

Understanding the Co-Creation of Value Emerging from the Collaboration between IT Consulting Firms and their Customers

Research-in-Progress

Severin Oesterle

University of Bayreuth
Universitätsstraße 30
95447 Bayreuth, Germany
severin.oesterle@uni-bayreuth.de

Arne Buchwald

EBS Business School
Rheingaustraße 1
65375 Oestrich-Winkel, Germany
arne.buchwald@ebs.edu

Nils Urbach

University of Bayreuth
Universitätsstraße 30
95447 Bayreuth, Germany
nils.urbach@uni-bayreuth.de

Abstract

Recent market developments such as increasing digitalization of services, professionalization of customers, and transparency about the specific value of IT services, are putting IT consulting firms as well as their customers under pressure. Thus, it is of high importance that IT consultancies and their customers are jointly working together to innovate new services and solve specific tasks which come along with the digitization of services. Although previous literature offers valuable starting points for explaining such collaborative value creation, we do not see specific approaches that comprehensively address this challenge. By drawing upon the service-dominant logic as the theoretical frame, we deductively develop a conceptual model that explains the emergence of co-created value within IT consulting relationships. After a thorough empirical validation of our model, our ultimate contribution will be a theory that equips IT consulting firms and their customers with information to better understand the drivers of co-created value.

Keywords: Value, value co-creation, service-dominant logic, IT consulting services, digital transformation

Introduction

Digitalization has begun to change the rules of competition in many industries. Salient characteristics of digitalization are that the speed of change has further increased and the level of competition has been intensified (Veit et al. 2014). As a consequence of these disruptive markets forces, organizations need to reconsider and to adjust their business models to remain competitive (Veit et al. 2014). In this quest for digitizing existing business models, organizations often rely upon the knowledge of consultancies as external knowledge providers. This way, organizations closely interact with IT consulting firms to achieve digitized business models, innovations, and thus a particular business value from the collaboration. In the same vein that regular organizations feel pressured to remain competitive, so do consulting firms. While their fundamental business model has not changed for many decades, consulting firms are currently faced with serious challenges putting the complete market at the risk of disruption (Christensen et al. 2013). A major trigger of this development is, next to a general market saturation (Richter and Schmidt 2006), the customer companies' increasing sophistication about consulting services. Looking at the domain of information technology (IT), service providers are further pressured by both a persisting competition from low-wage countries and the rise of innovative services, such as cloud computing, providing alternatives to the established business models (McCarthy and Matzke 2010). Given that situation, for IT consultancies it is more essential than ever before to understand the needs of their customers as good as possible. Only with a deeper comprehension of how their service provision leads to value for the customer will those companies be able to optimize their customer relationships and, finally, increase or at least keep their sales and profits.

Previous research posits that the value of such collaboration does not emerge in either the service provider (i.e., the IT consultancy) or the customer organization, but emerges through co-creation (Vargo and Lusch 2004). While knowledge on the underlying mechanisms between an IT consultancy's service provision and a customer's value receipt is surprisingly scarce, some related aspects have already been investigated. First, the work of Das et al. (1999) explicitly focuses on the explanation of customer satisfaction with IT consultants. The presented model, however, does not fully cover all facets that we find relevant in this particular context (e.g., collaboration quality and value co-creation). Second, Yoon and Suh (2004) present an IT Consulting SERVQUAL as a valuable measurement instrument for service quality of and customer satisfaction with IT consultants. Similar to the article mentioned before, it takes a solely firm-centric perspective which became outdated with the advent of the service-dominant logic (S-D logic) (Vargo and Lusch 2004; Vargo and Lusch 2008; Vargo and Lusch 2016). Subsequent and building on the S-D logic, Breidbach et al. (2013b) investigate innovation in service profit firms, also acknowledging the customer-centric perspective. In this line of inquiry, we draw upon Breidbach et al. (2013b) but focus on explaining the objective of this paper, value, instead of on innovation. Chan et al. (2010) provide empirical evidence from professional financial services and show that customer participation is significantly linked to customer value creation. Further, the approach of Barrutia and Gilsanz (2013) is grounded in the S-D logic and evaluates the electronic service quality and value in a B2C-e-commerce context. They posit that "[...] both consumer expertise and electronic service quality directly and positively affect value perception" (Barrutia and Gilsanz 2013, p. 231). However, the presented approaches focus on business to consumer relationships and/or the service under investigation cannot be compared with IT consulting services.

To conclude, we consider the closely related work as valuable starting points for our research. However, so far we do not see any specific comprehensive attempt addressing the practical problem outlined above. To address this research gap, we formulate the following research question: RQ1: Which factors explain the value creation emerging from the collaboration between IT consulting firms and their customers? RQ2: Which role does the service recipient capabilities play in terms of value creation between IT consulting companies and their customers? Based on what we learn from previous theoretical approaches, we aim at deductively developing a research model that will help us answer our research questions. After successfully laying the conceptual groundwork with this piece of research, our future research activities will comprise an empirical validation of the conceptual model.

Theoretical Foundations

As indicated in our introduction, we grounded our research in S-D logic. In 2004, Vargo and Lusch (2004) published the seminal work with which the dichotomy of goods and services is overcome. They define service "as the application of specialized competences (knowledge and skills) through deeds, processes, and

performances for the benefit of another entity or the entity itself” (Vargo and Lusch 2004, p. 2). In their view, goods are a distributing mechanism for services because a service represents the fundamental unit of exchange (Breidbach and Maglio 2015; Vargo and Lusch 2004; Vargo and Lusch 2016). Moreover, the S-D logic and related perspectives, e.g., service logic and service science, focus on transactions in which specialized competences, such as knowledge and skills, are exchanged (Bruns and Jacob 2014) and describe the mutual interaction between the provider of a service with its customers. Therefore, it is vital to understand the S-D logic’s assumptions “all economies are service economies” (Vargo and Lusch 2004, p. 10) and “enterprises cannot deliver value, but only offer value propositions” (Vargo and Lusch 2008, p. 7). Hence, the role of the customer and its resources has become more and more important. However, Heinonen et al. (2010) put forth that the S-D logic is still service provider-orientated and additionally integrates customers “[...] as employed by the company or as a partner [...]” (p. 533). Moreover, they state that “[...] the center of interest are not exchange and service as such, but how a company’s service is and becomes embedded in the customer’s contexts, activities, practices, and experiences, and what implications this has for service companies” (Heinonen et al. 2010, p. 533). Hence, their customer-dominant logic places the customer in the center and not the service. In our research endeavor, we focus on the service and its mutual interactions with the service recipient within a specific service delivery process. Consequently, we consider service recipients as partners in the value co-creation process and follow the view of Vargo and Lusch (2008, p. 7) that “service is the fundamental basis of exchange”.

