

Hoffmann, Antje; Herstatt, Cornelius

Working Paper

Service provider - customer interactions: Key to success of innovative services

Working Paper, No. 30

Provided in Cooperation with:

Hamburg University of Technology (TUHH), Institute for Technology and Innovation Management

Suggested Citation: Hoffmann, Antje; Herstatt, Cornelius (2005) : Service provider - customer interactions: Key to success of innovative services, Working Paper, No. 30, Hamburg University of Technology (TUHH), Institute for Technology and Innovation Management (TIM), Hamburg, <https://nbn-resolving.de/urn:nbn:de:gbv:830-opus-1228>

This Version is available at:

<https://hdl.handle.net/10419/55453>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Technologie- und Innovationsmanagement

Working Paper / Arbeitspapier

Service Provider - Customer Interactions: Key to Success of Innovative Services

Dipl.Kffr. Antje Hoffmann

Prof. Dr. Cornelius Herstatt

August 2005

Working Paper No. 30



Technische Universität Hamburg-Harburg

Schwarzenbergstr. 95, D-21073 Hamburg-Harburg
Tel.: +49 (0)40 42878-3777; Fax: +49 (0)40 42878-2867

Abstract

The majority of service providers have recognized the need to develop innovative services that meet sophisticated customer needs on time. Because of structural changes in the market, rising costs and shorter lifecycles of services and technologies this has become a more demanding task than ever before. Most of the existing research focuses on the development of products rather than services. However, research in service related innovation activities is highly rewarding, as the service market is about to become a dominant factor of economic development.

The objective of this paper is to provide an overview of the current state of interaction research with special focus on service marketing and service purchasing processes. A short presentation of the most important theoretical results and findings from empirical studies will be given. Furthermore, we will present results from our own case study investigating the IT Service industry. In this context, we have identified three different approaches of successful interactions between service providers and potential buyers during marketing and purchasing processes with innovative results. We will describe these approaches, show their similarities and differences and as a result, provide recommendations for the service industry and potential buyers.

Introductio

The services sector in Western Europe is of substantial economical and political importance. Especially business-to-business services have seen above average growth rates. [35] Business-to-Business-transactions include e.g. consulting, research and information technology services. Many companies facing rising costs and increasing levels of competition have turned to outsourcing in order to overcome these pressures. [39, 40] Development of Business-to-Business services is extremely dynamic. Furthermore, rising national and global competition, technological changes, decreasing lifecycles and constant market changes demand high levels of innovation activity. Today, buyers are confronted with a large variety of new services offering, unable to judge if any might be crucial for their own business success in the future. [4, 14] On the other hand, providers of professional business-to-business services are more and more convinced that they must increase marketing activities when conducting new business activities. [8, 51] The successful development of innovative new services, utilizing new and complex technologies, is crucial to the viability of every service providers' business.

Service marketing acknowledges the characteristics of services as intangibility, heterogeneity, inseparability of production and consumption and perishability separate services from tangible goods. [5, 48] Because of these constitutive characteristics, many approaches attempting to cluster different types of services besides business-to-consumer and business-to-business services were introduced. Two fundamental types of business services were proposed by GRONROOS – professional and other services. [16] Besides the constitutive characteristics, professional services can be distinguished according to four factors: (1) the service is provided by professionally qualified personnel, (2) services are advisory in nature and focus on problem solving, (3) services are commissioned on an assignment basis and (4) services are of high complexity and of high value. [16, 17, 33, 45, 47]

The aim of this study is to investigate the importance of the interaction between service providers and potential customers instead of just examining new service development or inter-organizational decisions. A framework is formulated to help to structure either the marketing process or the purchasing process of innovative services. This framework will help to conceptualize different inter-organizational interactions between service provider and buyer. The objectives of this study are, threefold:

- To develop a strategic framework for managers of both, service providers and buyers, which serve to better study, plan and manage the interaction process for innovative services. Based on these insights we derive strategic implications for managers of both parties.
- To identify a set of structural and process related determinants of organizing marketing or purchasing innovative services.
- Especially the dynamic time perspective has been rarely considered so far by interaction research, and there is nearly no research available in the case of service marketing. Therefore we will investigate changes of structural and process related variables over the course of the service provider-buyer interaction and frame a process-model including recommendations for the inter-company collaboration.

This paper is organized as follows. In the following paragraph, we present results of a literature review. We will then introduce the research approach applied and present the results of our first empirical observations and findings obtained from five case studies with 30 in-depth interviews in total (Appendix 1). Finally, we will discuss the implications of these findings for further research in the field of innovation marketing as well as corporate practices.

Theoretical background

With respect to marketing and purchasing of innovative professional business-to-business, one can distinguish two basic approaches in the literature: (1) focusing on organizational buying decisions

and process models in organizational buying situations, (2) the second having its focus on interaction research. The organizational buying models concentrate solely on the buyers' side, whereas the interaction school introduces the concept of interaction strategies. A short discussion of the literature is presented below.

(Ad 1) Organizational buying decisions are the result of transaction processes. Developed process models are the starting point and the analytical basis for successful marketing decisions and programs. ROBINSON, FARIS and WIND introduced one of the known models classifying the organizational decision process into eight distinctive stages. [41] WIND and THOMAS gave a summary of different process models that showed that organizational decision processes are difficult to model, that most phases are not easily definable and that differences in processes can be the result of different industries, product characteristics or buying situations. [52] The model of ROBINSON, FARIS and WINDS that is named "Buygrid" model introduces three buying classes: new task, modified rebuy and straight rebuy. This new task focused approach was a first step towards innovation marketing research. The concept of process focus and buying classes helps to differentiate organizational buying decisions and focuses the highly complex and lengthy processes typical for innovative products. [41] KIRSCH and KUTSCHKER introduced a slightly different approach, which in essence supports the concept of ROBINSON, FARIS and WIND. [27, 41] Models that discuss the dimensions influencing buying behavior have been proposed by WEBSTER/WIND and HOWARD/SHETH. [24, 49, 50] Neither the WEBSTER/WIND nor the HOWARD/WIND models incorporate the interplay of marketing and purchasing strategies. They have investigated neither their determinants nor the innovative parts.

