

JOURNAL OF BUSINESS MODELS

Intra-Organizational Business Model Implications of Inter-Organizational Collaboration

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Abstract

This short paper explores the intra-organizational business model implications of organizations as they enter different inter-organizational collaborations, as exemplified by clusters, networks, and ecosystems. The aim is to show, conceptually, how organizations must consider the degree of inter-connection and the value co-created with other actors through inter-organizational collaboration, as these affect the value creation, value configuration and value capture of their existing business model(s).

Keywords: Business models; inter-organizational collaboration; ecosystem; network; cluster

Please cite this paper as: Holm, C. G. and Kringelum, L. B. (2022), Intra-Organizational Business Model Implications of Inter-Organizational Collaboration, Vol. 10, No. 1, pp. 1-10

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ISSN: 2246-2465

DOI: <https://doi.org/10.54337/jbm.v10i1.6827>

Introduction

Taking part in an inter-organizational collaboration—such as a cluster, network or ecosystem—can create a competitive advantage for the involved actors (Håkansson and Ford, 2002; Adner, 2017). However, the process of changing relationships within and across the business context is unpredictable, and requires organizational openness to increase the degree of relational dependency. The lack of control and limited possibility of predicting outcomes of collaboration is a managerial challenge (Wilkinson and Young, 2002), as strategic decisions must be made regarding an uncharted potential while sustaining and contemplating potential changes to the existing business model; this poses a challenge resembling the management of ambidexterity. Thus, inter-organizational collaboration can be challenging, and can require changes to both business practices and different parts of the existing business model(s).

The aim of this paper is to illustrate aspects of inter-organizational collaboration that affect the decision-making process of practitioners who are engaging in or orchestrating different types of collaboration. In addition, an initial theoretical conceptualization is introduced to bridge the fields of business models and organizational collaboration. Based on a conceptual discussion, this is explored by illustrating the business model implications that might occur when organizations further their development from being a part of a cluster, to becoming part of a network or an ecosystem. In doing so, we explore both potential considerations for decision-making practitioners and the theoretical development and implications of collaborative business models.

The study of changing relationships among organizations is longstanding and founded in (amongst others) the discussion of networks and strong and weak ties which Granovetter (1973) set forward. As digital technologies in both production and communication continue to create new possibilities for (inter)organizational interaction, the possibilities for creating strong ties have never been greater. Ties come in many forms, from bilateral strategic alliances, to clusters, networks, and ecosystems that all represent ways of creating value via ties to other organizations. In recent years, the concept

of ecosystems has gained especial prominence in business research (Jacobides *et al.*, 2018). Ecosystems are centered on a joint value proposition created throughout a structure of interdependent activities (Ritala *et al.*, 2013). However, developing a new ecosystem is not easy and therefore not for all—especially because the creation of a new value proposition potentially challenges organizations' existing trajectories (Ritala *et al.*, 2017).

While existing research has focused on defining what business ecosystems are, when and why they emerge, and how they operate (Jacobides *et al.*, 2018), little attention has been paid to the organizational and business model implications of entering into a network or ecosystem constellation in which new collaborative business models are established (Kringelum, 2017). The following review introduces existing literature on clusters, networks, and ecosystems, to conceptually identify the business model implications of entering into these constellations. Based on the review, the co-existence of inter-organizational relationships is discussed from the perspectives of value creation, value capture, and value configuration, to cover the broad perspectives regarding business model implications. Based on the definition of Lepak *et al.* (2007, p. 183), we define value creation as being dependent on the subjective realization of value by the customer in question, which reflects a willingness to engage in transactions with the organization. Value capture concerns the appropriation of value, which, when dealing with inter-organizational relationships, also addresses the division of value appropriation among organizations (Dyer *et al.* 2018). Value configuration encompasses the efficient mix of resources, activities, and channels designed to create and capture value (Taran *et al.* 2016).

Business Model Implications of Entering Into Clusters, Networks and Ecosystems

Although much business model research takes the focal firm as the central level of analysis, value creation does not occur in isolation within organizational boundaries. When value creation transcends the

focal organization, new types of collaboration and cooperation become of relevance (Zott *et al.*, 2011). It is increasingly recognized that business model innovation should be based on stakeholder inclusion, open business models, or collaboration within networks (Storbacka *et al.*, 2012). As emphasized by Kringelum and Gjerding (2018), the processes of business model innovation are often affected by the relational links of the value network that surrounds the focal organization. However, this creates new challenges, as it requires alignment among business models via both intra- and inter-organizational configurational fit (Nenonen and Storbacka, 2010).

