

An Empirical Investigation of Interaction Processes between Buyers and Sellers of Business Services

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Abstract

This paper presents the results of a theory-building study into processes of interaction between buyers and sellers of different types of business services. We build on a recently developed usage-based classification of business services which identifies four service types. Earlier studies indicated that interaction for different types of services is associated with different key objectives, and differing functional involvement and organizational capabilities. However, the interactive processes that take place between buyers and sellers were not included in these studies.

The main objective of this article is to make a theoretical and an empirical contribution by 1) extending the conceptualization of interaction by including process dimensions; and 2) empirically investigating what these interactive processes look like for each of the four types of services. This empirical investigation is done by means of an embedded case study.

The results of our case study suggest that different types of services are associated with differing processes of interaction. Furthermore, we were able to replicate previous findings regarding the key objectives, functional involvement and organizational capabilities. Additionally, we found that the level of perceived risk associated with a service influences the extent to which interfaces and interaction processes are formally defined and designed.

Keywords: Business Services, Interaction, Purchasing, Buyer-Seller Relationships

Introduction

The services marketing discipline (Grönroos 2000; Lovelock 1983; 2001; Zeithaml & Bitner 1996) has consistently been emphasizing that (consumer) services are produced in interactive processes between the seller and the buyer. Zeithaml, Berry and Parasuraman (1988, p. 35) claim that “in most services, quality occurs during service delivery, usually in an interaction between the customer and contact personnel of the service firm”. As such, one could argue that the success of a service is actually established in the encounter between service provider and buyer. These observations equally apply to business

services, and highlight the presence of *ongoing buyer-seller interaction*, or in other words: continuous interaction during the service delivery process.

Recently, Grönroos (2004) stressed the importance of the service encounter and the customer-service provider interactions it comprises. This parallels a shift in the strategy debate towards a micro perspective on strategy and strategizing (Johnson et al. 2003), thereby calling for emphasis on the processes and practices that make up the daily activities of organizations and that relate to strategic outcomes. Johnson et al. (2003) argue that as the transparency of resource markets increases, sustainable advantage remains more and

more in the level of detail of the buyer-seller relationship. Hence, daily activities and ongoing interaction are the 'stage' for strategic behaviour.

Consequently, studies into buying business services could benefit from focusing more on the ongoing business (as opposed to the 'transactional' purchasing process), where the design and management of interfaces and interaction processes are an important determinant of the actual outcomes of the customer-supplier relationship. Unfortunately however, researchers in the area of Purchasing and Supply Management (PSM) have not fully acknowledged this typical aspect of services, and have largely focused on the initial phases of the purchasing process, such as supplier selection (Day & Barksdale 1994). An exception is Mitchell (1994), who briefly touches upon problems and risks in the buying process for consultancy services and includes project management and performance evaluation in addition to the stages comprising the up-front decision-making process.

In order to investigate this notion of ongoing interaction from a PSM perspective, Wynstra, Axelsson and Van der Valk (2006) recently proposed a classification of business services based on how the service is used/ applied by the buying company. They furthermore identified several dimensions in terms of which patterns of interaction can be described and found variation on these dimensions in their exploratory studies. However, as acknowledged by Wynstra et al. (2006), this conceptualization of interaction is rather static, since it involves only structural dimensions. Furthermore, in their exploratory studies, these authors did not explicitly address sampling issues or the development of research instruments.

The purpose of this paper is two-fold. Firstly, it extends the conceptual framework provided by Wynstra et al. (2006) by adding process dimensions to the set of dimensions originally used to describe patterns of interaction. According to Whetten (1989), identifying how a proposed change in the number of variables affects accepted relationships between the variables is a good way to

demonstrate the value of this change. Secondly, we empirically investigate ongoing interaction by conducting a single, theory-building case study aimed at understanding what processes of interaction look like for each of the four types of business services. This case study draws on theoretical selection criteria (Dul and Hak, 2007), as well as on a case protocol and an interview guide, thereby preventing the limitations that characterized the dataset of Wynstra et al. (2006). Conclusions are drawn and suggestions for future research are developed.

Usage as a driver for variation in ongoing interaction

Most firms nowadays tend to engage in a limited number of long-lasting relationships. As a result, the ongoing interaction in these business relationships has become highly important. The Industrial Marketing and Purchasing (IMP) Group was one of the first scholarly groups to acknowledge the importance of the ongoing business relationship and the interactions involved (Ford 2002; Håkansson 1982). In ongoing business relationships, buying companies and suppliers interact during exchange episodes and as part of the long-term relationship (across exchange episodes). Effective of functional interaction between buyers and sellers is required to ensure the successful ongoing exchange of business services.

In order to determine what a functional pattern of interaction looks like, the IMP Group has extensively investigated ongoing interaction between buyers and sellers of industrial goods. They identified variation in interaction and found that the type of application of a purchased good is the main determinant of buyer-supplier interaction (Håkansson 1982). Based on this attribute, Håkansson (1982) distinguishes three classes of goods: capital equipment, raw and processed materials and components (note that services are not explicitly accounted for in this classification). The classification resembles the classification

of industrial goods brought forward by Robinson et al. (1967), who make a distinction between product constituent transformers (components), product constituents (semi-manufactures), production facilities (investments goods/instrumental services) and production services (MRO goods/ consumption services). Similarly, Jackson and Cooper (1988) identify three classes containing both products *and services*: 1) capital products (major equipment); 2) operation products (minor equipment and MRO services); and 3) output products (raw materials/ components and 'production services' purchased for the final product)¹.

Building on the classifications of Håkansson (1982) and Jackson and Cooper (1988), Wynstra et al. (2006) propose a classification of business services, based on how the service is used/ applied by the buying company, and claim that this usage dimension is one of the main factors affecting the appropriate (effective) design of customer-supplier interfaces and interactions. Four types of services can be identified: component services, semi-manufactured services, instrumental services, and consumption services.

Component services are, without transformation by the buying company, passed on to the end-customer. Examples are subcontractors for a cleaning company, or (inbound) call centre services for a telecom company. Semi-manufactured services are transformed by the buying company before being passed on to the final customer; these services are primarily used as an *input* by the buying organization for particular offerings to final customers. An example is outsourced market research, which is then used by a marketing and advertising company to develop a marketing plan for a client. Instrumental services directly affect how the buying company's primary²

processes are carried out (they are not delivered to end-customers). An example is subcontracted ICT services to support the operations of a logistics service provider. Finally, consumption services do not directly affect how the buying company's primary processes are carried out. An example is the cleaning of office buildings for a consultancy agency.