Newer studies build on the structure and proceedings of these initial organizational buying studies and support their findings. Especially the decision and selection process, which is found to be varied and additionally complex, and the buying center structures are of particular interest. [1, 9, 11, 12, 21, 31, 40, 53]

(Ad 2) The famous definition of interaction was developed by HOMANS. "When we refer to the fact that some unit of activity of some man follows, or ... is stimulated by some unit of activity of another, aside of any question of what these units may be, then we are referring to interaction. ... the action of each persons has been a stimulus to the action of the other, the action of each has been a response to the action of the other. Accordingly, we may speak of the two as interacting..." [22, 23]

This early research in the field of interaction demonstrates how the characteristics of the individual organization such as size, complexity, professionalism and internal communication channels relate to interorganizational behavior. Especially the IMP-Group has clearly shown the value of taking an interaction perspective on organizational buying decision process and has helped to classify the context of buyer-seller relationships in Europe. [18, 20, 38] Their work contains detailed analysis of the interaction types that may evolve during the marketing and purchasing process. In the case of marketing or purchasing innovative services, the credibility of the service provider proved to be very important in influencing the buyer's willingness to adopt quickly. Frequently, it was discovered that a close interaction (with simultaneous learning processes) between potential buyer and seller – over a period of several months – was needed before contract negotiations were started [3]. Further studies were introduced by GEMÜNDEN, KLICHE and MATTSON. Their studies are dealing with the innovation influence on the interaction approach and are the foundations of innovation marketing. Nevertheless, they focus on innovative products and do not consider the importance of differences between the process stages. [15, 26, 27]

Research on interaction of services transactions is less frequent and the authors could only identify a few studies marginally discussing the marketing and purchasing of services innovations. [13, 25, 35, 36, 43, 44, 46] However, the authors of these studies agree that the subsumption of services transactions, with their characteristic interactions, into the research area of capital-intensive products marketing does not reflect their importance. The abundance of service marketing research shows that differentiated knowledge for services is needed [32, 48]. Furthermore, the need to interact is typically

not constant over time [19]. Therefore, a process-oriented focus research is expected to produce useful indications for senior management.

Despite the growing interest in professional business-to-business services and their economic importance [2, 10, 21] it is evident that little attention has been directed towards a better understanding of the interaction process between service provider and buyer during the marketing/purchasing process of innovative services. [7, 48] Both, the organizational buying and the interaction theory focus mainly on products and not on services. The shortcoming of the organizational buying approach is the fact that it neglects the manufacturers' side and the influence this party has on the customer's organizational decision process. The interaction research acknowledges these weaknesses and introduces an innovative research approach investigating the activities of both parties involved. Within interaction research, the following three shortcomings were addressed [15, 28, 29, 38]: (1) Interaction research within innovation marketing focuses on products not on services, (2) Knowledge on the influence of specific characteristics of innovative services on the interaction approach is limited and (3) interaction research within the innovation marketing neglects a process-oriented view so common in organizational buying research.

Methodology and research framework

The research question and the corresponding objectives are of a "why" and "how" nature. Therefore, we choose an explorative research design for this work. The purpose of this design is to generate new insights and based on them a set of propositions for our particular subject. The study we report about in this paper was based upon a comparative examination of marketing and purchasing processes of innovative services. Service innovations in this paper are defined from the view of both parties (service provider and buyer), are new to the market and the characteristics of services are predominant. One of the most known examples for service innovations is the new B2B platform of eBay. eBay who usually gets together buyers and consumers is reaching out and touching small

businesses now. [37] A further example from the IT Service field would be IBMs "IT services on demand". [42]

For this research, the IT outsourcing service market was selected. This market is characterized by highly dynamic and innovative business and technology development activities. Innovations are adopted very fast by the market and market pressures are generally high. Long lasting interaction processes between service providers and buyers within innovative activities are a typical characteristic and essential for success. [2, 26] Comprehensive, on-site case studies were carried out by visiting different IT service providers and their customers. In-depth interviews based on a semi-structured interview guide were conducted with key account managers, purchasing department staff, project leaders, consultants and R&D personnel on both sides. In total, 30 interviews were carried out. Each interview lasted about 1.5 to 4 hours. All IT service providers and their customers are located in Germany. We chose distinct marketing and purchasing projects of innovative services as the base of analysis and applied a multi-case-comparison methodology.

The reasons why we decided to carry out case studies were (1) the limited knowledge in this research area, (2) the complex nature of the research question, (3) our goal for a process oriented study, (4) the sometimes sensitive and confidential nature of the information and data to be investigated and finally (5) the interaction approach which can only be implemented by interviewing both parties. The latter reasoning is important because of the objective to develop strategic implications for managers of both interaction parties. [20, 54]

To identify innovative projects each supplier was asked to rank the degree of innovativeness of his project on a five-point scale. This scale covers market, technological and an organizational dimension (including the following factors: potential for competitive advantage, extent of required service processes, familiarity with characteristics of new service, complexity and degree of new technological principle, required change of competencies and human resources). The buyers had to rank the innovativeness as well (including the following factors: familiarity with characteristics of

new service, required behavioral change of buyers, required change of competencies and human resources, extent of required learning by users, extent of utility increase). Eventually, we selected only marketing and purchasing projects exhibiting a high degree of newness in all dimensions. For the selection of appropriate innovations and their marketing and purchasing processes, we focused on service companies, which are considered to have a leading role in the service market.

In addition, the innovation success was evaluated on the technological and market dimension using – again – a five-point scale. Both service provider and respective buyers were asked to judge the technological merit of the project according to technical innovation and to what degree technical requirements were met. The service provider evaluated market success by the following indicators: achievement of original goal with respect to profits, competitive advantage and development of a lasting relationship with the buyer. The buyer was asked to evaluate market success according to: customer satisfaction in both the technological and the business dimension and by user acceptance.

Interviews were conducted and structured according to the conceptual framework outlined in Fig. 1. This framework consists of three parts, (1) the context dimension, (2) the description of the marketing/purchasing process dimension and (3) the interaction dimension.