Value Propositions, Value Co-Creation, and Value

Within the initial work and later revised works of S-D logic, the term value proposition has not been defined clearly (Vargo and Lusch 2004; Vargo and Lusch 2008; Vargo and Lusch 2016). However, looking in related works, value propositions are considered as commitments the service provider makes that value-in-exchange is connected with value-in-use (Ballantyne et al. 2011; Frow and Payne 2011; Kowalkowski 2011; Lusch et al. 2007). Similarly, Grönroos and Voima (2013) consider value propositions as “promises that customers can extract some value from an offering” (Grönroos and Voima 2013, p. 145). However, the actual evaluation whether the service contributes to the service recipient’s value in future use has to be made only by the service recipient. Thus, the service provider cannot assure an initial value contribution (Skålén et al. 2014). Furthermore, the offered value proposition has to put the individual service recipient in a better position. The service provider can only make suggestions how the value proposition should be used. The emergence of value, however, differs in literature. Grönroos (2006) proposes that only service recipients are value creators and service providers are considered value co-creators only in the case interactions exist between both parties. In other terms, a service provider is co-creator when the service recipient invites the service provider to interact, otherwise the service provider is merely a facilitator. In contrast, Vargo and Lusch (2016) put forth that “value is always co-created” (p. 5) between a service provider and the service recipient. Furthermore, Barrutia and Gilsanz (2013, p. 232) state that “service science suggest that company and consumer service systems simultaneously access, adapt, and integrate resources to create value for themselves and others.” Summarizing, service provider cannot deliver value directly. It rather emerges in the service recipient sphere (Ballantyne and Varey 2006; Grönroos and Ravald 2011; Gummesson 2007; Vargo and Lusch 2016) which should be seen as value-in-use (Bruns and Jacob 2014; Lusch and Nambisan 2015; Lusch et al. 2007; Vargo and Lusch 2004) because the value for service recipients is generated by them while using and/or consuming the provided service (Grönroos and Ravald 2011; Sandström et al. 2008).

Service provider and Service Recipient Capabilities

In the light of the S-D logic and the closely related research fields, it is necessary to consider service provider resources as well as the resources of the service recipient in the value co-creation process. We correspondingly needed resources as service provider capabilities and service recipient capabilities. In the service process of IT-rich services, such as IT consultancy services, however, the role of the service recipient and its resources is particularly crucial. Therefore, we draw upon the above presented notion of the S-D logic and integrate service recipient capabilities next to service provider capabilities on the basis of Barrutia and Gilsanz (2013). Moreover, we also base our research on IT outsourcing literature to incorporate existing vendor capabilities.

Service Recipient Capabilities

Arnould et al. (2014) distinguish between operand and operant resources of service recipients, such as firms. On the one hand, operand resources of service recipient are e.g., physical and tangible resources, economic resources as well as goods and raw materials in their possession and which are under their sole control (Chandler and Vargo 2011). On the other hand, service recipients have also operant resources, e.g., knowledge and skills, business and family relationships, and openness in relation to certain activities (Alborz et al. 2003; Barrutia and Gilsanz 2013). Vargo and Lusch (2004, 2008, 2015) state that in the S-D logic the fundamental unit of exchange is service (knowledge and skills). Fahey and Prusak (1998) understand knowledge as personal information which are in individual minds. Thus, our focus is on the operant resources' knowledge. Therefore, we follow the line of reasoning of Barrutia and Gilsanz (2013) and use the more narrow term customer expertise accordingly, which is defined "[...] as the ability to perform product-related tasks successfully" (Alba and Hutchinson 1987, p. 411). Thus, in an IT consulting context, in which information is considered as the key resource (Mills and Margulies 1980), from an S-D logic perspective, all involved actors need expertise which consist of information. Therefore, service recipients should possess the needed expertise in the IT domain to have the ability to co-create value. Consequently, customer expertise is a major operant resource in our context. Furthermore, Arnould et al. (2014) argue that social resources should also be considered as customers' operant resources. Also, IT outsourcing literature acknowledges that strong interpersonal and communications skills as well as knowledge sharing are needed to successfully manage IT outsourcing relationships (Alborz et al. 2003; Beulen and Ribbers 2002; Lee 2001). Social resources may comprise, for instance, interpersonal trust, know-how exchange, perceived pressure, relationship proneness, and social expertise (Paredes et al. 2014). In our business-to-business context, we focus on expertise and interpersonal trust during an IT consulting service. Furthermore, the service recipients need to be open minded towards innovations in services and their underlying processes (Parasuraman and Colby 2015). The nature of IT consulting service, especially in the light of digitalization of services, is rather innovative and aims at solving a specific problem and/or invent new services. Summarizing, from a service recipient perspective, the co-creation in IT consulting services is decisively depending on its operant resources.

Service Provider Capabilities

Analogous to the service recipient, the service provider also has operand and operant resources. We focus on operant resources which are "[...] those that act on other [operand] resources [...]" (Vargo et al. 2008, p. 148). According to the S-D logic, firms cannot provide value directly, they only can offer value propositions. Service quality is the major resource of professional service firms (Kaiser and Ringlsetter 2011) and should thus be considered as operant resource. In the hierarchy model of Madhavaram and Hunt (2008), the service quality of an IT consulting firm can be established as a higher-order interconnected operant resource (IOR). They define "an IOR as a combination of two or more distinct, basic resources in which the lower order resources significantly interact, thereby reinforcing each other in enabling the firm to produce efficiently and/or effectively valued market offerings" (Madhavaram and Hunt 2008, p. 70). The key operant resources of an IT consulting firm are knowledge and skills which can be provided through the firm's employees (Alborz et al. 2003; Breidbach et al. 2013b; Goles 2003) and lead to a high IT consulting quality.