This classification has several important benefits. Firstly, it focuses specifically on business services, which according to Boyt and Harvey (1997) and Jackson and Cooper (1988) have received far less attention than consumer services. Secondly, it takes into account services that are being passed on to (business) customers: these services have largely remained unaddressed in services marketing research (Jackson & Cooper 1988). Thirdly, it takes on a buying firm's rather than a service provider's perspective. Finally, it enables the identification of similarities between services that are technically speaking of a different nature. Whereas business services are usually classified with regard to the nature of the service (IT, HRM), the service providers or the stakeholders involved (Agndal et al. 2006), this classification draws attention to the importance of an individual service for the buying firm, for example for customer satisfaction or for the continuity of the buying company's primary processes. Similarly, Fitzsimmons et al. (1998) argue that it is important to identify who or what is the recipient of the service (people, things or processes), since this provides an understanding of the nature of the service being offered and the required interactions. Focusing on what they can/should do with the service and its provider rather than on the service itself enables buying companies to think about what functional aspects are crucial and consequently who should be involved to what extent in the purchasing decision process and the exchange process that follows thereafter. These issues are

¹ MRO services are purchased by an organization to run its operations (f.e. maintenance, but also legal services) while production services become part of the production process for a particular (set of) product(s) (Jackson, Neidell and Lunsford, 1995).

² By primary processes we mean those processes aimed at fulfilling customers needs and wants (value-creating processes). Secondary processes refer to those processes

that enable and support the primary activities (Porter, 1985).

expected to be equally relevant for business service providers.

Developing the concept of interaction: adding process variables

Exploratory case studies into service procurement indicate that differences exist with regard to the *key objectives of interaction, type of representatives involved and required buyer and supplier capabilities* (Table 1) (Wynstra et al. 2006). For example: the key objective for component services is to have the service fit with the buying company's existing offerings, whereas for instrumental services, the service should result in the desired effect on/ change in the primary processes. These key objectives have certain implications for the resources required from buyer and seller (Cunningham & Homse 1986).

On the one hand, the key objective of interaction is reflected in the type of functional representatives involved in the ongoing interactions. For component services, for which the end-customer plays an important role, this involvement comes from people representing the end customer (often the marketing function) or perhaps even the end customers themselves. The fact that instrumental services affect the buying company's primary processes results in the involvement of business development and primary process representatives. Other internal users often include general management and service specialists (e.g. internal lawyers in the case of legal services).

On the other hand, different key objectives will require differing capabilities from both the buying and the supplying organization. When providing component services, the supplier has to understand the service itself as well as how it fits with the buying firm's complete (downstream) offering. Furthermore, an important capability is to match internal capacity with the buying company's demand pattern. Critical customer capabilities include the ability to (timely) interpret, translate and communicate (changes in) final customer demands and the ability to synchronize

and coordinate the design ('architectural knowledge') and delivery ('assembly capacity') of the different services. For instrumental services, the supplier should have a thorough understanding of the buying firm's production process. Furthermore, since instrumental services often have a long-term character, the supplier has to be able to sustain and support the service for an extended period of time (Håkansson 1982, p. 163-192). Critical customer capabilities concern the ability to interpret, translate and communicate the demands of internal users and the capability to (help) implement and leverage these services within the own organization.

Although Wynstra et al. (2006) acknowledge the limits of their conceptualization of interaction in terms of objectives, capabilities and interfaces and point out that the concept of interaction can be further developed by including process-related dimensions, they do not address this in large detail. This seems inconsistent since the IMP Group has repeatedly stressed the importance of studying the interactive processes between buyers and sellers and identified two key interaction processes: institutionalization and adaptation.

Institutionalization

Institutionalization occurs when buyer-seller relationships are long-term: in these relationships, conscious decision-making may be substituted by routine behaviour (Håkansson 1982). As such, patterns of interaction will either be deliberately designed or, more often, emergent. Institutionalization may for example emerge in the inter-organizational contact patterns as well as the role relationships being built up over time. Therefore, we propose to primarily focus on ongoing communication as an area in which institutionalization takes place, since this is expected to be strongly coherent with the structural dimensions of interaction, i.e. key objectives and functional representatives involved. Thus, we focus on the results of institutionalization, not on the process of institutionalization itself.

The differences in terms of key objectives, functional representation, and

Table 1
Differences in objectives, capabilities and interfaces for the different service types

Type of service	Objectives	Critical supplier capabilities	Critical customer capabilities	Supplier representatives	Customer representatives
<i>Component services</i>	<ul style="list-style-type: none"> The service should fit with the customer's final offering 	<ul style="list-style-type: none"> Production capacity and quality Development capabilities (in case of specialized services) 	<ul style="list-style-type: none"> Translating/communicating final customer demands (on ongoing basis) Synchronizing the supply of various service components 	<ul style="list-style-type: none"> Marketing representatives regarding the supplier's own service 'Downstream' specialists (knowledgeable of the customer's final offering) 	<ul style="list-style-type: none"> Buyer specialists regarding the service bought, and marketing representatives knowing the needs of the buyer's customer
<i>Semi-manufactured services</i>	<ul style="list-style-type: none"> The buying company should be able to transform the service in the desired way 	<ul style="list-style-type: none"> Production capacity and capability to maintain a stable quality Innovative capabilities (when used as an external expert and for strategic services) 	<ul style="list-style-type: none"> Translating final customer demands Optimizing fit between internal and supplier's operations Synchronizing suitable contact interfaces between internal and the supplier's operations 	<ul style="list-style-type: none"> 'Production planning' and marketing representatives 	<ul style="list-style-type: none"> Production and quality representatives
<i>Instrumental services</i>	<ul style="list-style-type: none"> The service should affect the customer's primary processes in the desired way The service should fit with important characteristics of these primary processes 	<ul style="list-style-type: none"> Business development and innovation Business and service production design services 	<ul style="list-style-type: none"> 'Implementation' skills: understanding what fits when, how and for whom 	<ul style="list-style-type: none"> Product representatives, often including a team of consultants or process engineers 	<ul style="list-style-type: none"> Business development representatives and affected internal customers
<i>Consumption services</i>	<ul style="list-style-type: none"> The service should support various core processes 	<ul style="list-style-type: none"> Ability to supply the desired service and (if needed) adapt it to the specific situation of customer 	<ul style="list-style-type: none"> Translating/communicating internal customer demands (on ongoing basis) Follow up on performance and user satisfaction 	<ul style="list-style-type: none"> Marketing representatives 	<ul style="list-style-type: none"> Buyers and internal customers

organizational capabilities will obviously be reflected in these inter-organizational contact patterns between the buying company and the service provider. Indeed, Wynstra et al. (2006) found that patterns of communication for the different service types differed in terms of broadness and the high-priority issues addressed. Håkansson (1982) suggests that the frequency and form of communication in relation to the topic discussed and the individual that was contacted are important dimensions when trying to understand the information exchange between buyer and seller, both within and across exchange episodes. Similarly, Cunningham and Homse (1986) mention frequency, intensity and hierarchical and functional scope of customer-supplier contacts as short-term aspects of the interaction process. Building on Cunningham and Homse (1986) and Wynstra et al. (2006), we propose to analyze the contact patterns in terms of hierarchical and functional scope, since this is expected to fit well with our analysis of the buyer-seller interface. These dimensions are evaluated by investigating what issues in the buyer-seller dialogue are important, since this should reflect the relevant hierarchical and functional issues.