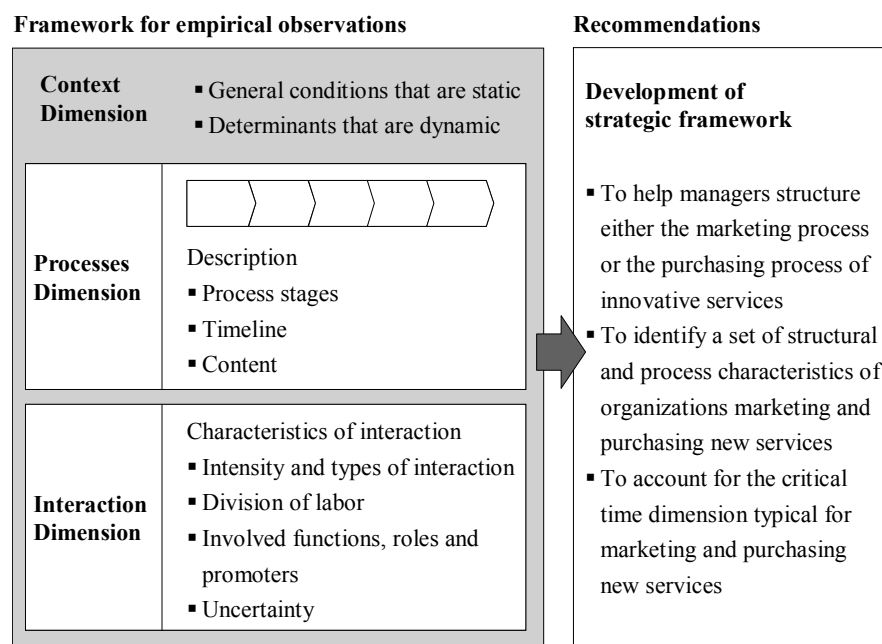


Fig. 1 Conceptual framework of the exploratory study

(Ad 1) Understanding of the context variables is important for any analysis, since the context dimension influences the process and the interaction approach. The context dimension can be divided into a static and a dynamic part. The dynamic dimension must be taken into account because the typical marketing and purchasing processes as investigated here span over months, sometimes even years. (Ad 2) The process dimension describes the individual sub processes by analyzing content and timelines. (Ad 3) The third part of our analysis deals with the interaction dimension, especially the intensity of the interaction, division of labor, involved functions, roles, promoters and uncertainty.

Empirical observations and findings

The context dimension

The question we asked was which factors did influence providers and buyers to interact with intent to create an innovative result. It was considered that innovativeness and complexity are important determinants for the interaction approach. At the beginning of the process, the service provider and the buyer have to cope with a more complex situation than later in the process when the service design has been mostly defined. Narrowing down the problem is a complex challenge that requires intense and frequent interaction sessions between service provider and potential customer. The question which of the parties is bearing the risks and if or how these risks can be shared among the parties are the predominant topics of early interactions between service provider and buyer.

To respond to the challenges encountered during such complex and long interaction phases – for example four of the five services design phases lasted longer than 6 months – the case study data analysis reveals organizational experiences and capabilities as key factors for success. Organizational experience can manifest itself in various forms e.g. the early introduction of project teams or steering committees, or the intimate involvement of decision makers and project stakeholders. Many interviewees considered their direct participation in the negotiation process as crucial to obtain high quality decision on innovative transactions. Intensive interaction and early information transfer typically generates the relevant and exhaustive data required for high service quality. In general,

experiences and capabilities of the individuals involved are considered important for a successful interaction. However, all interviewees agreed that – in most cases – this is a limiting factor in their respective organization; this applies equally to service provider and buyer.

We observed that the interviewees felt a strong need to introduce formal structures to the innovation process in order to make the introduction of innovative services more effective and efficient. "A better support of the development process by tools and instruments would have decreased the project time by at least 25 per cent." or "Most of the iterative activities could have been avoided by having checklists and guidelines of processes and responsibilities for developing new services." Service innovation activities and interactions are in most cases unstructured processes, with serendipity being a major driving force. Unlike in the manufacturing sector, formal innovation processes or dedicated service development departments are rarely found in services provider's organizations. Some other general conditions mentioned frequently were an already existent relationship between service provider and buyer, availability of resources within the organizations, risk evaluation and the involvement of top management.

Case study results show one dynamic category having a major influence on the innovative interaction between service provider and buyer, confidence. For example, two of the interviewees stated: "We knew our service provider before we started the project. Otherwise we would not have thought about this innovation project." or, "In the beginning we were quite skeptical, because we did not know the competence and intension of the service provider. But, with the project beginning and interaction phases we got an idea of the qualities of our service provider." Most interviewees agreed that developing confidence reduces uncertainty which is an important factor in building a lasting relationship between service provider and buyer. The relationship influences the interaction activity and the willingness to interact at all. In addition, commitment and knowledge transfer were confirmed to be key dynamic factors having a strong influence.

Fig. 2 summarizes the different dimensions identified during the analysis of the case studies. Based on the case study results a set of propositions is deduced.

Context	Variable	Proposition
<i>General Conditions</i> (static)	▪ Innovativeness and complexity ▪ Organizational experiences and capabilities ▪ Formal structures of innovation process ▪ Already existent relationship ▪ Available resources ▪ Risk evaluation ▪ Involvement of Top Management	▪ The greater the degree of innovation and the complexity of the introduced service the higher the need of intense and frequent interaction sessions between the service provider and the potential buyer. ▪ The higher the organizational experiences and capabilities of at least one of the parties the higher is the probability of an interaction having an innovative result. ▪ The higher the degree of formality and structure of the innovation process the higher is the probability of an interaction having an innovative result. ▪ The more intense and the longer lasting the relationship between service provider and potential buyer the higher is the probability of an interaction having an innovative result. ▪ The better the commitment of resources of at least one of the parties and the more questions from the party that is not that strongly involved the higher is the probability of an interaction having an innovative result. ▪ The higher the willingness on one of the parties' side to take the bigger part of the innovative risk the higher is the probability of an interaction having a successful innovative result. ▪ The higher the involvements of top management throughout the whole process of the interaction the higher the probability of the interaction having a successful innovative result.
<i>Determinants</i> (dynamic)	▪ Confidence ▪ Commitment	▪ The better the state of confidence on both sides in operational and strategic excellence (operational excellence: degree of education, competence, performance etc.; strategic excellence: corporate targets are aligned to market/customer needs) the higher the probability of the interaction leading to an innovative result. ▪ The higher the commitment on one side of the two parties to transfer an existing knowledge advantage in a certain dimension (technology or business information) to the other party the higher the probability of an interaction leading to an innovative result.

