REALIZING INNOVATIONS IN SERVICE FIRMS

NEW ORGANIZATIONAL FORMS AND SUPPORTING PROCESSES

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Realizing innovations in service firms

New organizational forms and
supporting processes

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Abstract

This paper describes a number of innovation forms that are of special relevance to firms in the service industry. Not only technological innovations but also organizational innovations have been distinguished. In the service industry organizational innovations seem to play a significant role. The literature on innovations makes little mention of new organizational arrangements in services. Based on the service management literature a scheme with three forms of organizational innovation and one form of technological innovation is developed. This scheme is illustrated and elaborated in ten case studies of firms in various service industries. The case studies shed some light on innovations in multi-unit forms, combinations of services and co-operation with customers. On a basis of the service management literature and the case studies some of the main processes supporting the (organizational) innovations are analysed.

Keywords:

Technological innovations

Organizational innovations

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Client as co-producer

INTRODUCTION

Innovations have contributed to the growth in the number of service firms and to the scale of their operations, which in turn has increased their economic impact. The same applies to service activities in manufacturing firms. Innovations provide opportunities to increase the efficiency and quality of the service delivery process, both in the front and the back office, whilst also facilitating the introduction of new service concepts. To a large extent innovation theory has been developed by extending the research approach to innovation in the manufacturing industry to embrace innovations in services as well (Gallouj & Weinstein, 1997). The emphasis has been on technological innovations, and only a few studies have focussed on organizational innovations. In service firms, however, organizational innovations are important, as there is a strong emphasis on the development and implementation of organizational formulas (Gadrey, Gallouj & Weinstein, 1995; Normann, 1984, 1991).

In the literature a number of different organizational innovations in services have been discussed, but it is difficult to compare the various forms. A broad concept such as modulization (Sundbo, 1994) is difficult to compare with process innovations as discussed in Gadrey et.al. (1995). And the concept of modulization also goes beyond the concept of bundling, introduced by Normann (1984, 1991). The ideas behind the recombinative model (Gadrey et.al., 1995; Gallouj and Weinstein, 1997) are different again, as they include some ideas about creating innovations, while

the modulization concept has a strong emphasis on standardization as a key process in the realization of the innovation. The ambiguity surrounding the different forms of innovation in services is reinforced by the limited research that has been done on the processes for implementing innovations. Thus a systematic understanding of the key processes in realizing particular new organizational forms in services is lacking. The aim of this study is, first, to distinguish a number of particular organizational innovations in services and, secondly, to improve our understanding of the processes supporting each one of the organizational innovations singled out.

A better understanding of the processes and mechanisms underlying particular service innovations will help, for example, to explain the difficulty in imitating successful service innovators (Storey and Easingwood, 1998). Some of these innovative firms, like McDonalds and IKEA, appear easy to imitate, but somehow this is not the case. From other studies it has also been concluded that certain innovations appear very difficult to imitate (Henderson and Clark, 1990; De Man, 1996). This difficulty is partly the result of a lack of understanding of the supporting processes of innovation. Some claim that the success of McDonalds is the result of a supreme mastery of the relevant logistics, while others refer to the strict adherence to the franchise formula (Love, 1995). In any case there is considerable 'causal ambiguity' (Reed and DeFilippi, 1990). More needs to be known about the supporting processes for developing and sustaining specific innovations in services.

In the next section we discuss the literature on innovations in services. In the following section on methodology we describe the explorative nature of our research and suggest that it can be seen as one of the first steps in theory-building. In the section on forms of innovations we present a scheme consisting of four such forms. The material drawn from ten case studies is used to identify

the main characteristics of innovations thus distinguished. Finally we focus on three organizational innovations and describe a number of key processes that underlie the implementation of these forms of innovation.