Taking the intra-organizational point of view, entering into new forms of collaboration has an effect on both the existing business models and those that might be in development. The effects depend on the degree of coupling among organizations, and on the degree of co-created value, which may differ depending on the extent of inter-organizational collaboration in clusters, networks, and ecosystems. This has implications for organizations' value creation, value capture, and value configuration, and for the calculated degree of value slippage (Lepak *et al.*, 2007) which organizations might have to accept based on the interdependency of their interorganizational relationships.

Clusters

The business model implications of entering into a cluster are elaborated based on the cluster definition set forward by Porter, who defines clusters as:

... geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g. Universities, standards agencies, trade associations) in a particular field that compete but also cooperate. (Porter, 2000)

Geographic concentration is an important aspect of the definition; it is also emphasized in extant cluster literature, in which there is consensus regarding the geographic concentration of companies in the definitions of clusters (Porter, 2000; Maskell, 2001; Carayannis and Campbell, 2009). Geographic concentration does not represent a clearly defined area, but rather depends on the scope, meaning that

a cluster can vary in geographic size from 10 companies in a municipal area to, for some industries, certain countries as a cluster. Carayannis and Campbell (2009) expand the understanding of clusters by dividing them into two dimensions: geographical clusters and sectoral clusters. A geographical cluster is defined by companies' specific location, and without any focus on certain industry-specific characteristics. Meanwhile, sectoral clusters are defined based on specific sectors or industries, thus creating a more specific cluster profile compared to geographical clusters (Carayannis and Campbell, 2009).

We define geographic clusters based on Carayannis and Campbell (2009), as consisting of organizations that operate in the same geographic location. These organizations may be either private companies or public organizations that are loosely connected units within a geographic area, but are *not defined* by the industry in which the organizations are operating. In contrast, sectoral clusters *are defined* by the specific industry in which the organizations are operating, but otherwise have the same characteristics as the geographical clusters.

Business model implications of clusters

Taking the definition of clusters as a point of departure, there is not necessarily a direct transactional link between companies in a given cluster. They might compete, they might cooperate, and they might be parts of the same value network (Allee, 2008) without any direct interconnection. While the cluster provides potential for establishing relationships (Porter, 2000), it is not inherent in the structure, so organizations must proactively seek stronger ties if they are to obtain full potential. The value created from being part of a cluster is thus indirect, and will not necessarily affect a company's perceived use value (Lepak *et al.*, 2007); belonging to a cluster thereby may not significantly change the existing business model of the focal organization. Changes to value configuration are limited due to the primarily indirect nature of advantages related to clusters, as these advantages are often driven by external economies or spillovers from the business environment. Nevertheless, a cluster provides the potential for value configuration through strengthening ties.

Networks

Håkansson and Ford (2002) define networks as “a structure where a number of nodes are related to each other by specific threads.” The connections between the actors in a network comprise an important characteristic in the network literature (McEvily and Zaheer, 1999; Carayannis and Campbell, 2009; Barile *et al.*, 2016). A network is a constellation in which organizations can be connected through interaction and complementarity. Being part of a network can create certain advantages for the actors, including: the exchange of information among actors, which may not have been obtained otherwise; the outsourcing of functions to other members of the network; and the creation of a base from which organizations can further develop (Håkansson and Ford, 2002; Carayannis and Campbell, 2009). Barile *et al.* (2016) distinguish between networks and ecosystems based on the value created among the actors in the two instances. Networks, in contrast to ecosystems, focus more on the connection among actors rather than on the co-creation of value. Based on this conceptualization, we regard the value interaction of networks as a connection among organizations that are based on relationships and interactions among the actors within the network. In a network, there is focus on information and knowledge sharing. The degree of interconnection among the actors is greater than that in clusters, but less than that in ecosystems.

Business model implications of networks

The network represents a higher degree of connection among actors, which includes knowledge sharing and potential new value configuration through the creation of tighter links. Building and maintaining the network becomes a central activity, and often requires a network broker (facilitator), who can maintain structure and neutrally facilitate interactions (Huggins, 2000). Often, as a network becomes more formalized, its potential for value creation and capture increases. The focal organization must therefore take into account how openly to approach the network structure: Which role do they aim to sustain, and what are the potential effects of the existing business model? Because a given network might be based on the value network of the existing business model, tighter links within the network can ensure both explorative and exploitative processes

(Möller and Halinen, 2017) that create potential for both value creation and value capture.