	▪ Knowledge transfer	▪ The better the alignment of knowledge in all dimensions between the parties the greater is the possibility of achieving an innovative result.
--	--	---

Fig. 2 Static and dynamic variables influencing interaction and propositions

The process dimension

With respect to the process dimension, five generic stages of the marketing and purchasing processes were identified. These are: "Initialization" including activities related to problem identification and customer requirements analysis (Sub process 1), "Concept Design" with innovative focus which includes activities like service concept development, technology selection and financial analysis (Sub process 2), "Service Design" (Sub process 3), "Contract Negotiations" including price finding and legal questions (Sub process 4) and finally, "Implementation" (Sub process 5). These five sub processes are found for both the marketing and the purchasing processes, but have – of course – different situational meanings.

In four of our five case studies, the sub processes "conceptual design" and "contract negotiations" needed various iterations, because of difficulties in describing the innovative content and its quality. The iterative approach helped both parties to reduce uncertainty and to secure confidence in the advantages of the innovation activities. Furthermore, service provider and buyer could gradually enhance the quality of the new service.

Further, we could identify three generic types of purchasing and marketing processes. These are categorized depending on who was responsible for providing the innovation impulse: Innovation impulse given by the service provider (Type 1), Innovation impulse given by the buyer (Type 2), Innovation impulse given by both parties simultaneously – service provider and buyer (Type 3). Relating the innovation impulses, the following three types of marketing and purchasing activities were identified:

- The organization developing the innovation pushes forward the development process unilaterally from initialization sub process all the way to the preparation of contract templates before then finally interfacing with potential buyers [potential services providers] and presenting the service design in a nearly completed form (Type 1, [Type 2]) – "Service provider or buyer dominated innovation situation"
- Both organizations take a joint responsibility for the development process. Cooperation thus becomes the main characteristic of innovation activities (Type 3) – "A co-development relationship innovation situation"

This identification of different processes helped us to analyze the interaction dimension and to identify differences in the interaction approach.

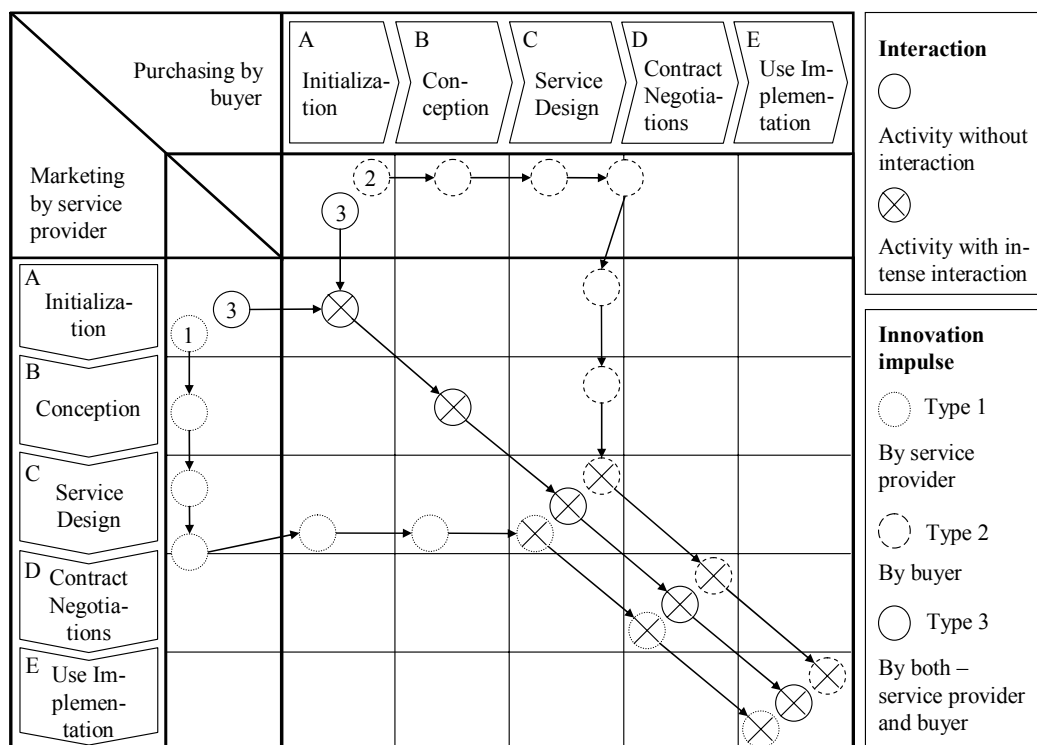


Fig. 3 Identified processes of marketing and purchasing

Timeline: Most of the investigated projects lasted 1 to 1.5 years. None of the projects was completed on time. One reason often quoted, was the additional iteration steps needed to define the service design. In comparison, the conceptual design phase typically lasted longer than the other four sub

processes. Especially the initialization phases were surprisingly short, usually because of difficulties in identifying and defining the scope of the desired new services.

The *content* discussed in the various sub processes was analyzed as well. The innovative discussions remained within the business dimension, only in very few cases technological innovations for the buyer were introduced in parallel. Depending on their level of knowledge, many buyers tend to avoid dealing with technological questions and rather delegate it to the service provider. Innovation business questions typically came on the agenda during the sub process of contract negotiation.

The content was analyzed according to procedures introduced by GEMÜNDEN in his interaction model of innovative products. GEMÜNDEN distinguishes between technological and business questions. [15] We observed no major differences between process type 1 and 2. Both are characterized by strong discussions in the early phases about technological questions that originate from a high uncertainty of the potential buyer about technological questions. The customer was unable to judge if the innovative business solution could be realized using a technological basis that in four of the five cases can not be changed. Process type 3 is characterized by a somewhat more balanced focus on both dimensions.

The interaction dimension

The order, in which the identified sub processes were carried out, was in all cases very much the same. However, in some instances, the interaction approach differed. As such, three different approaches for a successful interaction between service providers and potential buyers during innovation activities were identified. The case studies underline that the kind of interaction seems to be highly dependent on the party that gives the innovation impulse and the chosen process type.

Development of intensity and of different types of interaction: Depending on the innovation impulse, before stepping into a project, the innovative idea has to be understood by at least to one of the parties. Even before an initial interaction between the service provider and potential buyer starts the

innovative conception process, some parts of the service design have already been elaborated. Typically, however, the service design has not yet been adapted to the distinctive buyers' situation.

Joint innovation activities from an early beginning typically result in a strong provider-customer-relationship all the way from conception to the implementation of innovative idea (Type 3). The highest intensity of interaction has been observed throughout the complete marketing and purchasing process for Type 3. The intensity of the interaction during the sub processes "service design" and "contract negotiations", when carried out in close cooperation, is nearly the same for all three defined processes.

