Making sense of value platforms in B2B networks: towards a research agenda

ABSTRACT

The purpose of this paper is to describe value platforms as an emerging governance model that enables the creation and capture of value in business networks. To do this, we 1) define the value platform concept based on existing literature, 2) discuss the key dimensions that characterize development and application of value platforms and 3) identify key management challenges that value platforms will likely pose for companies as a mechanism for resource integration. We contribute to the emerging research on the application of platforms in the context of business markets. Most of prior research on platforms in the marketing domain has predominantly focused on consumer markets. The study is conceptual in nature and draws on various literature streams, primarily on innovation and technology management, industrial economics and business marketing. These literature streams provide distinct lenses to understand the key governance challenges that firms will likely face when utilizing platforms as resource integration tools in the B2B context. The paper reports work-in-progress and should be considered as the first exploration to an emerging research field.

Introduction

The world is moving from the digitalization of business to digital business, which has led to the rise of the platform economy (Viitanen et al. 2017, 22–23). The concept of the platform economy is not a new phenomenon, but its shape has changed over time, and is now strongly shaping business, economy and even the society at large (Parker, Van Alstyne, & Choudary, 2016, 3).

Strategic benefits can be achieved through application of platforms that connect actors and resources controlled by them (Fehrer, Woratschek, & Brodie, 2018, 443.) Airbnb, eBay, Amazon and Uber are often cited examples of this. The success of these companies is based on platforms that form the core of their business operations (Ozalp, Cennamo, & Gawer, 2018, 1203). Platform-based business has also become a major competitive factor in the renewal of knowledge-based services, technology-intensive businesses, and traditional industries. Opportunities exist, for instance, to build platforms for financial services, health industry, shipping industry, or for steel industry (Ailisto, *et al.*, 2016, 4; Laine, *et al.*, 2017, 177).

Given the growing importance of platforms also in B2B markets, the purpose of this paper is to examine value platforms as a governance model that enables the creation and capture of value in business networks. To do this, we 1) define the value platform concept based on existing literature, 2) discuss the key dimensions that characterize development and application of value platforms, and 3) identify key management challenges that value platforms will likely pose for companies as a mechanism for resource integration in the context of business networks.

We contribute to the emerging research on the application of platforms as a governance model that facilitates integration of resources in the context of business markets. Most of prior research on platforms in the marketing domain has predominantly focused on consumer markets (e.g. Breidbach & Brodie, 2017), and only a few prior studies have focused specifically on the B2B context (Perks et al., 2017; Laczko et al., 2019). Thus, how platforms can be applied in the B2B context is not well understood.

The study is conceptual in nature and draws on various literature streams, primarily on innovation and technology management, industrial economics and business marketing. From the network literature, the strategic networks perspective, where the network has a central orchestrator who builds the platform and defines how to build business on it, is primarily used. These literature streams provide distinct lenses to understand the key governance challenges that firms will likely face when utilizing platforms as resource integration tools in the B2B context. The paper reports work-in-progress and should be considered as the first exploration to an emerging research field.

The Concept of a Value Platform

Several academic fields have explored the concept of a platform such as technology strategy, operations management, product innovation, industrial economics, marketing, and information systems (Perks et al. 2017, 106). The extant literature provides several definitions of platform**s** that partly overlap, but may emphasize slightly different application logics. The *economics perspective* focuses on how a platform acts as a mediator between market actors (Gawer 2014, 1240). A platform connecting actors in a two-sided market can be expected to arise in a situation where transaction costs exist and platforms provide the required market intermediation effect (Evans and Schmalensee 2008, 667). A two-sided platform consists of a design that defines the service architecture, technical infrastructure, and rules that govern resource integration of actors connected by the platform. Examples of two-sided markets include Amazon and ebay where users interact and network with each other and through that create value through integration of resources (Li, Liu, & Bandyopadhyay 2010; Muzellec, Ronteua, and Lambkin, 2015).

