Leveraging value in multi-stakeholder innovation networks: A process framework for value co-creation and capture

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A B S T R A C T

To develop innovative solutions for complex societal and scientific challenges, organizations need to move beyond the boundaries of single firms and engage in collaborative networks. In these networks, multiple, diverse stakeholders are working together to co-create innovative value. Co-creation in a network creates new challenges in terms of changed processes and outcomes. Guided by grounded theory methodology, we explore these aspects by studying a public–private partnership involving 57 stakeholders. We take the number and diversity of stakeholders into account to shed light on the distinct processes through which value is co-created and captured. We also identify the types of value outcomes that accrue to the network and its participants. Overall, we present a multi-level cyclical process framework for leveraging value in multi-stakeholder collaborations and visualize these collaborations as a value space in which all stakeholders are uniquely positioned. In doing so, this study provides novel insights into the systemic, multi-actor nature of value co-creation and supports collaborators in maximizing value for both individual stakeholders and the network as a whole.

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1. Introduction

The complexity of markets is forcing organizations to shift from the creation of offerings in isolation to the co-creation of value in collaborative innovation networks (Filiieri & McNally, O’Dwyer & O’Malley, 2014). Because no single organization owns all the required expertise, knowledge, and credibility to develop innovative solutions to today’s complex scientific and societal challenges (Lusch, Vargo & Tanniru, 2010), diverse stakeholders are interacting (e.g., in public–private partnerships) to create multiple types of value that transcend the boundaries of individual organizations (Nissen, Evald & Clarke, 2014).

In these multi-stakeholder collaborations, at least three aspects require consideration that have received limited attention in previous research. First, traditional firm-level outcomes such as patents or market share no longer fully represent the range of value created for diverse stakeholders in a network (Provan, Fish & Sydow, 2007). Because value co-creation in a network is more ambiguous (Dougherty & Dunne, 2011) and value perceptions are likely to differ between partners (Lepak, Smith & Taylor, 2007), new insights are required to determine which outcomes drive effectiveness in multi-stakeholder collaborations.

Second, though distinct network-level features, such as collaborative processes and stakeholder characteristics, have become more relevant in multi-stakeholder settings compared with single-firm or dyad settings (Corsaro, Cantù, & Tunisini, 2012), few studies examine how value co-creation unfolds among multiple stakeholders at the network level (Freytag & Young, 2014). Third, we need to understand not just how value is created but also how stakeholders capture their share of value. If this process is unclear, stakeholders might be more conservative in their actions or less likely to participate in the network (Nambisan & Sawhney, 2011). For this reason, there is a need to examine the processes of value capture and their relationships to value creation (Adegbesan & Higgins, 2011).

Our research purpose is to focus on each of these aspects to advance our understanding of value co-creation and value capture in the multi-stakeholder setting. Our specific research questions are: (1) Why do stakeholders participate in innovation networks? (2) How is value created and captured in innovation networks with multiple, diverse stakeholders? (3) How does the number and diversity of stakeholders influence value co-creation? Because few studies provide sound theoretical or empirical guidance on these topics, we take an inductive, grounded theory approach (Glaser & Strauss, 1967). Moreover, because multi-stakeholder collaborations represent complex processes, we use the theory building from a single case study (Eisenhardt & Graebner, 2007). We ground our research in value creation, innovation, and stakeholder theory and present theoretical contributions to each of these literature streams.

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We contribute to value creation literature by explaining how value is leveraged in multi-stakeholder collaborations. We regard value leveraging as the overarching process of both value co-creation (network level) and value capture (stakeholder level). In line with Bizzi and Langley (2012), we take a process view to explain the dynamic pathways through which value is created and captured during collaborative innovation. By conceptualizing these processes as a virtuous cycle, we respond to calls to move from one-directional, structural equation models to system thinking (Vargo & Lusch, 2011; Woodside, 2005) and broaden our understanding of value creation.

We also offer a broad perspective that extends the point of view beyond a single organization. We thereby contribute to innovation literature by going beyond traditional firm-level innovation outcomes to identify multiple types of value created for individual stakeholders and the entire network.

Finally, we contribute to stakeholder theory by acknowledging potential differences between stakeholders and how those differences influence value creation. We argue that multi-stakeholder collaborations can be regarded as value spaces in which all stakeholders are uniquely positioned, depending on the outcomes they wish to achieve. Following calls by Aarikka-Stenroos, Sandberg and Lehtimäki (2014) and Vargo and Lusch (2011), we take the increased complexity of multi-actor systems into account.

2. Theoretical background

Our study draws on value creation, innovation, and stakeholder literature; we discuss each aspect separately before elaborating on their intersections. First, value creation research, particularly the service-dominant (S-D) logic, has put value at the center of research attention. Two foundational premises formulated by Vargo and Lusch (2004, 2008)—value is always co-created and “all social and economic actors are resource integrators”—point to the increasingly interconnected, collaborative nature of value creation (Vargo & Lusch, 2011). According to S-D logic, the interaction between actors creates value by integrating resources and capabilities (Vargo & Lusch, 2008), i.e., the co-creation of value. In line with McColl-Kennedy, Vargo, Dagger, Sweeney and van Kasteren (2012, p. 375), we regard value co-creation as the “benefits realized from integration of resources through activities and interactions with collaborators”. We are particularly interested in the interaction and knowledge-sharing elements that underlie the co-production dimension of value co-creation (Ranjan & Read, 2014). In our study, we build on the S-D logic to look at co-creation in a complex and dynamic multi-actor system in which multiple types of value are created for diverse actors, which we refer to as stakeholders.