INNOVATIONS AND THE CHALLENGES OF SERVICE MANAGEMENT

Innovative developments in service industries seem to be difficult to explain in terms of traditional innovation theories and typologies (Damanpour, 1991). The main emphasis of innovation research is on new products and production processes, especially in manufacturing (Burgelman, R.A. & M.A. Maidique & S.C. Wheelwright, 1996; Gallouj & Weinstein, 1997). Relatively few studies have focused on innovations in services. This bias in the innovation literature probably restricts our perception of the challenge to management represented by innovations in service firms. For example, the distinction between product and process innovations (Utterback, 1994) does not necessarily provide any deeper understanding of the factors responsible for the successful development of service innovations. Owing to the process character of many services and the close interaction between producers and customers in the service delivery process, the line between product and process in services is not clearly definable.

In the literature on innovations in services we distinguish three main categories. The theme of the first category is the innovation process or the 'new product development' process in a service firm (De Brentani, 1989; Easingwood, 1986; Martin & Horne, 1993; Miles, 1996; Sundbo, 1998). The main subject of the second category is the role of information and communication technology in services (Barras, 1986, 1990; Freeman & Soete, 1997; Quinn, 1992). Barras and Quinn in particular developed new concepts and theories on technological innovations and their implications for management and organization in the service industries. The third category of research on service innovations focuses on the various forms of innovation, especially organizational and technological innovations (Gallouj & Weinstein, 1997; Miles, 1996; Normann, 1984, 1991). Research on organizational innovations is relatively undeveloped and the results have been inconclusive and inconsistent (Wolfe, 1994).

The main topic of our own research is the form of the innovation, including the supporting processes. This is related to the third category of research on service innovation mentioned above. Our definition of innovations is a broad one, in the sense that it encompasses ideas, practices, or objects which are new to the organization and to the relevant environment, that is to say to the reference groups of the potential innovator (Knight, 1967; Rogers & Shoemaker, 1971). Thus an innovation does not have to be new to the world; being new to the industry is sufficient. For example, the multi-unit organizational form has long been established in the retail business, but to the personal services industry (for instance hairdressing) in the Netherlands at the beginning of the nineties it was new.

Innovation forms can be subdivided into two categories: technological and organizational. Some organizational innovations are clearly related to technological innovations. Quinn (1992) describes several 'organizational revolutions' that are closely related to innovations in information technology. But not all organizational innovations are directly related to technology, and on these forms little research has been done. In the sixties Ogburn & Nimkopf (1960) described a number of what they called 'social innovations', such as the chain store, the day nursery, the clearing-house, the Rotary Club and the summer camp. Richard Normann (1984, 1991) made a major contribution to this subject. His cases and illustrations present a greater variety of forms than is generally discussed in the literature. But although Normann offers a number of interesting descriptions of new forms of organizational innovation, his approach is not very systematic. Our research aims to clarify and systematise some of Normann's main concepts and to relate those concepts to more recent research on the subject (Gallouj & Weinstein, 1997; Miles, 1996; Sundbo, 1997,1998). Further, the various forms of innovation will be related to supporting processes that help to explain the success of the innovations.

METHODOLOGY

In our research we concentrated on innovations that are more or less typical for service firms. The study is explorative and the objective is not to test a particular theory but to contribute to theory-building in the field of innovation. Our aim is to explore and describe various forms of innovation in services and the supporting processes underlying those innovations. In line with the case research methodology used by Eisenhardt (1989), our project can be divided into three steps. The first was to develop specifications of constructs relevant to innovation in services. In doing so we drew on the service management literature (Berry, Parasuraman & Zeithaml, 1990; Grönroos, 1990; Heskett, Sasser & Hart, 1990; Normann, 1984, 1991; Schneider & Bowen, 1995), on literature on service innovation (Barras, 1986; Normann, 1991; Quinn, Paquette, 1990; Quinn, 1992), and on more recent work on organizational innovations in services (Gallouj & Weinstein, 1997; Miles, 1996; Storey & Easingwood, 1998; Sundbo, 1997, 1998). Nine cases of successful and internationally well-known service firms were also used to narrow down the relevant concepts: American Express, Citicorp, Federal Express, McDonalds, Minimaid, Nippon Life Insurance, Shop 'n Check, Shouldice Hospital, and Thomson Holidays. The cases were selected from the international literature on services and service management (Davidow and Uttal, 1989; Feigenbaum et al, 1988; Guile and Quinn, 1988; Heskett, 1986; Palmer, 1988; Zemke and Schaaf, 1989). This approach differs slightly from 'grounded theory' (Glaser and Straus, 1967) in that, in this construct-specification phase, it is permitted to build on existing insights. But, just as in the grounded theory approach, it is important to be open-minded and not to assume any causal relationship between the constructs.