Conceptual Development

After having introduced the theoretical foundations and previous works related to the investigation of value, we now derive our propositions to explain the value co-creation between an IT consultancy and its customer. We focus on the value co-creation from an individual perspective. Thus, the unit of analysis is the individual relationship between a service recipient and a service provider. Therefore, we propose a value model which consists of service recipient and service provider capabilities, collaboration quality, and the derived value-in-use out of the service. To derive our conceptual model, we were inspired by previous works of Chan et al. (2010), Breidbach et al. (2013b), and Barrutia and Gilsanz (2013) to also integrate the service recipient view. Thus, we make sure to be consistent with the S-D logic and related perspectives. In our notion, we adopt the view of Barrutia and Gilsanz (2013) of the value co-creation core model which consists of the service recipient, service provider capabilities, the value perception and, in addition, integrate the collaboration quality. In general, our dependent variable 'value-in-use' is the ratio between benefits and

sacrifices (Varki and Colgate 2001), which emerges in the S-D logic during the use of the service and in the service recipient sphere, as mentioned above (Grönroos and Voima 2013; Vargo and Akaka 2009; Vargo and Lusch 2004). Hence, the context-specific service experience is judged by the service recipient and is a cognitive comparison of former usage experiences with the current one and leads to value-in-use. However, the value develops throughout the whole value chain. We thus propose a theoretical model that integrates the factors which we expect to contribute to value-in-use with IT consulting services from both, a service provider and a service recipient sphere as well as the collaboration quality.

Collaboration Quality

Collaboration quality refers to the extent to which at least two entities work jointly and coordinated together (Pereira and Soares 2007). Chen et al. (2013, p. 914) state that collaboration “improves usefulness because there are now multiple ways to deal with trading partners.” Collaboration consists of personal interactions and relations between service provider and service recipients as well as interactional aspects like courtesy, respect, and friendliness (Kelley et al. 1990). Furthermore, collaboration depends on the mutual trustworthiness of the participants. The better these qualities, the stronger are the ties between the service provider and the service recipient (Yi and Gong 2013), and thus, a higher value during the use of the service emerges. Hence, a strong relationship between the service recipient and the service provider as well as a thoroughly executed relationship management are needed for a high collaboration quality (Goles 2003; Han et al. 2008). According to Ennew and Binks (1999) these multiple interactions are a prerequisite for successful value co-creation, which is why *collaboration quality* contributes to value-in-use. Hence, we propose:

P1: Collaboration quality has a positive impact on value-in-use.

Service Provider Capabilities

Within the service provider capabilities the *IT consulting service quality* ultimately contributes to value. *IT consulting service quality* “is best described as the result of an assessment process, in that course the client compares the expected service with the one delivered” (Kaiser and Ringlstetter 2011, p. 40). In turn, the IT consulting service quality depends on the operant resources: process quality, solution quality, and social expertise of the provider. Thus, IT consulting service quality is the outcome of the overall assessment of the service. The IT consulting service quality is, in contrast to objective quality, a judgment of the individual and thus a subjective perception (Kang 2006). According to Cronin et al. (2000), service quality is the main determinant of value. In addition to Cronin et al. (2000), Gallarza et al. (2013) confirm this view with their empirical findings. Thus, we conclude:

P2: IT consulting service quality has a positive impact on value-in-use.

Solution Quality, Process Quality, and Social Expertise of the Provider

Grönroos (1984) portrays one of the first published service quality models in which he splits up services and their inherent quality into functional and technical quality. This way, technical quality refers to “what the customer gets” (Grönroos 1984, p. 39) while functional quality describes “how he [the customer] gets it” (Grönroos 1984, p. 39). In other words, Grönroos (1984, p. 39) outlines that “the perceived service [quality] is the result of a consumer’s view of a bundle of service dimensions, some of which are technical and some of which are functional nature”. While the model serves as a good starting point, it is solely firm-centric. In light of our research questions, we incorporate an adoption of the variable technical quality and the variable functional quality. The first form, technical quality (or outcome quality) that we incorporate in our IT consultancy industry model as *solution quality*, refers to the final result of the IT consultancy service that the customer receives. Similar to an outsourcing vendor, an IT consulting firm needs the required technical skills to deliver the appropriate solution (Goles 2003). The second form, functional quality that we incorporate in our model as *process quality*, refers to the way in which the service recipient is receiving the service. In the context of IT consulting services, the outcome is a solution to a specific IT-related problem of an organization and/or an innovative new service, which is why we equate *solution quality* with technical or outcome quality. While the way how a service in terms of *process quality* is provided is continuously assessed by the service recipient, *solution quality* is assessed when the provision of the service is (partly) completed. However, both quality dimensions contribute to the overall IT consulting service quality. *Solution quality* is defined as the “answer [to] the question of what a customer gets [...]” (Grönroos

1984, p. 39). Grönroos (1984) describes that the overall service quality is comprised of both functional and technical quality, while Rust and Oliver (1994) equate technical quality with outcome quality. Thus, we follow the notation of Rust and Oliver (1994) and conclude:

P3: Solution quality has a positive impact on IT consulting service quality.

Process quality is defined as “the way a service is delivered to a consumer – that is, the customer’s perception of the interaction that takes place during service delivery” (Kang 2006, p. 39) and is a decisive element for how a service recipient perceives the overall service (Berry et al. 1985). Furthermore, the process through which the service is delivered influences the quality of the overall solution (Sweeney et al. 1997). More precisely, *process quality* is assessed by the service recipient’s interactions with the service provider during service provision (Berry et al. 1985) and thus, in accordance to the S-D logic. As mentioned above, the *process quality* contributes to the overall IT consulting service quality, and we conclude:

P4: Process quality has a positive impact on IT consulting service quality.

