Market Resistance to Innovative Service-focused Business Models: Insights from the Service-Dominant Logic

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Abstract

Innovative business models in Business-to-Business (B-to-B) settings allow suppliers to renew their business and to tighten the customer/supplier relationship while customers may benefit from more innovative and customized solutions. Astonishingly, the pace of adoption of these new business models is rather low. By now, it is still open what the final reasons for this market resistance might be. We analyze this sluggish adoption by making reference to total cost of ownership (TCO) concepts as a prominent example of innovative, service focused business models. To this end, we mirror the diffusion and the obstacles to trade in the light of the concept of the service-dominant logic (SDL), developed by Vargo and Lusch [1]. So doing, we employ the competence-based theory of the firm (CbF) as our theoretical foundation. We propose that the diffusion of innovative service business models like TCO depends on the stage of the transition process from a goods-dominant to a service-dominant logic in business and society. Thus, we raise our research question: To what extent is the sluggish adoption of TCO business models influenced by the state of the transition process from the goods-dominant to the service-dominant logic? Due to newness and complexity of our research topic we employ qualitative research and conduct case studies to better understand the reasons of sluggish TCO adoption.

1. Introduction

Innovative business models in B-to-B settings, such as performance contracting or differing TCO approaches, provide suppliers with the opportunity to renew business (activities) and to tighten the customer/supplier relationship. Moreover, they often restructure customers’ value-added structures to the end of productivity gains and/or increases in customization and reliability. Nevertheless, the speed of adoption of these new business models is rather low. By now, it is still open what the final reasons for this market resistance might be. This paper addresses this problem of understanding the obstacles to innovation.

Research on business model innovations in the context of industrial services is limited (e.g. [2]). The few existing studies tend to approach this field either solely from a supplier or a customer perspective. We transcend this view by focusing on both perspectives and analyzing the interplay between supplier and customer when establishing the new service-oriented business model. We adopt this perspective because it allows for addressing facets of the customer/supplier relationship and the market as well. To focus our research, we address the diffusion of a specific kind of innovative service-focused business model: the total cost of ownership (TCO) approach, in particular in mechanical engineering. Nevertheless, our reasoning is not limited to TCO approaches. When focusing on TCO business models and their long and uncertain path of market diffusion, we go beyond current explanations. In this vein, we employ the concept of the ‘service-dominant logic’ [1] [3] [4]. This concepts suggests the long transition from a product-dominant to a service-dominant logic with the latter characterized by a close and long-term customer/supplier relationship, the customer as co-producer/co-developer, a collaboration that is not restricted to the value-added process but the usage process as well and the final solution as a joint product of interrelated customer and supplier activities. We propose that the diffusion of innovative service business models such as TCO is dependent on the stage of the transition process. Thus, we raise our research question: To what extent is the sluggish adoption of TCO business models influenced by the state of the transition process from the goods-dominant to the service-dominant logic? We propose that TCO business models are too ambitious in terms of the de-facto transition path to a service-dominant logic, i.e. the markets are predominantly not prepared for this kind of business models.

2. Conceptual Background

Not astonishingly, new solutions, may it be new products, services, hybrid solutions or simply new business models, face obstacles when launched in the target market. However, new solutions such as total cost of ownership (TCO) concepts go along with numerous advantages for both the supplier and the customer. TCO means the estimation of all direct and indirect costs associated with the utilization of a
technical infrastructure over its entire life cycle [5] [6], i.e. costs of purchasing, installation, operations and maintenance, and end-of-life management, to name but a few. TCO intends to bring to the attention of a customer that a higher purchasing price can be (more than) compensated by lower costs in later phases of the life-cycle (in particular maintenance, employees, services, energy), based on TCO business models [7].

Understood as a new business model, TCO rests on new solutions as for all the three components that constitute a business model [8] [9], namely value proposition, value-added architecture, and sales model, as described below.

**Value Proposition.** TCO-based contracts provide customers with a clear, oftentimes guaranteed perspective on decreasing costs in the process of the utilization of the machine over time. Moreover, TCO allows for a more transparent and precise calculation of the costs of purchasing and driving this technical equipment. This perspective is accompanied by a high service level the supplier provides by offering a more comprehensive service package than before. Technical infrastructure and services form an almost inseparable unit that is often called a ‘hybrid solution’ [10] [11] [12]. In connection with the sales model TCO might reduce customer’s uncertainty considerably.