The second step was to select our case firms, which resulted in a core set of ten case studies of service firms in the Netherlands. Because of the explorative nature of the research, the selection of the cases was not a random process, but was based on theoretical sampling (Eisenhardt, 1989). The main selection criterion was that the firms should represent the main service sectors: business services as well as customer services.

The third step concerned the collection of data. This part of the study was conducted through interviews (two per company) and the analysis of company reports, industry data, and similar sources. Multiple-data sources were used enable us to check the validity of the data. The case companies were also given the opportunity to react to a preliminary version of their case reports. The last step was to describe the innovations within each case and across the cases, and to analyse some of the supporting processes. In this part we systematically compared the innovations and the relevant constructs in each case and we looked for similarities and differences.

FORMS OF INNOVATION IN SERVICES

Richard Normann's work on 'service management' (1984, 1991) was a point of departure for our exploration of different forms of innovation. Normann (1984,1991) describes four forms of innovation: social innovations, technical innovations, network effects and reproduction innovations. Normann's descriptions are interesting and provoking, although not always consistent or complete. His category of social innovations includes four types. Two of them, client participation and new linkages or bundling, appear to have provided a source for further research in a number of studies. Normann's description of the customer as co-producer is narrowly focused on self-service activities. In our category of the customer as co-producer we also included developments in the opposite direction, such as the outsourcing of service activities (Quinn, 1992). Normann's bundling concept is extended by Sundbo (1994), who complements the market focus with the concerns of internal production considerations, and referring to this wider concept as modulization. Further, the concepts of the recombinative model (Gadrey et.al., 1995; Gallouj and Weinstein, 1997) introduce some ideas about creating innovations into the discussion of bundling and modulization. We have included these aspects in our category of new combinations, while our emphasis on supporting processes adds to our understanding of the internal organization and realization of the innovation. Normann's reproduction category appears in our typology in the

more focused concept of the multi-unit organization and in our emphasis on the internal supporting processes. Thus we distinguish three forms of organizational innovation that are specifically relevant to service firms: the multi-unit organization, new combinations of services and the customer as co-producer. These categories can be traced back to Normann's work. We have modified his categorization and extended it on the basis of the results of recent research (Gallouj & Weinstein, 1997; Gadrey et.al., 1995; Miles, 1996; Sundbo, 1994, 1997, 1998).

Insert Table 1 about here

The emphasis in this study is on organizational innovations. However, for the sake of completeness, we have included the category of technological innovations as our fourth category of innovation forms. Table I shows the four main forms of innovation in our study. Each of these forms will be discussed below, and illustrated with examples from the case studies. Table II provides an overview of the forms of innovation in each of the ten Dutch cases. The Appendix provides some background information on the cases.

Insert Table II about here

Multi-unit organization

The provision of services takes place close to the customer. In many cases it is difficult to draw a definite line between the production and consumption of services. Consequently, in most cases,

the growth of the firm will lead to the reproduction of the service management system at another location, close to a new market.

The cases illustrate the creation of large firms with hundreds of units in sectors which, until recently, have been regarded as largely fragmented, small-scale and locally oriented. The formation of multi-unit service businesses can be seen as a typical organizational innovation.

New units may benefit from a lower cost per unit and from the experience previously acquired in areas such as service-concept development, delivery systems, working methods, machinery and client (relation) management. The 'reproduction formula' (Normann, 1984) is at the core of this form of innovation. Five of our cases illustrate the growth of the firm by the constant creation of new units. Hertz is an example of fast world-wide growth through the reproduction of the service management system. Cosmo is also an interesting case of a firm that developed a formula in hairstyling in a systematic way and reproduced this formula by (to some extent) franchising throughout the Netherlands. OPG is a firm that developed a franchise formula for pharmacies. Van Hecke in the catering business and IKEA as a retailer have also set up large organizations with many units.