Social expertise of the provider is defined as the “degree to which consumers receive intelligent social support [...]” (Barrutia and Gilsanz 2013, p. 235). We assume that this conclusion also remains valid in a business-to-business context and for the service provider employees. Employees of an IT consultancy also receive intelligent social support from their working colleagues with which they collaborate. Intelligent social support can be seen as knowledge transfer. According to Gruen et al. (2007), knowledge is transferable and the transferred knowledge can be used to complete the required service. However, the knowledge transfer will only take place if there is an interpersonal relationship between the actors (Breidbach et al. 2013a) and if the person receiving such support has openness towards social support. The interpersonal relationship depends on the interpersonal trust which refers to “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer et al. 1995, p. 712). Thus, trustworthy relationships within the project team of the service provider is a precondition for knowledge transfer and thus, for social expertise. Within the IT consulting project teams, there are various kinds of actors with different expertise. Furthermore, it is possible that the project team members may work together for the first time and are cross-functional, mainly business and IT (Chua et al. 2012). Hence, it is of inevitable importance for the IT consultancy to establish a strong and trustworthy team. The social expertise will enhance the quality of the collaboration and furthermore enable a high level of IT consulting service quality. Thus, we conclude:

P5: Social expertise of the provider has a positive impact on IT consulting service quality.

P6: Social expertise of the provider has a positive impact on collaboration quality.

Summarizing, the service provider capabilities focus on the operant resources of a firm. In our context, an IT consulting firm can only provide knowledge and skills as well as the quality of the delivery process and the social expertise of the consultants. We propose that the three dimensions (*solution quality*, *process quality*, and *social expertise of the provider*) positively influence the service recipient’s overall IT consulting service quality perception.

Service Recipient Capabilities

Due to the mutual provision of IT consulting services, there are always multiple actors involved in the provision. According to Vargo and Lusch (2016, p. 4), “value is co-created by multiple actors, always including the beneficiary.” Therefore, we include, next to the service provider capabilities, the service recipient capabilities to integrate also its operant resources. Within in the service recipient capabilities customer expertise ultimately contributes to value. *Customer expertise* refers to service recipient’s familiarity and knowledge about the firm’s offering (Alba and Hutchinson 1987). In line with Alba and Hutchinson (1987) and their view that a successful provision of a specific task needs more than one type of knowledge, we incorporate the constructs functional expertise, innovativeness and social expertise of the service recipient. A high overall customer expertise will help the service recipient to use the provided value propositions. Furthermore, the service recipient on an individual level can effectively participate in the service provision process. Expertise, understood as the overall competence and skills of employees (innovativeness, functional expertise, social expertise), affects the perceived value. Hence, we summarize:

P7: Customer expertise has a positive impact on value-in-use.

Functional Expertise, Innovativeness, and Social Expertise of the Service Recipient

Hoffman (1998, p. 85) defines a functional expert as “one who has special skills or knowledge derived from extensive experience with subdomains.” Deriving from this definition, we consider *functional expertise* of the service recipient as the extent to which an employee is an expert in a specific domain (Han et al. 2008). Within the area of the IT department, the service recipient should be striving to employ workers with IT-specific knowhow and skills to collaborate and further use the solution delivered by an IT consultancy. As another specific knowledge of a service recipient, functional expertise will form the overall individual customer expertise. Thus, we propose:

P8: Functional expertise has a positive impact on customer expertise.

Innovativeness is simply defined as “willingness to change” (Hurt et al. 1977, p. 59). Hence, the employees of the service recipient should be willing to change their work processes and/or work flows. IT consultancies are assigned to support their customers to resolve a specific task (Turner 1981) and/or to develop innovative services. Especially in light of the digitization of services, a certain level innovativeness and a willingness to change is necessary. If the service recipient’s employees are willing to change, adopt, and use the provided solutions, their level of customer expertise will increase. Hence, we propose:

P9: Innovativeness has a positive impact on customer expertise.

The *social expertise of the recipient*, while similar to the service provider capabilities, takes the recipient’s view. According to Paredes et al. (2014, p. 128), social expertise is defined as the “knowledge available in consumer social context” and thus, it will influence customers expertise (Barrutia and Gilsanz 2013). Here again, employees of the service recipient receive intelligent social support from their workmates, i.e. colleagues from other departments or from the same department as well as colleagues from external service providers. In contrast to the service provider’s social expertise, the employees of the service recipient work in their regular team and for a longer time period. Because of the interpersonal trust which is needed for the knowledge transfer, social expertise of the service recipient contributes again to the above mentioned collaboration quality. Furthermore, social expertise is a specific form of expertise and contributes to the overall individual expertise of an employee (customer expertise). Hence, we propose:

P10: Social expertise of the recipient has a positive impact on customer expertise.

P11: Social expertise of the recipient has a positive impact on collaboration quality.

Summarizing, the service recipient capabilities focus also on the operant resources of the service recipient. In our context, the service recipient of an IT consulting service should also provide knowledge, skills, and social expertise as well as has to be open to innovations which are decisive for the value co-creation. In sum, we propose that the three dimensions social expertise of the service recipient, functional expertise, and innovativeness positively influence customer expertise. Figure 1 gives an overview of the derived propositions.

