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Classification framework of knowledge transfer issues across value networks

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Abstract

Co-creating integrated solutions with customers requires collaboration of different partners within a value network. In this emerging context, knowledge is considered as a foundation for value co-creation. Therefore, identifying different types of issues, with which value network actors in knowledge transfer are confronted, is conceived as a first step toward, on the one hand, the prevention of the failure of knowledge exchange initiatives in a network, and on the other hand, the enhancement of the collaborative process of knowledge sharing. This requires shifting the conventional approach on knowledge transfer issues from an intra-organizational to an inter-organizational network. This paper aims to systematically identify and classify knowledge transfer issues with both tacit and explicit knowledge considerations. In doing so, we have first conducted a systematic literature review to identify issues. Secondly, these issues have been classified into six main categories and 29 subcategories through a structured classification approach. The proposed classification framework provides a comprehensive and wide spectrum of possible issues related to knowledge transfer within a value network. It also presents a step towards an improved awareness of such issues in order to resolve problems in transferring knowledge in such contexts.

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1. Introduction

In value networks, value is no longer created only within firms' boundaries, but is also co-created among various actors of a network [1]. We define a value network as the set of actors, i.e. multiple suppliers and customers, which collaborate with each other and integrate their resources and knowledge to co-create value through offering integrated solutions. In this context, knowledge is seen as a primary source of value co-creation and differentiation from competitors [2, 3]. Since knowledge is dispersed around networks, transferring and aggregating it from scattered sources and facilitating its seamless flow, are important tasks in a knowledge management initiative within value networks [4, 5].

Despite the fact that knowledge transfer has received considerable attention in recent years in the context of value networks, it often faces issues [6]. Such issues are hindrances to seamless knowledge sharing among actors, resulting in significant wasted time and resources for each member of the value network [7]. Thus, identifying issues in relation to knowledge transfer across a value network is important in undertaking knowledge transfer efforts.

Currently, issues of knowledge transfer across a value network are not well studied. This paper, based on a systematic review of the literature, identifies knowledge transfer issues (KTIs), classifies them in a structured way, and proposes a classification framework. In addition, issues related to both tacit and explicit knowledge are considered. This study aims to provide a well-structured theoretical basis for providing solutions that tackle issues of knowledge transfer across value networks. Accordingly, this paper addresses the research question: what are the issues related to transferring both explicit and tacit knowledge within value networks?

This paper contributes to the literature on knowledge transfer in a value network in three ways: first, compared to existing classifications of KTIs, the proposed classification framework identifies, classifies, and integrates prior findings on KTIs in one single framework; second, as it covers both tacit and explicit knowledge transfer issues it represents a more comprehensive picture of KITs; third, it identifies and classifies KTIs in a well-structured way. The remainder of the paper is structured as follows. Section 2 provides overview on research background. Section 3 details the research methodology. Research execution is explained in Section 4. Then Section 5 presents a classification framework. Discussion and conclusion are found in sections 6 and 7.

2. Theoretical background

Knowledge transfer is a crucial condition for obtaining effective collaboration among actors of a network [8]. In a value network, knowledge transfer refers to the process by which actors share knowledge among themselves through ongoing interactions [9]. In such settings, the aim of knowledge transfer initiatives has shifted from improving product innovation and operational efficiency toward enhancing the customer experience by using integrated solutions [10]. Here knowledge is collaboratively created and transferred through iterative and mutually interactive processes among the actors—including customers—that are involved in the value co-creation process [11].

Nevertheless, knowledge transfer within a network may encounter certain issues. According to Pirkkalainen and Pawlowski [12], issues are "any barrier, challenge, or problem that might prevent or hinder a single person, a group, an organization, or a network of firms from reaching an objective and achieving success in a specific context, when the challenge is related to acting or working in a collaborative cross border setting."

Since research on investigating KTIs in a value network is still underdeveloped, we also searched within the wider literature of KTIs in business networking (BN) to find relevant information that can be useful to our research. We use the term "BN" to denote any form of inter-organizational collaboration (e.g. supply chain, collaborative network, alliance, virtual enterprise, virtual enterprise) in order to achieve a common or consistent goal.

In current literature on KTIs within BN, several studies have identified issues. However, the results are quite mixed. In some studies, high-level classes of issues are introduced and their focus is limited to a small set of issues; in others, a more detailed approach is applied [13]. For example, Cramton [14] identified five types of problems constituting failures of shared knowledge among partners in collaborative settings; Haug et al. [13] investigated information quality barriers and identified 12 issues; and Lin et al. [15] identified 18 barriers and classified them into 5 categories. Furthermore, different classification frameworks have been also developed, but researchers diverge in their KTIs classification frameworks[6, 12, 13, 16-18] or there is a lack of clarity about the process of developing a framework [19, 20]. In addition, transferring tacit and explicit knowledge encounters different issues, so they require different considerations. However, little research considers both issues simultaneously [6].

In summary, although such studies provide useful insights, they depict only a partial picture as they either focus on specific issues (e.g. [7, 21]) and fail to consider a wide variety of issues, or their focus is separately on tacit or explicit KTIs (e.g. [22, 23]). Therefore, little is known about KTIs in a more comprehensive classification framework. Therefore, to fill these gaps, this study aims to identify and classify issues related to both explicit and tacit knowledge in a structured manner. To do so, the initial list of KTIs will be systematically identified from current literature on KTIs. Then by applying a structured classification approach, a classification framework will be proposed.

3. Research methodology

We followed systematic processes in identifying and classifying issues relating to knowledge transfer across networks. Although a co-creation value network is the context of this research, there is a lack of research on KTIs in this context. Two options to investigate KTIs in value networks exist. The first is to follow a grounded theory approach and conduct exploratory case study research to identify KTIs from practice. However, since a value network is an emerging field, finding proper cases that have rich experience of long-term collaboration with multiple partners and co-creation with customers is difficult. It is likely the results would be based more on people's ideas than on their real experience. The second option is to investigate issues in other relevant literature in a related field (i.e. KTIs in business networking), but that requires context-related verification of the theoretical classification framework. A value network is regarded as a specific type of BN in which customers are considered as one among other actors in collaboration in order to achieve a common goal (i.e. co-creation value). Therefore, the types of KTIs from the BN research field are still relevant within value networks. Consequently, we selected the second option. However, literature on KTIs within BN is still fragmented and a clear consensus among various research findings has not yet been realized. As a result, in this paper (as the first step of two-phase research) we focused on identifying and classifying knowledge transfer issues within BN in a structured way.

Our research methodology included two phases, a systematic review and a structured classification approach. In phase one, we conducted a systematic review (SR) to identify current literature on KTIs in BN, following the guidelines of [24]. KTIs can disrupt the performance of a BN, so they must be recognized and receive a proper response. In this respect developing a KTI classification framework covers a comprehensive list of tacit/explicit knowledge issues which can offer a well-structured theoretical basis to solve issues and improve knowledge transfer across a network. This motivated us to conduct an SR. Subsequently, in a review protocol a search strategy was defined, as well as a set of keywords (Table 1) that included a number of synonyms. To accomplish the search, keywords were combined by Boolean operators. The Emerald, Elsevier, Wiley, IEEE, and Springer databases were selected, as they cover many publications in this field and are often used in such studies [13].

Given the feasibility concerns of searching separately in many databases (256 search queries in five databases), we planned to execute a simultaneously search within these

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