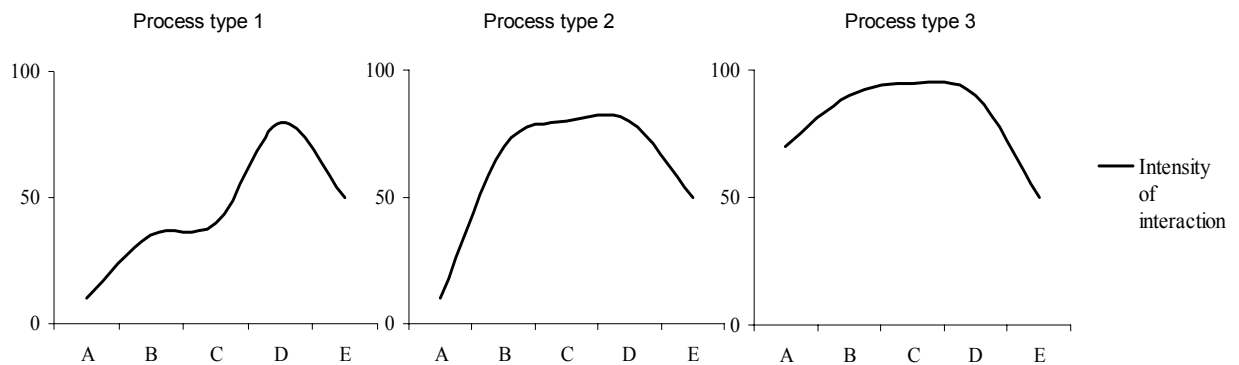


Fig. 4 Development of intensity of interaction (estimated total time of interaction time in percent of total project time)

Referring to the content discussed in each sub process different types of interactions occurred. It must be noted that during the interaction a strong focusing on technological questions is very common. That does surprise because the biggest part of innovative activities in all case studies were realized within the business dimension. The reason for this finding might be that potential buyers must evaluate first whether their current technological basis may benefit from – or in fact cope with – the introduction of innovative services (which in four of the five cases must not change the existing technology basis). Interactions aiming to resolve conflicts are much more common within process type 1 and 2 compared to process type 3.

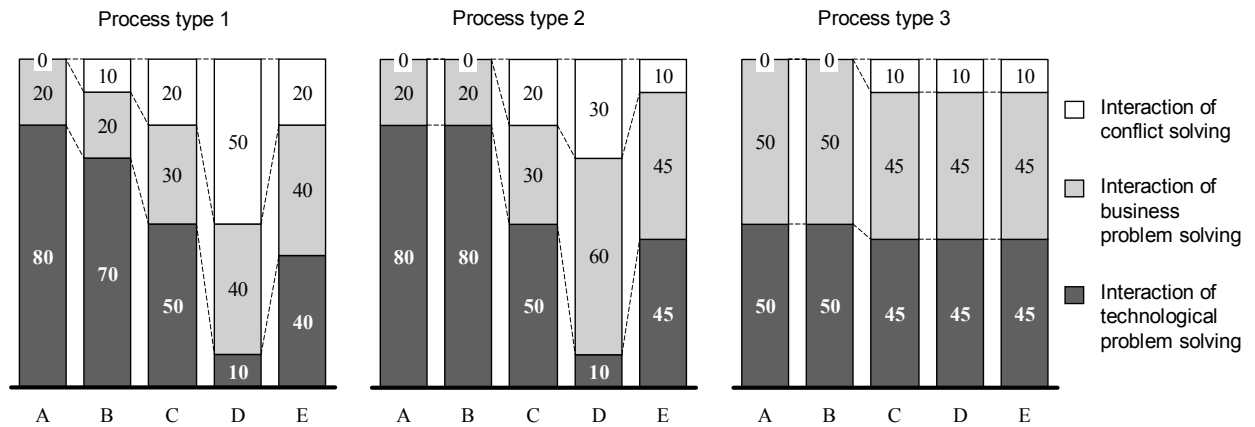


Fig. 5 Development of different types of interaction (types of interaction in percent of estimated total interaction time)

Division of labor: The division of labor is discussed early on, usually when the interaction between the two parties begins. Differences between the three types of processes were observed during the initialization and conceptualization phases. While a well-balanced division of labor is characteristic for type 3, for types 1 and 2 a significant imbalance was identified.

Because the party that had the innovation impulse typically has a head start with respect to know how the opposing partner does rarely interact in the beginning of the common development process. In these cases, the "leading" party typically transfers the innovative idea to the other party in the form of presentations and first solution scenario discussions. The "leading" party then has to wait for customers' organization to adopt their suggestions. Initially, important questions e.g. cost-benefit analysis or internal decision to start a project with innovative focus have to be answered before the interactive service design between both parties' starts in earnest.

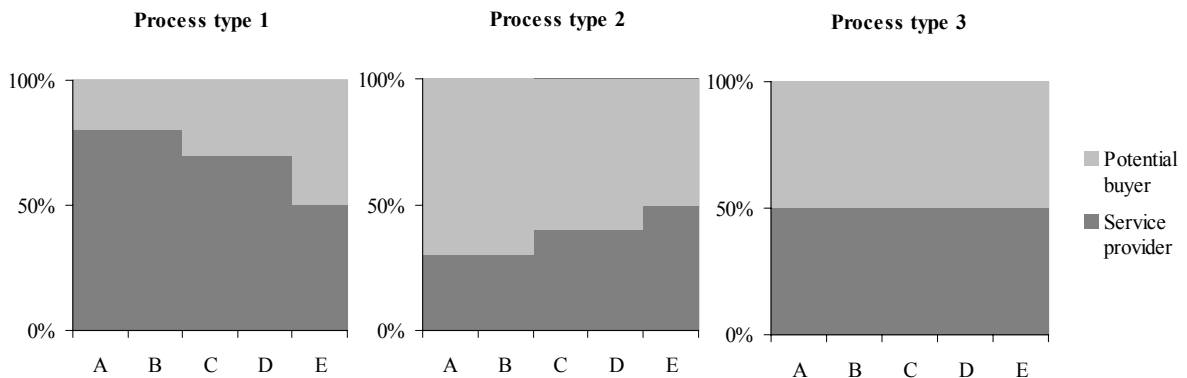


Fig. 6 Development of division of labor

Involved functions, roles and promoters: The involvement of top management (unit heads, executive board members, management board members) is typically higher than in rebuy and standardized buying situations. Independently of the process, top managers are involved from the very beginning of the process. The project team members or the project manager can not only leverage the power of top management, but also have the business experience and management knowledge of those managers at their disposal. The project leaders typically combine the roles relationship and professional promoter in one person throughout the whole process. The project teams are typically multidisciplinary, staffed with employees from all core business areas, e.g. users on the business side, controlling, purchasing and marketing staff as well as technological related employees from the IT department. Some service provider organizations have special divisions focusing exclusively on innovating services. However, this is rare.