Standardization of services and the service delivery system is important as a way of reducing costs through economies of scale. The firms in our cases paid considerable attention to attaining a certain degree of standardisation. The hairstyling chain, Cosmo, has reduced the many different ways of cutting people's hair into sixteen specific styles. An artist has drawn pictures illustrating these styles, and the pictures are used to help clients to express more clearly what they expect from the service. Cosmo has tried to make part of the intangible nature of this service tangible, by standardising the result of the service into a limited number of styles.

Developing a uniform service concept by making the concept as explicit as possible is an important ingredient in the 'reproduction formula'. The IKEA case reinforced these findings. Some

parts of the service are made explicit in the IKEA guide that is mailed to a wide range of customers. In this guide, as well as in every individual store, IKEA presents its service concept and communicates its expectations concerning the role of the customer in the service process. The benefits of standardisation also apply to human resource policies, such as the training of employees.

Supporting processes

The standardization of the service management system is one of the key supporting processes, as it enables a service company to exploit economies of scale and to reduce costs (see also Sundbo, 1994). Sales growth and economies of scale imply the reproducibility of the elements of the service management system: i.e. its delivery system, business philosophy and culture, market segment, service concept, and its image (Normann, 1984, 1991). The balance between those elements and the fit between the service management system and the particular business environment are strategic issues. Service firms may fail in reproducing themselves, for example because of market segments with different expectations and evaluations that do not match the other basic elements of the system.

The cases bring out the importance of making the concept as explicit as possible. Institutionalizing the procedures and making the intangible tangible can be regarded as supporting processes in elucidating the new service concept. Clarifying the service concept is important when it comes to training employees and guiding the expectations of customers. The management of expectations is an important ingredient of quality management in services (Zeithaml & Bitner, 1996).

Another supporting process is internal benchmarking. The cases provide evidence that multi-unit firms refine and improve the concept by learning from the best performing units. The concept of limited experimentation was also observed in some cases. This process contributes to the

modification and renewal of the established service concept in the multi-unit firm. New ideas can be tried out in a limited number of units. If and when the ideas appear to offer an improvement in the service concept, they can then be implemented in all the units.

New combinations of services

The creation of new service combination and service elements is the second form of organizational innovation. This innovation, involving new combinations, may be connected with characteristics such as intangibility and simultaneity. Services with important 'search qualities' or 'credence qualities' can imply information asymmetries and uncertainties on the part of the customer (Nayyar, 1993). On their part, customers can reduce any uncertainties about buying and co-producing by adhering to a known service provider and by paying a premium for reputation and good practice. In addition, new combinations of services can offer a solution to the problem of idle capacity caused by the simultaneity of services. This will be the case when demand patterns for various services in a package are complementary. This form of innovation is very similar to Normann's concept of bundling (1991), as well as resembling Sundbo's concept of 'modulization' (1994) and that of 'recombinative innovation' (Gallouj & Weinstein, 1997).

Adding service activities to the existing service portfolio does not necessarily imply innovation. In many instances, unrelated diversification does not lead to new service concepts. Our proposition is that to be innovative a certain level of integration is required. From the perspective of the customer, the joint purchase of service components must offer some additional value over and above the purchase of the components from a number of separate service providers (Baker & Faulkner, 1991). Integration in the provision of services can create opportunities for differentiation and customization. The innovation designated as 'new combinations' fits well into the category of architectural innovation (Henderson & Clark, 1990). In many 'new combinations' in

services the components are not all that novel. Rather, the new concept derives its novelty from the way the components are combined. Although the notion of linking or 'bundling' is not new, the extent to which separate service activities are combined or integrated, and how they are bundled, remains unclear (Normann, 1984). The crucial factor is the design of the linkages between the components. Mechanisms have to be introduced to link the service components, and it is through these linkages that value is created for the customer.

