

Value architecture of result-oriented PSS: An integration of value network partners

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Introduction:

In the last decades, manufacturers have increasingly shifted from offering physical products to Product-Service Systems (PSS) through a process known as servitization. Manufacturers offering “result-oriented” PSS sell specific outcomes (Tukker, 2004). One example is Heat-as-a-Service (HaaS), where the outcome is an agreed heating level rather than the equipment itself. The transition towards HaaS requires manufacturers to redesign their value network partners and, consequently, their value architecture. However, extant literature does not describe how. Therefore, we develop the research question (RQ): “How can the value architecture of a result-based PSS such as HaaS be designed?” To address such RQ, this paper adopts an abductive approach. It integrates data from the case study of a heating systems manufacturer shifting towards HaaS, BAXI, followed by a systematic literature review. As a result, the study proposes a conceptualization of the value architecture and outlines future research directions.

Theoretical background:

Manufacturers have increasingly moved towards a combined offering of products and services ranging from product to result-oriented, known as Product-Service Systems (PSS) (Baines and Lightfoot, 2013). The present study looks at result-oriented services, which are focused on delivering results based on customers’ needs rather than the product themselves (Tukker, 2004). To successfully provide result-oriented services, servitizing manufacturers must effectively manage value co-creation with customers and facilitate the wider value network partners that deliver these services in the local markets (Reim et al., 2019). Manufacturers’ transition to result-based PSS is only possible with the collaboration and corresponding transition of the value network partners.

Servitizing one’s business model (BM) entails a resolute adaption of the whole value architecture (VA), which comprises the value creation as the PSS design, the value delivery as the underlying provision process, and value capturing as the profit distribution (Teece, 2010). The literature has provided insights into essential value processes, such as value co-creation through servitized value propositions. However, currently, most contributions approach servitized value architectures focusing on the provider’s perspective only, and there is a research gap concerning interdependent value

architectures of several contributors in a value network of one PSS (Garcia Martin et al., 2019).

Manufacturers still need to gain a profound understanding of the VA design when offering result-based PSS such as HaaS. For instance, BAXI introduced its HaaS BM as an addition to its traditional BM of selling equipment via a distribution network. This infusion of servitized BM into established VAs entails challenges such as channel conflicts, partner management, and balancing contradicting value constellations. Consequently, the success of the new servitized BM often depends on the effective involvement of the existing value network in the newly constructed PSS VA. Therefore, our study will investigate how to redesign the VA by integrating specific value network partners for HaaS.

Research methodology:

To address the RQ, this study will investigate a single case of BAXI and its value network, followed by a systematic literature review. The research will use an abductive process for analysis, where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously (Corbin and Strauss, 2014). This supports fewer specified procedures and a flexible research design, which is crucial to qualitative studies (Brooks et al., 2015). As a research methodology, case studies are adept at understanding complex phenomena and imperative business strategies. Semi-structured interviews will be conducted within BAXI through heterogenous purposive sampling, which enables the participation of respondents from various departments within the case firm. Apart from interviews, an analysis of the company website and relevant reports will also be used. Simultaneously, a systematic literature review serves to collect existing frameworks and theories that provide guidance in BAXI's servitization. These theoretical insights build the foundation for an adapted approach to guide BAXI in the reconfiguration of its VA and in the integration of its value network partners.

Expected findings:

The findings of the study will be divided into four parts: (1) challenges of BAXI with value network partners in the VA to design and offer HaaS to end customers; (2) an approach to identify a way to select the right value network partners for the successful provision of HaaS; (3) proposing a systematic way to conceptualize the VA integrating the selected value network partners; (4) incentivization mechanisms for the selected network partners contributing to value co-creation.

Theoretical and practical contributions:

The present study will contribute to servitization literature by providing a systematic literature review on the challenges manufacturing firms experience in redesigning the value architecture for result-oriented PSS. Furthermore, it will provide a conceptualization of value architecture that integrates the manufacturers' implications with their value network partners for designing and providing HaaS, and present future directions.

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