With regard to these process dimensions, several propositions can be developed. For example: for component services, which become part of the offerings to final customers, critical issues in the buyer-seller dialogue are the integration of the service into the overall offering of the buying company, end-customer requirements (f.e. regarding the sourcing of the component or the desired use of the component) and the coordination of service production/ delivery and consumption. In contrast, for instrumental services, a critical issue in the buyer-seller dialogue is how and to what extent the service impacts the buying company's primary processes. Buyer and seller will furthermore discuss developments in the supply market and within the buying organization, as to obtain long-term alignment. The complete set of propositions regarding buyer-seller communication of interaction is as follows:

Proposition 1 In the buyer-seller communication for

- a ... component services, the most important issues are customer requirements, the fit of the service with the rest of the offering, and the customers' evaluation of the service.
- b ... semi-manufactured services, the most important issues are customer requirements, service transformation possibilities and the fit between the customer's and the supplier's processes.
- c ... instrumental services, the most important issues are the buying company's strategy and developments, and the effect of the service on the buying company's primary processes.
- d ... consumption services, the most important issues are internal customer demands, the internal customer's evaluation of the service and how to increase efficiency (f.e. by reducing administrative workload).

Adaptation

Adaptations refer to any relation-specific changes or investments made by the parties involved aimed at facilitating buyer-seller collaboration. Brennan et al. (2003) brought forward several areas in which adaptation can take place when exchanging industrial services (derived from Håkansson (1982) and adapted to the specific situation of services by Brennan et al. (2003)): service specification, service design, service delivery processes, capacity and demand management, administrative procedures, financial procedures, adaptations with regard to provision of sensitive information, and changes to organization structure. They furthermore pointed out that adaptations can be unilateral (one firm making a modification for a specific exchange partner, without the exchange partner making a reciprocal modification) or mutual (reciprocal modifications).

Since demand for component services is strongly related to the purchase pattern of the buying companies'

customers, adaptations are made with regard to capacity and demand management. With instrumental services, sensitive information regarding for example the buying company's strategy is provided to the service supplier, in order to enable the supplier to optimally address the developments within the buying organization. Because of the long-term collaboration between buying company and service provider, special arrangements are also made with regard to financial and administrative procedures. We thus develop the following propositions:

- Proposition 2 Adaptations for...
- a ... component services mostly occur with regard to the specification and design of the service, and capacity and demand management. Furthermore, critical information regarding the buying company's value proposition will be exchanged.
 - b ... semi-manufactured services mostly occur with regard to service delivery and capacity and demand management. Furthermore, critical information regarding the buying company's value proposition will be exchanged.
 - c ... instrumental services mostly occur with regard to organizational structure. Furthermore, critical information regarding internal developments at the buying company will be exchanged.
 - d ... consumption services mostly occur with regard to financial and administrative procedures.

The perceived risk framework and its consequences for buyer-seller interaction

In addition to variation with regard to structural dimensions of interaction, Wynstra et al. (2006) found that patterns for interaction were more explicitly defined and designed for some of the services they studied. For example: a "qualified" dialogue between the companies involved could be observed for the strategic and knowledge intensive component service,

whereas for the non-strategic component services, broader patterns of interacting people were found. Also, the variety and number of involved specialists differed for an advanced semi-manufactured service versus one that is standard. Based on these findings, they suggest that patterns of interaction surface most clearly for those services that are associated with a high degree of perceived risk, or high potential impact. We therefore deem it important to control for risk in our analysis, since this may explain deviations from the expected patterns of interaction, should they occur.

This suggests that the buying companies studied designed the interaction with the supplier with reference to other factors than how the service is used/ applied by the buying company. From their review of the three most influential models of Organizational Buying Behavior (OBB) (Robinson & Faris 1967; Sheth 1973; Webster & Wind 1972), Johnston and Lewin (1996) conclude that much of the variation in OBB can be related to the level of *perceived risk* associated with a particular purchase situation. Building on Bauer (1960), Mitchell and Greatorex (1993) and Sheth (1973) claim that perceived risk is a combination of consequences (measured in terms of seriousness/ importance) and uncertainty. Indeed usually, perceived risk is viewed as the function of two variables: the importance of the purchase and the level of uncertainty associated with the outcome of the purchase (Gelderman & Van Weele 2002; Henthorne et al. 1993; Kraljic 1983; Wilson et al. 1991).

Importance refers to the purchase's impact on organizational profitability and productivity (McQuiston, 1989). Importance/ seriousness can thus be interpreted as the extent to which a service is strategic or critical for customer satisfaction: in the case of component and semi-manufactured services, service delivery failure has a direct impact on end customers. The service can also be of critical importance for the continuation of the buying company's production processes or result in a short-term or long-term impact on for example the primary processes of the buying company: this

mostly applies to instrumental services. Consumption services will generally be considered unimportant for the buying company's profitability, competitive advantage, or for the continuity of the buying company's primary processes³.

Uncertainty is a concept that is usually made up of complexity and novelty. Considering complexity, two elements can be identified (McQuiston 1989): complexity of the purchase situation and complexity of the product (service) being purchased. Since we are interested in the potential influence of complexity (as an element of risk) on ongoing interaction, we focus on the complexity of the service. This complexity depends on the inherent complexity of the service (i.e. the extent to which a service is advanced) and the inherent complexity of the context in which the service is applied (Fisher 1976, p. 30)⁴. Similarly, novelty refers to the extent to which buyers are familiar with similar services or similar contexts in which the service is to be applied (Fisher 1976, p. 30).

The importance of these factors is also noted by Fitzsimmons, Noh and Thies (1998), who point out that the importance or criticality of the service to the buying firm must be considered in the purchasing decision, and by Smeltzer and Ogden (2002), who find that the nature of the services being purchased and their associated complexity are major factors for purchasers.

Regarding the influence of perceived risk on interaction, Johnston and Bonoma (1981) and later McQuiston (1989) demonstrate that the functions/people involved in interactions with suppliers vary with the novelty, complexity and importance of a purchase. Johnston and Bonoma (1981) define five

measurable dimensions of the buying centre and find that novelty, complexity and especially importance were very helpful in explaining the level of managerial involvement, the functional disciplines involved, the number of people involved and the degree of linkage between members of the buying centre. McQuiston (1989) expands on the theory of buy classes (Robinson & Faris 1967) by studying the combined effects of novelty, complexity and importance and finds that particularly the last two constructs explain participation and influence of different organizational functions.

Johnston and Bonoma (1981) furthermore claim that the influence of novelty, complexity and importance is likely to be present in and have an effect on both the purchase situation and the interactions afterwards. Within the OBB research tradition however, these interactions have not been studied in great detail. For example: the influence of risk on ongoing interaction may be reflected in a higher level of managerial involvement. Therefore, in line with the claim of Johnston and Bonoma (1981) and the findings of Wynstra et al. (2006), we propose that differentiated patterns of interaction are more formally defined and designed for services that are characterized by high perceived risk, since buying companies will make more conscious decisions about how to deal with these services. These ideas lead to the development of the following propositions:

P3a For high-risk services, the extent to which the patterns of interaction for the four service types are really distinct is high.

Since consumption services are generally characterised by low risk, we also bring forward the following proposition:

P3b Interaction patterns for low risk-services are similar across all service types and resemble the interaction pattern for consumption services.

³ Note that a consumption service like office cleaning can be considered highly important when regarding them from the perspective of the internal customers/ users of the building.

