Journal of Business Research xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Journal of Business Research

A bricolage perspective on service innovation

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ARTICLE INFO

Article history:
Received 15 November 2016
Received in revised form 23 March 2017
Accepted 24 March 2017
Available online xxxx

Keywords:
Service innovation
Bricolage
Entrepreneurship
Resource-constrained environments
Social innovation
Capabilities

ABSTRACT

Service innovation is often viewed as a process of accessing the necessary resources, (re)combining them, and converting them into new services. The current knowledge on success factors for service innovation, such as formalized new service development (NSD) processes, predominantly comes from studying large firms with a relatively stable resource base. However, this neglect situations in which organizations face severe resource constraints. This paper argues that under such constraints, a formalized new service development process could be counter-productive and a bricolage perspective might better explain service innovation in resource-constrained environments. In this conceptual paper, we propose that four critical bricolage capabilities (addressing resource scarcity actively, making do with what is available, improvising when recombining resources, and networking with external partners) influence service innovation outcomes. Empirical illustrations from five organizations substantiate our conceptual development. Our discussion leads to a framework and four testable propositions that can guide further service research.

1. Introduction

Service innovation, which remains a key priority in service research (Ostrom et al., 2015; Witell, Snyder, Gustafsson, Fombelle, & Kristensson, 2016), emphasizes that a sustainable competitive advantage depends on the development and introduction of new services (Gebauer, Gustafsson, & Witell, 2011). Reflecting the rise of a service-centered approach to value creation, service innovation research has broadened its focus to address new value creation logics represented by companies such as Google, IKEA, and Airbnb, and targeted new empirical fields such as manufacturing industry, the public sector, and social organizations at the bottom of the pyramid (e.g., Gebauer & Reynoso, 2013; Lusch, Vargo, & O'Brien, 2007; Michel, Brown, & Gallan, 2008). This change in context has introduced challenges to the key assumptions in existing research on service innovation.

According to the contemporary view, a service innovation is a novel (re)combination of resources (Gallouj & Weinstein, 1997; Lusch & Nambisan, 2015). The extant literature assumes, at least implicitly, that organizations have access to the necessary resources, which they (re)combine and, finally, convert into service innovations. Thus, new service development (NSD) research has focused on how firms can do this effectively, advocating the use of formalized NSD processes along the design, analysis, development, and launch stages (Froehle, Roth, Chase, & Voss, 2000; Papastathopoulou & Hultink, 2012). The rationale is that formalization increases the efficiency and effectiveness of the NSD process, which is positively associated with service innovation outcomes (Storey, Cankurtaran, Papastathopoulou, & Hultink, 2016).

The present paper challenges the current focus on developing effective processes for (re)combining resources and shifts attention toward *resource scarcity* (Cunha, Oliveira, Rosado, & Habib, 2014). The newly emerging empirical fields for service innovation represent environments where different forms of resource constraints are prevalent (Fuglsang, 2010; Linna, 2013). For example, the manufacturing industry reportedly lacks resources regarding digitization and the Internet of Things (IoT), which has led to failure in innovating new services that utilize these technologies (Spring & Araujo, 2016). The public sector has resource deficits when it comes to understanding customers (Fuglsang, 2010), while social organizations operating in low-income countries face naturally resource-constrained environments (Srinivas & Sutz, 2008). While many organizations often innovate in such conditions, previous research has paid little attention to the implications of resource constraints on service innovation.

To address this shortcoming, we look beyond extant service innovation research and employ the concept of bricolage to explain how

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http://dx.doi.org/10.1016/j.jbusres.2017.03.021
0148-2963/

organizations innovate services in resource scarce environments. Bricolage refers to solving problems and taking advantage of opportunities by combining resources at hand (Baker & Nelson, 2005) and can be contrasted with behaviors that involve seeking new resources to address new situations or opportunities (Duymedjian & Rüling, 2010). We consider the bricolage concept as a set of capabilities related to improvisation and making do with what resources are available. The bricolage concept originates from technology and product innovation research, but has rarely been applied in research on service innovation. From a bricolage perspective, firms view scarcity as an opportunity, which makes it a suitable conceptual lens for extending research on service innovation (Salunke, Weerawardena, & McColl-Kennedy, 2013).

The present article makes four theoretical contributions. First, we shift the attention of service innovation research from resource-rich to resource-constrained environments, and suggest that bricolage is a key perspective in understanding service innovation in such environments. Second, we propose four specific bricolage capabilities (addressing resource scarcity actively, making do with what is available, improvising when recombining resources, and networking with external partners) that influence service innovation outcomes in resource-constrained environment. Third, our analysis is summarized in four testable propositions, which can guide and be tested by future service research. Fourth, we suggest potential contingencies for the impact of such bricolage capabilities, thereby extending the extant knowledge on the bricolage concept.