Second, from an innovation perspective, research shows that the locus of innovation is increasingly moving from the firm level to the network level (Schilling & Phelps, 2007). Recent work examines innovation networks as distinct organizational designs for innovation with unique processes that differ from traditional organizational models (Fieldstad, Snow, Miles & Lettl, 2012). We build on research that examines how several factors (e.g., knowledge transfer and social capital) allow different types of networks (e.g., business networks, alliances, deliberately designed innovation networks) to create innovative value collectively (Freytag & Young, 2014). Authors make a further distinction between orchestrated networks (Dhanaraj & Parkhe, 2006) and networks that cannot be managed by one institution alone (Möller & Rajala, 2007). We look at how innovation is organized in a network in which no single firm is in charge (i.e., consortium model) but stakeholders act as partners whose characteristics need to be balanced.

Third, the stakeholder theory of the firm points to the importance of taking external stakeholders into account, thereby broadening the focus beyond consumers to “any person, group, or organization who affects and/or is impacted by an organization’s decisions” (Freeman, 1984, p. 46). Donaldson and Preston (1995) elaborate on stakeholder theory by distinguishing three types: normative, instrumental, and descriptive/empirical. Prior research has focused on stakeholder theory from a normative perspective, for example, by addressing how firms should respond to stakeholder pressures (Driesen & Hillebrand, 2013). In our study, we build on empirical and instrumental research that describes the organization’s stakeholders and explains their effect on performance (Bridoux & Stoelhorst, 2014). In particular, we investigate how diverse stakeholders, such as pharmaceutical companies and universities play an important role in various parts of the co-creation process.

These three literature streams have greatly contributed to extending theoretical perspectives on business-to-business (B2B) research by shifting the focus beyond the boundaries of a single firm and emphasizing a more complex, collaborative approach. Researchers have begun to integrate these theories to address phenomena at the intersection of the literature streams. Initial studies of the value creation–innovation intersection shed light on antecedents of value creation derived from different theoretical backgrounds, such as the resource-based view of the firm and network theory—including a firm’s capabilities, routines, and social networks (Mahoney, McGahan & Pitelis, 2009). However, these studies focus mostly on how individual firms create value for themselves through co-innovation (Jacobides, Knudsen & Augier, 2006), without accounting for the role of actors’ heterogeneity (Corsaro, Cantù, et al., 2012). We extend this research by going beyond the firm level of analysis to study the increased challenges of dealing with a variety of stakeholder interests at the network level.

Recent studies of the stakeholder–innovation intersection increasingly recognize the role of stakeholders’ heterogeneity. They have distinguished between public and private partners (Nissen et al., 2014) and included a wider set of actors such as businesses, government agencies, users, investors, and research organizations (Rampersad, Quester & Troshani, 2010). However, few studies identify the exact number and diversity of stakeholders in the network under study. Moreover, many studies revolve around how innovation in a network can be facilitated, focusing on a single antecedent, e.g., innovator roles; Godsieheyt (2014) or outcome (e.g., knowledge transfer; Filieri et al. (2014)). We extend these studies by clarifying the dimensions along which stakeholders differ and identifying the unique innovation processes and outcomes that underlie value co-creation with multiple stakeholders.

With regard to the intersection of stakeholder theory and value creation, researchers have paid attention to the drivers and dimensions of value creation (Eggert, Ulaga & Schultz, 2006) and studied how actors perceive and interpret value (Smals & Smits, 2012). Although such research acknowledges the importance of understanding and building value (Lindgreen, Hingley, Grant & Morgan, 2012), its context has been limited to the study of value creation in buyer–seller relationships and excluded the interplay between value creation and capture. Moreover, the value drivers and processes identified in these studies cannot be directly transferred to the innovation context, which has distinct processes and outcomes, such as the creation of new business models and networks. As proposed by Frow and Payne (2011) and Jaakkola and Hakanen (2013), we extend these insights by studying the broader network of stakeholder relationships and examining how innovative value outcomes are shared by actors.

Although research in the field provides valuable insights, there is little detailed theoretical guidance on how to co-create and capture value with multiple stakeholders in an innovation context. To our knowledge, few studies focus on the point at which the three literature streams coincide. Therefore, we integrate innovation, value creation, and stakeholder theory to study the distinct processes that determine how unique types of innovative outcomes can be leveraged, i.e. created and captured, to provide value to stakeholders in complex B2B innovation networks.

3. Methodology

Our study is based on a qualitative, grounded theory methodology as formulated by Strauss and Corbin (1990). In the following sections, we describe our research process.