Uncertainty: The build-up of expertise during the knowledge transfer between the two potential partners is interesting to look at. Knowledge transfer appears to reduce the perceived uncertainty of both parties. One of the most important instruments to reduce uncertainty seems to be frequent interactions between service provider and the buyer.

Concerning the process itself, the following structural characteristics were identified: By the time the interactions with the potential buyer [service provider] take place, the service provider has [buyer] build-up a strong knowledge base, both in terms of technological and business information. In most instances, an alignment in terms of business related questions [technological questions] is important in order to complete contract negotiation successfully. The providers' advantage with respect to technological information [business questions] remains, but does not seem to have a negative influence on successful interaction. For (Type 1, [Type 2]) an interactive balancing of the individual levels of knowledge occurs. In most cases, the service providers transfer their technological knowledge to the potential buyers and vice-versa the buyers transfer business knowledge to the service providers. An alignment in terms of business and technological questions is important to get a successful contract negotiation. (Type 3)

Depending on the level of knowledge transfer throughout the interaction, the perceived uncertainty decreases. Innovative transactions would be impossible if there were no decrease of uncertainty on both sides. The following example demonstrates this for process type 1.

At the start of the sub process "initialization" the potential buyer was highly uncertain because of his limited knowledge both in the business and the technology dimension. He was also uncertain whether the actual problem had been identified at all; later on, he did not trust the recommended solution. This perceived disadvantage was "cured" by the service provider by intensive interaction sessions. This very early interactions are usually learning interactions and not problem solving or design interactions. These particular interactions increase knowledge and simultaneously decrease uncertainty.

However, the service provider also has to deal with uncertainty. The service provider must ask himself if the potential buyer is the right partner to be innovative. For that kind of uncertainty, the characteristic of services as a whole does play an important role – i.e. the need to interact with the buyer while providing the service (inseparability of production and consumption). Only the interaction during the marketing process helps the service provider to acquire the knowledge about the potential buyer he needs to decide if it is prudent to cooperate with the buyer. The provider's uncertainty decreases with increasing interaction and with increasing knowledge about the potential of the buyer.

Implications

These interactions are of crucial importance since they have a major impact on marketing and purchasing strategies of both partners. Hence, recommendations are to be developed for both parties – service provider and buyer – since both parties play an essential role in implementing an innovative service in the market. Clearly, a better and more explicitly planned strategic development of innovative services in combination with appropriate marketing activities has the potential to reduce risks of failures significantly for the benefit of both parties. For an interaction to be successful and

producing innovative results, we found an early generation of know how, commitment and confidence as important.

Further, we found that a high interaction between the both parties from the service design phase onwards is very common. This is often observed when the service provider is responding actively to the various requests of the buyer. The imperative of a joint provision of services are a strong motivation for a close collaboration. Interactions vary from joint problem solving sessions to the establishment of teams staffed by members from both organizations.

Our findings show that buyers with different purchasing strategies need to be handled differently by a service provider e.g. by using specially tailored marketing strategies and actions. For process type 1 – the dominated by the service provider process – regular marketing activities (e.g. visits, need assessment research, presentations etc.) are supportive. This process type is characterized by an intensive interaction during the design phase. Most marketing activities aim at convincing the potential buyer of the advantages of the innovative service, for example by supply appropriate references. Process type 2 – the one dominated by the buyer – is not driven by increased marketing activities of the service provider. Usually, an already existent relationship between provider and the buyer is the basis for first discussions of the innovative idea and the decision to aim for a joint development. In this case, the buying organization shows the readiness to invest in the new service idea and in longer relationship with the service provider. In the case of process type 3, when a co-development relationship emerges, cooperative buyers require a lot of attention. The service providers need to permanently reassure their individual buyers that the buyer's decision to focus solely on one provider was the right one. To provide this reassurance, it seems necessary that provider's senior management visits the buyer regularly and takes every opportunity to further develop the relationship with the buyers' organization. Figure 7 relates the relevance of different interaction approaches/strategies to the different marketing and purchasing processes discussed.

Recommendations		Process Type 1	Process Type 2	Process Type 3
<i>Marketing Management</i>				
	Intensity and types of interaction			
	- Try to reveal in early interactions benefits of innovative service based on measurable dimensions (Price, Quality etc.) - Try to realize a high frequency of interaction as early in process as possible	+++ +	+++ +	+++ +++
	Division of labor			
	- Try to limit the resources and time expended on developing a new service. Instead, devote resources on establishing some form of relationship with potential buyer - Try to understand technological issues and try to get ahead of buyer's knowledge	+++ +	+ +++	++ +
	Involved functions roles and promoters			
	Try to involve senior management and build-up a relationship, for example including courtesy visits	+++	+++	+++
	Uncertainty			
	- Being aware of own intellectual property - Try to work with references	+++ +++	+ +++	+ ++
<i>Purchasing Management</i>				
	Intensity and types of interaction			
	- Try to check with service provider in early interactions benefits of innovative service based on measurable dimension (Price, Quality etc.) - Try to realize a high frequency of interaction as early in process as possible	+++ +	+ +	+++ +++
	Division of labor			
	- Try to limit the resources and time expended on developing a new service. Instead, devote resources on establishing some form of relationship with potential service provider - Try to understand business questions and try to get ahead of service provider's knowledge	+ +++	+++ +	++ +
	Involved functions roles and promoters			
	Try to involve senior management and build-up a relationship	+++	+++	+++
	Uncertainty			
	Being aware of own intellectual property	+	+++	+

+++ Essential, ++ Highly relevant, + Relevant

Fig. 7 Marketing and purchasing strategies in different process types

Research conclusions, limitations and issues for further research

This paper sets out to overcome the problem that research on interaction during marketing and purchasing processes of innovative services has yield few guidelines for management action. Marketing and purchasing activities are classified into three process types that show different successful interaction approaches. These interaction approaches are influenced by the characteristics of general conditions (static) and determinants (dynamic). Multitudes of variables influence the marketing and purchasing process. The authors depicted general conditions and determinants on interaction approach and developed first propositions.

