

The co-production of value in digital, university–industry R&D collaborative projects



Ana Isabel Canhoto^{a,*}, Sarah Quinton^a, Paul Jackson^a, Sally Dibb^b

^a Oxford Brookes University, Wheatley Campus, Oxford OX2 7BB, England, United Kingdom

^b Open University Business School, The Open University, Walton Hall, Milton Keynes, Buckinghamshire MK7 6AA, England, United Kingdom

ARTICLE INFO

Article history:

Received 14 November 2014

Received in revised form 30 November 2015

Accepted 11 February 2016

Available online 22 April 2016

Keywords:

Value co-creation

Value proposition co-production

University–industry collaboration

Knowledge exchange

Digital research

R&D collaboration

ABSTRACT

In the context of R&D collaborations between universities and industry, this study investigates the co-production process and the contextual elements that shape it. We develop a conceptual framework that builds on the service-dominant logic perspective that value propositions emerge from the interaction between co-producing parties and the integration of resources. Specifically, the framework explicates how individual, organizational, and external factors shape the type of interactions and the platforms used, the availability and use of operand and operant resources, and the organizational and individual outcomes sought in R&D collaborative projects. We investigate the interplay among these factors through group interviews with UK industry practitioners and university researchers in the context of digital research projects. The types of interaction, resources, and outcomes sought that characterize successful R&D collaboration are revealed, and the contextual aspects that enable, facilitate, block, or create barriers to successful R&D collaborations are identified. Finally, we propose five practical principles for the successful development of collaborative R&D projects within the university–industry context.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

The concept of service-dominant logic (SDL) emphasizes the customer's role in co-creating value with the supplier during exchange, rather than as a passive recipient of value at the end of a transaction (Vargo, Maglio, & Akaka, 2008). Value is therefore created through active interactions between the firm and the consumer (Vargo & Lusch, 2008) or, in business-to-business markets, from the integration of resources between two firms to create a valued outcome (Gronroos, 2007).

In this paper, the distinction between value co-creation and value co-production is important. Co-creation occurs when the customer takes the firm's value proposition and integrates it with his or her own resources to generate something, the value of which is subjectively determined by the beneficiary (Vargo & Lusch, 2008). Conversely, co-production involves the purposeful integration of operand and operant resources from the firm and the customer, to develop a value proposition, which can range from the co-conception of goods and service to their co-disposal (Sheth & Uslay, 2007). The distinction between co-creation and co-production is dismissed as unnecessary and unhelpful by authors such as Payne, Storbacka, and Frow (2008), who prefer to use the two terms interchangeably. However, other scholars, such as Etgar (2008), Jacob and Rettinger (2011) and Vargo and Lusch (2008),

argue that the distinction is important for the conceptual development of the field. This paper follows the tradition that distinguishes co-creation from co-production, focusing on the latter to center attention on the process of development of the core value proposition.

Co-production takes place in a variety of business-to-consumer and business-to-business exchanges and non-commercial settings (e.g. Alves, 2013; Diaz-Mendez & Gummesson, 2012). It is also present in the form of collaborative R&D initiatives between universities and industry, which are the focus of this paper. Idea generation and creativity are both fundamental to R&D, with the latter being particularly emphasized as an antecedent of innovation (Bozeman, Fay, & Slade, 2013). Both idea generation and creativity are enhanced through interpersonal communication that can be developed within a workplace environment (West, 2002).

This paper makes both theoretical and applied contributions. Theoretically, we develop a conceptual understanding of value co-production by building on the SDL notion of value as an interactive, multi-actor exchange process. We unpack how the social features (e.g., norms, organizational culture), material characteristics (e.g., support, incentive systems), and the attributes of individuals engaged in the co-production of value propositions support or hinder the process. In doing so, we complement and advance conceptual work of Akaka, Vargo, and Lusch (2013), Chandler and Vargo (2011), and others on the interplay between the context and process of value proposition co-production. The applied contribution we make is through the provision of qualitative, empirical evidence that is absent from these earlier articles (Perkmann et al., 2013), which sheds light on the management of R&D collaborations in practice.

* Corresponding author.

E-mail addresses: adomingos-canhoto@brookes.ac.uk (A.I. Canhoto), sequinton@brookes.ac.uk (S. Quinton), pjackson@brookes.ac.uk (P. Jackson), sally.dibb@open.ac.uk (S. Dibb).

This paper addresses the following research question: How do the various contextual layers shape the co-production of value propositions in university–industry R&D collaboration, in the digital arena? We begin with an outline of the specific context of the study. Then, we draw from literature on the process and role of context in value proposition co-production and on R&D collaboration, which we use as the basis for a research framework for understanding co-production in R&D projects. Next, we discuss the empirical data collection and present our findings, in which we draw from the verbalized experiences of practitioners and academics. Finally, we outline the theoretical implications and present five practical principles for the development of university–industry R&D projects.

2. Context

Collaboration, in the digital arena? We begin with an outline of the specific context of the study. Then, we draw from literature on the process and role of context in value proposition co-production and on R&D collaboration, which we use as the basis for a research framework for understanding co-production in R&D projects. Next, we discuss the empirical data collection and present our findings, in which we draw from the verbalized experiences of practitioners and academics. Finally, we outline the theoretical implications and present five practical principles for the development of university–industry R&D projects.