⁴ Fisher (1976, p. 30) furthermore proposes the level of experience the buying company has with the technological characteristics of the service and the level of sophistication of the buying firm in this specific area. In our view, this resembles McQuiston's (1989) definition of novelty; this latter factor therefore determines uncertainty rather than complexity.

A case study into ongoing buyer-seller interaction

The propositions developed will now be investigated by means of an embedded case study. In this case study, i.e. the study of one service of each service type at one buying company, we investigate what the processes of interaction look like for each of the four types of services. We thus study four cases (service purchases) at one buying company. Furthermore, collecting evidence on the structural dimensions of interaction enables us to replicate the findings of Wynstra et al. (2006). After all, in their studies, Wynstra et al. (2006) did not explicitly address case selection issues or the development of research instruments. In our case study, we draw on a pre-determined case protocol and interview guide⁵.

The case study is part of an overall research project, in which we intend to study one service of each type at several companies (thus: multiple case studies). Such an approach enables both within-company and cross-company comparisons, the results of which are used to develop the emergent theory. We developed theoretical selection criteria using the following two dimensions: 1) the type of company (service providers versus manufacturing companies); and 2) the type of customer of the buying company (other companies or consumers). We invited multiple companies in each of the resulting categories; eventually, ten companies agreed to participate in our study. We expected results obtained at different companies would be similar when these companies are similar in terms of the selection criteria used (within-categories); across-categories, results are expected to differ.

From these ten companies, a Fossil Fuels (oil and natural gas) Exploration and Exploitation company (FFEE) was selected for this case study; the reason for choosing this company was that it was the

first company at which data could be collected.

FFEE finds and produces oil and natural gas in the Netherlands and the Dutch part of the continental plate. It is the largest natural gas producer in the Netherlands, with annual production of around 50 billion m³, which covers around 75% of Dutch demand. With an oil production of 0.8 million m³ a year, FFEE covers about 4% of the country's total oil demand. FFEE also performs various construction projects with differing sizes, ranging from relatively small modifications to the realization of complete land or offshore installations for the extraction of oil and/ or natural gas.

In consultation with the authors, FFEE selected the four services (one service purchase for each category in the usage-based classification) to be studied. Unfortunately, we were not able to identify a component service. This can be explained from the fact that at manufacturing companies, it will usually be more difficult to identify services that move downstream to customers: instrumental and consumption services will be more common. We therefore proposed to select four services from the remaining three categories. This resulted in one semi-manufactured service, two instrumental services and one consumption service.

In our analysis, we control for the level of perceived risk involved with each service to see if this helps us to understand why interaction may not vary as strongly as expected. The risk associated with the semi-manufactured service and one of the instrumental services was considered high; the risk associated with the other two services was low. Thus, specifically within the category of instrumental services, interesting insights may be obtained. The level of risk associated with the service purchases reflects the level of risk as perceived by the buying company. The services selected and their brief descriptions, their respective classifications, and the functions of the people interviewed can be found in Table 2.

Each of the purchases was studied by means of two to three in-depth interviews of 1,5 to 2 hours each with

⁵ Since in this case study we were to use our case protocol and interview guide for the first time, this study would also be used to evaluate the suitability and usability of our research instruments and case protocol.

Table 2

Services and informants (*SEM: semi-manufactured, INS: instrumental, CNS: consumption*)

	Service	Informants	Type
FFEE	<i>Drilling services</i>	<ul style="list-style-type: none"> ▪ Supply Chain Engineer (purchasing) ▪ Drilling Development Team Leader 	<i>SEM</i>
	<i>Engineering and construction services</i>	<ul style="list-style-type: none"> ▪ Supply Chain Engineer ▪ Senior Project Engineer 	<i>INS HIGH RISK</i>
	<i>Managing stock of piping materials</i>	<ul style="list-style-type: none"> ▪ Supply Chain Engineer ▪ Mechanical Engineer Piping 	<i>INS LOW RISK</i>
	<i>Waste management</i>	<ul style="list-style-type: none"> ▪ Supply Chain Engineer ▪ Representative Waste Management department 	<i>CNS</i>

purchasers and with contract owners and/or users. The interviews with the purchasers focused predominantly on the purchasing process and to a lesser extent on the ongoing stages, whereas for the contract owners, who were deemed to be most knowledgeable on what happened after the purchase, the emphasis was on these ongoing stages (data source triangulation; Yin (2003)). Appendix 1 contains the interview guide used. In most cases, the buyer involved was approached first. Other informants were usually identified by the buyer. We tried to take the supplier's perspective into account by asking the buying company about supplier representatives involved, the supplier's actions/ behaviours, viewpoints, et cetera; however, data was not collected at the suppliers.

The interviews were semi-structured. The interview guide was based on the interview guides used in similar studies conducted by the IMP Group (Håkansson 1982). Of each interview, extensive interview summaries were made and sent back to the informants for verification. Approved summaries at the informant level were merged into one description at the case level, which was again sent to the informants in order to eliminate any inconsistencies and to provide further clarification if necessary. Furthermore, the interview results were extensively discussed by the authors to further enhance validity⁶. Table 3

summarizes how we dealt with various issues of validity and reliability.

Results of the case studies

We now turn to descriptions of the four cases studied, after which we will perform a within-case analysis and a cross-case analysis across the three service types. The findings for all cases studied have been summarized in Table 4; we will refer to this table in our analysis.

A semi-manufactured service: drilling services

FFEE works with a main contractor, which provides the equipment/ installations and the personnel to perform the actual drilling for oil, and which is paid a refund for its costs plus a fair profit margin. The main contractor also manages the contracts with third parties (which can only be contracted in consultation with FFEE) and carries out some project planning activities. This service becomes part of the customer processes (increased speed of production due to the use of a special drilling technique); furthermore, demand for the service is strongly connected to customer demand. It is therefore considered a semi-manufactured service. The service comprises a high risk purchase, since non-performance of the contractor results in substantial production (and thus revenue) loss.

For this service, the key objective of interaction is to integrate the drilling service into FFEE's primary processes. Consequently, the supplier needs to

⁶ The research team consisted of one principal researcher and the two co-authors of this paper.

Table 3
Validity and reliability in the case studies

Type of validity	Methods of addressing this in the case studies
<p><i>Construct validity</i></p> <p>“establishment of correct operational measures for the concepts being studied”</p>	<ul style="list-style-type: none"> ▪ Triangulation of questionnaire and interview data ▪ Triangulation of multiple informants: different internal representatives ▪ All informants received draft versions of the interview report for comments ▪ Draft versions of the complete case report were verified with at least one key informant from each buying firm ▪ Three research team members gave input during data collection and analysis ▪ Result: emergent explanations adjusted and expanded; participants agreed to the interpretations
<p><i>Internal validity</i></p> <p>“establishing causal relationships whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships”</p>	<ul style="list-style-type: none"> ▪ Use of conceptual framework ▪ Result: relationships between the different variables from the conceptual framework identified and substantiated
<p><i>External validity</i></p> <p>“establishing a domain in which the study’s findings can be generalized”</p>	<ul style="list-style-type: none"> ▪ Theoretical sampling of cases at the firm level and the level of the service purchase ▪ Result: revised framework applicable to different types of firms and service purchases
<p><i>Reliability</i></p> <p>“demonstrating that the operations of a study can be repeated with the same results”</p>	<ul style="list-style-type: none"> ▪ Development of case protocol ▪ Development of (interview) questionnaire ▪ Result: methodology transparent and repeatable

