspects which might support innovativeness, but in most cases the employees that are supported by the organization are left in the periphery. Therefore we suggest that more research is needed that explicitly investigates the role of service workers in service innovation processes.

The literature review provides a basis for discussing the need for further research in more specific terms. Below we suggest a number of areas which we believe would contribute to the understanding and practices of managing and organizing service innovation. Specifically these areas are chosen for their potential to bring knowledge of how the innovative power of the employees can be brought to use and improve service innovation in the Swedish industry. The focus on these areas does however not exclude the need for further research on topics that have already been investigated.

6.1 Understanding the dynamics of the service innovation process

A number of studies identified in this literature review have applied a large-sample, cross sectional approach to investigate specific aspects or relations in service innovation (e.g. de Brentani, 2001, regarding success factors for developing innovative services; de Jong & Kemp, 2003, regarding determinants of service workers' innovative behavior and Oke, 2007, investigating the links between innovation types and innovation management practices). While these studies provide important insights into general relationships they fail to take into account the context and micro-dynamics of the process through which new services emerge. Recent in-depth studies on the development of new services in professional service firms have for example shown that the service development process is highly complex and may take different forms in different contexts (Anand *et al*., 2007; Heusinvkeld & Benders, 2005).

More studies focusing on understanding the micro-dynamics of the service innovation process in different kinds of service sectors are thus needed.

These should contribute to developing an understanding of the complexities and situatedness of the processes through which new ideas for services emerge, develop and are turned into profitable services in different industry and organizational contexts.

6.2 Using contextualized models of service innovation

The introduction of formalized service development processes is widely suggested as a way of improving the innovativeness of service firms. However, given the large variety of the service sector, it is reasonable to believe that these processes need to look differently in different service contexts – depending on the size of the firm, the nature of the service, the respective service industry, the kind of customers, etc. There is thus a need for further research-based suggestions of how service development processes may be designed in different contexts.

Furthermore, there is a need for a critical discussion and evaluation of formal service development processes. Research on service development in management consulting has for example shown that the development of consulting services is partly an ongoing process integrated with ongoing service delivery (Werr, 1999). Formalizing such processes would be hard or even counterproductive as those innovations taking place in the “moment of truth” of service delivery may be invisible and evasive. This links back to the previously mentioned need to create a thorough understanding of the dynamics of new service development processes in different contexts. Additionally, formalization of the innovation process is closely linked to the need for increased managerial control. However increased control might hamper individual and collective creative processes. Studies are needed that investigate how the balance between creativity and control is managed in service firms’ innovation processes including how employees are affected by this balancing act.

Contextual models would also be useful for understanding risks and opportunities with different innovation approaches. Specifically further studies are needed which compare the use of open innovation processes – in which different external actors (for example users) are included in the innovation process – with closed innovation processes – in which only internal actors are involved – in different service contexts.

6.3 Exploring and comparing different types of service firms

The current review points at empirical biases to either rather technology intensive, highly standardized “service factory” kinds of contexts, such as

financial services, on the one hand and highly knowledge intensive "professional services" on the other hand. This leaves a lot of services, which are of a less glamorous nature, mainly unstudied. In terms of Schmenners (1986) service typology, mass services such as retailing, wholesaling, cleaning, etc. as well as Service Shops such as different kinds of repair and maintenance services are less well represented in the current literature.

There is also a need for explicitly comparative studies of innovation in different kinds of services and service contexts as well as different kinds of innovations (e.g. degree of newness). The current literature provides a large number of typologies differentiating different kinds of services, different innovations, and different service firms. However few studies systematically discuss the impact of these differences on the way the innovation process may be organized and managed. Discussions of the differences and similarities between (different kinds of) service and product innovations are also scarce. They may however be very helpful in determining to what extent service innovation may actually learn from product innovation research (and vice versa).

Furthermore, the focus of the current literature is rather blind to variance in the service innovation process between service firms of different sizes. However, the growth potential related to service innovation may be largest in small to mid-sized firms at the same time as smaller service firms may be less formalized and thus more open to innovative customized services (e.g. Gottfriedsson, 2001). Larger firms on the other hand may be able to put aside more resources for formalized service innovation processes. There is however a lack of studies in this area. For this reason, developing our understanding of the processes by which new services are developed in service firms of different size is a further worth-while research task.

6.4 Studies of service innovation in business networks

The current literature acknowledges that service innovation takes place in business networks. Focus has so far been on the customer's role in the process, especially when it comes to rather knowledge or technology intensive processes such as consulting (Anand *et al*., 2007), union membership services (Björkman, 2005) or telecom services (Magnusson *et al.*, 2003; Magnusson, 2004; Kristensson *et al*., 2008). The role of the customer in developing for example "mass services" would thus merit further research. The involvement of the customer has also been studied with a focus on idea generation, while there may be a potential of involving

the customer also in later phases of the development process (e.g. conceptualizing or testing the new service).

Furthermore, external actors beyond customers may contribute to the innovation process. Their role in service innovation has however so far been less studied. The way in which suppliers of IT systems, competitors, consultants, partners, governments and consumer organizations etc. contribute to the development of new services is an area where further research is needed. Further studies should also investigate whether and how the relationship between more or less competing suppliers of services could be important for the development of innovations.

6.5 Studies of knowledge and knowledge processes in service innovation

The management of knowledge is an important theme in the reviewed literature, especially the part focusing on knowledge intensive services. However, learning from a wide variety of sources, such as front line employees, may be as important in “labour intensive” services. The distribution of knowledge driving innovation in these latter contexts as well as the processes by which this may be taken into account in the innovation process are, however, less well researched.

Furthermore, the reviewed studies point at the importance of bringing together knowledge and insights from different functions and parts of the organization. However, research from product development shows that this is not an easy task (Dougherty, 1992; Carlile, 2004). Different interests, languages and interpretive frameworks are identified as barriers to bringing together these different kinds of knowledge. Physical “boundary objects”, such as a model of for example a car, have been identified as helpful in bridging these knowledge boundaries in a product context. In a service context, such physical boundary objects may however often be missing. Close studies of cross functional collaboration in a service context are thus needed to increase our understanding of knowledge integration in this context.

6.6 Studies of innovative climate and HRM practices

The innovative climate is emphasized as an important facilitator of service innovation in a number of studies. However the more detailed characteristics of this climate and how it may be created is less well discussed. Situating the characteristics and importance of the innovative climate in the specific service is also important as it might be argued that the problem in some contexts (e.g. professional services) may be one of limiting and directing creativity rather than fostering it (Løwendahl *et al.*, 2001).

The issue of creativity and innovative behavior is also linked to larger aspects of the HR system in the service firm. As pointed out by Anand *et al*. (2007) the "up or out" career system in consulting organizations is an important driver for the development of new service offerings, since a consultant who wants to be promoted to partner needs to demonstrate his or her ability to develop a new service area. Similarly, in the wake of the financial crisis, the bonus system in financial institutions has been under scrutiny as a potential driver for the development and adoption of increasingly complicated and risky service offerings. A better understanding of HRM practices in service organizations, their motivational effects and their consequences for service workers innovative behavior is thus needed.

6.7 Studies of communication and "talk" in service innovation

Services are by definition at least partly intangible. Both the development and diffusion of service innovations are thus to a large extent about "talk". Several studies in the current review highlight the importance of the way in which an innovation is conceptualized for its diffusion and adoption. These studies are to a large extent focused on IT related innovations. However, studying "talk" and "discourse" in other service innovation contexts holds some promise of highlighting important specificities of service innovation. Particularly studies of whether and how people in service firms talk about innovation, what type of vocabulary they use etc., would help us understand the phenomenon better and serve as a useful base for empirical investigations of innovation processes. Through examining the discourse of innovation and new service development in service firms we may also better understand how innovations are constructed socially in specific contexts. Additionally a discursive perspective may bring an understanding of which actors are involved in the conceptualization of service innovations, including conceptualizations of why and why not service firms need to innovate.

6.8 Studies of power and politics in service innovation

Innovation is a political process as it holds the potential of redistributing power within the organization (Reimirez, 2004; Heusinkveld & Benders, 2005) Innovation may thus be fought and counteracted by actors within the organization. At the same time, the need to bring together actors from different parts of the organization, representing different knowledge and interests, has been pointed out as essential.