The case material enhances our understanding of 'new combinations' as an organizational innovation. In the Publex case the separate services are combined into a new concept; they need to be attended to simultaneously. For example, unless the bus shelter is cleaned and maintained, there will be no advertising revenues. This type of inseparability also appears in the James Telesuper concept of 'teleshopping', in which information services, logistics services and retail services are integrated. Frans Maas, OPG, Lavold and Van Hecke provide evidence that their types of new combinations require deliberate co-ordination. These four service providers use cross-selling to expand the number of related services sold to their clients.

In James Telesuper, Oranjewoud and Frans Maas the new service concept, involving the integrated provision of previously separate services, would have been inconceivable without the support of advanced IT-systems. For James Telesuper, 'teleshopping' could only be realized in an efficient way by using sophisticated software to monitor stocks, to respond in real time to customer orders, and to organize the logistics. The added value of Oranjewoud (engineering firm) to the various municipalities depends on the company's ability to co-ordinate their various services, such as monitoring road quality, planning maintenance, and new construction work on roads and the public infrastructure (cables, electricity). This co-ordination relies on the smart use of information technology. The logistical services offered by Frans Maas (logistics services) consist of a package of services such as storage, transport, and the planning of the just-in-time delivery of parts from the suppliers to the assembler. This requires exact information about the

hour-by-hour demand for every part and the location of these parts. The co-ordination of all the information requirements would have been impossible without the advanced use of information technology.

In the above cases information technology has facilitated the development of new combinations of services. In fact, in these cases, information technology not only provides the glue that holds the individual services in the new combination together, but it also creates added value for the customers who can now buy these services in an integrated package instead of purchasing them separately from independent providers. However, information technology is not always a requirement for the creation of new combinations, as the Van Hecke and OPG cases illustrate. There are many alternative mechanisms for co-ordinating and integrating different service concepts. In the IKEA and Publex cases the use of new technologies in the design of the tangible parts of the service system has favoured the development of new combinations. For example, the particular design and use of materials in the Publex bus shelter facilitated the integrated provision of a shelter at the bus-stop, marketing services (ads) and maintenance services (by the Publex staff).

Supporting processes

On a basis of the above discussion we propose a number of supporting processes to this organizational innovation. The introduction of new service combinations sometimes requires a seamless integration of separate components to create a service concept that fulfils the needs of a particular group of customers. The linkage between the previously separate service concepts is crucial, and (information) technology can be helpful in realizing this integration. Some new combinations are loosely coupled rather than tightly integrated. The customer can choose from a range of related services. In such cases various processes for achieving transparency are central to the improvement of customer support. Real-time information at all locations on the availability

and costs of the full range of service activities, for example, is important. This transparency may enhance the ability to attract and keep customers for as many services as possible.

The third process that can support new combinations is cross-selling. The cross-selling capability may be enhanced by incentive mechanisms that will improve the efforts of employees to sell an expanding range of services to existing customers. Experience from the cases illustrates the importance of this process.

The customer as co-producer

In comparison with manufacturing, the process of producing services is much more open. There is a scope for the customers to influence parts of the service process, or to do these parts themselves. The borderline between the activity of the producer and that of the customer is flexible. This flexibility provides the opportunity for new organizational arrangements. In some cases we found strategies and new service concepts that led to a shift in activities between service providers and clients. In many cases such reallocations imply a redefinition of the relationship and the roles played by the various actors, which in turn often involves a systematic investigation of the involvement of clients in the service-producing process. Opportunities for customers to change their role as co-producer are typical of service firms, and show that the borderline between production and consumption is not fixed. The tasks can shift from service provider to customer, for example in many self-service concepts in customer services. Another possible path in the reallocation process is illustrated by the outsourcing of business services.

Interesting illustrations among our case studies are IKEA, Geovas and Frans Maas. In IKEA clients have taken over activities traditionally carried out by the service provider. A more complicated self-service concept and rearrangement of activities was adopted by Oranjewoud in their 'Geovas-system'. In this case the clients contributed to the development of the information service and played an active role as co-producers.