Based on: Yin (2003).

understand not only its own service delivery process, but also FFEE’s primary processes. The fact that this contract involves a new drilling technique puts certain requirements on the innovative capabilities of the supplier (further development and fine-tuning of the technique). The supplier needs to understand the safety requirements of FFEE, as well as the impact of non-production on FFEE’s revenues. FFEE has to be able to properly explain these issues. Furthermore, FFEE should provide a good forecast on when a drilling period will start, as well as maintain the time schedule (coordination of FFEE’s and the supplier’s processes). We find the involvement of production planners; however, marketing involvement is lacking. This can be explained from the fact that production is delivered to a company which is part of the same

conglomerate as FFEE. Formally, this customer company is considered an external customer. However, being part of the conglomerate, production planners also fulfil the marketing role. Regarding the supplier representatives, an account and a contract manager represent the commercial side of the supplier. Technical specialists are involved to plan, prepare and perform drilling activities. Communication is intensive and concerns production progress and deviations that may occur. Adaptations mostly occur with regard to the specification and design of the service: the supplier has developed the new technique in collaboration with (and thus custom for) FFEE.

FFEE is satisfied with the contractor’s performance in terms of the service provided and the process of service provision. The service is delivered at the right time with the right quality and

Table 4
Findings for the different types of services at FFEE

	Objectives	Critical supplier capabilities	Critical customer capabilities	Supplier representatives	Customer representatives	Communication	Adaptation
FFEE_SEM	Deliver a service that enables production during drilling	<ul style="list-style-type: none"> ▪ Understand how service contributes to revenue generation FFEE ▪ Understand importance of safety aspects ▪ Innovativeness 	<ul style="list-style-type: none"> ▪ Provide accurate forecast of demand ▪ Maintain time schedule (delay in production means revenue loss) 	<ul style="list-style-type: none"> ▪ Account manager ▪ Contract manager ▪ Administration department (for support purposes) ▪ Technical specialists (regarding ongoing delivery) 	<ul style="list-style-type: none"> ▪ Supply chain engineer (purchasing) ▪ Technical representatives ▪ Contracting 	<ul style="list-style-type: none"> ▪ Production progress, deviations ▪ Daily operational contact, quarterly review meetings ▪ Evaluation on well-by well basis 	<ul style="list-style-type: none"> ▪ Specification and design developed by FFEE ▪ Cost plus payment ▪ Exchange of sensitive information
FFEE_INS HIGH RISK	Realize capital investments in construction as soon as possible (so they can generate revenue)	<ul style="list-style-type: none"> ▪ Understand how the capital investment fits with FFEE's primary process ▪ Understand FFEE's specific requirements ▪ Project management skills 	<ul style="list-style-type: none"> ▪ Clearly specify tasks and responsibilities of supplier ▪ Maintain time schedule (delays result in revenue losses) 	<ul style="list-style-type: none"> ▪ Management team consisting of proposal manager and technical representatives 	<ul style="list-style-type: none"> ▪ Purchasing ▪ Technical representatives ▪ Tender board 	<ul style="list-style-type: none"> ▪ Feasibility of outsourcing scenario's ▪ Schedule and deliverables ▪ Formalized contact points including hold and witness points and review moments 	<ul style="list-style-type: none"> ▪ Specification and design customized ▪ Fixed unit price per m³ and kWh output ▪ Exchange of sensitive information
FFEE_INS LOW RISK	Ensure timely availability of piping materials to prevent disruption of primary process	<ul style="list-style-type: none"> ▪ Understand how non-availability of materials affects primary process (reliability) ▪ Enable 	<ul style="list-style-type: none"> ▪ Clearly specify how they want the supplier to contribute to the primary process ▪ Clearly specify 	<ul style="list-style-type: none"> ▪ Managing Director ▪ Sales/ account manager ▪ Engineers ▪ Quality manager 	<ul style="list-style-type: none"> ▪ Supply chain engineer ▪ Global account manager ▪ Mechanical engineer 	<ul style="list-style-type: none"> ▪ Quality and delivery reliability ▪ Frequent communication 	<ul style="list-style-type: none"> ▪ Service design customized ▪ Standardization of materials ▪ Service centre

		standardization of materials	tasks and responsibilities of supplier		<ul style="list-style-type: none"> ▪ Project employees 		
FFEE_CNS	Fulfill governmental requirements to clean up waste resulting from FFEE's primary process	<ul style="list-style-type: none"> ▪ Understand how service contributes to FFEE's license to operate ▪ Reduce integral chain costs ▪ Create process which can pass (environmental) accountancy audit 	<ul style="list-style-type: none"> ▪ Clearly communicate locations and types of waste ▪ Communicate safety requirements 	<ul style="list-style-type: none"> ▪ Two account managers: one for contractual and one for commercial aspects 	<ul style="list-style-type: none"> ▪ Supply chain engineer ▪ Waste manager 	<ul style="list-style-type: none"> ▪ Coordination of activities ▪ Industry specific safety standards ▪ Scorecard results (HSE, savings, administration) 	<ul style="list-style-type: none"> ▪ Transparent pricing with flexible (maximized) profit margin ▪ Investments in company clothing and containers ▪ Supplier set up service centre

there have been no major problems in the collaboration. In a new contract however, the focus will be more on cost optimization issues in addition to just performing the drilling activities requested.

A high risk instrumental service: engineering and construction services

FFEE has started a development project aimed at the profitable exploitation of an oil field. Steam produced by a hydropower plant is injected into the earth, resulting in oil "sinking" into specially constructed trenches (horizontal pits). The construction and subsequent maintenance of the trenches and the hydropower plant have been outsourced to an engineering & construction consortium. This service is targeted at the buying company's primary processes, and represents a major investment: therefore, it is considered an instrumental service. The risk associated with this service purchase is large since it is a greenfield project involving large investments.

The key objective is to realize the production facilities as quickly as possible so that FFEE can start production. This requires the involvement of technical specialists (people knowledgeable about construction activities). Since this project involves an expansion of FFEE's business activities, business development representatives are involved. This project involves a long-term collaboration (the life cycle of the oil field is estimated to be 25 years); the selection of the consortium was therefore done with the greatest care. Furthermore, the final decision was made by a tender board (higher management involvement), which consisted of the technical disciplines, finance, sales, et cetera (all represented by someone from the senior management level).

During the ongoing service exchange, a senior project manager and a core team of five to six people (a.o. engineering and quality) are dedicated to the consortium, with purchasing in an advisory role. The consortium is represented by a management team consisting primarily of a proposal manager and technical representatives (involved with the detailed design and execution of the development project). Communication

for the engineering services is intensive and formal and mostly concerns progress in terms of project realization and technical performance. The information exchanged is critical, since the plan to redevelop an existing oil field is considered sensitive information from a competitive point-of-view.

At the moment of studying this case, the project was still ongoing, and FFEE has been confronted with a number of delays. However, according to FFEE, this is inherent to a development project of this size, and FFEE claims to generally be satisfied with the services provided and the process of service provision.