In some contexts, power dynamics may emerge through status differences. In labor intensive services front line employees may, for example, have a lot of knowledge, but a low status, which may make it difficult to exploit that knowledge for idea generation in collaboration with service developers on a managerial level. In other kinds of services, such as professional services, the power dynamics may be the reverse, with the front line employees being in a power position in relation to managers wanting to implement new approaches or services.

Studies focusing on the power dynamics in different kinds of service development contexts thus hold promise of adding essential insights to our understanding of key enablers and impediments to service innovation.

6.9 Gender studies of service innovation

Previous studies have also fallen short on looking at gender aspects of the service innovation process. Specifically in processes of organizational change the power and position of men versus women have the potential to either transform or reproduce gender relations (Wahl *et al.,* 2001). Also the involvement of men and women (or the lack thereof) in central development processes may have significant consequences on gender structures in general, such as career possibilities, influence and the possibility of work/life balance. Consequently, there is a need for gender studies in the field of service innovation. Specifically there is a need for studies that look at the involvement of women and men in innovation processes, at the potential genderdness involved in service innovation initiatives and at processes of gender production and structuring in service innovation processes.

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8 Appendix – Annotated Bibliography

This annotated bibliography consists of brief summaries of the articles and dissertations included in the literature review. The first section includes summaries of articles in scientific journals and the second section of summaries of dissertations. The summaries are written as part of the review with the purpose of extracting the research findings relevant considering the scope of the review. Each summery includes: the focus of the article/dissertation, the main relevant findings and a brief note, within parenthesis, on the methodological approach used.

8.1 Articles in scientific journals

Abramovici, M., & Bancel-Charensol, L. (2004) How to take customers into consideration in service innovation projects. Service Industries Journal, *24 (1):56-78.*

Abramovici & Bancel-Charensol investigate how service firms can take customers into consideration in service innovation projects. Specific emphasis is put on the validation stage of the innovation project cycle, in which the goal is to validate the chosen technical option through the construction and testing of a prototype. Here the customer can take a partial role in the evaluation. In service innovation the customer's validation appears to be more complex than the validation of goods innovation. (Three case studies of French services firms.)

Alam, I. (2006a). Service innovation strategy and process: a cross-national comparative analysis. International Marketing Review, *23(3): 234-254.*

Alam makes a comparative cross-national analysis of new service development strategy and process. The empirical context is financial service firms in Australia and the US. He distinguishes between six types of innovation:

1 *new-to-the market services,*
2 *new-to-the-company services,*
3 *new delivery processes,*
4 *service modifications,*
5 *service line extension,* and

6 *service repositioning*.

The findings suggest that new-to-the-company services, as a low cost and less risky option of developing moderately innovative services, is the most popular strategy choice for both US and Australian firms – even though it has been assumes that highly innovative "new-to-the-world" services may be the best option for a firm. (Statistical analysis based on data from a survey of financial service firms in Australia and the US.)

Alam, I. (2006b). Removing the fuzzyness from the fuzzy front-end of service innovations trough customer interaction. Industrial Marketing Management, *35: 468-480*.

Alam here examines the role of customer interaction in what is called "the fuzzy front-end" of service innovation – i.e. the initial stages of idea generation, idea screening and concept development in new service development. The findings suggest that the fuzzy front-end can be much less fuzzy if customers are involved in the front-end stages of new service development. (Case studies of 26 financial service firms.)

Anand, N., Gardner, H. K., & Morris, T. (2007). Knowledge-based innovation: emergence and embedding of new practice areas in management consulting firms. Academy of Management Journal, *50(2): 406-428*.

Anand et al. investigate how innovative knowledge structures emerge and become embedded in knowledge-intensive firms. The empirical focus is management consulting firms. Four elements critical for generating new practice areas are identified:

1 *socialized agency* – professionals that are socialized so as to act on the behalf of the company,
2 *differentiated expertise* – constant development of new knowledge, different from previous and that of other consulting firms,
3 *defensible turf* – creating legitimacy for the new practice area, and
4 *organizational support* – support through resources (personnel and political sponsorship).

These elements must be combined in specific ways for knowledge-based innovative structures to emerge. Here practitioner networks, markets for knowledge-based services and professional firms' hierarchies are central. (Case study of four management consulting firms.)

Avlonitis, G. J., Papastathopoulou, P. G., & Gounaris, S. P. (2001). An empirically-based typology of product innovativeness for new financial services: success and failure scenarios. Journal of Product Innovation Management, *18: 324-342*.

Avlonitis et al. examine how different innovative types may be associated with different patterns and performance outcomes in service development. Special focus is on financial services in Greece. Based on previous literature on product innovativeness a conceptual framework for a new service development process is suggested (however no clear distinction between the nature of product and service innovativeness is made). The development process is examined based on three variables:

1 *new service development activities* – the "what" component,
2 *process formality* – the "how" component and
3 cross-functional involvement – the "who" component.

Further, six service innovativeness types were identified and placed on a continuum from the lowest (service repositioning) to the highest (new to the market services) in innovativeness. These six type were found to be associated with different development patterns in terms of activities, formality and cross-functional involvement. (Cluster analysis on data from a survey covering both innovation successes and failures in financial service companies in Greece.)

Berry, L., & Lampo, S. K. (2000). Teaching an old service new tricks: the promise of service redesign. Journal of Service Research, *2(3): 265-275*.

Berry & Lampo discuss service redesign as an alternative to new service development. Through service redesign service firms can be innovative with what exists. In the article the authors reports their findings from gathering and classifying examples of service redesign. Suggested service redesign approaches are:

- *self-service* where the customer assumes the role of producer,
- *direct service* where the service is delivered to the customer's location,
- *pre-service* where the activities of the service is streamlined,
- *bundled service* where multiple services are combined into a package and
- *physical service* where tangibles associated with the service is manipulated.

(Gathering and review of more than 100 examples of service redesign).

Björkman, H. (2004). Design dialogue groups as a source of innovation: factors behind group creativity. Creativity and Innovation Management, *13(2): 97-108*.

Björkman discusses a suggested methodology (the Design Dialogue Group methodology, DDG) that can be used to enhance group creativity and learning in service innovation processes. The empirical focus is on a Swedish national trade union for white-collar workers in industry (Sif). The Design Dialogue Group methodology consists of focus groups that are organized by the organization with the purpose of using the collected data in the organizations own development processes. Based on the experiences of using DDGs Björkman shows that this methodology is a good way for trade unions to structure attempts to enhance creativity in the process of listening to members in the service development process. (Participative case study of the use of DDGs in the Swedish trade union Sif.)

Björlin Lidén, S., & Sandén, B. (2004). The role of service guarantees in service development. Service Industries Journal, *24(4): 1-20*.

Björlin Lidén & Sandén present an empirical description of how service guarantees may support service development by systematizing customer involvement after service failures –i.e. when something goes wrong in the service delivery process. The results show that in 9 out of 41 situations, the invoking of a guarantee led to service development. The guarantee contributed to service development through three processes:

1 the service process before the failure,
2 the process of recovery after the failure and
3 the long term development process.

(Content analysis on in-depth interviews with informants with knowledge or experience of service guarantees in three case companies in Sweden.)

Blindenbach-Driessen, F., & van den Ende, J. (2006). Innovation in project-based firms: the context dependency of success factors. Research Policy, *35: 545-561*.

Blindenbach-Driessen & van den Ende investigate to which extent success factors from the new product and new service development literature can be applied to development projects in project-based service firms. Project-based firms are described as firms, such as in engineering and construction, consulting or system integration, which solely execute projects for clients. They found that although success factors frequently mentioned in the

literature can also apply to some extent to project-based firms remarkable discrepancies existed. Factors that seemed more important for project-based firms were:

1 the application of contingent planning approaches,
2 explicit project selection,
3 senior management support,
4 the availability of sufficient experts and
5 making business cases and testing and launching the new services.

Factors that seemed less important were:

1 the use of cross-functional teams,
2 heavyweight project managers,
3 collaboration with customers and suppliers, and
4 performing market research.

The involvement of product champions and external team communication seem to be equally important. (In-depth case study of six-projects in four firms – an engineering firm, an engineering-consultancy firm, a construction company and a financial consultancy firm.)