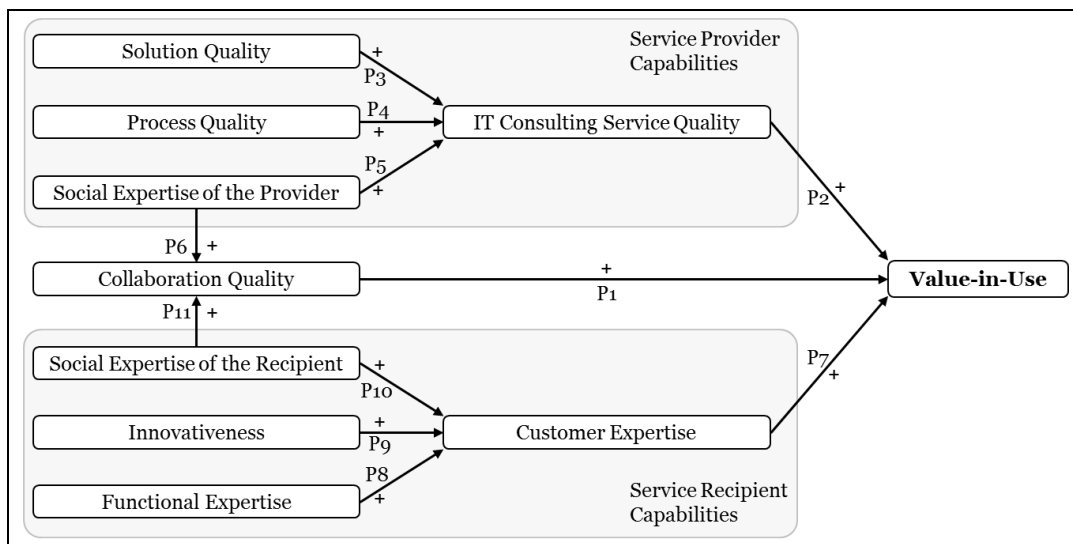


Figure 1. Model Explaining Value Co-Creation in IT Consulting Relationships

Possible operationalization for the constructs of our conceptual model have been suggested in previous research. An overview can be found in Table 1.

Construct	Operationalizations
Solution Quality	Sureshchandar et al. (2002), Barrutia and Gilsanz (2013), Han et al. (2008), Goles (2003)
Process Quality	Sureshchandar et al. (2002)
Social Expertise of the Provider	Barrutia and Gilsanz (2013), Gruen et al. (2007), Goles (2003), Yi and Gong (2013)
Collaboration Quality	Ruivo et al. (2012), Yan and Dooley (2014), Zacharia et al. (2011), Han et al. (2008), Yi and Gong (2013)
Social Expertise of the Recipient	Barrutia and Gilsanz (2013), Gruen et al. (2007), Yi and Gong (2013)
Innovativeness	Barrutia and Gilsanz (2013), Hurt et al. (1977)
Functional Expertise	Auh et al. (2007)
Customer Expertise	Bell and Eisingerich (2007)
IT Consulting Service Quality	Brady et al. (2005), Yang et al. (2005), Goles (2003), Brady and Cronin (2001)
Value-in-Use	Barrutia and Gilsanz (2013), Callarisa Fiol et al. (2009), Sweeney and Soutar (2001)

Table 1. Sources for Construct Operationalization

Referring to our model, we integrate two perspectives, the perspective of the service provider and the one of the service recipient. Within the service provider sphere, the process and solution quality as well as the social expertise contributes to the overall IT consulting service quality. This perspective presents the quality of how the service is delivered (Kärnä 2014) and what the IT consultancies actually delivers. The IT consulting service quality depends on the operant resources of the consultancy firm. In our context, operant resources of an IT consulting firm are especially skills and knowledge as well as the ability to be trustworthy in the eyes of the service recipient. The IT consultants need to be trustworthy to get the required information as accurate as possible form the service recipient and also to conceive customer requirement as precise as possible. Moreover, the operant resource social expertise is needed to gain a high collaboration quality to have a pleasant work relationship within the whole project team. But also the service recipient should integrate its operant resources. Innovativeness, seen as the willingness to change, is needed to see beyond one's own nose and accept the delivered solution. Functional expertise is needed to understand what the IT consulting firm is doing and if this is appropriate. Additionally, the social expertise of the service recipient's employees encourages their trustworthiness and contributes to a higher collaboration quality and a higher customer expertise. In the actual value co-creation model, we also incorporate the collaboration quality. We propose that the way and the manner the involved actors collaborate is decisive for the value-in-use. The service recipient evaluates the final professional advice during its usage. Hence, the formation of value takes place individually.

Conclusion and Outlook

We set out to deductively build up a conceptual model with which we aim to explain the emergence of value in IT consulting relationships from both the perspective of the service provider and the service recipient. To achieve this goal, we transferred established approaches from marketing and service research into the IT consulting domain to develop a comprehensive, yet parsimonious model. In particular, the S-D logic guided our model development stressing the co-creation process during the service provision. With our derived model we lay the foundation of a future empirical validation.

Before we conclude this paper by outlining our recommendations for future research and by highlighting our contributions to both theory and practice, we briefly discuss the limitations of our study. Since our study, so far, is only a conceptual piece, we do not have any empirical evidence as to how far our propositions

reflect the reality and as to how strong the proposed relationships between constructs are. Thus, while the model is deductively derived on theoretical accounts, the empirical validation remains for future research. Another aspect we want to highlight is that our study only focuses on perceived value, which can be considered as a key determinant of IT consulting service success. Success in that respect may also be influenced by additional factors such as price, political connections, and sales capabilities (Das et al. 1999; Oh 1999) which, however, is beyond the scope of our study. Furthermore, we decided to simplify our conceptual model by excluding circular relationships that would emerge from a more dynamic perspective of how value is co-created between a service provider and a service recipient to enable a subsequent operationalization. Regarding the specific next steps in this research endeavor, we deem quantitative-empirical methods as most suitable to validate our proposed model. Almost all organizations have relationships with IT consultants, such that the average employee will be able to respond to questions regarding to the service provision and his or her level of perceived value with one of the IT consulting services offered. Thus, as specific next steps in this research project, we will define the measurement model based on the preliminary operationalization suggested above, develop a suitable survey instrument, collect quantitative-empirical data, and finally analyze the data using a structural equation modeling approach (Straub 1989; Urbach and Ahlemann 2010). To capture both the service provider and the service recipient perspective we will collect matched pairs (O'Farrell and Hitchins 1988; Peck 1985). Through measurement of the two spheres, we will obtain better insights and a comparison of the service recipient's view and the provider's view is possible. To account for the particularities of the IT consulting domain as outlined in the introduction (broad variety of offered services, fragmented market in terms of the service providers' characteristics, different customer segments), we aim to strengthen our statistical analysis by carrying out multi-group comparisons (Chin 2003; Henseler 2007) in a subsequent step. This will allow us to investigate not only the different value drivers' impact but also potential differences in the dynamics leading to value within IT consulting services considering the specific characteristics of the service offered, the service provider, and the service recipient. An additional opportunity would be the application of bottom-up segmentation procedures, such as FIMIX-PLS (Becker et al. 2013; Mohan and Urbach 2012), for further identification of heterogeneities in the dynamics leading to the emergence of value in IT consulting relationships.