To advance the conceptual development of this field and its relevance for managerial practice (Chang, Chih, Chew, & Pisarski, 2013), we focus on the specific case of R&D projects in the digital arena. Digital research is an area of interest and importance for both industry and university environments (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). The interdisciplinary nature of research in the field offers multiple streams of inquiry, from computer science and sociology to marketing and information systems, to benefit from distributed innovation (Yoo, Boland, Lyytinen, & Majchrzak, 2012) and inter-organizational partnerships (Bharadwaj et al., 2013) that transcend established subject or functional silos. Furthermore, while it is clear that universities can transfer knowledge that supports innovation to industry (Pertuzé, Calder, Greitzer, & Lucas, 2010), in the case of digital research, the reverse is also the case; for example, industry has developed new techniques and protocols to collect, manage, analyze, and distribute digital data (Ruppert, Law, & Savage, 2013). This represents a significant departure from the traditional discourse on university–industry R&D collaboration, which tends to describe universities as providers of knowledge and technology and industry as providers of funding, materials, or data (Bozeman et al., 2013; Perkmann et al., 2013).

3. Theoretical background

The starting point for our conceptual framework is the SDL emphasis on process (Vargo & Lusch, 2004). This focus draws attention to the integration of key resources through a series of interactions, to define and deliver a mutually valued outcome (Perks, Gruber, & Edvardsson, 2012; Prahalad & Ramaswamy, 2004). This integration can occur at various levels, each of which frames the derivation and evaluation of value (Akaka et al., 2013): from dyadic interactions between individual actors at one extreme to complex service networks at the other. The subsections that follow explore how these contextual layers influence the interactions, resources, and expected outcomes that constitute the co-production of value in R&D collaborative projects. Fig. 1 depicts the conceptual framework we use to shape our study.

3.1. The constituent elements of the co-production process

The SDL literature suggests that value emerges from the interaction between co-producing parties through purposeful, continued encounters that take place over time (Gronroos, 2011). Engagement platforms play an important role in facilitating this interaction (Ramaswamy & Gouillart, 2010); for example, organizations increasingly use online communities and other web-enabled spaces as platforms to connect with different stakeholders (Ngugi, Johnsen, & Erdelyi, 2010; Verette & Hamdi-Kidar, 2013). In instances in which online collaboration generates frustration, particularly when there is no sense of community or participants are perceived to be unfairly treated (Gebauer, Füller, & Pezzeri, 2013), face-to-face contact can be more conducive to dialogue and intensive interaction (Crowther & Donlan, 2011). Payne et al. (2008) conceptualize the interactions between parties as a series of touch points that cumulatively produce value propositions and involve various departments at different stages of the relationship. Although these authors base their findings on business-to-consumer interactions, their views about how value propositions are generated are also relevant to co-production between organizations. Lambert and Enz (2012) refer to the need to implement cross-functional business processes that facilitate the sharing of information, encourage engagement, enable progress monitoring, and measure project success. Similarly, Perks et al. (2012) note the existence of multiple, micro-level patterns of behaviors, each producing incremental progress that eventually leads to a significant outcome, and Lempinen and Rajala (2014) explain that it is necessary to clarify roles in the process and understand how these alter over time.

Perkmann et al.'s (2013) review of university–industry relationships identifies a broad range of R&D collaboration formats, ranging from

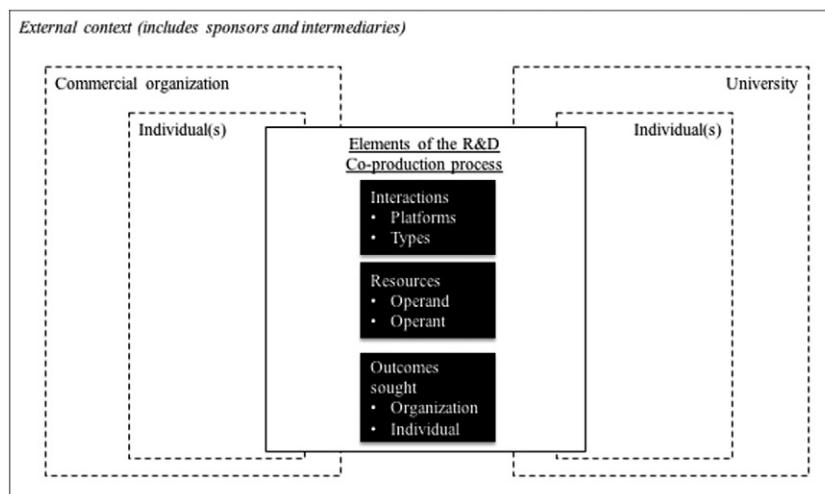


Fig. 1. Framework of co-production in university–industry R&D collaboration.

Download English Version:

<https://daneshyari.com/en/article/1027339>

Download Persian Version:

<https://daneshyari.com/article/1027339>

[Daneshyari.com](https://daneshyari.com)