Bower, D. J., Reid, M., Barry, N., & Ibbotson, T. (2000). Aligning process and meaning: innovating in complex healthcare delivery systems. International Journal of Innovation Management, *4(3): 299-317.*

Bower et al. investigate the impact of innovations in information and communication technologies (ICT) in a healthcare delivery system. The main focus is on the perceptions of key groups of healthcare professionals – policymakers, mangers and clinicians including both physicians and nurses – of the barriers to adopt new ICT. While there was some shared perception of the critical problems, the interpretations of the underlying issues differed. Specifically healthcare personnel were found to be well informed about the unscheduled problems which might accompany the adoption of ICT, but not as pessimistic and resistant as expected. Bower *et al*. highlight the importance of how the innovation is conceptualized and communicated. (Qualitative analysis of data from semi-structured interviews with executives/managers and health professionals in the National Health Service in Scotland.)

Cainelli, G., Evangelista, R., & Savona, M. (2004). The impact of innovation on economic performance in services. Service Industries Journal, *24(1): 116-130.*

Cainelli et al. explore the relationship between innovation and economic performance in services. The results show that innovating firms out-perform non-innovating firms in terms of productivity levels and economic growth. Productivity is also found to be linked to the amount of innovation expenditures, especially expenditures on new software. (Statistical analysis based on a longitudinal data set of Italian firms.)

Camacho, J., & Rodríguez, M. (2005). How innovative are services? An empirical analysis for Spain. Service Industries Journal, *25(2): 253-271*.

Camacho & Rodríguez explore the innovative character of services and asks the question: how innovative are services? The empirical focus lies on the service sector in Spain. The findings leads to the conclusions that services do innovate, but to a varying degree. Three main groups of services are classified:

a high-innovative – research and development, software and other computer activities,
b medium-innovative – telecommunication, financial intermediation and other business services and
c low-innovative – wholesale, transport and public services.

(Factor and cluster analysis on data from the Third Community Innovation Survey for Spain.)

Chan, A., Go, F. M., & Pine, R. (1998). Service innovation in Hong Kong: attitudes and practice. Service Industries Journal, *18(2): 112-124.*

Chan *et al*. explore management's attitude towards innovation in service firms and the extent to which service firms are committed to the general practice of managing service innovation. The empirical focus is on service firms in Hong Kong in four sectors: retail/wholesale, financial services, hotel/restaurant, and tourism. The findings suggest that although the majority of service organizations in Hong Kong are engaged in some type of innovation, the majority of them do not have an established system to control the process. In general, managers confine their development to incremental or distinctive innovations and do not attempt to develop breakthrough innovations. (Questionnaires to service sector firms in Hong Kong)

Czarnitzki, D., & Spielkamp, A. (2003). Business services in Germany: bridges for innovation. Service Industries Journal, *23(2): 1-30.*

Czarnitzki & Spielkamp examines the role of business services in building bridges for innovation in both the manufacturing and service sectors. The empirical context is business services in Germany. A distinction is made between ordinary standard business services and qualified knowledge-based or knowledge-intensive business services. Specifically the second category is of specific focus in the article. A sound innovation capacity, in particular knowledge, creativity, market and management skills, is a necessary precondition to become a bridge for innovation, the authors claim. They conclude that business services have sufficient innovation potential which makes them good candidates for building bridges for innovation for other firms. The role of business services in an innovation system is thus that of a distributor of knowledge and a transfer agent. (A survey among service firms in Germany)

Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovation in organizations. Journal of Management Studies, *38(1): 45-65*.

Damanpour & Gopalakrishnan examine the dynamics that govern the adoption of product and process innovations at the firm level over time. The empirical setting for the study is commercial banks in the US. Product innovation is defines as new products or services introduced to meet an external user or market need. Process innovation is defines as new elements introduced into an organization's production or service operation to produce a product or render a service. The findings are:

1 product innovations are adopted at a greater rate and speed than process innovations,
2 it is more likely that product innovation is adopted first followed by later process innovation (a product-process pattern) than that process innovation precede product innovation (a process-product pattern),
3 the adoption of product innovations is positively associated with the adoption of process innovation and
4 high-performance banks adopt product and process innovations more evenly than low-performance banks.

The conclusion is that organizations in the service sector, like those in the manufacturing sector, emphasize the adoption of product innovations over process innovations. (Statistical analysis on data from a database and from questionnaires covering innovation introductions in a sample of 101 commercial banks in the US.)

de Brentani, U. (2001). Innovative versus incremental new business services: different keys for achieving success. Journal of Product Innovation Management, *18, 169-187.*

de Brentani attempts to gain insight about the influence of product innovativeness on factors linked to new service development. Specifically, focus is on new business-to-business service projects. A number of more general success factors governing the outcome of new service ventures are identified:

1 ensure a good customer/need fit,
2 involve expert front line personnel in new service development, and
3 implement a formal and planned launch program for new service offerings.

Other factors were however found to be more and less central depending on how really new or innovative the new service is. Some of these factors are significant for both really new and incremental new services, but with substantially different impacts. Other factors are distinctive in that they are significant for only one of the two types of new services. (Statistical analysis on data from a large-scale survey of managers knowledgeable about new product development in their firms.)

de Jong, J. P. J., & Kemp, R. (2003). Determinants of co-workers' innovative behaviour: an investigation into knowledge intensive services. International Journal of Innovation Management, *7(2): 189-212.*

de Jong & Kemp investigate drivers/determinants of innovative behavior of individual co-workers in knowledge-intensive service firms. Individual innovative behavior is considered to be a major determinant of incremental innovation. The analysis shows that the following determinants had a positive relation to innovative behavior of co-workers:

1 perceived job challenge,
2 autonomy,
3 strategic attention to innovate in the firm,
4 external contacts with customers and/or competitors and
5 operating in a market where firms compete on differentiation.

However, contrary to what was expected:

1 a firm climate supportive of innovation and
2 a high variation in demand could not be supported as determinants of co-workers innovative behavior.

The seven constructs could explain 34% of the variance in innovative behavior. De Jong & Kemp point out that the results indicate that part of the innovative behavior of individual co-workers is not manageable, since it is dependent on external factors – i.e. is more likely to emerge when competition is based on differentiation. (Regression analysis on survey data from 360 workers in knowledge intensive service firms.)

de Jong, J. P. J., & Vermeulen, P. A. M. (2003). Organizing successful new service development: a literature review. Management Decision, *41(9): 844-858.*

de Jong & Vermeulen have reviewed literature on organizing new service development. They classify the literature into two evolutionary stages:

1 managing key activities in the new service development process, and
2 creating a climate for continuous innovation.

They argue that in order to help service firms improve their new service development more research should focus on activities such as testing, and market launch and the potential impact of products champions. Also how service firms build a capability to innovate constantly should be further researched. (A literature review.)

den Hertog, P. (2000). Knowledge-intensive business services as co-producers of innovation. International Journal of Innovation Management, *4(4): 491-528.*

den Hertog explores what role knowledge-intensive business services (KIBS) play in innovation in other firms. A four-dimensional model of service innovation is presented consisting of:

a a) the service concept,
b b) the client interface,
c c) the service delivery system/organization,
d d) technological options.

Based on these dimensions five basic service innovation patterns are identified:

1 supplier-dominated innovation,
2 innovation in services,
3 client-led innovation,
4 innovation through services and

5 paradigmatic innovation.

KIBSs are seen to function as facilitator, carrier or source of innovation in client firms. Through their symbioticlike relationship with client firms some KIBSs function as co-producers of innovation. Specifically process-oriented and intangible forms of knowledge flows are crucial in such relationships. (Theoretical discussion with occasional empirical examples.)

Djellal, F., & Gallouj, F. (2006). Innovation in care services for the elderly. Service Industries Journal, *26(3): 303-327*.

Djellal & Gallouj focus on innovation in care services for the elderly. They develop a framework for analyzing innovation in this context in terms of "targets". Innovation is identified in:

1 the various forms of assistance and residential provision for the elderly,
2 the technologies deployed,
3 the services provided,
4 the human environment including caregivers and relatives, and
5 the institutional environment.

(A literature review.)

Djellal, F., & Gallouj, F. (2007). Innovation and employment effects in services: a review of the literature and an agenda for research. Service Industries Journal, *27(3): 193-213*.