**Value-added Architecture.** TCO business models are novel in the way how the value-added process is organized. Typically, TCO implies more intensive couplings between customer and supplier and, thus, often a higher degree of customization. Besides a higher level of customer integration in the value-added process [11], TCO goes along with a considerable integration of the supplier in the utilization activities of the industrial customer. Thus, supplier and customer form a temporary unit. This causes often considerable bilateral resource adaptations [13]. We show below that this constellation ties in the typical thinking in terms of SDL.

**Sales Concept.** TCO represents a system solution. Based on this, the customer pays a price for the entire hybrid offering with the machine as the centrepiece and the service that surround this core. At the expense of an oftentimes higher purchase price the customer saves considerable maintenance costs due to intensive supplier integration and related services of the entire TCO package. From the customer’s point of view, it is no longer possible to buy product and service separately. Such a linkage between product and service is indispensable because the supplier ex ante guarantees a long-term durability of components or even of the whole product. In this sense, the entire transaction is framed by a long-term contract that reduces the risks of the supplier and the customer substantially.

What else changes in case of TCO business models? Since the customer and the supplier collaborate more closely, the governance situation changes. In terms of Williamson [14], there is a shift from (more or less) market governance when simply buying/selling a machine to hybrid governance with the two parties in a rather active role. Both the supplier and the customer should be well prepared for these governance tasks. Moreover, bilateral adaptations are necessary beyond the value-added architecture.

At least at first glance, TCO models seem to be attractive from the buyer’s point of view thanks to the opportunity to reduce life-cycle costs and uncertainty. Comparing the advantages with the rather slow and, from the supplier’s perspective, disappointing adoption of these models the question about the obstacles to trade is open. Typically, literature points to deficiencies of the innovation and/or marketing management of the suppliers [15] and/or customers that misunderstand the concept or fear problems of the change process [16] such as losing critical know-how.

We do not intend questioning these findings fundamentally. However, we believe that a suitable explanation of the sluggish adoption of innovative business models in B-to-B markets should consider circumstances in markets and in the society. To this end, we refer to the Vargo and Lusch’s debate on the so-called ‘service-dominant logic’ (SDL).

In contrast to the goods-dominant logic, the SDL points to a transition that is close to a paradigm shift in the Kuhn [17] sense in regarding value-added concepts [1] [18]. SDL stresses the way how value-added processes and market transactions are arranged. ‘Sense and respond’ as a principle replaces the traditional goods-centred logic of ‘make and sell’. The single customer and the single supplier interact and co-produce what the customer really wants. It takes a high level of empathy of the supplier to patiently analyze and finally understand what the customer’s problem really is. If it is possible to implement such a kind of understanding, both parties are in a much better position to co-produce and co-develop solutions tailored to problem of the customer. This requires a mutual openness and, thus, calls for an open system view to model it. More than that, the design of a value-added system implies an integration of the customer in the sphere of the supplier. Resources of both parties interact and allow for synergies that cannot be raised within the scope of a goods-centred logic. As Vargo and Lusch [1] argue, it is not important what the final outcome of the value-added process really is. It is much more important how the process of co-development proceeds. The relevance of resources (in particular the so-called ‘operant’ resources, cf. below) [19] and processes of the two involved parties replaces the former relevance of goods. Furthermore, the goal of increasing the transactional value for both sides shifts our attention from the performance delivered to the utilization process of the customer, (pro-) actively supported by the supplier.

In this vein, we search for a framework that considers the customer/supplier interaction and its impact implications for the value-added processes of
the supplier. To date, the service-dominant logic is a notion and marks the end of a transition process in economies and societies. In modern economies considerable progress in this transition is already made. However, if we take a look at all the issues we raised in the SDL context above, it transpires in many regards the transition is not finished, yet. Insofar we analyze in our next steps in more detail, what the SDL implies and what might create obstacles to TCO model adoption from an SDL perspective. To this end, we need a theoretical background that allows for addressing our problem.