A low risk instrumental service: managing stock of piping materials

One of the construction activities of FFEE concerns constructing pipelines. Three suppliers have been contracted to manage the inventory of the required materials (f.e. flanges and fittings) at FFEE's construction sites. This service remains within the buying company and directly affects the (primary) construction processes of FFEE: this makes this service an instrumental service. Orders for materials (this is the majority of spend) and related services (i.e. welding, construction or digging services) are placed on a daily basis and vary in size from several euros to several millions of euros. Failure of service delivery can lead to delays in the construction activities, which can eventually result in claims of customers because of discontinued natural gas supply. The same goes for quality deficiencies in the materials purchased. The key objective is thus to maintain continuity of FFEE's primary processes. Overall however, the risk involved with this contract is considered low, since the chances of a delay actually resulting in customer dissatisfaction are small.

This service affects the primary process of FFEE: non-delivery or low quality may cause delays. A mechanical engineer (contract owner) therefore is involved with designing the service process and ensuring its fit with FFEE's primary processes. Since this purchase

concerns a European contract, a global account manager is also involved. After signing the contract, the contract owner and the supply chain engineer conduct quarterly review meetings with the supplier. Since delivery reliability and quality are important, these issues are discussed here. The coordination of supplies, the scope of activities and specifications remain with the business lines. Both FFEE and the supplier have made adaptations with regard to service specification and design (standardization of Stock Keeping Units).

At the beginning of the contract period, there were some problems; however, these were not too serious (no delays). The contract reviews demonstrate increasing performance and overall, FFEE is satisfied with the service provided and service provision.

A consumption service: waste management

Waste management refers to the collection of perilous waste, regular waste (coming from on and offshore drilling locations and office buildings), construction and demolition waste, processing of contaminated earth and drilling waste at various FFEE locations, and delivering it to appropriate processors. One service provider has been contracted for dealing with and carrying the administration for 80% of the waste streams. The service remains within FFEE and does not affect its primary processes: it is therefore considered a consumption service. Although the contract is critical with regard to environmental and safety regulations, risk is considered to be low.

The key objective here is to support the primary process by dealing with the waste resulting from production and abandonment of activities in an appropriate manner, as to safeguard FFEE's corporate reputation and its license to operate. Consequently, the supplier has to conduct these activities efficiently, thereby understanding that good performance is critical for FFEE's license-to-operate. FFEE has to be able to clearly communicate where waste can be found (internal demand) and the safety regulations that apply. This is ensured by

allocating the role of contract owner to a representative from the waste management department. The user has daily contact with the supplier about for example collecting containers. The contract owner and purchasing have regular contact with two account managers (marketing representatives) about execution of activities, the contract, optimization opportunities, et cetera.

There have not been any critical issues in this contract and FFEE is content with the service provided and service provision. The supplier has made some relation-specific investments with regard to clothing (because of safety regulations) and containers (which are rented from the supplier by FFEE). Furthermore, the supplier has set up a dedicated service centre, which serves as FFEE's focal contact point. FFEE in turn has made some adaptations with regard to administrative procedures.

Cross-case analyses

Looking at the observations for the three service types, we see that the structural dimensions of interaction differ in line with the findings of Wynstra et al. (2006). Note that since our dataset did not contain component services, we were not able to investigate propositions 1a and 2a.

Regarding the interactive processes, we see that for semi-manufactured services, communication mostly concerns production progress and deviations that may occur, since this will immediately affect FFEE's delivery to customers. Customer requirements are not an important topic in the communication, and we thus find that proposition P1b is not supported. This may be explained by the fact that FFEE's customer is part of the same conglomerate, as a result of which there is less explicit attention for customer needs and wants. Adaptations have taken place with regard to service specification and design, and sensitive information about FFEE's value proposition has been exchanged. This provides support for proposition 2b.

For the first instrumental service studied, engineering and construction services, communication involves the

exchange of critical information, as well as how the service delivered affects the buying company's primary processes (continuity of primary processes/ enabling production at new locations). We therefore conclude that proposition 1c is supported. Adaptations were mostly made with regard to organizational structure. Proposition 2c is thus supported.

For the other instrumental service, stock management services, the exchange of critical information was not so profound. In this case, proposition 1c is not supported. Adaptations mostly concerned administrative procedures, which does not provide support for proposition 2c. However, this instrumental service is characterised by low risk, which explains why we do not observe the expected patterns. The engineering and construction services were characterised by high risk: when comparing these observations to the findings for the high-risk semi-manufactured service, we can see that the patterns observed are clearly distinct, thereby providing support for proposition 3a.

When examining the findings for the low-risk instrumental service more closely, we see that the observations resemble the expectations for consumption services, which provides partial support for proposition 3b (note that since we have only one low-risk service outside the class of consumption services, we are not able to gather evidence regarding the first part of proposition 3b).

Finally, communication for consumption services namely focuses on the requirement of internal customers (the users at various production locations) and optimization opportunities. Consequently, adaptations are made to financial and administrative procedures, as to increase the efficiency of the collaboration. This provides support for propositions 1d and 2d.

To summarise: proposition 2b regarding adaptation for semi-manufactured services was supported. Proposition 1b regarding the importance of customer requirements in buyer-seller communication for semi-manufactured services was not supported; this was explained by the fact that FFEE delivers to

an internal customer (part of the same conglomerate), as a result of which there is less explicit attention for customer needs and wants. Propositions 1c and 2c regarding interaction processes for instrumental services were supported, as were propositions 1d and 2d (interaction processes for consumption services). The fact that the pattern for the low-risk instrumental service differed from the pattern for the high-risk instrumental service provided support for proposition 3a. The pattern for the low-risk instrumental service resembled the pattern for consumption services, thereby providing support for proposition 3b.

Conclusions, limitations and further research

Research into buying business services has mainly focused on the initial stages of the purchasing process: not much attention has been given to what happens after the purchase decision has been made (Bryntse 2000). Purchasing and supply management is however not just a matter of completing individual transactions, but certainly also of dealing with supplier relationships on an ongoing basis. This is especially true for business services, which are characterized by their interactive nature.

Wynstra et al. (2006) recently brought forward a classification scheme based on the way the buying company uses/ applies the service and found that ongoing interaction between buyers and sellers of business services will vary for the resulting four types of services. They investigated several structural dimensions of interaction, i.e. the key objectives of interaction and the buyer-seller interface (functional representatives and critical capabilities). Processes of interaction were not included in their study.

This article has empirically investigated these interactive processes that take place between buyers and sellers of business services after the contract has been signed. We conducted an in-depth, embedded case study and found that for the process dimensions of interaction differences arise across the three types of services studied. We can not say however whether this variation is systematic; literal

replications of our study are required to verify this. Concerning the structural dimensions of interaction, our findings are in line with the findings of Wynstra et al. (2006).

Since our data-set contained services that varied in terms of the level of perceived risk involved, we controlled for risk in the analysis. This was important since Wynstra et al. (2006) found that interaction is more formally defined and designed for high-risk services. Our findings suggest buying companies define and design interaction with providers of high risk services more formally. This can be explained from the fact that for high-risk services, buying companies will think more consciously about how they design their interactions with providers of business services. For service providers, an understanding of this effect is important in order to be able to involve the appropriate actors and resources to deal with representatives of the buying company.