Djellal & Gallouj examine the relationship between innovation in services and the creation of new jobs (employment). They (re)examine the literature on innovation in services focusing on to what exent and in what way this issue is implicitly or explicitly addressed. Three general research topics are addressed:

1 the impact of information technology and technological innovation on employment in services,
2 the question of employment in service innovation and
3 the employment effect of knowledge-intensive services on the innovation in other sectors (manufacturing or services).

(A literature review.)

Dolfsma, W. (2004). The process of new service development - issues of formalization and appropriability. International Journal of Innovation Management, *8(3): 319-337.*

Dolfsma looks at the innovation process for service firms. He concludes that service firms do innovate, but the service development process is often ad hoc and integrated in the firms' everyday operations. The possibilities involved in formalizing and appropriating service development and its benefits are discussed. (A literature review)

*Ettlie, J. E., & Kubarek, M. (2008). Design reuse in manufacturing and service*s. Journal of Product Innovation Management, *25: 457-472*.

Ettlie & Kubarek explore design reuse in both manufacturing and services. Among other things the tendency of design reuse is put in relation to manufacturing and service firms' inclination to novelty and innovation in new offerings. The results show that for manufacturing novelty of new offerings was found to be significantly and inversely related to percentage of reuse for manufacturing, which means that the higher percentage of design reuse the less innovative new offerings tend to be. This relation was however not found do exist for services. (Statistical analysis on data from a web-based survey covering both manufacturing and service firms).

Fay, D., Borrill, C., Amir, Z., Haward, R., & West, M. A. (2006). Getting the most out of multidisciplinary teams: a multi-sample study of team innovation in health care. Journal of Occupational and Organizational Psychology, *79: 553-567*.

Fay *et al*. investigate whether multidisciplinarity in teams increase team innovation or not. The empirical setting is the health care sector in the UK. Multidisciplinarity is defined as the number of different professional groups in a team. Results show that multidisciplinarity was positively related to the quality of team innovation under the condition that the teams had good team processes. (Statistical analysis of data from a database of breast care teams in the UK.)

Fitzgerald, L., Ferlie, E., Wood, M., & Hawkins, C. (2002). Interlocking interactions, the diffusion of innovations in health care. Human Relations, *55(12): 1429-1449*.

Fitzgerald *et al*. study the process of diffusion of innovations into organizations, specifically the later stages of the diffusion process. The empirical focus in the article is healthcare in the UK. Diffusion of innovation is talked about in terms of diffusion of new knowledge. A number of findings emerge from the study. First, the evidence for the (in this case scientific) innovation is not self evident but ambiguous and complex. Second, diffusion is an interactive and iterative process in which the adopters have an active role. Third, the process of diffusion is dependent on the interlocking interactions of actors and context. (Two case studies based on interviews in the acute and primary care sector of health care in the UK.)

Froehle, C. M., Roth, A. V., Chase, R. B., & Voss, C. A. (2000). Antecedents of new service development effectiveness. An exploratory examination of strategic operations choices. Journal of Service Research, *3(1): 3-17*.

Froehle et al. examine the strategy process of new service development with an empirical focus on team-based organizatitional structures. They found that:

1 a cross-functional team structure directly influence the effectiveness of firms new service development efforts,
2 more formalized processes can contribute to increasing the speed of new service development, and
3 the sophistication of the information technology infrastructure directly effects both the seed and effectiveness of new service development activities.

(Hypothesis testing and statistical analysis based on the U.S. database of the International Service Study (ISS).)

Froehle, C. M., & Roth, A. V. (2007). A resource-process framework of new service development. Production & Operations Management, *16(2): 169-188*.

Froehle & Roth develop a theoretical framework that integrates process and resource oriented perspectives on new service development and in which the investment in key resources for innovation – intellectual, organizational, physical – are interlinked with different stages of the innovation process (design stage, analysis stage, development stage, launch stage). (Quantitative and qualitative data gathered through multiple rounds of interviews with senior service managers.)

Gadrey, J., & Gallouj, F. (1998). The provider-customer interface in business and professional services. Service Industries Journal, *18(2): 1-15*.

Gadrey & Gallouj focus on the provider-customer interface in business and professional services (consulting). Besides being a *moment of truth* – where the value of the service is produced in the interaction between customer and provider – and a *moment of trust* – where trust is vital for a productive interaction in the interface – Gadrey & Gallouj identifies the interface as a possible *moment of thrust for innovation*. Three types of innovation modes are identified:

a) ad hoc innovation,

b) expertise-field innovation and

c) formalization innovation.

(Several national and international studies of the management of consulting firms)

Gustafsson, A., Ekdahl, F., & Edvardsson, B. (1999). Customer focused service development in practice. A case study at Scandinavian Airlines Systems (SAS). International Journal of Service Industry Management, *10(4): 344-358*.

Gustafsson et al. investigate customer focused service development. The focus is on the airline SAS. Specifically they illustrate how SAS has carried out thorough investigations into the concerns of the customers throughout the entire travel experience. It is shown how SAS has developed new services and redesigned old ones based on the feedback from the customers. By observing customers´ processes and trying to figure out what people wanted to do during their travel, SAS let the customers design the process instead of squeezing them into some company designed process. (Case study of the Scandinavian airline SAS.)

Hargadon, A. B. (2002). Brokering knowledge: linking learning and innovation. Research in Organizational Behavior, *24, 41-85*.

Hargadon presents a model of innovation, based on knowledge brokering, that explains how some organizations are able to routinely innovate by recombining their past knowledge in new ways. Knowledge brokering involves:

1 the potential inherent in recombinant innovations that draw from existing ideas, artifacts, and individuals from across many small worlds,
2 the bridging strategies that can expose organizations to the local resources of these different worlds,
3 the learning activities that bring knowledge of these resources into organizations,
4 the linking activities that recognize how knowledge and learning in one context could be valuable in another, and
5 the building activities that construct new networks around the emerging innovations.

(Theoretical discussion with empirical examples.)

Heusinkveld, S., & Benders, J. (2005). Contested commodification: consultancies and their struggle with new concept development. Human Relations, *58(3): 283-310*.

Heusinkveld & Benders seek to understand the process of commoditization in relation to new concept development in management consulting. The focus is on the internal elements that may inhibit or encourage the development of new knowledge products. The results reveal that although consultants are eager to present themselves as innovative knowledge producers, there are a number of important factors that inhibit the development of new commodities. Specifically, developing new ideas do not necessarily fit with established practices in the consultancies and do not automatically enjoy support and collaboration within the organization. Additionally, it is shown that struggles about involvement and legitimacy are an inherent part of commoditization efforts within the producers of knowledge (consultancies). (Explorative study based on semi-structured interviews with management consultants.)

Hipp, C., Thether, B. S., & Miles, I. (2000). The incidence and effects of innovation in services: evidence from Germany. International Journal of Innovation Management, *4(4): 417-453*.

Hipp *et al*. present evidence from a large-scale survey of innovation. The empirical setting is German commercial service firms. They show that service firms are much more active with respect to innovation than was widely thought. A distinction is made between three types of innovations:

a *service innovations* – introduction of new or significantly improves services,

b *process innovations* – new or significantly improved methods of service production and
c *organizational innovations* – major improvements in organizational structure or procedures.

The service firms included in the study were found to be most active in service innovation and process innovation but less active in organizational innovation. Suppliers of highly standardized services were further found to have lower tendency to innovate than suppliers of more customized services. (Statistical analysis on data from a large-scale survey of innovation in German service companies between 1993 and 1995.)

Howells, J. (2004). Innovation, consumption and services: encapsulation and the combinational role of services. Service Industries Journal, *24(1): 19-36*.

Howells explores "service encapsulation" of goods and material, a context where goods are not offered to consumers in their own right, but rather in terms of their wider service attributes. Services here act as "wrappers" to goods. As part of this phenomenon services can play a key role in the innovation process in respect to both new goods and services. (Theoretical discussion with examples from the industry)

Hull, F. M. (2003). Simultaneous involvement in service product development: a strategic contingency approach. International Journal of Innovation Management, *7(3): 339-370*.

Hull examines simultaneous cross-functional involvement in service development. Results show that simultaneous involvement by multiple functions has the strongest main effects on performance – i.e. time compression and cost reduction – at the earlier stages of the development process. Simultaneous cross-functional involvement has the largest effects where the development strategy involves a relatively high level of innovation. (Statistical analysis of a survey covering 62 service businesses.)