Exploratory research has been conducted only in the IT Service Industry. Despite the observed advantages of the chosen research approach, some limitations need to be considered when using the resulting findings for interaction strategies with innovative focus. The results stem from an exploratory approach. Thus, even though multiple sources of evidence were sought within the cases, the research approach is not capable of providing statistically significant results. Considering the rather difficult access to exhaustive IT service innovation case study data in practice, the five marketing and purchasing processes analyzed provide a rich source for guidelines in this work's recommendation.

Further work is clearly needed to extend the concept of different marketing and purchasing strategies with corresponding interaction approaches of innovative services. Additional empirical research on marketing and purchasing processes of innovative services could contribute to our overall understanding. Work already done in related fields as for example the interaction research for the industrial market could be helpful. Future research will need to address additional conditions and determinants and might add additional dimensions within the interaction approach. Detailing the single components of the conceptual framework offers manifold opportunities for extended research. For example, a quantitative research design could be followed. Moreover, each of the introduced and supported proposition could be subject to extended validating research.

Appendix

Case study	Interviews with Service provider	Interviews with Buyer	Documents
Application and infrastructure management – Case Study [1]	Key Accounting/ Project manager (1), Member of the management board (1)	Project manager (1) Member of top management (1), Project team member (1)	Project documentation, meeting notes, decision templates and contracts
Outsourcing of IT-infrastructure – Case Study [2]	Project manager (1) External consultant (2)	Project management (1), Project team member (1), External consultant (2)	In-depth project documentation, contracts, meeting and steering committee and team meeting notes
Outsourcing of IT-infrastructure – Case Study [3]	Project manager (1) Project team member (1)	Project manager (1) Project team member (2), External consultant (2)	In-depth project documentation, meeting and steering committee notes, documents of contract negotiations preparation
Outsourcing of SAP and non SAP-applications – Case Study [4]	Project manager (1)	Project manager (1) Legal consultant (1) External consultant (2)	In-depth project documentation, meeting and steering committee notes, request for proposal, documentation of contracts structure
Outsourcing of Telecommunications-Infrastructure, WAN und LAN – Case Study [5]	Project manager (1)	Project manager (1) Legal aid Consultant (1) company attorney External Consultant (2)	In-depth project documentation, meeting and steering committee notes, request for proposal, documentation of contracts structure

Appendix 1 Table of case studies, empirical interviews and materials analyzed

Bibliography

- [1] Bennet, R. J. und Smith, C.: The Selection and Control of Management Consultants by Small Business Clients, in: *International Small Business Journal*, vol. 22, issue 5, pp. 435-463, 2004.
- [2] Boone, T. and Ganesham, R.: The Effect of Information Technology on Learning in Professional Service Organizations, in: *Journal of Operations Management*, vol. 4, pp. 485-495, 2001.
- [3] Brennan, R. and Turnbull, P. W.: Adaptive Behavior in Buyer-Seller Relationships, in: *Industrial Marketing Management*, vol. 28, pp. 481-495, 1999.
- [4] Brentani, U.: Developing new Business-to-Business Professional Services: What Factors Impact Performance, in: *Industrial Marketing Management*, vol. 25, pp. 517-530, 1996.

- [5] Bullinger, H.-J., Fähnrich, K.-P. and Meiren, T.: Service Engineering - methodical development of new service products, in: *International Journal Production Economics*, vol. 85, pp. 275-288, 2003.
- [6] Campbell, N. C.: An interaction approach to organizational buying behavior, in: *Journal of Business Research*, vol. 13, pp. 35-48, 1985.
- [7] Chryssochoidis, G. M. and Wong, V.: Service innovation multi-country launch: causes of delays, in: *European Journal of Innovation Management*, vol. 3, pp. 35-44, 2001.
- [8] Dawes, P. L., Dowling, G. R. and Patterson, P. G.: Determinants of Pre-Purchase Information Search Effort for Management Consulting Services, in: *Journal of Business-to-Business Marketing*, vol. 1, pp. 31-60, 1993.
- [9] Day, E. und Barksdale, H. C.: How firms select professional services, in: *Industrial Marketing Management*, vol. 21, S. 85-91, 1992.
- [10] Drejer, I.: Identifying innovation in surveys of services: a Schumpeterian perspective, in: *Research Policy*, vol. 33, pp. 551-562, 2004.
- [11] Farrell, M. und Schroeder, B.: Power and influence in the buying centre, in: *European Journal of marketing*, vol. 33, issue 11/12: S. 1161, 1999.
- [12] File, K. M., Cermale, D. S. P. und Prince, R. A.: Word-of-mouth effects in professional services buyer behavior, in: *The Services Industries Journal*, vol. 14, issue 3, S. 301-314, 1994.
- [13] Fitzsimmons, J. A., Noh, J. and Thies, E.: Purchasing business services, in: *The Journal of Business and Industrial Marketing*, vol. 13, pp. 370-380, 1998.
- [14] Frambach, R. T., Barkema, H. G., Nooteboom, B. et al.: Adoption of a service innovation in the business market: an empirical test of supply-side variables, in: *Journal of Business Research*, vol. 41, pp. 161-174, 1998.
- [15] Gemünden, H. G.: Coping with Inter-Organizational Conflicts Efficient Interaction Strategies for Buyer and Seller Organization, in: *Journal of Business Research*, vol. 13, pp. 405-420, 1985.
- [16] Gronroos, C.: An Applied Theory for Marketing Industrial Services, in: *Industrial Marketing Management*, vol. 8, pp. 45-50, 1979.
- [17] Gummesson, E.: Toward a Theory of Professional Service Marketing, in: *Industrial Marketing Management*, vol. 7, pp. 89-95, 1978.
- [18] Hakansson, H.: *International Marketing and Purchasing of Industrial Goods*, Chicester, 1982.
- [19] Hakansson, H. and Wootz, B.: A Framework of Industrial Buying and Selling, in: *Industrial Marketing Management*, vol. 8, pp. 28-39, 1979.
- [20] Hakansson, H. and Snehota, I. J.: *The IMP Perspective: Assets und Liabilities of Business Relationships, Handbook of Relationship Marketing*, Sage Publ., Thousand Oaks, Calif., 2000.
- [21] Hitt, M. A., Bierman, L., Shimizu, K. et al.: Direct and Moderation Effects of Human Capital on Strategy and Performance in Professional Service Firms: A Resource-based Perspective, in: *Academy of Management Journal*, vol. 44, pp. 13-28, 2001.