The systematic involvement of the customer in the service delivery system requires changes in the core concepts and in the linkages between them. This innovation is based on the observation that clients can perform certain activities in the service delivery process that have traditionally been done by employees. These clients can be seen as 'partial' employees (Schneider & Bowen, 1995), and the ability to motivate them is crucial to the smooth operation of the delivery process. Motivating clients and giving them the instruments and incentives to perform certain activities is quite different from the managing of employees. Clients as 'partial' employees are not on the payroll, they do not fit into any hierarchical system and they have no prior education for their role in the service delivery. Thus a service company such as IKEA informs and 'educates' its clients in their role, as well as explaining why it is beneficial to them to become involved in co-production. The ability to motivate clients as co-producers can be seen as a new competence requiring to be developed. In addition, the linkages between these 'partial' employees and the regular staff and operations have to be adapted and brought into line with particular the requirements of the clients' involvement in the service delivery system.

The case of Frans Maas is an illustration of the role of information technology in the development of co-producer relationships. A customer, a machine assembler uses EDI (Electronic Data Interchange) to transmit to Frans Maas all its internally collected information concerning stocks of components. The EDI facility enables Frans Maas to monitor stocks in order to organize the logistics around the just-in-time principles.

Supporting processes

Motivating and integrating customers in the service delivery are two processes that support this form of innovation. These processes not only require the introduction of incentives to encourage the client to take over roles previously performed by employees, but additional measures may also be necessary to safeguard the smooth integration of client activities into the overall service

production system. For example, IKEA had to use new technologies in the redesign of the furniture construction process. The furniture has to be assembled at home by the client, instead of in the factory. In addition, the pre-assembled furniture components have to be packaged in such a way that the client can easily take them out of the warehouse stacks and transport them home. New ways of assembling and packing furniture had to be developed. These innovations in technology have been helpful in involving the client as co-producer.

These cases indicate that in order to manage the role of the client in the service delivery process, a focused service operation and a sharply defined target group of clients are needed. There are various ways in which the customer can make a useful contribution to the production process. The (re-)grouping of activities and the nature and extent of the interactions between the activities determine the particular (inter-)organizational arrangement. Changes in this arrangement are regarded as organizational innovations.

Insert Table III about here

Technological innovations

The introduction and widespread adoption of information technology has had important consequences for large parts of the service sector. According to Freeman & Soete (1997) information and communication technologies allow for greater service tradability, particularly in the case of services that have been most dependent on the geographical or chronological proximity between production and consumption. Many firms started out by using information technology to improve the efficiency and speed of processing and storing information in back-office processes (Barras, 1986, 1990). Through the new technology a great many opportunities for improving front-office

processes, delivery systems and new services have been discovered and developed. Our cases show that the use of information technology in both the back and front offices provides the basis for improved and even new services. Services in the rental car industry (the Hertz case) depend on the IT investments in the firm's back office to ensure efficiency, quality and speed. A similar situation holds for the development of new information systems in logistics and transport services (the Frans Maas case). Another example is the case of a real estate information and expert system (Geovas in the Oranjewoud case), which enables the development of new information services.

From our case studies we learned that innovations in information technology can be used in solving many of the management problems in service firms. Information technology was used to overcome the constraints of time and space (simultaneity), and the effective utilization of production capacity was improved by reducing response time and introducing reservation systems. Even personal interaction with clients can be improved by facilitating expert systems. Because customers and employees must be able and willing to work with these new technologies, the technology has to be integrated into the service management system (see, for example, Tornatzky and Fleischer, 1990).

Examples of the benefits of 'other' technologies are generally related to the design of tangible products to suit the specific conditions of the service delivery process. These can be found in the design of appliances and materials in the specialized cleaning services (the Lavold case), the special design of bus shelters (in the case of Publex) or the design of furniture and layout of shopping areas (IKEA). These innovations can also be brought in to solve a variety of management problems. For example, Lavold developed appliances in order to reduce the level of heterogeneity in the service delivery, and to secure its quality and consistency. In addition technological innovations often play a role in enhancing the tangibility and visibility of the service system.

CONCLUSIONS

In this paper three typical organizational innovations in services have been singled out and characterized in terms of various processes that support their realization. The main elements of particular organizational innovations and the supporting processes have been discussed and illustrated, using new empirical material from ten case studies. We have contributed to the debate about organizational innovations by determining the distinctive characteristics of three organizational innovations in a more precise manner than previous studies have done. Our emphasis on the supporting processes as one of the distinctive features of the organizational innovations is also new.