Hull, F. M. (2004). Innovation strategy and the impact of a composite model of service product development on performance. Journal of Service Research, *7(2): 167-180*.

Hull here looks at innovation strategy and suggest a composite model for service development. In this model three parts are highlighted as central:

1 an operating system that organizes people from diverse functions,
2 defined common processes for them to use and
3 the availability of tools for them to use.

But specific significance for service development performance is put on the magnitude of the innovation strategy of the service provider. (Factor analysis based on a service sector questionnaire of best industrial practices.)

Johne, A., & Storey, C. (1998). New service development: a review of the literature and annotated bibliography. European Journal of Marketing, *32(3/4): 184-251*.

Johne & Storey provide a review of resent literature dealing with new service development, including an annotated bibliography. They suggest that further research is needed on the following topics:

1 comparing new service development in different sectors,
2 international aspects of new service development,
3 managerial attitudes towards meeting corporate growth objectives via new service development,
4 managerial attitudes towards meeting personal growth objectives via new service development,
5 objective procedures for evaluating new service development success,
6 new service development teamwork,
7 the role of marketing,
8 the effects of contingencies and
9 system control.

(A literature review.)

Kelly, D., & Storey, C. (2000). New service development: initiation strategies. International Journal of Service Industry Management, *11(1): 45-62*.

Kelly & Storey focus on initiations of new service development projects. More specifically they investigate whether firms use systematic procedures to generate and screen ideas for new services. It was found that only half the sample has a formal new service development strategy, idea generation is undertaken on an ad hoc basis and idea screening is failing to support the new service development strategy. (Statistical analysis based on data from a survey of marketing managers in UK service companies in banking, telecommunications, insurance, transportation and media.)

Kristensson, P., Magnusson, P. R., & Matthing, J. (2002). Users as a hidden resource for creativity: findings from an experimental study on user involvement. Creativity and Innovation Management, *11(1): 55-61*.

Kristensson et al. examine how user involvement affects the originality of new service ideas in service innovation. The empirical findings revealed that the users produced more original ideas than the company's professional service developers. Based on this the authors suggest that service firms would benefit from involving their customers in the service innovation process. (Quantitative experiment study in Sweden involving simulations of user involvement in the context of developing GSM services – Global System for Mobile Telecommunication.)

Kristensson, P.; Gustafsson, A. & Archer, T. (2004). Harnessing the creative potential among users. The Journal of Product Innovation Management. *Vol. 21, pp. 4-14*.

Kristensson et al. here examine the benefit of involving users in suggesting new product ideas in an innovative project. In the study advanced users, ordinary users and professional product developers where given the task of creating ideas for future mobile phone services. The results indicate that ordinary users create significantly more original and valuable ideas than professional developers and advanced users. Professional developers and advanced users created more easily realizable ideas, and ordinary users created the most valuable ideas. They conclude that companies in need of original, customized ideas for future products should involve their users in the creative phases of their innovation process. (A quasi-experimental research design in collaboration with the telephone operator Telia Mobile in Sweden.)

Kristensson, P., Matthing, J., & Johansson, N. (2008). Key strategies for the successful involvement of customers in the co-creation of new technology-based services. International Journal of Service Industry Management, *19(4): 474-491*.

Kristensson et al. discuss key strategies required for successful involvement of customers in the co-creation of new technology based services. Seven key strategies are identified as being essential for successful user involvement in new service development:

1 users identifying needs in their own setting of use,
2 users identifying need in their various roles,

3 providing users with analytical tools,
4 motivating users via the apparent benefit to be gained from their involvement,
5 non-reliance on brainstorming when generating ideas,
6 users not having too much knowledge of technology, and
7 the involvement of a heterogeneous group of users to ensure that a diversity of ideas is provided for future services.

(A case study of five project meeting conducted in two Swedish telecommunications service companies – Ericsson Consumer Lab and TeliaSonera.)

Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. International Journal of Innovation Management, *5(3): 377-400*.

Lawson & Samson provide a framework in which they argue that innovation management can be seen as a form of organizational capability. The process of innovation can be managed, systematized and replicated within organizations. They develop a model of the firm as an innovation engine, in which investment in innovation capability is seen as the most important facilitator for wealth creation. Innovation capability includes managing: vision and strategy, the competence base, organizational intelligence, creativity and idea management, organizational structures and systems, culture and climate and technology. (A literature review and a case study of Cisco Systems.)

Leiponen, A. (2005). Organization of knowledge and innovation: the case of Finnish business services. Industry and Innovation, *12(2): 185-203*.

Leiponen examines knowledge creation activities and its relations to learning and innovation in knowledge-intensive business service firms. The results suggest that:

1 *collective application of knowledge* is more likely to lead to significant improvements in services than individual application of knowledge,
2 *acquiring external knowledge*, particularly from customers and competitors, is more likely to lead to new service introductions than local and incremental learning on the job, and
3 service innovations are also supported by *highly educated employees*.

(Explorative factor analysis combined with regression analysis based on data from a survey of 167 service firms in Finland.)

Leiponen, A. (2006). Managing knowledge for innovation: the case of business-to-business services. Journal of Product Innovation Management, *23: 238-258*.

Leiponen here examines the effects of knowledge on innovation performance. A conceptual framework of knowledge assets with degrees of tacitness and collectiveness as the principal axes is developed. The results show that both improvements and new introductions of business services are significantly associated with collectively held knowledge – i.e. codified service solutions or team-based competences and procedures. Relying solely on tacit knowledge held by individuals might in contrast hamper innovation. The results also show that tacit collective knowledge is more closely associated with new service introductions (innovations), whereas explicit collective knowledge is associated with service improvements. (Statistical analysis of survey data from 167 business service firms and complementary case survey of 16 other firms.)

Lievens, A., de Ruyter, K., & Lemmink, J. (1999). Learning during new banking service development. A communication network approach to marketing departments. Journal of Service Research, *2(2): 145-163*.

Lievens *et al*. have studied the impact of interpersonal communication in new service development. Their empirical focus lies on financial services in banks. They conclude that close cooperation can be detrimental for learning in these contexts. Close cooperation involves strong integration and a central position within the communication network. Boundary-spanning communication and the presence of individuals within loosely coupled networks are suggested as potentially effective conditions to obtain a good learning environment. (Network analysis based on a sociometric survey among samples of employees in two banks.)

Lievens, A., & Moenaert, R. K. (2000b). Project team communication in financial service innovation. Journal of Management Studies, *37(5): 733-766.*

I the same empirical setting as Lievens *et al*. (1999) Lievens & Moenaert have looked at project communication in new service development teams. Project teams were found to service as information-processing systems where innovative uncertainty could be reduced. The authors found that project success in new project development is mediated by the level of innovation uncertainty reduction. (Hypothesis testing and statistical analysis

based on a survey in two leading Belgian banks involving 20 financial service innovation projects.)

Lievens, A., & Moenaert, R. K. (2000a). New service teams as information-processing systems. Reducing innovative uncertainty. Journal of Service Research, *3(1): 46-65*.

In this article Lievens & Moenaert further examine the role of communication during the innovation process of new financial services. They view the innovation process from an information processing perspective stressing that successful innovation depends on the reduction of innovation uncertainty. Uncertainty is in this context described as the difference between the amount of information necessary to perform a task and the amount of information already available within the organization. In order to lower this uncertainty focus should be put on three types of project team communication:

1 *intra project communication*,
2 *extra-project communication involving organizational liaisons* – i.e. transfer of intra-organizational communication by project members – and
3 *extra project communication involving gatekeepers of information* – i.e. transfer of extra-organizational information by customer-contact personnel.

Intra-project and extra-project communication is further linked with the reduction of innovative uncertainty. (Regression analysis of data from a survey covering new financial service projects in banks in Belgium.)

Magnusson, P. R., Matthing, J., & Kristensson, P. (2003). Managing user involvement in service innovation. Experiments with innovating end users. Journal of Service Research, *6(2): 111-124*.

Magnusson *et al*. investigate the impact of user/customer involvement on the outcome of service innovation projects in telecommunication in Sweden. The results show that involving the users makes the ideas more original and holding a higher perceived value. But, on the other hand the users' ideas are on average less producible. (Statistical analysis bases on data from experiments involving the emulation of user involvement scenarios in telecom services in Sweden.)

Mascitelli, R. (2000). From experience: harnessing tacit knowledge to achieve breakthrough innovation. Journal of Product Innovation Management, *17: 179-193*.