- [22] Homans, G. C.: *Social behaviour : Its elementary forms*, London : Routledge & Kegan Paul, 1961.
- [23] Homans, G. C.: *Social behavior. Its elementary forms*, 2nd, New York, Chicago, San Fransisco, Atlanta, 1974.
- [24] Howard, J. A. and Sheth, J. N.: *The theory of buyer behavior*, Wiley, New York, 1969.
- [25] Jackson, R. W., Neidell, L. A. and Lusnford, D. A.: An Empirical Investigation of the Difference in Goods and Services as Perceived by Organizational Buyers, in: *Industrial Marketing Management*, vol. 24, pp. 99-108, 1995.
- [26] Jayatilaka, B., Schwarz, A. and Hirschheim, R.: Determinants of ASP choice: an integrated perspective, in: *European Journal of information systems*, vol. 12, pp. 210-224, 2003.
- [27] Kirsch, W., Kutschker, M. and Lutschewitz, H.: *Ansätze und Entwicklungstendenzen im Investitionsgütermarketing: Auf dem Wege zum Interaktionsansatz*, Stuttgart : Poeschel, 1980.
- [28] Kliche, M.: *Zum Interaktionsansatz im Innovationsmarketing*, in: Kliche, M. (Ed.): *Investitionsgütermarketing: Positionsbestimmung und Perspektiven*, Wiesbaden, pp. 53-76, 1990.
- [29] Kliche, M.: *Industrielles Innovationsmarketing: eine ganzheitliche Perspektive*, 1991.
- [30] Kodama, M.: Creating new services based on the formation of at strategic community with customers: a case study of innovation involving IT and Multimedia Technology in the Field of Veterinary Medicine, in: *Creativity and innovation management*, 2000.
- [31] Kumar, R. und Kumar, U.: A conceptual framework for the development of a service delivery strategy for industrial systems and products, in: *Journal of Business & Industrial Marketing*, vol. 19, issue 5, S. 310-320, 2004.
- [32] Lovelock, C.: *Why Marketing Management Needs to be Different for Services*, in: Donnelly, J. H. und George, W. R. (Ed.): *Marketing of Services*, American Marketing Association, Chicago, pp. 5-9, 1981.
- [33] McDonald, H. E. and Stromberger, T. L.: Cost Control for the Professional Service Firm, in: *Harvard Business Review*, vol. 47, pp. 109-121, 1969.
- [34] Mitchell, V.-W.: Risk Perception and Reduction in the Purchase of Consumer Services, in: *The Service Industries Journal*, vol. 13, pp. 179-200, 1993.
- [35] Mitchell, V.-W.: Segmenting purchasers of organisational professional services: a risk-based approach, in: *The Journal of Services Marketing*, vol. 12, pp. 83, 1998a.
- [36] Mitchell, V.-W.: Buy-phase and buy-class effects on organisational risk perception and reduction in purchasing professional services, in: *The Journal of Business and Industrial Marketing*, vol. 13, pp. 461, 1998b.
- [37] Olivia, R. A.: B2B for Sale, in: *Marketing Management*, vol. 13, issue 5, S. 48-50, 2004.
- [38] Parkinson, S. T.: Successful new product development - an international comparative study, in: *R&D Management*, vol. 11, pp. 79-86, 1981.

- [39] Preissl, B.: Service Innovation in Germany Information Technology as a Driving Force, in: *Vierteljahreshefte zur Wirtschaftsforschung Institut für Konjunkturforschung*, vol. 67, pp. 113-125, 1998.
- [40] Preissl, B.: Service Innovation: What makes it different? Empirical evidence from Germany, in: Metcalfe, J. S. und Miles, I. (Ed.): *Innovation systems in the service economy*, Boston: Kluwer Academic Publ., 1999.
- [41] Robinson, P., Faris, C. and Wind, Y.: *Industrial buying and creative marketing*, Boston, Mass.: Allyn & Bacon, 1967.
- [42] Scannel, E. und Sullivan, T.: Utility Computing on Tap for 2004, in: *InfoWorld*, vol. 26, issue 1, S. 16, 2004.
- [43] Skaggs, B. C. and Huffman, T. R.: A customer interaction approach to strategy and production complexity alignment in service firms, in: *Academy of Management Journal*, vol. 46, pp. 775-786, 2003.
- [44] Skaggs, B. C. and Youndt, M.: Strategic positioning, human capital, and performance in service organizations: a customer interaction approach, in: *Strategic Management Journal*, vol. 25, pp. 85-99, 2004.
- [45] Stock, J. R. and Zinszer, P. H.: The Industrial Purchase Decision for Professional Services, in: *Journal of Business Research*, vol. 15, pp. 1-16, 1987.
- [46] Stremersch, S., Wuyts, S. and Frambach, R. T.: The Purchasing of Full-Service Contracts: An Exploratory Study within the Industrial Maintenance Market, in: *Industrial Marketing Management*, vol. 30, pp. 1-12, 2001.
- [47] Thakor, M. und Kumar, A.: What is a professional service? A conceptual review and bi-national investigation, in: *The Journal of Services Marketing*, vol. 14, issue 1, S. 63, 2000.
- [48] Webster, C.: Buyer Involvement in Purchasing Success, in: *Industrial Marketing Management*, vol. 22, pp. 199-206, 1993.
- [49] Webster, F. and Wind, Y.: A General Model of Organizational Buying Behavior, in: *Journal of Marketing*, pp. 12-19, 1972a.
- [50] Webster, F. and Wind, Y.: *Organizational Buying Behavior*, Englewood Cliffs, 1972b.
- [51] Wheeler, K.: Referrals between Professional Service Providers, in: *Industrial Marketing Management*, vol. 16, pp. 191-200, 1987.
- [52] Wind, Y. and Thomas, R. J.: Conceptual and methodological issues in organizational buying behaviour, in: *European Journal of Marketing*, vol. 14, pp. 239-261, 1981.
- [53] Woodside, A. G., Wilson, E. J. und Milner, P.: Buying and marketing CPA services, in: *Industrial Marketing Management*, vol. 22, S. 199-205, 1992.
- [54] Yin, R. K.: *Case study research: design and methods*, Sage Publications, Thousand Oaks, 2003.