Keeping the limitations of the study in mind, our results contribute to both theory and practice. Having finished the overall research project, our targeted contribution to research is the advancement of the theoretical discourse on the emergence of value by providing an empirically validated theory that explains value-in-use with IT consulting services. By proposing collaboration quality as an additional dimension in the value co-creation model next to the capabilities of service providers and recipient, we aim for a more differentiated view of co-value creation with which we go beyond previous approaches. Furthermore, we account for the value co-creation model in a business-to-business context that has mostly been neglected by similar studies. From a practical point of view, we expect our model after a thorough empirical evaluation to be a beneficial instrument to evaluate and predict customer value with IT consulting services. By considering the specific characteristics of the service offered, the service provider and the beneficiary in our empirical analysis, we try to achieve a largely differentiated view of the phenomenon under investigation. Thus, our results might be useful for providing IT consulting firms with the necessary information to better understand the drivers of customer value-in-use with their services, thus support their after sales process and the acquisition of follow-up projects, and finally improve or at least maintain their market position.

Acknowledgements

This research was (in part) carried out in the context of the Project Group Business and Information Systems Engineering of the Fraunhofer Institute for Applied Information Technology FIT.

References

- Alba, J. W., and Hutchinson, J. W. 1987. "Dimensions of Consumer Expertise," *Journal of consumer research* (13:4), pp. 411-454.
- Alborz, S., Seddon, P., and Scheepers, R. 2003. "A Model of Studying It Outsourcing Relationships," in: *Proceedings of the 7th Pacific Asia Conference on Information Systems (PACIS)*. Adelaide, Australia, Paper 90: pp. 1297-1313.

- Arnould, E. J., Price, L. L., and Malshe, A. 2014. "Toward a Cultural Resource-Based Theory of the Customer," in *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions*, R.F. Lusch and S.L. Vargo (eds.), New York: Routledge, pp. 91-104.
- Auh, S., Bell, S. J., McLeod, C. S., and Shih, E. 2007. "Co-Production and Customer Loyalty in Financial Services," *Journal of Retailing* (83:3), pp. 359-370.
- Ballantyne, D., Frow, P., Varey, R. J., and Payne, A. 2011. "Value Propositions as Communication Practice: Taking a Wider View," *Industrial Marketing Management* (40:2), pp. 202-210.
- Ballantyne, D., and Varey, R. J. 2006. "Creating Value-in-Use through Marketing Interaction: The Exchange Logic of Relating, Communicating and Knowing," *Marketing theory* (6:3), pp. 335-348.
- Barrutia, J. M., and Gilsanz, A. 2013. "Electronic Service Quality and Value Do Consumer Knowledge-Related Resources Matter?," *Journal of Service Research* (16:2), pp. 231-246.
- Becker, J.-M., Rai, A., Ringle, C. M., and Völckner, F. 2013. "Discovering Unobserved Heterogeneity in Structural Equation Models to Avert Validity Threats," *MIS Quarterly* (37:3), pp. 665-694.
- Bell, S. J., and Eisingerich, A. B. 2007. "The Paradox of Customer Education: Customer Expertise and Loyalty in the Financial Services Industry," *European Journal of Marketing* (41:5/6), pp. 466-486.
- Berry, L. L., Zeithaml, V. A., and Parasuraman, A. 1985. "Quality Counts in Services, Too," *Business Horizons* (28:3), pp. 44-52.
- Beulen, E., and Ribbers, P. 2002. "Managing Complex It Outsourcing-Partnerships," *HICSS. Proceedings of the 35th Annual Hawaii International Conference on System Sciences, 2002, Paper 10*.
- Brady, M. K., and Cronin, J. J. 2001. "Some New Thoughts on Conceptualizing Perceived Service Quality: A Hierarchical Approach," *Journal of Marketing* (65:3), pp. 34-49.
- Brady, M. K., Knight, G. A., Cronin, J. J., Tomas, G., Hult, M., and Keillor, B. D. 2005. "Removing the Contextual Lens: A Multinational, Multi-Setting Comparison of Service Evaluation Models," *Journal of Retailing* (81:3), pp. 215-230.
- Breidbach, C. F., Kolb, D. G., and Srinivasan, A. 2013a. "Connectivity in Service Systems: Does Technology-Enablement Impact the Ability of a Service System to Co-Create Value?," *Journal of Service Research* (16:3), pp. 428-441.
- Breidbach, C. F., and Maglio, P. P. 2015. "A Service Science Perspective on the Role of Ict in Service Innovation," in: *Proceedings of the 23rd European Conference on Information Systems (ECIS 2015)*, J. Becker, J. vom Brocke and M. de Marco (eds.). Münster, Germany, Paper 33.
- Breidbach, C. F., Smith, P., and Callagher, L. J. 2013b. "Advancing Innovation in Professional Service Firms: Insights from the Service-Dominant Logic," *Service Science* (5:3), pp. 263-275.
- Bruns, K., and Jacob, F. 2014. "Value-in-Use and Mobile Technologies," *Business & Information Systems Engineering* (6:6), pp. 349-359.
- Callarisa Fiol, L. J., Bigne Alcañiz, E., Moliner Tena, M. A., and García, J. S. 2009. "Customer Loyalty in Clusters: Perceived Value and Satisfaction as Antecedents," *Journal of Business-to-Business Marketing* (16:3), pp. 276-316.
- Chan, K. W., Yim, C. K., and Lam, S. S. 2010. "Is Customer Participation in Value Creation a Double-Edged Sword? Evidence from Professional Financial Services across Cultures," *Journal of marketing* (74:3), pp. 48-64.
- Chandler, J. D., and Vargo, S. L. 2011. "Contextualization and Value-in-Context: How Context Frames Exchange," *Marketing Theory* (11:1), pp. 35-49.
- Chen, J. V., Chen, Y., and Capistrano, E. P. S. 2013. "Process Quality and Collaboration Quality on B2b E-Commerce," *Industrial Management & Data Systems* (113:6), pp. 908-926.
- Chin, W. W. 2003. "A Permutation Procedure for Multigroup Comparison of PLS Models," in: *Proceedings of the PLS'03 International Symposium*, M. Vilarés, T. Michel, P. Coelho, E. Vinzi and A. Morineau (eds.). Lisbon, Portugal.
- Chua, C. E. H., Lim, W.-K., Soh, C., and Sia, S. K. 2012. "Enacting Clan Control in Complex It Projects: A Social Capital Perspective," *MIS Quarterly-Management Information Systems* (36:2), p. 577.
- Cronin, J. J., Brady, M. K., and Hult, G. T. M. 2000. "Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments," *Journal of retailing* (76:2), pp. 193-218.
- Das, A., Soh, C. W. L., and Lee, P. C. B. 1999. "A Model of Customer Satisfaction with Information Technology Service Providers: An Empirical Study," in: *ACM SIGCPR conference on Computer personnel research*, J. Prasad (ed.). New Orleans, Louisiana, USA: ACM, pp. 190-193.