Based on these findings, we propose to use risk as a control variable in future studies. We cannot use risk as a selection criterion, since that would lead to almost excluding (usually low-risk) consumption services from our further studies.

Limitations and future research

Despite the contributions made by this study, a few critical notes should be raised here. One of these notes has to do with the selection of the cases: we were not able to identify component services at FFEE. This can be explained by the fact that we started our investigations at a manufacturing company: component and semi-manufactured services are more common and thus more easily found at service companies. This limitation could not be overcome in this study, but future studies should explicitly be aimed at investigating ongoing interaction for component services.

Another limitation concerns the fact that data was only collected at the buyer. In this case study, we were able to obtain information on all the dimensions of interaction, including dimensions that concerned the supplier (i.e. supplier representatives involved, critical supplier

capabilities). However, a concept like interaction should be studied by means of two-sided data collection. In future studies therefore, data should also be collected at suppliers.

Further research could be aimed at replicating the patterns observed in this case study at various other companies (literal replication (Yin 2003)). Studying services at many different companies will result in the inclusion of many different services: as such, generic patterns of ongoing interaction *across* the wide variety of services that organizations buy can be identified, which is important according to Smeltzer and Ogden (2002). This would also address the observation by Agndal et al. (2006), who conclude that purchasing and supply management research covering different types of services is scarce.

Since this study did not include component services, we propose to select service companies for the next study, since the chances of finding both component and semi-manufactured services are expected to be higher there than at manufacturing companies. We suggest performing this study at a limited number of buying companies, since this enables making detailed cross-case analyses. Furthermore, these studies enable us to verify which dimensions show consistent and strong variation; future studies focusing on just these dimensions can then be executed at a large number of buying companies or can be based on two-sided data-collection.

Although there are still many possibilities for further research in this area, we think this study has made an important contribution by advancing our understanding of differentiated ongoing interaction between buyers and sellers of business services.

References

- Agndal, H., Axelsson, B., Lindberg, N., & Nordin, F. (2006). Current Trends in Service Sourcing Practices. In Croom, S., Carter, P., & Day, M, *Creating and managing value in supply networks. Proceedings of the 15th Annual IPSERA Conference, 6-8 April, San Diego, California, USA.*

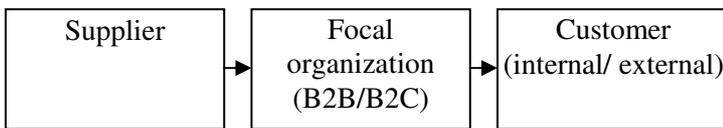
- Bauer, R. A. (1960). Consumer Behavior as Risk Taking. In Hancock, R. S., *Dynamic Marketing for a Changing World*. Chicago: American Marketing Association.
- Boyt, T., & Harvey, M. (1997). Classification of Industrial Services. *Industrial Marketing Management*, 26 (4), 291-300.
- Brennan, R. D., Turnbull, P. W., & Wilson, D. T. (2003). Dyadic Adaptation in Business-to-Business Markets. *European Journal of Marketing*, 37 (11/12), 1636-1665.
- Bryntse, K. (2000). *Kontraktstyrning*, Doctoral thesis, Lund University, Lund, Sweden (2000).
- Cunningham, M. T., & Homse, E. (1986). Controlling the Marketing-Purchasing Interface: Resource Development and Organisational Implications. *Industrial Marketing and Purchasing*, 1 (2), 3-27.
- Day, E., & Barksdale, H. C. (1994). Organisational Purchasing of Professional Services: The Process of Selecting Providers. *The Journal of Business and Industrial Marketing*, 9 (3), 44-51.
- Fisher, L. (1976). *Industrial Marketing: An Analytical Approach to Planning and Execution*. London: Business Books Limited.
- Fitzsimmons, J. A., Noh, J., & Thies, E. (1998). Purchasing Business Services. *Journal of Business and Industrial Marketing*, 13 (4/5), 370-380.
- Ford, D. (2002). *Understanding business marketing and purchasing*. London: Thomson Learning.
- Gelderman, C. J., & Van Weele, A. J. (2002). Strategic Direction through Purchasing Portfolio Management: A Case Study. *Journal of Supply Chain Management*, 38 (2), 30-37.
- Grönroos, C. (2000). *Service Management and Marketing: A Customer Relationship Management Approach*. Chichester: John Wiley & Sons Ltd.
- Grönroos, C. (2004). *Service Management: Understanding Productivity and Profitability Applying a Service Business Logic*. Doctoral Seminar in Service Management and Marketing, Helsinki, Finland.
- Håkansson, H. (1982). *International Marketing and Purchasing of Industrial Goods: An Interaction Approach*. London: Wiley.
- Henthorne, T. L., LaTour, M. S., & Williams, A. J. (1993). How Organizational Buyers Reduce Risk. *Industrial Marketing Management*, 22, 41 - 48.
- Jackson, R. W., & Cooper, P. D (1988). Unique Aspects of Marketing Industrial Services. *Industrial Marketing Management*, 17, 111-118.
- Johnson, G., Melin, L., & Whittington, R. (2003). Micro Strategy and Strategizing: Towards an Activity-Based View. *Journal of Management Studies*, 40 (1), 3-22.
- Johnston, W. J., & Bonoma, T. V. (1981). The Buying Center: Structure and Interaction Patterns. *Journal of Marketing*, 45 (3), 143-156.
- Johnston, W. J., & Lewin, J. E. (1996). Organizational Buying Behavior: Toward an Integrative Framework. *Journal of Business Research*, 35 (1), 1-15.
- Kraljic, P. (1983). Purchasing Must Become Supply Management, *Harvard Business Review*, 61, 66-74.
- Lovelock, C. H. (1983). Classifying Services to Gain Strategic Marketing Insights. *Journal of Marketing*, 47, 9-20.
- Lovelock, C. H. (2001). *Services Marketing: People, Technology, Strategy*. Upper Saddle River, NJ: Prentice Hall.
- McQuiston, D. H. (1989). Novelty, Complexity and Importance as Causal Determinants of Industrial Buyer Behavior, *Journal of Marketing*, 53 (2), 66-79.
- Mitchell, V. W. (1994). Problems and Risks in the Purchasing of Consultancy Services. *Service Industries Journal*, 14 (3), 315-339.
- Mitchell, V-W, & Greatorex, M. (1993). Risk Perception and Reduction in the Purchase of Consumer Services. *The Service Industries Journal*, 13 (4), 179-200.
- Robinson, P. J., & Faris, C. W. (1967). *Industrial Buying and Creative*

- Marketing*. Boston, MA: Allyn and Bacon,.
- Sheth, J. N. (1973). A Model of Industrial Buying Behavior. *Journal of Marketing*, 37, 50-56.
- Smeltzer, L. R., & Ogden, J. A. (2002). Purchasing Professionals' Perceived Differences between Purchasing Materials and Purchasing Services. *Journal of Supply Chain Management*, 38 (1), 54-70.
- Webster Jr, F. E., & Wind, Y. (1972). A General Model for Understanding Organizational Buying Behavior. *Journal of Marketing*, 36, 12-19.
- Whetten, D. A. (1989). What Constitutes A Theoretical Contribution? *Academy of Management. The Academy of Management Review*, 14 (4), 490-495.
- Wilson, E. J., Lilien, G. L., & Wilson, D. T. (1991). Developing and Testing a Contingency Paradigm of Group Choice in Organizational Buying. *Journal of Marketing Research*, 28, 452 - 466.
- Wynstra, F., Axelsson, B., & Van der Valk, W. (2006). An Application-based Classification to Understand Buyer-Supplier Interaction in Business Services. *International Journal of Service Industry Management*, 17 (5), 474-496.
- Yin, R. K. (2003) *Case study research: design and methods*. California: Sage Publications, Inc., Thousand Oaks.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1988). Communication and Control Processes in the Delivery of Services. *Journal of Marketing*, 52 (2), 35-48.
- Zeithaml, V. A., & Bitner, M. J. (1996). *Services Marketing*. Singapore: McGraw-Hill Companies, Inc.