Three forms of organizational innovation were distinguished, and for each of these a number of supporting processes have been described. The empirical material underlying these processes was derived from ten new case studies. The first organizational innovation is the multi-unit organization. Because of the simultaneity of production and consumption, the growth of the business in any one location is limited. Service firms need to develop reproduction formulas and new organizational forms with a new balance between standardization and customization. For the multi-unit organization three supporting processes are relevant: standardization of the service management system; making the service concept explicit; and a certain amount of experimentation connected with internal benchmarking.

New combinations of services are the second organizational innovation. Service firms extend and redefine their portfolio of services and the linkages between these. Creating new bundles of services requires the integration and realization of synergies within the portfolio of services. For innovation by way of new combinations, three supporting processes have also been distinguished:

organizing linkages between services, creating transparency in the service offering, and the cross-selling of the various elements in order to customize the service bundle.

The third organizational innovation consists of the redefinition of roles and relationships with customers. New tasks and roles for customers and firms offer many opportunities for new services and growth. Changing forms of "co-makership" imply new service concepts, new delivery systems and in many cases new markets. Innovation by way of co-production with clients is supported by motivating the clients and integrating them into the delivery process of the service firm. The application of information technology can also play an important part in creating and supporting new forms of co-makership.

Technological innovations seem to be relevant in all cases. Information technology in particular has a widespread and dominant influence on various aspects of the production and deliveries of service firms. New services and higher efficiency, better quality and synergy in existing services can all result from the application of IT. In addition other kinds of technological innovation have been shown to be relevant in several cases.

Implications for further research

This research project has revealed the underexposure of innovations in service firms in the innovation literature. As the service sector is growing rapidly and the dynamics of the industry are confronting the management with new problems and new phenomena like the Internet, the need for research on service innovations is becoming increasingly urgent.

The forms of innovation described in this study are open to further elaboration and testing. The case study approach limits the generalization of the results. One interesting issue concerns the differences between various service sectors. For example, the co-producing role of the customer

probably varies between consumer services and business services. Another relevant research theme is the relation between technological and organizational innovations. We need a deeper understanding of the potential influence of new technologies such as the Internet on the forms of organizational innovation that have been described here. And, finally, the managerial conditions and prerequisites for implementating the various forms and the related supporting processes is a further topic of great interest.

APPENDIX

Innovations in ten Dutch service firms

This section offers a brief overview of the ten case studies that we conducted in the Netherlands. We give some general information and a short description of the innovations that we diagnosed in each case study. Eight of the firms were Dutch-based, two were subsidiaries of firms based elsewhere, namely in the USA (Hertz) and in Sweden (IKEA). The first two cases were customer service firms. The next two provided services both for customers and for other firms. The other six were mainly engaged in providing business services.

James Telesuper is a subsidiary of Ahold (retailing) and is one of the most successful teleshopping businesses in the Netherlands. Teleshopping is a relatively new service. Three types of innovation can be discerned in this company. In the first place there is a new combination of services: retailing and transport (plus some information services). The second innovation concerns the innovative use of information technology in the back office. Thirdly, there is a new interface between customer and company in the front office.

Cosmo is an example of an innovative company in personal services, namely hairstyling. The main innovation is the development of a firm with about 50 units in many towns in the Netherlands and Belgium. This is a rare phenomenon in a highly fragmented industry. The scale of the company opens opportunities for training, the development of new styles and techniques, building an image, and realizing efficiencies from standardization in both products and hairstyles.

Hertz is one of the major players in the car rental industry. Renting a car involves a good deal of information processing. Hertz has successfully applied information technology to improve efficiency in back-office processes, to improve the quality of their services, and to extend their provision of services by introducing 'Computerized driving directions' and several types of client card. Furthermore, Hertz is an example of an internationally operating service firm with a very large number of units.