Besides lowering transactions costs, platforms can also support *innovation* across and within industries (Iansiti and Levien, 2004; Gawer and Cusumano, 2008). The innovation perspective is often applied to understand platform ecosystems. The platform in this definition consists of services, tools, technologies, standards and other resources that ecosystem members can rely on to coordinate resource integration activities aimed at development of new innovations (Gawer and Cusumano, 2008; Thomas et al. 2014.)

Given the multitude of definitions that exist to characterize platforms, Perks et al. (2017, 107) suggest adoption of the term value platform, which is grounded in the markets as networks perspective. A value platform can be considered a dynamic configuration of tangible and intangible resources that allows actors within a network to co-create value (Ibid). Value co-creation, in turns, can be understood to occur through the integration of resources between actors (Vargo & Lusch, 2017).

Key design dimensions of value platforms

According the concept of value platforms, platforms can take multiple forms in terms of the *technical architecture and architecture of participation* (Perks et al., 2017). This means that the form the platform can take varies, as do the rules that govern the roles and activities of actors connected by the platform. Evans and Gawer (2016) state that most platforms are digital, but may contain physical elements. Accordingly, *digital platforms* are expected to be now and in the future, at the heart of new value creation. Such digital platforms can be understood as IT systems that allow different actors to work together to create value-added activities according

to common policies (Ailisto et al. 2016, 14). A digital platform brings together a wide range of actors, and filters and analyzes the data collected by the platform in a way that benefits all actors connected via the platform (Hämäläinen, Maula, & Suominen 2016, 35). The digital platform economy, in turn, describes the wider economy in which platform business is conducted. In it, business based on digital platforms has gained a significant or even a dominant position. Low fixed investments, low transaction costs, and data algorithm-based business models are characteristic of the digital platform economy (Ailisto et al. 2016, 15). Muzellec, Ronteua, and Lambkin (2015) use the term *Internet platform,* which is also categorized as a digital platform but interaction is happening online. These are considered as platforms for social networking where a good example is Facebook, which is an Internet platform that can further connect its users with others. Platforms such are Amazon or eBay are different and their main idea is to connect buyers and sellers (Bakos & Katsamakas, 2008, 178).

In addition to the technical architecture, the design of the architecture of participation requires careful attention, which explicates how the resource integration between actors connected by the platform takes place. The so called rules of the game encourage positive behaviors of actors and define sanctions for negative, opportunistic interactions (Perks et al. 2018). The efficiency and functionality of the platform depend on how effectively it is controlled and how well developed its management practices are (Tura, Kutvonen, & Ritala, 2018, 883). According to Fu et al. (2017, 365), these rules need be developed by the platform leader/owner. The platform owner may offer financial incentives to stimulate new members to join the platform and therefore to stimulate important network effects. Finding ways to generate positive network effects is typically an important strategic priority for platform owners (Gawer, 2014). However, according to Cennamo and Santalo (2013, 1346), platform leaders sometimes focus too much on increasing their existing user base, regardless of what benefits they can bring and ignoring the importance of attracting partners in the platform who could develop the platform and who could guarantee continues innovation of the platform. This is common particularly in B2C platform applications where the higher the number of users of the platform, the more valuable the platform is for its owner and its users. (Fu, Wang, & Zhao, 2017, 349). According to Li and Penard (2014, 12), in B2B markets, platform attractiveness is based more on the quality of actors and resources controlled by them, rather than the scope of the network of actors connected by the platform.

In designing of platforms and business models based on them, of key importance is also clear articulation of value promises. This extends the platform development task beyond development of the technological infrastructure and governance mechanisms that allows resource integration among actors to take place. Effective value creation, and value appropriation, are in fact reasons for platforms to exist (Muzellec, Ronteua, & Lambkin, 2015, 140).

