ARTICLE IN PRESS

Industrial Marketing Management xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Industrial Marketing Management

journal homepage: www.elsevier.com/locate/indmarman

Network orchestration for value platform development

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ARTICLE INFO

Keywords:
Value platforms
Network orchestration
Mechanisms
Business networks
Value-creating systems

ABSTRACT

The traditional firm and product-centric view of platforms is changing. Platforms are increasingly developed around value that is co-created with a network of actors. In such settings, lead firms shape their environments and develop value platforms through network orchestration. This study examines how lead firms mobilize network relationships to support and build novel value platforms. The research adopts a multiple case study methodology, investigating the development of six value platforms in network settings within Europe. A large-scale interview program over several years was conducted. The findings unravel practices constituting four overarching network orchestration mechanisms in the value platform development context; envisioning, inducing innovativeness, legitimizing, and adjusting. The study explains the relationships and interplay between the orchestration mechanisms and articulates theoretical and managerial contributions.

1. Introduction

Increasingly, the competitive advantage of firms stems from platforms rather than product portfolios or standalone offerings (Thomas, Autio, & Gann, 2014). Platforms are ascribed to the success of high-tech companies such as Apple, Google, Intel, and Microsoft (Cusumano & Gawer, 2002; Gawer & Cusumano, 2014; Meyer & Lehnerd, 1997). They enable the co-creation of value among network members, through which the lead firm (and other network members) can achieve business growth and competitive advantage (Gawer & Cusumano, 2014; Nambisan & Sawhney, 2011). Several academic streams have studied the platform concept, including technology strategy (Cusumano & Gawer, 2002; Meyer & Mugge, 2001), operations management (Huang, Zhang, & Lo, 2007; Meyer & Lehnerd, 1997), product innovation (Nambisan & Sawhney, 2011; Simpson, Siddique, & Jiao, 2005; Sköld & Karlsson, 2007), industrial economics (Armstrong, 2006; Evans, 2003), marketing (Chakravarty, Kumar, & Grewal, 2014; Sawhney, 1998; Sawhney, Verona, & Prandelli, 2005; Sridhar, Mantrala, Naik, & Thorson, 2011), and information systems (Lusch & Nambisan, 2015).

The platform concept has traditionally been technology and product-based, located within complex system industries (Gawer & Cusumano, 2014; Simpson et al., 2005). Platforms are however shifting towards a value and network-centric notion in that they evolve from the joint actions of network actors rather than the features and attributes of products (Lusch & Nambisan, 2015). This study is concerned with such *value platforms*. These are dynamic configurations of tangible and intangible resources that act as foundations for value-creating systems (Parolini, 1999), upon which network members co-create value through a set of specific activities. In network settings, lead firms (platform leaders) shape their environments and orchestrate the network to further develop the value platform (Gawer & Cusumano, 2014). Such lead firms can initiate value platform development and support their network-centric emergence and reconfiguration over time (see also Möller & Rajala, 2007; Möller & Svahn, 2009).

This study puts attention to the way lead firms orchestrate the network for value platform development. It focuses on central network actors that strive to configure network relationships to support and build a novel value platform. It adopts the view that the lead firm is capable of intentionally influencing and managing its network for such ends (Dhanaraj & Parkhe, 2006; Hinterhuber, 2002; Lorenzoni & Lipparini, 1999; Möller & Svahn, 2006; Müller-Seitz, 2012). The research aims to delineate and explain lead firm network orchestration for value platform development in network settings. More specifically, the research seeks to identify network orchestration mechanisms, along with underlying practices, and their interplay in value platform development. An orchestration practice is an observable, repeated and routinized single or set of activities of the lead firm related to the development of the value platform. An orchestration mechanism is an overarching assembly of practices that produces an effect on the

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http://dx.doi.org/10.1016/j.indmarman.2017.08.002
Received 13 April 2016; Received in revised form 31 July 2017; Accepted 4 August 2017

value platform development, which is not inherent in any one of the practices alone. We are interested in intentional and purposeful network orchestration practices and mechanisms.

The paper progresses as follows. The first section introduces the theoretical underpinning of the study by drawing on two core concepts; network orchestration and value platform, and discusses how they relate to each other in the context of value platform development. The study's multiple case study methodology is then detailed, putting particular attention to the framing and explanation of the data analysis around practices and mechanisms. The findings follow which unravel and demonstrate a complex array of network orchestration practices. Further analysis derives their association with four overriding network orchestration mechanisms that are shown to underpin the construction of value platforms. The connections and interplay between these mechanisms are elucidated. The discussion articulates and discusses three contributions and concludes with implications for management and further research.

2. Theoretical background

2.1. Network orchestration

Network orchestration is the process of assembling and managing an inter-organizational network to achieve a collective goal (Paquin & Howard-Grenville, 2013), in which the role is accepted by the other network members (Müller-Seitz, 2012). Prior research within marketing and organizational studies have distinguished networks that are intentionally orchestrated from networks that are emergent without guidance from a key network actor (e.g., Dagnino, Levanti, & Li Destri, 2016; Möller & Svahn, 2006; Ritter, Wilkinson, & Johnston, 2004). In contrast, research on orchestration of intentionally created networks assumes that the lead firm is able to purposefully influence and manage its network (Dhanaraj & Parkhe, 2006; Hinterhuber, 2002; Lorenzoni & Lipparini, 1999; Müller-Seitz, 2012); that is, intentional networking through deliberate activity.[1] It resonates with studies of networks that adopt an actor-defined perspective, such that a central network actor strives to configure its business relationships through networking activities (e.g., Jarillo, 1988; Kowalkowski, Witell, & Gustafsson, 2013).