3. Obstacles to SDL Adoption in the Light of Competence-based Theory

Since we regard an evolutionary phenomenon where rigidities of both the supply and demand side play an important role we need a theoretical framework that is able to consider these peculiarities. Moreover, the debate above revealed that resources of customers and suppliers as well as their interplay need to be taken into account, too. Against this background we consider competence-based theory [20] [21] useful to explaining the sluggish adoption of TCO models and to highlight the interdependencies between the two exchange partners. Competence-based theory consists of two branches with one explaining sustaining competitive advantages [20] [22] and one explaining the essence and nature of the firm [9]. To better understand rigidities of the supplier and the customer, including the temporary unit the two exchange partners form, we employ the second branch, namely the competence-based theory of the firm (CbTF). CbTF rests on market process theory of the Modern Austrian Economics and, hence, a system of the following antecedents: radical uncertainty, subjectivism, moderate voluntarism, relevance of time (as for the chronological run of events), and human behaviour according to the model of the acting man [9]. Competence-based theory argues that firms exist as idiosyncratic entities that offer protection from environmental uncertainty and opportunism as well as an ambiance that fosters, different from markets and hybrids, a transfer of all kinds of knowledge and superior conditions for the sake of competence building and leveraging. We adopt this viewpoint and employ the open system view of the firm according to Sanchez and Heene [23] that is explicitly developed within competence-based theory. By an open system view we respond to the numerous interrelations between the supplier and the customer. As outlined below, we need to modify the Sanchez and Heene [23] open system view to better consider the very nature of collaboration of customers and suppliers in B-to-B markets.

In their original approach, Sanchez and Heene [23] focus one firm, namely a supplier. The entire system consists of six system elements: strategic logic, management processes, intangible assets, tangible assets, activities, and products. The open system is surrounded by external assets, so-called ‘firm-addressable resources’, and the market. The strategic logic (henceforth: strategic mental models to avoid a confusing terminology facing the SDL discussion) and the management processes steer the entire system. Competences work in the background and allow for a run of all kinds of processes in and between the system elements, both at the external interfaces to the market and internally.

Considering the very nature of services and services transaction and keeping in mind the SDL debate we need to extend and modify the Sanchez and Heene [23] model for the following reasons: First, if supplier and customer are closely interrelated in TCO-based transactions, then a focus on the supplier would be too myopic. Instead, we need to respond to the pivotal role the organizational customer plays as a co-producer and co-developer in B-to-B service transactions. Furthermore, supplier and customer form a temporary unit and, thus, a somewhat virtual organization. This needs to be considered as well. Second, service transactions, in particular in case of TCO in mechanical engineering, are customized. The customer participates in the supplier’s sphere by customer integration. Vice versa, the supplier participates in the usage process of the customer by supplier integration. A specific model should consider this as well. Third, the output of the value-added process of the supplier is a solution, jointly developed by the two partners. Supplier and customer agree on specifications beforehand within the scope of a contract. Thus, a promise of performance is sold in the sales act, followed by the final value-added process. Alchian and Woodward [24] call this a contract - vis-à-vis the exchange. If this holds true, there is no real selling process after the solution is provided. Thus, there are no products to be stored and sold that we could assign to the supplier. Instead, the solution will be transferred to the customer according to the specifications of the contract. This can be easily considered within a modified open system view as well.

Figure 1 portrays the modified open system view, consisting of the supplier system, the organizational customer system and the temporary unit (virtual organization) formed by the two partners. We outline below the cornerstones of our modified view against the background of the SDL debate in order to develop research propositions on the sluggish adoption of TCO business models in B-to-B markets.
We already pointed out the steering character of the strategic mental models and the related management processes which form a single system element. This system element is in no way independent from external influence. In close relationships, as they are common in mechanical engineering, these mental models develop with the transactions in markets so that there is at least some impact of the organizational customer on the supplier et vice versa. More important, the mental models are in close interaction with standards in markets and societies and develop by taken external advice. If this holds true, the general shift in the economy and the society towards a more service-dominant logic is translated to some extent via this external linkage. Insofar, external forces and external advice fuel the transition from a goods-dominant to a service-dominant logic.

The other way round, the question arises how far mental models cause rigidities. In this respect, strategic mental models are equipped with a phenomenon we can call a ‘built-in inflexibility’. Mental models rest on previously learned patterns and are in use by decision-makers in a rather automatic manner. Since people are oftentimes not able to unlearn rapidly, one force of rigidity is already obvious. The lacking willingness and/or ability to unlearn closely corresponds to the capacity to absorb external knowledge. To this end, Cohen and Levinthal [25] introduced the concept of the ‘absorptive capacity’ in a different context. The absorptive capacity applies in our context for decision-makers that have to be able to identify, assimilate, and integrate external knowledge in this respect as well. A second source of inertia refers to the interrelationships of the mental models of both customer and supplier. If the mental models do not fit, unproductive modes of conflict work and make adaptations unlikely. In case of TCO models, the customer very often focuses the attention on the price when it comes to decision-making in transactions [26]. Cost savings in later periods oftentimes get out of sight. Insofar it is not easy to re-educate customers in their way of thinking [27]. Moreover, organizational procedures and decision rules need to be changed to prepare the ground for a TCO adoption. Thus, mental models and management processes of the customer are not open for TCO adoption and represent an obstacle to innovation. Against this background, we propose:

**Proposition 1a.** With a lower degree of firm’s embeddedness in markets and society the pressure of moving towards a service-dominant logic on the firm level decreases, and so the openness for TCO business models.