2. Literature review

2.1. Service innovation

2.1.1. Service innovation as a novel combination of resources

In its early days, service innovation research mainly discussed differences between product and service innovation (Johne & Storey, 1998; Snyder, Witell, Gustafsson, Fombelle, & Kristensson, 2016). Service innovation was perceived as inherently different from product innovation by virtue of being incremental and continuous in nature, explaining the absence of distinct "developmental stages" and research and development (R&D) departments in service firms (Johne & Storey, 1998). More recently, service research has developed new conceptualizations of service innovation, building on service-centered approaches to value creation (Lusch & Nambisan, 2015). These service-centered approaches suggest that service innovations are not only incremental and continuous improvements, but can be both radical and disruptive, creating a leap in customer value (de Brentani, 2001; Michel et al., 2008).

Accordingly, service innovation concerns recombining resources in novel ways. In other words, service innovation can be viewed as "*the rebundling of diverse resources that create novel resources that are beneficial … to some actors in a given context*" (Lusch & Nambisan, 2015 p. 161) or as "*the collaborative recombination of practices that provide novel solutions for new or existing problems*" (Vargo, Wieland, & Akaka, 2015 p. 64). This follows a Schumpeterian view of innovating, suggesting that it concerns "*carrying out of new combinations*" (Schumpeter, 1934 p. 66). Service innovation takes advantage of new combinations of resources derived from existing technology and knowledge. Service innovation often starts with a change in a resource that then opens up to new combinations. In line with recent conceptualizations in service research, we view all innovations as recombinations of existing and new resources.

2.1.2. The NSD process

While the incremental and continuous nature of service innovation initially explained the absence of distinct "developmental stages", research later agreed that service innovation benefits from formalizing the NSD process as well as employing deliberate and structured approaches for involving customers, employees, suppliers, and partners (de Brentani, 2001; Storey et al., 2016). Most studies on success factors have recommended establishing a formalized NSD process, and several researchers have regarded the NSD process as the most important success factor (Biemans, Griffin, & Moenaert, 2015). A recent meta-analysis highlighted the importance of both the effectiveness and the efficiency of the NSD process (Storey et al., 2016). Furthermore, previous studies have empirically demonstrated that the formalization of the NSD process shortens time-to-market (Froehle et al., 2000).

The formalization of the NSD process is a vital element for service innovation (Cooper & de Brentani, 1991; de Brentani, 2001; Storey & Easingwood, 1998). Most process models in the NSD literature contain the four stages of design, analysis, development, and full launch. The more elaborate and formalized NSD process, the higher the performance (Melton & Hartline, 2015). NSD models are often based on a stage-gate model, with suggestions on which methods to use in different stages (Edvardsson, Meiren, Schäfer, & Witell, 2013). Indeed, the better organizations formalize the tasks involved in developing new services, the easier it is to replicate, convey, and improve them (Ferdows, 2006). However, there is a duality of the service innovation process; that is, process formalization can improve effectiveness and efficiency, but it can also inhibit creativity and lead to less innovative services. Table 1 summarizes previous research findings on the role of formalization of NSD processes in service innovation.

2.2. Bricolage in resource-constrained environments

2.2.1. Innovation and resource scarcity

Resources are the tangible and intangible assets that firms use to develop and implement their strategies (Ray, Barney, & Muhanna, 2004). Innovating depends less on finding optimal combinations of resources than it does on using, for development tasks, resources that are hidden, scattered, or badly utilized (Hirschman, 1958). Resources appear to be particularly important for services because service innovation starts with a change in a resource that then opens up to new combinations of resources. In many situations, service innovation occurs in resource-constrained environments.

Resource scarcity is not a uniform concept. First, the focal firm trying to innovate the service might have internal resource constraints (Gupta, Smith, & Shalley, 2006). A firm can have too few employees with a certain capability, the employees could be situated in the wrong organizational unit, or their capabilities could be outdated. Second, resource constraints can occur at the customer's end. Customers might lack the financial resources to afford the use of services (Cunha et al., 2014) or the competences to participate in the design and testing of service innovations (Gebauer & Reynoso, 2013). Third, resource constraints can occur in the business environment when other organizations lack the resources to partner in NSD or service provision (e.g., Barrett et al., 2015; Srinivas & Sutz, 2008).

Following Srinivas and Sutz (2008), we refer to resource constraints and/or scarcity in comparative terms, viewing scarcity either quantitatively or qualitatively. Organizations often experience scarcity when they try to attract specific human, financial, or other resources when they are needed (Baker & Nelson, 2005). Resource scarcity have been discussed in different literature streams, including organizational behavior, innovation, and entrepreneurship. We view resource constraints as the lack of a resource needed for innovating (Cunha et al., 2014). Research into resource constraints has either discussed the matter on a general level (Staw, 1980 or addressed the scarcity of specific resources such as financial, technical, human, and time (Cunha et al., 2014). In addition, research has discussed scarcity in institutions and infrastructure (Barrett et al., 2015) or addressed knowledge and skills as a specific resource of humans (Baker & Nelson, 2005).

2.2.2. Bricolage

The bricolage concept originates from technology and product innovation, but has rarely been applied to service innovation, see Table 2. It was originally introduced by Levi-Strauss (1966), who basically contrasted engineers with bricoleurs. While engineers follow specific

Please cite this article as: Witell, L., et al., A bricolage perspective on service innovation, *Journal of Business Research* (2017), http://dx.doi.org/10.1016/j.jbusres.2017.03.021