Particularly in cases where the platform requires resource investments by actors connected via the platform, a clear *value creation and capture logic* needs to be in place. At the heart of the value creation of the platform can be the reduction of transaction costs (Gawer & Cusumano, 2014), facilitation of innovation (Gawer and Cusumano, 2008), and managing and maximizing user confidence (Brown 2016, 4). Key actors whose resources are required by the platform to function, need be convinced of the multitude of possible advantages that commitment to the platform provides (Perks et al., 2017). It may be that individual actors connected by the platform have their own proprietary value logics that are derived from their individual business model logics. However, at the aggregate level, it is likely that the platform leader will need to articulate a shared "meta logic" that provides the shared purpose for actors to commit to a shared value platform as a resource integration tool (Möller, Rajala, & Svahn, 2015). Also, given that capturing of the value through platforms is considered much more difficult than its creation (Laczko et al. 2018, 214), the platform leader will need to ensure that actors connected by the platform perceive that value appropriation schemes are perceived as fair by all actors.

KEY CHALLENGES IN APPLYING VALUE PLATFORMS

Understanding of the application of value platforms (Perks et al., 2017) as a resource integration tool that allows value creation and capture in the context of business networks is currently at an emergent stage. However, it is likely that firms will face a multitude of challenges in their practical application. Particularly platforms that build on an innovation rather than a market efficiency logic and utilize data as a key resource to be integrated, are likely to be difficult to build in the B2B context. A practical example would be a digital platform that stores data collected by different business actors, for instance, regarding equipment usage, which allows commercial development of new services. Such data can be collected with growing ease, for instance, by relying on remote monitoring equipment. Thus, many B2B firms have increasing pools of data about how customers use the products and services provided by manufacturers, and how equipment usage can be optimized in the customer's process. Many of these firms have undertaken concerted efforts to turn this data into new business opportunities, for instance, through development of new services. However, it is likely that opportunities to develop new services would grow exponentially if business actors would pool data onto a shared digital platform. For example, in the context of intelligent buildings, business actors that collect data on how people use the building and how the equipment in the building functions could pool this data onto a shared digital platform. This would make it possible, for instance, to develop new services that enhance the building use experience. However, building of such shared digital platforms, is likely to be extremely

difficult in practice. For one, companies are likely to display high unwillingness to share data-based resources unless the value appropriate schemes are carefully thought and the architecture of participation is designed to encourage positive behaviors of actors and sanctions for negative, opportunistic interactions are sufficiently high.

Thus, in development and application of value platforms in the B2B context, network orchestration becomes crucially important. Who should take the lead in orchestration of the network, how to define the actors whose resources are required for the platform to realize is value creation potential, how to attract these actors to join, and how open can value platforms be for membership? In theory, the value of the platform grows through extension of its scope driven by positive network effects. However, in cases where actors connected by the platform commit to integration of valuable, data-based resources, it may be difficult to grow the scope of the network very quickly, as issues related to trust and governance need to be solved first.

We encourage scholars in the IMP community to tackle these and undoubtedly many other challenges that relate to understanding how platforms can be applied in the B2B context as a resource integration tool. Given the emergent stage of both managerial practice and theoretical understanding related to this phenomenon, we feel that defining the appropriate questions is the required first stage. We invite our fellow scholars to join us in identifying these questions and to begin the process of developing answers to them through research.

References

Ailisto, H., Collin, J., Juhanko, J., Mäntylä, M., Ruutu, S., Seppälä, T., Halén, M., Hiekkanen, K., Hyytinen, K., Kiuru, E., Korhonen, H., Kääriäinen, J., Parviainen, P., & Talvitie, J. (2016). Onko Suomi jäämässä alustatalouden junasta? Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja 19/2016.

Bakos, Y., & Katsamakas, E. (2008). Design and Ownership of Two-Sided Networks: Implications for Internet Platforms. *Journal of Management Information Systems.* 25(2), 170–192.