**Proposition 1b.** A low level of absorbing external knowledge on steering the management and value-added processes leads to a lower awareness of innovative service solutions and, thus, a lower penetration of the market.

**Proposition 1c.** With more rigid goods-centred mental models the adoption of TCO solutions decreases.
Proposition 2a. Insufficient customer integration in the value-added process of the supplier will negatively affect the overall product quality, lifecycle costs, and TCO adoption.

Proposition 2b. Insufficient supplier integration in the utilization process of the customer will negatively affect the overall product quality, lifecycle costs, and TCO adoption.

Proposition 2c. Insufficient combinative capabilities will lead to disconnected and/or mismatched structures and solutions and to a slow pace of TCO adoption.

The SDL concept operates with two resource categories, namely operant and operand resources [1] [3] [4] [30]. Constantin and Lusch [30] define operand resources as those on which operations are performed to produce an effect. Typical production factors belong to this kind. Instead, operant resources are employed to act on operand resources. Whereas operand resources are typically finite, operant resources are generative, i.e., their value increases in use [31]. Capabilities, knowledge, and technologies are examples of this kind. Vargo and Lusch [1] argue that operand resources were considered primary in the goods-dominant logic. Oppositely, operant resources stand at the forefront in the SDL. Analyzing the complex, demanding and long-lasting solutions provided in case of TCO business models in mechanical engineering, the pivotal relevance of operand resources turns out, in fact. However, the question arises how far operant resources are available the way it should be and whether the ratio of operant and operand resources employed in TCO settings is reasonable. In case of more or less evident bottlenecks [32] [33] [34] we additionally ask for an absorptive capability to integrate ‘firm-addressable resources’, according to figure 1. We conceptualize the absorptive capability similarly to the absorptive capacity [25] [35] with the decisive difference that the absorptive capability is not bound to the integration of external knowledge but refers to any kind of firm-addressable resources. This leads us to our next set of propositions:

Proposition 3a. Insufficiently developed operant resources of both the supplier and the customer side prevent from a faster transition to the SDL and have a negative impact on the adoption of TCO business models.

Proposition 3b. A disproportion of operant and operand resources with over-emphasized operand resources prevents from a faster transition to the SDL and has a negative impact on the adoption of TCO business models.

Proposition 3c. Lacking absorptive capabilities to integrate firm-addressable resources weaken the entire value-added system and have a negative impact on the adoption of TCO business models.

Facing our line of reasoning, we finally propose:

Proposition 4. A still fragmented state of SDL implementation in firms, markets, and in the society causes insufficient hybrid solutions and market resistance as for launching TCO business models.
4. Qualitative Empirical Analysis

Our subject is, to date, rather new and complex. Some concepts, such as SDL, are fuzzy and need to be translated into a model to facilitate the scientific treatment. In this early stage of research it is useful to aim at a better understanding of factors that affect the pace of TCO adoption in the market by starting at the micro level. In this vein, our work is exploratory in nature. What we want to know at this point in time is the set of factors relevant from an SDL point of view. Insofar, we want to develop first considerations on causalities. To this end, we conducted empirical research based on case studies to better understand the factors relevant to the subject matter. In particular, we carried out an in depth case study according to Yin [36]. We selected two German mechanical engineering companies (company A and company B), both of them confronted with developing innovative TCO business models. Between 2009 and 2011 we conducted 20 interviews with different persons and in different points in time to better understand how problems in launching these complex solutions evolve. Our interview partners were carefully selected to ensure considering all the relevant factors by a multitude of perspectives. To this end, we interviewed the CEO, the head of construction, heads of sales and marketing management and purchasing managers so that different corporate functions as well as different hierarchical levels could be considered. Moreover, following our modified open system view we interviewed representatives of two customer firms to better understand the peculiarities of organizational buying behaviour in the realm of industrial services and hybrid solutions.