If networking activities are conducted in a routinized way (Reckwitz, 2002) we refer to them as *practices*. Consistent with research within industrial network theory (e.g., Möller & Svahn, 2009; Partanen & Möller, 2012) and organizational studies (e.g., Paquin & Howard-Grenville, 2013), we take the view that network orchestration should be understood not as a static structural position but as a set of evolving practices. We refer to such sets of practices as *mechanisms*. Mechanisms, being an overarching concept (Easton, 1998), describe "an assembly of elements producing an effect not inherent in any one of them. A mechanism is not so much about 'nuts and bolts' as about 'cogs and wheels'…the wheelwork or agency by which an effect is produced" (Hernes, 1998, p. 74). Over time, mechanisms—and their underlying practices—may change the lead firm's position relative to other network members. However, individual practices alone may be insufficient to drive change in a network setting. The distinction between mechanism and practice is hence important to make.

The limited influence that the lead firm may have over network members is acknowledged in industrial network theory (Ford, 2011; Håkansson & Ford, 2002), whereas organizational studies of orchestration tend to imply stability and linearity within the network (Müller-Seitz, 2012). Industrial marketing scholars like Anderson, Håkansson, and Johanson (1994) and Ford (2011) highlight the interdependent nature of business relationships within networks and that the ability to influence others depends on such things as the firm's network position. In every relationship, "there is a blend of cooperative and conflicting interests and a well-functioning relationship makes this blend a constructive development force" (Håkansson & Eriksson, 1993, p. 28). As Håkansson and Eriksson (1993) point out, network actors build up structures of resources and activities that cause inertia and reluctance to change. They find that successful orchestration is not only a matter of convincing network members with rational arguments, but also of influencing them by capitalizing on the relationship or even making use of indirect relationships to put pressure on them.

Hence, no orchestration activities are controlled by a single network actor. The more capabilities and supporting infrastructure a new business requires, the less likely it is that a single actor can manage the process (Möller & Svahn, 2009). Instead, orchestration represents a collaborative effort within an intentionally formed network (Huxham & Vangen, 2000). Furthermore, previous research suggests that conditions for and aspects of network orchestration differ greatly depending on the type of business network. Möller and Svahn (2006) distinguish between three ideal types of value systems in intentionally created business networks. These span from stable, well-defined systems with high levels of determination and well-known activities/actors, to emerging systems with low levels of determination, new value-creation activities, and a combination of old and new actors. In existing networks that are relatively stable, emphasis is placed on the exploitation of each actor's specialized knowledge. Typically, lead firms strive to achieve high systemic efficiency through integration and coordination. Rather, if the goal is renewal of existing market offerings and business processes, emphasis is placed on balancing knowledge exploitation and exploration. Finally, in new networks, through which lead firms strive to shape markets and create new technologies and businesses, emphasis is placed on sensing and seizing of fragmented and emergent knowledge. As inter-organizational networks are formed and evolve, emphasis shifts from sense making to agenda setting along with the formation of means for collaboration, joint learning, and market growth (Möller & Svahn, 2009; Ritvala & Salmi, 2010). In order to collaboratively mobilize value co-creation and leverage networks, platforms are seen as such means for network members to come together in a more integrated and synchronized way (Gawer, 2009; Palo & Tähtinen, 2011). In the following, the concept of value platform is further discussed.

2.2. Value platform

While early perspectives on platforms were firm and internal resource centric, recent conceptualizations increasingly acknowledge the role of network actors in platform development and commercialization (Nambisan & Sawhney, 2011; Thomas et al., 2014). This underscores the critical role of network orchestration in mobilizing value co-creation, which is further supported by marketing research (e.g., Jaakkola & Hakanen, 2013; Partanen & Möller, 2012). In particular, studies of successful firms in information-technology intensive industries demonstrate the importance of network centricity when developing platforms. Cusumano and Gawer (2002) refer to lead firms as platform leaders that shape their environments and orchestrate their inter-organizational networks.

In this study, we specifically develop the concept of "value platform". We view value platforms as dynamic configurations of (tangible and intangible) resources that act as a foundation upon which network members co-create value through a set of specific practices.[2] Analogous

[1] These types of networks, being sets of connected exchange relationships (Cook & Emerson, 1978), are often referred to as "business nets" (Möller & Svahn, 2006), "network configurations" (Gemünden, Ritter, & Heydebreck, 1996), "value constellations" (Normann & Ramírez, 1993), "value networks" (Stabell & Fjeldstad, 1998), "strategic nets" (Möller & Rajala, 2007) or "strategic networks" (Amit & Zott, 2001; Jarillo, 1988). Similar concepts are "innovation network" (Corsaro, Ramos, Henneberg, & Naudé, 2012) and "supplier network" (Håkansson & Eriksson, 1993), although they may also be used to described more loosely coupled systems of independent companies.

[2] Analogous with the three fundamental elements in industrial network theory—actors, resources, and activities—we refer to network members, value platforms (resource configurations), and practices (routinized activities). The characteristics attributed to a value platform has some similarity with what Möller and Svahn (2003) refer to as a "strategic net". Nets are intentional inter-organizational structures which firms design for specific