Breidbach, C.F. and Brodie, R.J. (2017). Engagement platforms in the sharing economy: conceptual foundations and research directions. *Journal of Service Theory and Practice*, 27(4), 761-777.

Brown, C. (2016). 3 Questions to Ask Before Adopting a Platform Business Model. *Harvard Business Review*, (5), 2–5.

Evans, D.S. – Schmalensee, R. (2008). Markets with two-sided platforms? *Issuesin Competition and Law and Policy (ABA Section of Antitrust Law*), 1(28), 667–693.

Evans, P., & Gawer, A. (2016). *The Rise of the Platform Enterprise*. A Global Survey. *The Emerging Platform Economy Series No. 1*.

Fehrer, J.A., Woratschek, H., & Brodie, R.J. (2018). A systemic logic for platform business models. *Journal of Service Management*, Vol. 29 (3), 443–467.

Fu, W., Wang, Q., & Zhao, X. (2017). The influence of platform service innovation on value co-creation activities and the network effect. *Journal of Service Management*, 28(2), 348–388.

Gawer, A., & Cusumano, M.A. (2008). How companies become platform leaders. *MIT Sloan management review*, 49(2), 28.

Gawer, A., & Cusumano, M.A. (2014). Industry platforms and ecosystem innovation. *Journal of Product Innovation Management*, 31(3), 417–433.

Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research policy*, 3(7), 1239–1249.

Hämäläinen, V., Maula, H., & Suominen, K. (2016). *Digiajan strategia*. Helsinki: Alma Talent Oy.

Iansiti, M., & Levien, R. (2004). Strategy as ecology. *Harvard business review*, 82(3), 68–81.

Laczko, P., Hullovaa, D., Needhamb, A., Rossiterb, A.M. & Battistia, M. (2018). The role of a central actor in increasing platform stickiness and stakeholder profitability: Bridging the gap between value creation and value capture in the sharing economy. *Industrial Marketing Management*, 76, 214–230

Laine, E., Alhava, O., Peltokorpi, A., & Seppänen, O. (2017). Platform ecosystems: Unlocking the subcontractors' business model opportunities. *International Group for Lean Construction* 2(25), 177–184.

Li, Z., & Pennard, T., (2014). The Role of Quantitative and Qaulitative Network Effects in B2B Platform Competition. *Managerial and Decision Economics*, 35, 1-19.

Muzellec, L., Ronteua, S., & Lambkin, M. (2015). Two-sided Internet platforms: A businessmodel lifecycle perspective. *Industrial Marketing Management*, 45, 140–149.

Möller, K., Rajala, A., & Svahn, S. (2015). Strategic business nets—their type and management. *Journal of Business Research*, 58 (2005) 1274– 1284.

Ozalp, H., Cennamo, C., & Gawer, A. (2018). Disruption in Platfrom-Based Ecosystem. *Journal of Management Studies*, 55(7),1203-1241.

Parker, G., Van Alstyne, M., & Choudary, S. (2016). *Platform revolution. How networked markets are transforming the economy – and how to make them work for you*. New York: W. W. Norton & Company, Inc.

Perks, H., Kowalkowski, C., Witellb, L., & Gustafsson, A. (2017). Network orchestration for value platform development. *Industrial Marketing Management*, 67, 106–121.

Thomas, L.D., Autio, E., & Gann, D.M. (2014). Architectural leverage: putting platforms in context. *The Academy of Management Perspec*tives, 28(2), 198–219.

Tura, N., Kutvonen, A., & Ritala, P. (2018). Platform design framework: conceptualisation and application. *Technology analysis & strategic management*, 30(8), 881–894.

Vargo, S. L., & Lusch, R. F. (2017). Service-dominant logic 2025. *International Journal of Research in Marketing*, 34(1), 46-67.

Viitanen, J., Paajanen, R., Loikkanen, V., & Koivistoinen, A. (2017). Digitaalisen alustatalouden tiekartasto. *Innovaatiorahoituskeskus Tekes.*