Ecosystems

One of the biggest differences among clusters, networks, and ecosystems is the degree of connections among the actors involved. Ecosystems are characterized by a continuous flow of either knowledge, communication, or materials among the organizations, which creates closer connections among the actors (Adner, 2017; Moore, 1993). Furthermore, Adner (2017) characterizes ecosystems as a structure in which organizations interact to materialize a value proposition. Thus, ecosystems have a greater focus on the co-creation of value among actors, in comparison to clusters and networks. The co-creation of a value proposition contributes solutions to mutual issues by combining resources from the actors in the ecosystem (Adner, 2017; Barile *et al.*, 2016).

According to Spigel (2017), ecosystems consist of attributes—material, social, and cultural—all of which must continuously be balanced. Therefore, it is not possible to develop ecosystems by merely focusing on one of the attributes; development requires a more holistic view of ecosystems. Ecosystems are defined as a closer connection among the actors, in which the focus is not only on information and knowledge sharing, but also on the co-creation of a mutual value proposition (Adner, 2017). Furthermore, there is continuous flow of either communication, knowledge, or materials within the ecosystem.

Business model implications of ecosystems

When regarding ecosystems as structures to create joint value propositions, the business model implications for the focal firm can be extensive. As Lingens *et al.* (2021) demonstrate, entrepreneurs can structure their entire business model on their interactions with other organizations in an ecosystem. Thus, ecosystem interaction will affect the focal organization, which might find itself in a situation of managing multiple business models (Markides and Charitou, 2004) both within and outside the ecosystem structure. This creates implications for value configuration, value creation, and value capture, when it affects the resource distribution across multiple business models. Thus, an ecosystem requires both alignment structures,

and an untangling of the multilateral relations among actors (Adner, 2017). While each organization within an ecosystem has its own business model, all of the participating organizations can be interconnected in producing a joint value proposition. All firms have their own approaches to and intentions regarding the ecosystem, and thus all have their own ecosystem strategies (Adner, 2017). This naturally entails that some might also have ecosystem strategies that do not converge with the ecosystem as a whole. Thus, organizations in an ecosystem naturally take on various roles during ecosystem establishment.

Building on a system of alignment, ecosystem management mechanisms must be implemented to maintain, realize, and deploy potential value creation and value capture (Ritala *et al.*, 2013). Thus, the needed threshold level of coordination for creating and capturing value in a specific ecosystem must be determined (Adner, 2017).

Co-existence of the concepts

Figure 1 illustrates, as elaborated above, that entering into a cluster, network, or ecosystem will have different implications for the business model of the focal firm. The concepts covering various degrees of inter-organizational collaboration exist simultaneously; they are complementary constellations that depend on the degree of interaction reflected in the connection and co-creation of value among the participating organizations. Thus, a network can be a subsystem in a geographic cluster, and furthermore, a geographic cluster can feature different sectoral clusters. The degree of interconnection and co-creation of value are the driving forces when examining the differences among different constellations. Based on the above, Figure 1 visualizes the transition from clusters and networks to ecosystems based on the degree of connection and co-creation of value.