We conducted the semi-structured interviews following an interview guideline developed based on the typical principles in literature [37]. Each interview was conducted face-to-face with the firms’ employees and customers. Thus, we were able to identify issues that were interpreted differently. This allowed us to go deeper as for these critical aspects. Each of the interviews lasted more than one hour. For the sake of quality assurance we recorded each interview and made transcriptions that were carefully reviewed afterwards by members of the research team who were not involved in the interviews to avoid problems of triangulation. In case of unclear or contradictory results we had the chance to receive feedback from our partners for the purpose of clarification.

Our core ambition was a first reality check of our research propositions in order to specify, modify or amend them whenever possible. This first step should prepare follow-up steps to investigate core causalities in more detail.

Next, we introduce our core findings as for the propositions we developed above.

Whereas the first set of propositions touches on the embeddedness in markets and society, on absorbing external knowledge, and on goods-centered mental models, the second set refers to the level of customer/supplier integration and the combative capabilities. Besides that, we consider SDL implementation (Proposition P4) from the very beginning.

In the last two years of research we realized that the better and more specialized a solution is, the less this company is aware of the importance of service or external knowledge. In the beginning of the research period the CEO of company A stated:

“We produce a special kind of machinery. We do not have to change our attitude or to offer goods and customized services because the customer does not find any other supplier.”

Although the company A had a considerable innovation potential the goods-centered thinking of powerful persons within the firm prevented company A from fully tapping this potential (Proposition P1c, P4). Moreover, based on several interviews it turned out that there was no real cooperation of supplier and customer and, thus, only limited integration in this case. From the customer’s point of view, the behaviour and the attitudes of the supplier were perceived as problematic, for the customer wanted to have more information, more adaptation, and individual support for the products and the services from the supplier. Among others, the lacking supplier integration in the usage phase created a lot of disconfirmation of the customer (P2b). The CEO of one customer remarked that the supplier should rethink a lot of processes and structures. In particular, the behaviour, the attitudes, the way of thinking and the entire project management were not well suited to the supplier’s ambition to deliver an innovative and customized solution.

As for P2a we learn from the interviews that customer integration, by far, does not only depend on the customer’s willingness and readiness for integration but the supplier’s willingness as well. Obviously, not all suppliers (cf. company A) are aware of the positive effects of customer integration and collaboration in the value-added process. Instead, they fear losing control and expect conflicts in cooperation. Oppositely, company B seems to be aware of the necessity of customer integration. A manager of this company stated:

“For us it is not even more just selling a product. To retain the customer we have to ask the customers for their wishes and more important, we have to integrate the customer to create the services that fit the product.”

Nevertheless, integrating the customer in a useful manner is not taken for granted. The sales manager stated:
“It is very difficult to convince the customer to give input during the development of the machinery so that we could fit the wishes with our product or services, respectively.”

Obviously, the customer is afraid of telling the supplier too many details. These insights are useful to specify P2a.

Moreover, the sales manager of company A told that a big company simply does not want to buy machineries without an ex ante cost calculation in future. The manager added that it is very difficult to calculate lifecycle costs of machinery only by the supplier. Furthermore, in his eyes it is completely impossible to do this before the contract is almost fixed. He sees the supplier in charge of such calculations, but in close interaction with the customer. Although combinative capabilities (P2c) are basically required in this respect, we need to consider in our proposition system as well that supplier’s awareness of the problem must be given. This, however, is also relevant to P4.

A sales manager of company B pointed to the relational background of customer/supplier collaboration and the way how the supplier is embedded in the market (P1a) and stated as for TCO partnerships:

“Suddenly we realized the win/win situation for both, the customer and ourselves. In former times we had to ‘fight’ for the relationship; now it comes without any additional effort - and lasts for a long time.”

Simultaneously he pointed out the necessity to renew the TCO business model in a customer oriented direction almost permanently. In this sense, he considered useful to be open-minded in order to identify upcoming issues as early as possible (P1b). Otherwise, customers would perceive this, become sceptical and finally drop the relationships, sometimes before tightly established.

The third set of propositions refers to the ability of both the supplier and the customer to develop operand resources, the disproportion of operand and operand resources, and the lacking absorptive capabilities. When we analyzed in the beginning both companies (A and B) we found out that both were not aware of the importance of the operand resources. It was only the product which was focused because in their minds goods deliver value to the customer – and profit to the supplier. Although the companies were rather self-aware of their own expertise and technical capabilities they were not really aware of the experience and knowledge of their customers that could help them improving their solutions. Insofar, P3a as well as P3b passed this very first reality test. However, SDL thinking implies to understand value as a product of joint activities of customer and supplier (value co-creation) [1]. The CEO of company B added in this context:

“When a lot of information and knowledge has to be exchanged and explained, understood and used, it is important that both partners have a clear understanding of the situation and common goals.”