Mascitelli investigates the process by which valuable breakthrough innovations are achieved. He proposes that breakthrough innovations results from exploiting tacit knowledge possessed by both individuals and project teams. The best conditions for breakthrough innovation to occur is an atmosphere in which divergent thinking, improvisation, and artistic creativity can merge with the practical demands of the product development process. In order to harness the creative power of tacit knowledge the organization need to help the design team members to foster an emotional commitment and deep personal involvement in the innovation process. Two techniques for catalyzing breakthroughs derived from tacit knowledge is suggested:

1 use prototypes as catalysts for breakthrough thinking,
2 share tacit knowledge face-to-face.

(A theoretical discussion.)

Matear, S., Grey, B. J., & Garrett, T. (2004). Market, orientation, brand investment, new service development, market position and performance for service organisations. International Journal of Service Industry Management, *15(3): 284-301*.

Matear *et al*. investigate how three market related sources of advantage – new service development, market orientation and brand investment – contribute to service firm performance. New service development and brand investment are found to contribute to the attainment of positional advantage and consequently to performance. Market orientation is however found not to contribute directly to positional advantage. (Statistical analysis based on questionnaire data from marketing managers of service organizations in New Zealand.)

Matthing, J., Sandén, B., & Edvardsson, B. (2004). New service development: learning from and with customers. International Journal of Service Industry Management, *15(5): 479-498*.

Matthing *et al*. examine the task of understanding and anticipating latent customer needs in new service development. The empirical focus is on Sweden. The results support the belief that customer involvement in service innovation, if properly managed, obtains valuable customer information and

has a positive effect on the innovativeness of the created service ideas. Customers' service ideas were found to be more innovative, in terms of originality and user value, than those of professional service developers. (A literature review and statistical analysis based on data from a field experiment together with TeliaSonera on end-user mobile phone services in Sweden.)

Matthing, J., Kristensson, P., Gustafsson, A., & Parasuraman, A. (2006). Developing successful technology-based services: the issue of identifying and involving innovative users. Journal of Service Marketing, *20(5): 288-297.*

In this article Matthing et al. explore the identification of innovative customers and the effectiveness of employing such customers to generate new service ideas. The empirical focus is on new service development in technology-based services – i.e. services with a technology platform such as the internet, 3G mobile-phone technology, geographic positioning systems etc. Specifically the use of the "technology readiness index" (TR) – a survey tool which addresses the attitudes that individuals seem to experience when esposed to new technology – is discussed. The results suggest that:

1 TR is a useful tool for identifying users who exhibit both innovative attitudes and behaviors and
2 users with a high TR score are highly creative as reflected by the quantity and quality of new service ideas.

(Statistical analysis based on data from a customer survey – the Swedish National Technology Readiness Survey – and data from field experiments in Sweden in which customers were asked to come up with ideas for value-adding mobile phone services.)

McCabe, D. (2000). The swings and roundabouts of innovating for quality in UK financial services. Service Industries Journal, *20(4): 1-20.*

McCabe examines organizational innovation in the financial service sector. The focus is on innovations in work organization and new methods of management control such as culture, TQM and BPR. These organizational innovations have been described as ways to enhance employee commitment, empowerment, improved communication, delayering, greater flexibility through less bureaucracy and more customer focus. The results of the study however suggest that an attempt to implement these organizational innovations resulted in a situation of complexity where the old and new merge to reconstitute each other. McCabe emphases that although there

might be some manifest changes, innovation can be understood as a series of “swings and roundabouts”, highlighting that tensions in the management of innovation are perennial. (Case studies of two banks and two insurance companies in the UK.)

McCabe, D. (2002). "Waiting for dead men's shoes": towards a cultural understanding of management innovation. Human Relations, *55(5): 505-536*.

In this article McCabe seeks to understand how the innovations adopted by managers are influenced and “imbued” by the embeddedness of their subjectivity within a particular cultural context. Specifically, it is shown how managers may resist new discourses/innovations that seem to threaten established ways of thinking and acting. An innovation cannot be separated from the context in which it arises and it has a tendency to mirror as well as reshape organizational conditions. Innovations reflect and reproduce the past, while simultaneously reshaping it, both in intended and unintended ways. In this way innovations reflect and reproduce the existing relations of power in organizations. (A case study of an insurance company.)

McMeekin, A., & Coombs, R. (1999). Human resource management and the motivation of technical professionals. International Journal of Innovation Management, *3(1): 1-26*.

McMeekin & Coombs examine the links between HRM and the motivation of technical professionals located in R&D functions in innovative companies. Identified HRM practices are analyzed with respect to their impact on the motivation of technical professionals. The authors found that:

1 the intrincic motivation of “interesting” technical work is a deeply rooted element of the culture of technical professionals,
2 short-term rewards, in the form of salary improvements and other incentives, also have an effect on motivation, and
3 motivation is also affected by the longer-term vision of a career with stages and a process of development.

It is argued that HRM techniques are still only partially developed in R&D settings. In particular career development is poorly understood and practiced, both by managers and HRM specialists in R&D. (Case studies based on interviews in R&D functions in four companies.)

Menor, L., J., & Roth, A. V. (2008). New service development competence and performance: an empirical investigation in retail banking. Production & Operations Management, *17(3): 267-284*.

Menor & Roth investigate success factors for new service development. They conceptualize a firm's new service development competence as consisting of four interrelated and complementary dimensions:

1 formalized new service development processes,
2 market acuity,
3 new service development strategy and
4 information technology use and experience.

Contrary to conventional wisdom in new service development, Menor & Roth have found that formalized processes play a lesser role in the success of new service development compared with the other dimensions. Instead, market acuity – which captures the firm's ability to see the competitive environment clearly and to anticipate and respond to customers' evolving needs and wants – was the most important new service development competence indicator. (Statistical analysis based on survey data from 166 retail banks.)

Meyer, M. H., & DeTore, A. (2001). Perspective: Creating a platform-based approach for developing new services. Journal of Product Innovation Management, *18: 188-204*.

Meyer & DeTore explore the design and renewal of services. A platform-approach similar to what is used for product development is applied. The authors list a number of principals for effectively developing new product/service lines:

1 creating new insights into a firm's market segmentation,
2 understanding both the perceived and latent needs of both new and existing groups of customers,
3 design and implement subsystems and interfaces that can be used across different products and across different product lines.

(Case study of Lincoln Re, a large international reinsurer.)

Miles, I. (2000). Service innovation: coming to age in the knowledge-based economy. International Journal of Innovation Management, *4(4): 371-389*.

In 2000 Miles edited a special issues in International Journal of Innovation Management. In the introduction to the special issue he argues that it is time for a marriage between the study of service innovation and mainstream innovation studies. The essays in the issue emphasize the need for more integrated approaches to innovation in a knowledge-based economy. The articles in the issue are: Wyatt, 2000; Hipp et al., 2000; Uchupalanen, 2000; den Hertog, 2000. Miles identifies some new themes in the service innovation research that had received attention some years before the special issue:

1 1) attention to building typologies and taxonomies of service firms and sectors, and understanding how these may relate to varieties of innovation processes in services,
2 2) a move from studying individual firms and sectors in isolation to linking the study of service innovation to innovation networks and systems.

Oke, A. (2007). Innovation types and innovation management practices in service companies. International Journal of Operations & Production Management, *27(6): 564-587*.

Oke investigates management practices in different types of innovation in the UK service sector. He differentiates between two types of innovations in service firms:

1 *(service) product innovation* – new developments in the core offering of service companies that tend to create new revenue streams,
2 *service innovations* – innovations in processes and innovations in the organization for existing service products.

The findings show that product innovations are emphasized more in telecommunications and financial sectors while service innovations are emphasized more in retail and transport sectors. The results also suggest that formal management practices supporting innovation – innovation strategy, creativity and idea management, human resource management, selection and portfolio management and implementation – tend to be biased toward the development of radical innovations on the expense of incremental innovation. (Statistical analysis based on data from interviews and a mail survey sent to senior managers in the service sector in the UK.)

Osborne, S. P. (1998). Naming the beast: defining and classifying service innovations in social policy. Human Relations, *51(9): 1133-1154*.