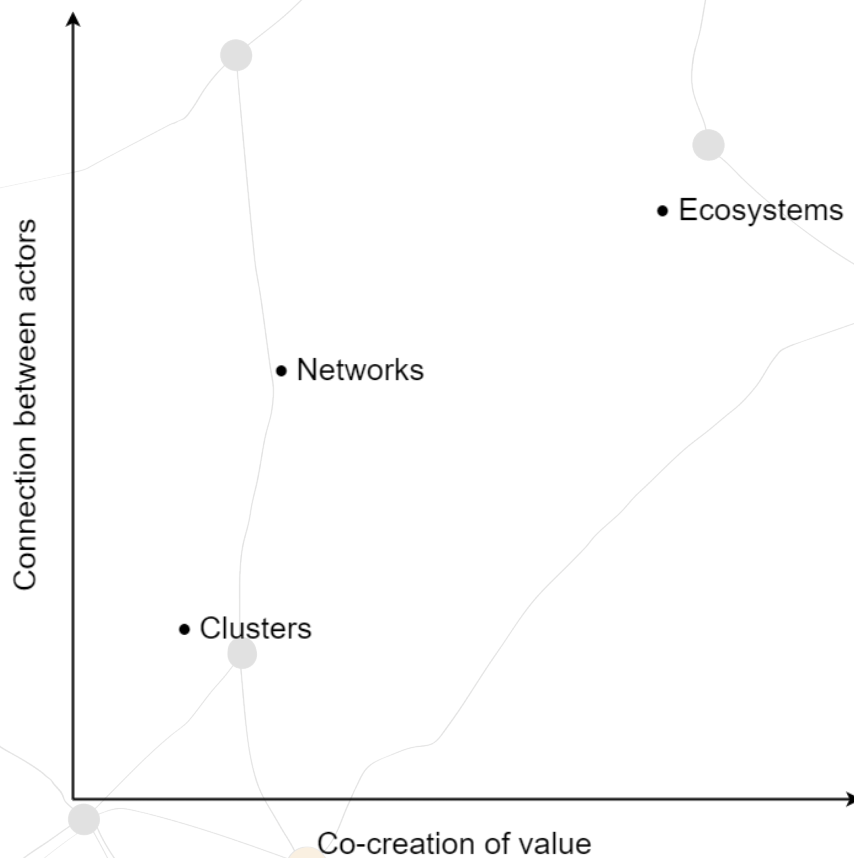


Figure 1: Degree of connection and co-creation in inter-organizational collaboration

Discussion

The conceptual exploration above illustrates why it is of great importance that organizations possess the necessary knowledge regarding how to work with their business model(s) when entering clusters, networks, or ecosystems, based on the potential implications. Having this knowledge increases the chances of obtaining improved results when entering different types of business constellations. The following section discusses how organizations and leaders can work with their business models to create the appropriate conditions based on their specific contexts.

Value creation

Value creation reflects the use value for customers, and the price they are willing to pay for value creation (Lepak *et al.*, 2007). Inter-organizational relations can change the threshold of value creation within and among organizations. As Storbacka *et al.* (2012) argue, meso-level types of organization are developed through rule structures that create new market practices. Thus, when an organization enters into an inter-organizational setup—either tightly or loosely coupled—as a cluster, network, or ecosystem, new market practices are created that can also create ripple effects for the business model of the focal firm. Closer coordination and value co-creation make firms dependent on both individual and joint value creation objectives (Storbacka *et al.*, 2012). Depending on the degree of autonomy and coupling, the focal firm might find itself in a position in which its existing business model becomes superfluous or needs radical adjustment.

As Le Pennec and Raufflet (2018) argue, the ultimate motivation for engaging in collaboration is value creation. However, the competitive advantage gained through collaboration, based on the appropriable quasi-rents, remains firm-specific, and will often overlook the resources embedded in the interfirm relationships (Duschek, 2004; Dyer and Singh, 1998). The value creation of the different collaboration types varies greatly. While clusters and networks create potential for value creation through closer coupling among organizations, the interdependence of value creation grows significantly within ecosystems. When an organization enters a cluster,

the value creation is primarily indirect, because the participants' value creation arising from the cluster comes in the form of the increased pool of knowledge and workforce that firms contribute. Examining the value creation implications of networks reveals that a central shift occurs, from internal value creation towards potential co-creation of value through tighter linkages among actors within those networks. The shift toward co-creation of value is significantly increased when organizations enter ecosystems, because of the necessary focus on shared value propositions. This shift, from value being created within firm boundaries toward being created among actors of networks and ecosystems, involves challenges regarding how organizations manage this value co-creation (Nenonen and Storbacka, 2010).

Value capture

Value capture also differs greatly among the different constellations. Clusters contribute a different value compared to that of networks or ecosystems (Porter, 2000; Adner, 2017). The complementarities of a cluster are relatively easy to obtain, because complementarity in a cluster is a passive value that is based on each organization's location. In contrast, the value capture in a network is more active than that of a cluster because of the broader mutual sharing of knowledge and information. Organizations might obtain unique knowledge about competition, customers, and other important matters, which might prove useful to each company (McEvily and Zaheer, 1999).

By entering an ecosystem, organizations create value in ways that enable other participating actors to receive value from one another. The organizations in an ecosystem expose parts of their business model to other actors; therefore, to compensate for the increased risk, the potential value capture must be greater in ecosystems than in other setups. In such meta-organizational setups, value creation and value capture are both reliant upon intricate links of dependence across the value network. Moving upward in the value network can contribute to increasing value capture, but leaders need to be aware that the increased value comes with the price of relational

dependency and the demand to create value for other actors (Barile *et al.*, 2016).