- Ennew, C. T., and Binks, M. R. 1999. "Impact of Participative Service Relationships on Quality, Satisfaction and Retention: An Exploratory Study," *Journal of Business Research* (46:2), pp. 121-132.
- Fahey, L., and Prusak, L. 1998. "The Eleven Deadliest Sins of Knowledge Management," *California management review* (40:3), p. 265.
- Frow, P., and Payne, A. 2011. "A Stakeholder Perspective of the Value Proposition Concept," *European Journal of Marketing* (45:1/2), pp. 223-240.
- Gallarza, M. G., Gil Saura, I., and Arteaga Moreno, F. 2013. "The Quality-Value-Satisfaction-Loyalty Chain: Relationships and Impacts," *Tourism Review* (68:1), pp. 3-20.
- Goles, T. 2003. "Vendor Capabilities and Outsourcing Success: A Resource-Based View," *Wirtschaftsinformatik* (45:2), pp. 199-206.
- Grönroos, C. 1984. "A Service Quality Model and Its Marketing Implications," *European Journal of Marketing* (18:4), pp. 36-44.
- Grönroos, C. 2006. "Adopting a Service Logic for Marketing," *Marketing Theory* (6:3), pp. 317-333.
- Grönroos, C., and Ravald, A. 2011. "Service as Business Logic: Implications for Value Creation and Marketing," *Journal of Service Management* (22:1), pp. 5-22.
- Grönroos, C., and Voima, P. 2013. "Critical Service Logic: Making Sense of Value Creation and Co-Creation," *Journal of the Academy of Marketing Science* (41:2), pp. 133-150.
- Gruen, T. W., Osmonbekov, T., and Czaplewski, A. J. 2007. "Customer-to-Customer Exchange: Its Moa Antecedents and Its Impact on Value Creation and Loyalty," *Journal of the Academy of Marketing Science* (35:4), pp. 537-549.
- Gummesson, E. 2007. "Exit Services Marketing-Enter Service Marketing," *Journal of Customer Behaviour* (6:2), pp. 113-141.
- Han, H.-S., Lee, J.-N., and Seo, Y.-W. 2008. "Analyzing the Impact of a Firm's Capability on Outsourcing Success: A Process Perspective," *Information & Management* (45:1), pp. 31-42.
- Heinonen, K., Strandvik, T., Mickelsson, K.-J., Edvardsson, B., Sundström, E., and Andersson, P. 2010. "A Customer-Dominant Logic of Service," *Journal of Service Management* (21:4), pp. 531-548.
- Henseler, J. 2007. "A New and Simple Approach to Multi-Group Analysis in Partial Least Squares Path Modeling," in: *Proceedings of PLS'07 - The 5th International Symposium on PLS and Related Methods*, H. Martens and T. Naes (eds.). Matforsk, Aas, Norway: pp. 104-107.
- Hoffman, R. R. 1998. "How Can Expertise Be Defined? Implications of Research from Cognitive Psychology," *Exploring expertise*, pp. 81-100.
- Hurt, H. T., Joseph, K., and Cook, C. D. 1977. "Scales for the Measurement of Innovativeness," *Human Communication Research* (4:1), pp. 58-65.
- Kaiser, S., and Ringlstetter, M. J. 2011. *Strategic Management of Professional Service Firms*. Berlin Heidelberg: Springer.
- Kang, G.-D. 2006. "The Hierarchical Structure of Service Quality: Integration of Technical and Functional Quality," *Managing Service Quality: An International Journal* (16:1), pp. 37-50.
- Kärnä, S. 2014. "Analysing Customer Satisfaction and Quality in Construction – the Case of Public and Private Customers," *Nordic journal of surveying and real estate research* (2).
- Kelley, S. W., Donnelly Jr, J. H., and Skinner, S. J. 1990. "Customer Participation in Service Production and Delivery," *Journal of Retailing* (66:3), p. 315.
- Kowalkowski, C. 2011. "Dynamics of Value Propositions: Insights from Service-Dominant Logic," *European Journal of Marketing* (45:1/2), pp. 277-294.
- Lee, J.-N. 2001. "The Impact of Knowledge Sharing, Organizational Capability and Partnership Quality on Is Outsourcing Success," *Information & Management* (38:5), pp. 323-335.
- Lusch, R. F., and Nambisan, S. 2015. "Service Innovation: A Service-Dominant Logic Perspective " *MIS Quarterly* (39:1), pp. 155-175.
- Lusch, R. F., Vargo, S. L., and O'Brien, M. 2007. "Competing through Service: Insights from Service-Dominant Logic," *Journal of Retailing* (83:1), pp. 5-18.
- Madhavaram, S., and Hunt, S. D. 2008. "The Service-Dominant Logic and a Hierarchy of Operant Resources: Developing Masterful Operant Resources and Implications for Marketing Strategy," *Journal of the Academy of Marketing Science* (36:1), pp. 67-82.
- Mayer, R. C., Davis, J. H., and Schoorman, F. D. 1995. "An Integrative Model of Organizational Trust," *Academy of management review* (20:3), pp. 709-734.
- Mills, P. K., and Margulies, N. 1980. "Toward a Core Typology of Service Organizations," *The Academy of Management Review* (5:2), pp. 255-265.