Osborne develops a typology of organizational change within which to situate and analyze innovation in social policy. Four archetypes of change in social policy implementation are distinguished:

1 *total* – new service and new relation to the client needs,
2 *expansionary* – existing service but new relation to the client needs,
3 *developmental* – existing service and existing relation to the client needs and
4 *evolutionary* – new service but existing relation to the client needs.

Total, expansionary and evolutionary types of change are seen as innovative as they involve discontinuity for the organization. (A literature review and a survey study of voluntary and nonprofit organizations in the personal social services in the UK.)

Perks, H., & Riihela, N. (2004). An exploration of inter-functional integration in the new service development process. Service Industries Journal, *24(6): 37-63*.

Perks & Riihela explore the nature of inter-functional integration in new service development. A framework is developed highlighting process, outcome and context as central elements for understanding the complex nature of functional integration. Critical factors underlying inter-functional activities were found to be:

1 which functional stakeholders to include and when in the process,
2 the relationship with external stakeholders,
3 how authority and process ownership is distributed,
4 a shared understanding of goals, and
5 the influence of changes in the organizational context over time.

(A case studies of new services (internal ICT) in the UK postal service Consignia.)

Ramirez, M. (2004). Innovation, network services and the restructuring of work organisation in customer services. Service Industries Journal, *24(1): 99-115*.

Ramirez looks at the dynamics of involving key employees from customer service in the innovation process. The empirical focus in the article is on service innovation in telecommunication in the UK. A conclusion from the study is that integrating broader groups of employees into the innovation process can be vital. Because of their relationship with the end users

customer service employees are in a unique position to share insights with developers and new service designers. However, transforming work related institutions in the firm can be a challenging process. Specifically as this may involve moving to less formal divisions of labor and requiring that management give up some of their formal power. (A case study in a telecommunication firm in the UK.)

Song, X. M., di Benedetto, A., & Song, L. Z. (2000). Pioneering advantage in new service development: a multicountry study of managerial perceptions. Journal of Product Innovation Management, *17: 378-392*.

Song *et al*. examine pioneering advantage in new service development. Pioneering advantage can be of several types: economic, preemptive, technological and behavioral. In the study they find that technological advantage of pioneering are much less important to service managers than are other pioneering advantages. (Statistical analysis of survey data from a sample of 982 senior managers in service industries in nine countries: the US, the UK, Germany, Japan, China, Taiwan, Hong Kong, South Korea and Singapore.)

Storey, C., & Kelly, D. (2001). Measuring the performance of new service development activities. Service Industries Journal, *21(2): 71-90*.

Storey & Kelly here investigate how service firms evaluate their new service development activity. They find that although new services are an important source of revenue, firms are still not satisfied with their ability to develop new services. The study further shows that truly innovative firms measure new service development performance along a number of softer internal dimensions including the cost of development, the speed of development and the effectiveness of the process. This contrasts less innovative firms which most often use financial measures and fast followers which employ customer-based measures. (A survey of and interviews with marketing managers in British service firms in five sectors: banking, telecommuication, insurance, transportation and the media.)

Tether, B. S. (2003). The sources and aims of innovation in services: variety between and within sectors. Economy, Innovations and New Technology, *12(6): 481-505*.

Tether investigates the extent and sources of innovation in five service sectors: wholesales trades, transport services, financial services, computer

services, technical services. The results show significant differences between sectors in their pattern of innovation behavior – i.e. the extent to which services innovate and the extent of their engagement in R&D and collaborative arrangements for innovation. Furthermore, there were significant differences within the sectors studied. (Statistical analysis based on data from a large scale survey undertaken in 13 western European countries.)

Tether, B. S., & Tajar, A. (2008). The organisational-cooperation mode of innovation and its prominence amongst European service firms. Research Policy, *37: 720-739*.

Tether & Tajar investigate different modes of innovation and discusses which mode is more common in service firms. Three modes of innovation are identified:

1 *the product-research mode* – activities oriented to the development of new products,
2 *the process-technologies mode* – activities oriented to the development of new production processes, and
3 *the organizational-cooperation mode* – activities oriented to organizational change.

The two first are forms of technical innovation whereas the organizational-cooperation mode is a form of organizational innovation. The organizational-cooperation mode is particularly prominent in services, especially in trade and distribution services. (Multiple-correspondence analysis based on data from a survey of European firms.)

Tsai, K.-H., Chou, C., & Chen, M.-Y. (2008). Does matching pay policy with innovation strategy really improve firm performance? An examination of technology-based service firms. Personnel Review, *37(3): 300-316*.

Tsai *et al*. examine whether matching pay policy with innovation strategy improves firm performance. In a pay policy it is specified whether the organization will be a pay leader, a pay follower or hold and average position in the labor market. Examinations revealed that combining pay policy with the expenditure on innovation/R&D only showed a positive effect in one of the studied sectors (IC design). Therefore matching pay policy and innovation strategy cannot be regarded as a preferred way toward improving firm performance. (Regression analysis based on data from three technology-based service sectors: software, information system integration and IC design.)

Uchupalanen, K. (2000). Competition and IT-based innovation in banking services. International Journal of Innovation Management, *4(4): 455-489*.

Uchupalanen examines the relationship between corporate strategy and information technology based innovation in services. The empirical setting is financial services in Thailand from the mid 1960s and onward. Uchupalanen critiques the existing "Reverse Product Cycle" model for service innovation and suggest a new framework and model. In this framework the dynamic nature of IT-based product and process innovation and competitive strategies is stressed. Additionally the new model is less general, seeking to encapsulate a country-specific pattern in the Thai banking industry. (Case studies of five IT-based innovations in a Thai bank.)

van den Ende, J. (2003). Modes of governance of new service development of mobile networks. A life cycle perspective. Research Policy, *32: 1501-1518.*

van den Ende investigates modes of governance for service development of mobile telephone networks. Three governance modes are specified:

1 internal development by the telecom operator,
2 several forms of collaboration between telecom operator and service firm,
3 only providing a network by the telecom operator to the service firm, which then develops and provides its services. van den Ende shows that the phases of the life cycle of the mobile telephone network and the service affects the choice of governance mode of new service development projects.

Mainly the governance mode varied based on the degree of uncertainty – technological or market – and urgency involved in the network and service development process. Specifically, the number of redesigns and the level of communication costs in collaboration projects were found to depend on the degree of uncertainty and urgency involved in these projects. (Four case studies of service development projects for mobile telecom networks in the Netherlands.)

van der Aa, W., & Elfring, T. (2002). Realizing innovation in services. Scandinavian Journal of Management, *18: 155-171*.

van der Aa & Elfring investigate innovative forms of special relevance to firms in the service industry. They argue that organizational innovations

play a significant role in services. Three forms of organizational innovation are identified:

1 *multi-unit organizations* – reproduction of the service management system in a multi-unit organization,
2 *new combinations of services* – creating new combinations of service activities, service parts, service segments and
3 *customer as co-producer* – redefining the co-production role of the customer.

These forms of organizational innovation complement technological innovation which also exist in service firms. Supporting processes for different forms of innovation in service firms are also discussed. (Ten case studies of firms in various service industries in the Netherlands.)

van Riel, A. C. R., Lemmink, J., & Ouwersloot, H. (2004). High-technology service innovation success: a decision-making perspective. Journal of Product Innovation Management, *21: 348-359.*

van Riel *et al*. here report on a study of internal success factors for innovation in services. Innovation success is found to be related positively and directly to how well informed and knowledgeable decision-makers are. Furthermore, a market orientation was found to contribute as an internal success factor since it contribute to an organizational climate favoring information sharing and intelligence gathering in relation to the customer. (Survey data from 251 innovation projects in companies in Europe, the US and Japan.)

van Riel, A. C. R., & Lievens, A. (2004). New service development in high tech sectors. A decision-making perspective. International Journal of Service Industry Management, *15(1): 72-101*.

van Riel & Lievens investigate the decision-making effectiveness of managers in high tech new service development projects. The study reveals that it is crucial that decision makers are flexible in their use of cognitive strategies (in how they think), that they have a proactive attitude and that they develop a capability to mentally represent various interfaces between service, customer, technology and firm. (A case study of new service development projects in a mobile telecommunication service industry in Europe.)

Verganti, R., & Buganza, T. (2005). Design inertia: designing for life-cycle flexibility in Internet-based services. Journal of Product Innovation Management, *22: 223-237*.