Value configuration

Taking an inter-organizational perspective on the construct of new relations in clusters, networks, or ecosystems, the degree of collaboration among organizations depends on the temporal expectations, the purpose of the collaborative efforts, and the degree of organizing among participants (Kringelum, 2020). As organizations move from clusters to networks and ecosystems, the key partners of the business model become more important because of the interconnections among the actors. Therefore, networking and stakeholder-related activities become increasingly important focal areas for leaders when their organizations enter networks or ecosystems.

As Kretschmer and Schilling (2020) argue: “the success of platforms hinges on cooperation, coordination, and integration across a diverse and often very large array of organizational units and agents, some of whom face conflicting incentives or are direct rivals.” These success factors are thus ingrained in the existing business model of the organizations that collaborate within an ecosystem. The cooperation among organizations in platforms can be inspired by Spigel (2017), and by the attributes—material, social and cultural—of which ecosystems consist. It is insufficient for leaders to merely focus on, for example, the material aspects of cooperation with other organizations; leaders need to incorporate a holistic view that focuses on social and cultural attributes as well to create the best conditions (Spigel, 2017). As discussed above, the coordination aspect is of great importance to the success of the platform because multiple actors are working on the shared value proposition (Kretschmer and Schilling, 2020). Based on this, organizations need to be able to coordinate effectively with the different actors in their specific constellation. This coordination is especially important when working in ecosystems, because of the co-creation of value and the degree of interconnection.

Exploring the value potential in the interdependencies created among actors requires acknowledging the interplay among existing structures and the agency of organizational actors within each

inter-organizational form. The interconnection of organizations is the fundamental idea underlying the classical value chains perspective which Porter (1985) advanced. However, as inter-organizational relationships become less materially oriented and less transactional, knowledge and immaterial value flows increase in importance. To support the sharing of knowledge and immaterial value, leaders need to create trusting relationships with the other actors operating in the value network (Hakanen *et al.*, 2016). When moving toward a higher degree of value co-creation, the focal firm becomes dependent on the responsiveness of the external relationships (Kringelum and Gjerding, 2018). As the need for closer connections among actors increases, the need for relational capital grows. However, creating relational capital among organizations can require changes in the key activities of the focal organization, which can further imply that organizations need an orchestrator to facilitate the ecosystem. In the light of this, leaders need to be prepared to outsource responsibility to other organizations in order to focus on joint value propositions (Lingens *et al.*, 2021).

Implications and Future Research

This short paper explores how the business model of a focal firm can be affected and experience related implications in the value creation, value capture, and value configuration when a firm enters a business cluster, network, or ecosystem. For practitioners working with inter-organizational collaboration, awareness of both the possible advantages and risks when entering these types of collaborative models is important.

Clusters provide potential for knowledge sharing and interaction, without significant effects on the business model of the focal firm. While geographical co-location of sectorial clusters can create a competitive advantage via both access to a specialized workforce and co-branding efforts (Maskell, 2001), the effects on value creation will be low, and therefore, value capture is also minor.

Networks create potential for closer connections among their actors, but managers should be aware of the time spent on the network compared to the value creation provided through the network.

Furthermore, there is a risk of creating structures, which might lead to inertia (Håkansson and Ford, 2002).

Collaborating in an ecosystem provides potential value creation through joint value propositions, beyond what is possible for the individual organizations on their own, via tight coupling and sharing of knowledge and resources (Jacobides *et al.*, 2018). The increased potential in ecosystems comes with a higher degree of risk based on the interdependencies created, which presuppose that the ecosystem is prioritized by all partners operating within it (Adner, 2017). Alignment of expectations is essential, as misalignment might lead to ecosystems failing or radically changing, because of the multiple different interests or expectations among the participants (Lund and Nielsen, 2014).

As conceptualizations of value creation, value capture, and value configuration among organizations

are rare, this paper provides a starting point and an initial conceptual framework for empirical exploration of the topic. Future research, based on empirical exploration of the different contexts, can help to increase knowledge regarding how different organizations' business models change based on how they approach and engage with inter-organizational relationships.

Furthermore, the notion of inter-organizational collaboration in various forms is dependent on the establishment of an inter-actor configurational fit among the participants' business models. As Storbacka *et al.* (2012) argue, this can occur at a business model meso-level through rule structures inherent to the market practices. Thus, the particular distinction of the micro and meso-level structures influencing the processes of value creation, value capture, and value configuration, as well as the distinction between intra- and inter-organizational business model innovation, are key areas for future research.

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