Appendix I List of interview questions

Questions on the service being supplied

- 1) What is the service that is actually being supplied (in terms of activities carried out for your company, personnel and equipment supplied, et cetera)? What is the frequency of service delivery and how important is timely delivery?
- 2) What does the (simplified) supply chain look like?



- 3) Could you please provide me with some background information on the supplier company?
You could for example think of:
 - i) Part of the supplier company you are dealing with
 - ii) Product/ service range of the unit you are dealing with
 - iii) Types of customers and market segments the supplier services
- 4) Which people/ functions are involved with this service from
 - i) the supplier's part?
 - ii) your company's part?
 - iii) your customer's part?
 What are their respective roles/ responsibilities? Please distinguish between pre-purchase and post-purchase.
- 5) What is the position of the service in relation to your organisation's offering to its customers? Is it:
 - i) Consumed within your own organisation?
 - ii) Transferred (either directly or indirectly) to the customer?
 - iii) What are the consequences to the customer of delivery and/ or performance failure?
 - iv) Could you give an estimate to what extent this service contributes to your company's competitive position in terms of market share,

- turnover and/ or profit (hardly, quite a lot, very much)?
- 6) How important is the service being exchanged?
 - i) In terms of financial importance: what share of purchasing expenditures is spent on this service?
 - ii) If applicable, in terms of importance for customer satisfaction (your company's customers)
- 7) How complex is the service being exchanged?
 - i) How many disciplines/ departments are affected by this service?
 - ii) What is the contribution of the final customer in the service delivery process?
 - iii) To what extent does this service rely on expert knowledge of employees on both the buyer's and the supplier's side?
 - iv) To what extent does this service depend on support from information systems?
 - v) To what extent does this service have to be integrated with/ adapted to existing systems and/ or existing service offerings?
- 8) How novel is the service being exchanged?
 - i) In comparison to existing service offerings/ the offering preceding this offering, to what extent is this service new to the supplier organisation/ employees (not at all, a little, very different)?
 - ii) In comparison to existing service offerings/ the offering preceding this offering, to what extent is this service new to the customer organisation/ employees (not at all, a little, very different)?

Questions on the service purchasing process

- 9) Which departments are primarily involved in the purchasing process?
 - i) Which departments are represented in the purchasing team?
 - ii) Which functions represent these departments? Which function

- carries main responsibility and/ or has the “final word” in decision-making?
- 10) How does supplier selection take place?
- i) Is there a list of preferred suppliers?
 - ii) How many alternatives are there and what is there respective attractiveness? What are the costs and difficulties associated with switching to another source? What is the market structure/ competitive situation?
 - iii) What are important selection criteria?
 - iv) To what extent is the service contract detailed before selection actually takes place?
- 11) To what extent can the characteristics of the service be determined in advance of the purchase/ development project?
- i) To what extent can the service concept be designed in advance of the purchase/ development project?
 - ii) To what extent can service delivery be designed in advance of the purchase/ development project?
 - iii) To what extent can performance characteristics be determined in advance of the purchase/ development project?

Questions on “life after the purchase”

- 12) What does the customer-supplier interface look like after the purchase has been made (communication and coordination mechanisms, boundary spanning roles, and DMU/PSU structures)?
- i) Which departments/ functions are primarily involved in the interactions?
 - ii) Which departments/ functions are involved in managing the ongoing supply after the purchase of a service? How does this take place?
 - iii) Which departments/ functions are involved in managing the supplier? How does this take place?
 - iv) Who are the counterparts of these functions on the supplier's side?

- 13) What are the most important issues discussed in the interaction?
- i) What are the respondent's contacts with counterpart in terms of frequency, form, topic, who was contacted?
 - ii) What are the respondent's contacts inside the buying company in terms of frequency, form, topic, who was contacted?
 - iii) What are the contacts of others inside the buying company with counterpart in terms of frequency, form, topic, who was contacted?
 - iv) What type of information is requested from and provided by the counterpart?
- 14) Is this relationship characterised by frequent or little exchange? In between exchange episodes, is the amount of interaction considered to be low, medium, high?

Questions on the long-term relationship

- 15) Could you please provide me with some background information on the nature of the relationship?
- i) How long has the relationship been in existence?
 - ii) How was this relationship established (in terms of reason for and approach to)?
 - iii) What is the criticality/ overall importance of the relationship?
- 16) Have any relation specific investments been made by either or both parties to accommodate the service exchange?
- i) Have any special financial procedures been developed for the benefit of financial exchange between buyer and supplier?
 - ii) What adaptations have been made, proposed or discussed by the parties involved in the relationship (for example: modifications of product specifications, product design, manufacturing processes, planning, delivery procedure, stock holding, administrative and financial procedures)?
 - iii) What were the reasons for these initiatives? What people were involved in the development of

- propositions, discussion, and execution of adaptations?
- iv) How would you describe the social character of the relationships between members of the buying and supplying organisation in terms of trust, openness, personal friendships, social contacts, et cetera?
 - v) What is the buyer's impressionistic character of the counterpart?
 - vi) What is the buyer's impressionistic character of the dependence between buyer and supplier (mutual shares)?
 - vii) Have there been any critical issues during the history of the relationship? Please explain how these have been solved.

- functions, roles, status levels, education, qualifications, job-experience, language competence.
- 5) Information on terms of trade, contract procedures and protocols.

Additionally, information will be gathered on the companies involved in the focal relationship (through studying documents, electronic sources, et cetera):

- 1) Customer company:
 - i) Company size (number of employees, turnover, profit, size, production technology, degree of (international) orientation, organisation, competences);
 - ii) Product/ service range;
 - iii) Types of customers and market segments;
 - iv) Organisation of the purchasing department;
 - v) Organisation of Decision Making Unit.
- 2) Supplier company:
 - i) Company size (number of employees, turnover, profit, size, production technology, degree of (international) orientation, organisation, competences);
 - ii) Product/ service range;
 - iii) Types of customers and market segments;
 - iv) Organisation of counterpart of Decision Making Unit.
- 3) Absolute and relative total value and/ or volume of business placed with the supplier counterpart during history of the relationship.
- 4) Characteristics of the individuals involved in the interaction in terms of