- Mohan, K., and Urbach, N. 2012. "Do We Fully Understand the Critical Success Factors of Employee Portal Utilitarianism? - Uncovering and Accounting for Unobserved Heterogeneity," in: *Proceedings of the 20th European Conference on Information Systems (ECIS 2012)*, J. Pries-Heje, M. Chaisson, J. Wareham, X. Busquets, J. Valor and S. Seiber (eds.). Barcelona, Spain, Paper 72.
- O'Farrell, P. N., and Hitchins, D. M. 1988. "Inter-Firm Comparison in Industrial Research: The Utility of a Matched Pairs Design," *Tijdschrift voor economische en sociale geografie* (79:1), pp. 63-69.
- Oh, H. 1999. "Service Quality, Customer Satisfaction, and Customer Value: A Holistic Perspective," *International Journal of Hospitality Management* (18:1), pp. 67-82.
- Parasuraman, A., and Colby, C. L. 2015. "An Updated and Streamlined Technology Readiness Index Tri 2.0," *Journal of Service Research* (18:1), pp. 59-74.
- Paredes, M. R., Barrutia, J. M., and Echebarria, C. 2014. "Resources for Value Co-Creation in E-Commerce: A Review," *Electronic Commerce Research* (14:2), pp. 111-136.
- Peck, F. 1985. "The Use of Matched-Pairs Research Design in Industrial Surveys," *Environment and Planning A* (17:7), pp. 981-989.
- Pereira, C. S., and Soares, A. L. 2007. "Improving the Quality of Collaboration Requirements for Information Management through Social Networks Analysis," *International Journal of Information Management* (27:2), pp. 86-103.
- Ruivo, P., Oliveira, T., and Neto, M. 2012. "Erp Use and Value: Portuguese and Spanish Smes," *Industrial Management & Data Systems* (112:7), pp. 1008-1025.
- Rust, R. T., and Oliver, R. L. 1994. "Service Quality: Insights and Managerial Implications from the Frontier," in *Service Quality: New Directions in Theory and Practice*, R.L. Oliver and R.T. Rust (eds.), Thousand Oaks: Sage Publications, pp. 1-19.
- Sandström, S., Edvardsson, B., Kristensson, P., and Magnusson, P. 2008. "Value in Use through Service Experience," *Managing Service Quality: An International Journal* (18:2), pp. 112-126.
- Skålén, P., Gummerus, J., von Koskull, C., and Magnusson, P. R. 2014. "Exploring Value Propositions and Service Innovation: A Service-Dominant Logic Study," *Journal of the Academy of Marketing Science* (43:2), pp. 137-158.
- Straub, D. W. 1989. "Validating Instruments in Mis Research," *MIS Quarterly* (13:2), pp. 147-169.
- Sureshchandar, G. S., Rajendran, C., and Anantharaman, R. N. 2002. "The Relationship between Service Quality and Customer Satisfaction – a Factor Specific Approach," *Journal of Services Marketing* (16:4), pp. 363-379.
- Sweeney, J. C., and Soutar, G. N. 2001. "Consumer Perceived Value: The Development of a Multiple Item Scale," *Journal of retailing* (77:2), pp. 203-220.
- Sweeney, J. C., Soutar, G. N., and Johnson, L. W. 1997. "Retail Service Quality and Perceived Value: A Comparison of Two Models," *Journal of Retailing and Consumer Services* (4:1), pp. 39-48.
- Turner, A. N. 1981. "Consulting Is More Than Giving Advice," *Harvard business review* (60:5), pp. 120-129.
- Urbach, N., and Ahlemann, F. 2010. "Structural Equation Modeling in Information Systems Research Using Partial Least Squares," *Journal of Information Technology Theory and Application (JITTA)* (11:2), pp. 5-40.
- Vargo, S. L., and Akaka, M. A. 2009. "Service-Dominant Logic as a Foundation for Service Science: Clarifications," *Service Science* (1:1), pp. 32-41.
- Vargo, S. L., and Lusch, R. F. 2004. "Evolving to a New Dominant Logic for Marketing," *Journal of Marketing* (68:1), pp. 1-17.
- Vargo, S. L., and Lusch, R. F. 2008. "Service-Dominant Logic: Continuing the Evolution," *Journal of the Academy of Marketing Science* (36:1), pp. 1-10.
- Vargo, S. L., and Lusch, R. F. 2016. "Institutions and Axioms: An Extension and Update of Service-Dominant Logic," *Journal of the Academy of Marketing Science*, pp. 1-19.
- Vargo, S. L., Maglio, P. P., and Akaka, M. A. 2008. "On Value and Value Co-Creation: A Service Systems and Service Logic Perspective," *European management journal* (26:3), pp. 145-152.
- Varki, S., and Colgate, M. 2001. "The Role of Price Perceptions in an Integrated Model of Behavioral Intentions," *Journal of Service Research* (3:3), pp. 232-240.
- Yan, T., and Dooley, K. 2014. "Buyer-Supplier Collaboration Quality in New Product Development Projects," *Journal of Supply Chain Management* (50:2), pp. 59-83.

- Yang, Z., Cai, S., Zhou, Z., and Zhou, N. 2005. "Development and Validation of an Instrument to Measure User Perceived Service Quality of Information Presenting Web Portals," *Information & Management* (42:4), pp. 575-589.
- Yi, Y., and Gong, T. 2013. "Customer Value Co-Creation Behavior: Scale Development and Validation," *Journal of Business Research* (66:9), pp. 1279-1284.
- Zacharia, Z. G., Nix, N. W., and Lusch, R. F. 2011. "Capabilities That Enhance Outcomes of an Episodic Supply Chain Collaboration," *Journal of Operations Management* (29:6), pp. 591-603.