IKEA is a well known retailing company dealing in home furnishings and equipment. In our view the most important innovations at IKEA are the following. First, the roles a customer is expected to play differ from the roles that competitors expect their customers to adopt. Customers use a catalogue at home to scan and select what they want to buy. The customers then have to pick up, transport, and even assemble the furniture themselves. In many ways they operate as important co-producers. Secondly, IKEA has been able to reproduce its formula in many countries. In doing so, the company has been able to profit from economies of scale and to build a strong image. Thirdly,

IKEA has developed several technologically innovative features such as special equipment, the layout of their outlets, and the design of their furniture. And lastly, to reinforce the concept of going to IKEA as a day out (fun shopping), services such as childcare and a restaurant have been added.

Publex is a company that thought up a new form for combining services previously carried out in a less specialized and productive form. The services they combine are advertizing/PR, the development and production of bus shelters, and the cleaning and maintaining of these shelters. Publex was initially established in France (see Normann, 1991), but its concept proved to be successful in the Netherlands too.

Van Hecke is the largest catering company in the Netherlands. This firm has been successful in reproducing its service delivery system and setting up a large number of units. Van Hecke combined the development of a set of different services for different market segments with a high degree of specialization in areas such as quality control, the supply of information, and employee training. In doing so, van Hecke provided opportunities for many firms to farm out their own catering activities.

The Lavold case revealed a picture similar to that of van Hecke. Lavold is a large professional cleaning business. In our study we focussed on a special new service provided by Lavold's Compuclean division. This service provides a special way of cleaning information-processing equipment (computers). Compuclean developed a cleaning program, trained personnel and also designed specialized cleaning equipment. Compuclean is an example of the specialization and broadening of a set of services.

OPG is a wholesaler of pharmaceutical products. The firm has realized two organizational innovations. The first one involves the start-up of a 'business service' division. This division provides a broad range of business consultancy services to the pharmacists. This set of services can be aimed specifically at the special management situation of the pharmacists. The second innovation concerns the formation of a new chain of pharmacies with several advantages such as reproducing a service and a service delivery system.

Oranjewoud is a large engineering firm (about 1500 employees). This firm developed Geovas, a real estate information system in close co-operation with local government. In this way Oranjewoud realized a (related) diversification and extended its range of services. Equally innovative was its close co-operation with customers in developing, implementing, and operating the information system. The third innovative aspect involved the use of information technology.

Frans Maas is one of the largest transportation companies in Europe and is a provider of logistics services. This company is innovative in at least three respects. The first innovation concerns the transformation of what was (mainly) a transportation company into what is (mainly) a provider of logistics services. This involved extending the services to bundling, amongst other things, warehousing, handling, and information processing. A second innovation involves the use of information technology in tracking systems and the like. The third innovation is connected with the close interaction between Frans Maas and some of its clients. For example, in a co-production arrangement Frans Maas takes care of the logistical services required for the just-in-time delivery of components to a manufacturing firm.

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Table I FORMS OF INNOVATION IN SERVICES

Innovation form	**Description**
1. Multi-unit organization	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
3. Customer as co-producer	Redefining the co-producing role of the customer
4. Technological innovations	Development and implementation of new forms of technology and related reconfigurations of service concepts and processes

Table II INNOVATIONS IN SERVICE FIRMS - TEN CASES FROM THE NETHERLANDS

		Multi-unit organization	New combinations of services	Customer a co-producer	Technological innovations
Company name	*Main activities*				
1. James	Teleshopping		0		0
2. Cosmo	Hairstyling	0			
3. Hertz	Car rental	0			0
4. IKEA	Home furnishing	0	0	0	0
5. Publex	Exploitation bus shelters		0		0
6. Van Hecke	Catering	0	0		
7. Lavold	Professional cleaning		0		0
8. OPG	Pharmaceutical wholesaling	0	0		
9. Oranjewoud	Engineering		0	0	0
10. Frans Maas	Logistics services		0	0	0

Table III SUPPORTING PROCESSES OF THREE ORGANIZATIONAL INNOVATIONS

Multi-unit organization	*New combinations of services*	*Customer as coproducer*
Standardization	Organizing linkages	Motivating
Making explicit the service concept	Creation of transparency	Integrating
Internal benchmarking and limited experimentation	Cross-selling and customization	Application of information technology

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