Verganti & Buganza investigate design inertia when facing the need for continuous redesign and innovation in services. They identify five possible inertia factors that may influence service life-cycle flexibility:

1 technological inertia,
2 internal organizational inertia,
3 external organizational inertia,
4 customer inertia toward change in the service package and
5 customer inertia toward change in service interaction design.

(Two in-depth case studies of Italian Internet-based companies.)

Wong, P. K., & He, Z.-L. (2005). A comparative study of innovation behaviour in Singapore's KIBS and manufacturing firms. Service Industries Journal, *25(1): 23-42*.

Wong & He investigate innovation behavior of knowledge-intensive business services (KIBS) in Singapore. In the KIBS category three major sectors are included: IT and related services, business and management consulting and engineering and technical services. These firms are further compared with the innovation behavior of manufacturing firms in the same region. Central findings are that (a sample of conclusions):

1 KIBS firms have higher innovating ration than manufacturing firms,
2 KIBS firms have higher intensity of human capital, and spend more on training, innovation and R&D,
3 KIBS and manufacturing firms have roughly the same innovation objectives and
4 KIBS firms are less likely to have overseas partners for innovation collaboration.

(Statistical analysis on data from two national innovation surveys in Singapore in 1999.)

Wyatt, S. (2000). ICT innovation in central government: learning from the past. International Journal of Innovation Management, *4(4): 391-416*.

Wyatt examines examples of service innovation within the public sector. The empirical setting is two attempts to develop information networks by

government administrations in the UK and the US during the 1980s. It is suggested that these attempts were unsuccessful because insufficient attention was paid to users. A concluding remark is that technologies and innovations are not only a matter of artifact and the knowledge of how to use them, but they are also about social relationships. Creating a new social-technical system involves creating ideas about how it might be used. (Two case studies of government administrations, one in the UK and one in the US.)

8.2 Dissertations

Björkman, H. (2005). Learning from members. Tools for strategic positioning and service innovation in trade unions. *Stockholm School of Economics, EFI.*

In his dissertation from 2005 Hans Björkman focuses on the utilization of market orientation methods in a Swedish trade union, Sif. As part of being market oriented trade unions can listen to its members. Björkman looks at two tools for listening to trade union members in Sif, an annual member satisfaction survey and an internally developed interview methodology resembling focused groups (Design Dialogue Methodology). Listening to trade union members in the development of the services offered by a trade union is suggested to be a tool for improving strategic positioning and service innovation in these organizations. Björkman concludes that the qualitative tool, the Design Dialogue Methodology, had been connected to service innovation projects and thus had a role in the development of new services through contributing concepts and knowledge to the organization. The quantitative tool, the Barometer, was not found to be a source for creative ideas in service innovation, but had a role in strategic positioning and specifically in selecting adequate service ideas to implement. (An in-depth qualitative case study in the Swedish trade union Sif by an insider action researcher focusing on two tools for market orientation: the Sif Baromenter and Design Dialogue Groups. The thesis consist of a collection of articles.)

Gottfridsson, P. (2001). Småföretags tjänsteutveckling - en studie av hur småföretag utvecklar individuellt anpassade tjänster. *Stockholm universitet, Företagsekonomiska institutionen.*

In his dissertation from 2001 Patrik Gottfriedsson examines how small businesses develop services. Gottfriedsson identifies several aspects that are important in the way small enterprises develop individually designed services:

1 different forms of competence development are important in service development,
2 service development is organized informally and takes place in the daily problem solving activities of the company's management and employees,
3 service development is largely unstructured,
4 service development often revolves around specific individuals, and
5 within service development of small companies there is often a need to use external resources.

These conditions support small enterprises in developing individually designs services. (A qualitative study of 11 companies with less than 49 employees in different service sectors, mainly through interviews with the owner or management of each company oven an 18-month period.)

Magnusson, P.R. (2003). Customer-oriented product development. Experiments involving users in service innovation. *Stockholm School of Economics, EFI.*

In his thesis Magnusson investigates user involvement during the early phases of new end-user service development processes for mobile telephony in Sweden. User involvement is in the thesis focused on customers generating new ideas for services. Magnusson focus on:

1 the contributions of involving users in new service development as opposed to confining the task to professional developers,
2 the personal characteristics that make users useful to be involved, and
3 how the process of involvement affects the results of user involvement.

The results show that involving users does make a difference for the service ideas generated. The involved users service ideas where more original than those of professional developers. However, the enhanced level of originality did simultaneously result in a decreased level of producibility. The results also indicate that the outcome is more dependent on how the users are involved than on who is involved. Particularly good knowledge about the technology may decrease the originality of the ideas but increase the producibility. On the other hand, training in creative methods produced more original ideas. Magnusson conclude that involving users in the service development process may be valuable if the ideas utilised are used as levers for reframing the firm's mindset. However, the ideas should be seen as input to a filtering process in which "the rough diamonds" can be identified. (One qualitative case study based on interviews and documentation of a Telia Mobile endeavour towards user involvement and a quasi-experimental study emulating user involvement in innovating new mobile end-user services in

comparison with professional service developers. The data were analysed both quantitatively through statistical testing of hypotheses and qualitatively. The thesis consist of a collection of articles.)

Matthing, J. (2004). Customer involvement in new service development. *Karlstad University, Division for Business and Economics Service Research Center*.

Jonas Matthing examines and discusses customer involvement as innovative contributors in new service development in his dissertation from 2004. Customer involvement means active participation of customers in the development process or observation of customers in their use of services. He raises the issue whether or not customers are a source of new services that have a potential to enhance market success. The empirical context is technology-bases services for end-user mobile telecommunications in Sweden with a focus on how customers can contribute with suggestions on innovative new service ideas. The results of the study show that customer involvement in service development does contribute to innovativeness in service ideas. They even significantly surpass professional service developers from the company. The study also shows that users who score high on technology readiness create more ideas and more novel ideas. The dissertation also contribute with an enhanced understanding of how companies systematically can develop new services that more accurately meet customer needs by taking the nature of services into account. (Use of an experimental method where groups of customers and company experts were put in problem-solving situations related to new service development for end-user services in mobile telecommunication. The study was conducted in collaboration with the telecommunication company TeliaSonera as one of their technical platforms, Unified Services, was used in the experiments. The thesis consists of a collection of articles.)

Sonesson, O. (2007). Tjänsteutveckling med personalmedverkan. *Karlstad universitet, Fakulteten för ekonomi, kommunikation och IT*.

In his dissertation from 2007 Olle Sonesson focuses on service development in which the front-line employees are actively involved in the service development process in a Swedish bank. His aim is to investigate the front-line employees' involvement and contributions to the service development process and to identify what specifically they contribute to the new service. Sonesson divides the service development process into four phases:

1 the idea phase,

2 the project forming phase,
3 the design phase and
4 the launch phase.

The results show that the front-line employees were partly involved in the idea phase and project forming phase, but mainly in the design phase and launch phase. Their contribution to the service development process is identified as:

1 *trying prototypes* – front-line employees got an opportunity to communicate their view of already developed material,
2 *development work* – front-line employees were involved in developing for example a process manual, and
3 *improved efficiency contributions* – front-line employees contributed through simplifying implementation and launch of the new service.

The findings also show that the front-line employees contributed to the service quality through taking part in the *management of the customer process* –i.e. standardizing work content and work methods – and through *building relationships* with the customers. To conclude, Sonesson argues that the results of the study indicate that it is when the front-line employees are involved in the service development process in various ways that the best results are attained. It also demonstrates that the importance of the employees' participation being supported by the management in the local bank so that time and resources can be detailed. (A qualitative case study design in which Sonesson retrospectively follow four service development projects in one Swedish bank in which the purpose was to offer the bank's customers new and attractive financial services.)

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04 The GSM Story - Effects of Research on Swedish Mobile Telephone Developments. *For brief version in Swedish or English see VA 2008:07 or VA 2008:06*

05 Effektanalys av ”offentlig såddfinansiering” 1994 - 2004

06 Summary - The GSM Story - Effects of Research on Swedish Mobile Telephone Developments. *Brief version of VA 2008:04, for brief version in Swedeish see VA 2008:07.*

07 Sammanfattning - Historien om GSM - Effekter av forskning i svensk mobiltelefoniutveckling. *Brief version of VA 2008:04, for brief version in English see VA 2008:06*

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by funding needs-driven research
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