This statement supports P3a and P3b as well. Besides the considerable disproportion of operand and operand resources, a lack of absorptive capabilities turned out as well (P3c). Obviously, the problem is rooted in the lack of identifying the usefulness of integrating some firm-addressable resource.

We already considered the final proposition (P4). Notably, the attitudes within the suppliers changed over time. Being familiar with the basic debate on the transition towards the SDL, the CEO of company A stated:

“It was and it still is a very complex process to change the logic from a good-centered to a service-focused one. But we see that this change brings us lots of opportunities, allows satisfying the customer, forcing the relationship and so on. We are sure the TCO business model will bring lots of more advantages in future, e.g. cost reductions, quality improvements and well educated resources.”

5. Discussion and Outlook

To what extent is the sluggish adoption of TCO business models influenced by the state of the transition process from the goods-dominant to the service-dominant logic? Our case studies provide first evidence that successfully launching innovative business models such as TCO depends on considerable progress in the transition process from a rather goods-dominant to a service-dominant logic. In other words, without fulfilling certain requirements, well mirrored in the SDL, on both the supplier and the customer side the innovative solution does not match the given situation and, thus, cannot unfold its potential. This seems to hold true for innovative, service-focused business models in general.

What we learned from our case studies is that these requirements are not given not only at the customer’s side but, surprisingly, on the supplier’s side as well. Notwithstanding the innovative ambitions of the suppliers we investigated they are in many ways not well prepared for this renewed business. One aspect in this regard is the development of operand resources which is in many regards much too low. To name but a few, relational competences, combinative capabilities, and customer-related knowledge are missing. The
entire SDL thinking rests on customer and supplier integration. In fact, integration in the activities of the exchange partner takes place, but in a rather low level and without the explicit intention to raise the potential connected with partner integration. In particular, reliable routines and capabilities of effective partner integration are missing so that rather simple endeavours such as calculating the total costs of ownership already run dry. More fundamentally, the mindset of the observed suppliers is to some extent too different from thinking in terms of SDL. We need to consider this in our set of research propositions, particularly in our first set, more explicitly because it seems to reduce the pace of TCO adoption basically.

Moreover, our case studies provide evidence that real value co-creation by customer and supplier is still an exception. Although both customers and suppliers seem to be at least to some extent aware of necessities and benefits that may evolve from collaboration, they seem to fear a loss of expertise that occurs as unpreventable drawback of establishing a close customer/supplier relationship. Even though this fear is not very reasonable in terms of the OSV and SDL, it seems to determine the perception and action of the customer and supplier to a large extent and should not be under-estimated.

Although not explicitly considered in our set of propositions, the case studies revealed that another factor might play a role, namely trust among the exchange partners. Oftentimes a certain level of trust is missing. Instead, mutual reservations prevent the temporary unit from tapping the full potential. Since trust takes often a long time to develop, this obstacle cannot easily be circumvented. Once again, it is a matter of the mindsets of the people in the partnership involved. Besides this, we can assume that a certain ‘relational culture’ might work as glue between the partners and facilitate the move to more ambitious ways of collaboration in the sense of the SDL. Both trust and relational culture belong to the operant resources according to SDL as well.

In this discussion, we already touched on the mindsets of the people involved in TCO-based cooperation. In this vein, we learned from our case studies, that unlearning is an issue. People use mental models based on previously learned knowledge. These models, considerably influenced by principles of the goods-dominant logic, work automatically, i.e. without an explicit cognitive control. Due to this implicit character it is very hard to identify them as obstacles of the transition process and, thus, to change them. It seems that these routines and mental models, connection with the rigidities, deserve more attention in on-going empirical research.

Insofar, the empirical fieldwork provided us with useful insights to modify and specify our propositions. The empirical findings, however, fit well in the modified open system view of the firm and can be well explained against the CbTF background we employed. Finally, the transition process to an SDL as well as the SDL concept in general seem to be rather useful to understanding the phenomenon of sluggish adoption of innovative business models of hybrid solutions such as TCO.

Despite the usefulness of the first empirical steps we made, we are aware of the fact that the number of case studies we conducted is rather small and therefore the results are only of limited explanatory power. To advance research, in the next steps more qualitative research is necessary to allow for a reality check of a modified and specified system of research propositions. It seems that the explanatory power of the factors differs. Thus, before starting quantitative research it seems to be useful to reduce the number of variables. Insofar, the development of more case studies is required.

6. References


