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## **Strategic collaboration on business model innovation**

*A transaction cost perspective*

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STRATEGIC COLLABORATION ON BUSINESS MODEL INNOVATION. A TRANSACTION COST PERSPECTIVE

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ABSTRACT

The present paper focuses on collaboration as a source of hybridization of the market in the case of business model innovation. The basic argument is that while hybridization economizes on transaction costs, it also gives rise to transaction costs. In effect, transaction costs appears as a dialectical phenomenon. The argument is illustrated by a narrative of a case of radical business model innovation. The narrative shows how collaborators economize on transaction costs by developing a mutual understanding and shared interpretation of business model innovation, but at the same time gives rise to transaction costs elsewhere in the ecosystem to which the collaborators belong.

Keywords: Collaboration, transaction cost

**Title**

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**Abstract**

The present paper focuses on collaboration as a source of hybridization of the market in the case of business model innovation. The basic argument is that while hybridization economizes on transaction costs, it also gives rise to transaction costs. In effect, transaction costs appear as a dialectical phenomenon. The argument is illustrated by a narrative of a case of business model innovation in a port setting. The narrative shows how collaborators economize on transaction costs by developing a mutual understanding and shared interpretation of business model innovation, but at the same time gives rise to transaction costs elsewhere in the ecosystem to which the collaborators belong.

**Keywords**

Strategic collaboration, business model innovation, transaction cost economics, generation of ports.

## 1. Introduction

Collaboration on business model innovation involves the strategic issue of how the collaborating firms strike a balance between internalization and externalization. A strategic issues which presents a dichotomy from the core of transaction cost economics. In the present paper, we address the issues of collaboration on business model innovation from a transaction cost perspective

Collaboration in the form of cooperative strategies (Contractor & Loranger 1988) and strategic alliances (Todeva & Knoke 2005) is by no means a new research topic. However, the issue of collaboration is becoming increasingly important. Repositioning at the market place is a strategic and practical challenge which companies are continuously contemplating, and it is increasingly recognized within economics and business research that the complexity of market dynamics and competitive pressures create incentives for companies to collaborate (Miles, Miles and Snow, 2005; Bøllingtoft *et al.*, 2012). Collaboration is studied within various lines of research, covering both the macro, meso and micro levels. At the macro level, the study of collaboration has appeared in studies of industrial districts (Marshall, 1890; Pyke, Becattini and Sengenberger, 1990), national systems of competitiveness (Porter, 1990), and regional and national systems of innovation (Lundvall, 1992; Nelson, 1993; Asheim and Gertler, 2005), which are informed by the idea of organized markets (Lundvall, 1988). At the meso level, collaboration is frequently studied in terms of clusters (Porter, 1998; 2000; Bresnahan, Gambardella and Saxenian, 2001; Hospers, Desrochers and Sautet, 2009), networking (Håkansson, 1987; Håkansson and Snehota, 2006), value networks (Christensen and Rosenbloom, 1995; Chesbrough, Van Haverbeke and West, 2006), and ecosystems (Moore, 2006; Adner, 2012). At the micro level, the study of collaboration occurs in numerous case studies, and is often at the conceptual level addressed in terms of balances and tensions, e.g. in the case of balancing exploration and exploitation (March, 1991; Holmqvist, 2004), realigning absorptive capacities (Nooteboom *et al.*, 2007; Knoppen, Sáenz and Johnston, 2011), and bridging competition and cooperation (Brandenburger and Nalebuff, 1996; Bengtsson and Kock, 2000; Raza-Ullah, Bengtsson and Kock, 2014). Recently, collaboration has been introduced in the research of business models, however mostly described as an approach or conceptual artefact to generate ideas or innovations (Eppler and Hoffman, 2012; Rohrbeck *et al.*, 2013) thus overlooking the collaboration in itself. Furthermore, the process of collaboration is, as stated by Thomson *et al.* (2009) frequently overlooked in research. Thus, we aim to develop the research of collaboration in business model

innovation by presenting a narrative of a process continuously with discussing the transaction costs and effects of collaboration as a dialectical phenomenon.

By including a recent longitudinal action research case study in a port setting, we follow the approach highlighted by Laudien and Daxböck (2015), who in their study of business model change in manufacturing firms emphasize the need for research on the actual development process.

In general, the study of business models can be positioned in two main lines of research, i.e. a dominant approach which study business models as actual configurations by which organizations create value (e.g. Chesbrough and Rosenbloom, 2002; Zott and Amit, 2010), and a less dominant approach which study business models as cognitive representations that management apply in order to identify the system of value creating activities (e.g. Magretta, 2002; Baden-Fuller and Mangematin, 2013; Kringelum, 2015). Our approach bridges both lines of research in the sense that we are following a process of developing a collaborative business model initially as a cognitive representation which is grounded in the configurations and current value creation of the firms in the collaboration. Thus, our discussion will build on the notion widely shared among the abovementioned macro/meso/micro level approaches that interorganizational economic activities are organized and thus subjected to organizational setups serving coordinative purposes.

While the lines of research which we have described so far consider collaboration to be the normal state of affairs, mainstream economics take the opposite view that collaboration reflects pathologies of market dynamics. However, there is also a tradition within economic theory for interpreting collaboration as a remedy for market failure, i.e. a way to solve coordination problems arising from information asymmetry and uncertainty. The basic idea is that since there are costs associated with using the market as means of coordination (Coase, 1937), hybrid forms of contractual arrangements or even devolution of the market in the form of hierarchies occur (Williamson, 1975; 1981). Although intuitively appealing, and endowed with high normative and prescriptive value in guiding and influencing the decision of management (Rubin, 1993), this line of thinking does not occur in the current conceptualization of collaborative business models (Rohrbeck, Konnertz and Knab, 2013). Although it is widely recognized that networks and alliances are core contexts for business model innovation (Bouncken and Friedrich, 2016 based on Amit and Zott, 2001) as it can enhance the value creation and capture of organizations, it is of relevance to consider the risk of opportunism that is inherent in this line of business model innovation (Bouncken and Friedrich, 2016).

In the following, we will explore the extent to which transaction cost economics can inform the research of business model innovation in the form of collaboration. The discussion proceeds in three steps. First, section 2 discusses the theoretical implications of analyzing collaboration from a transaction cost perspective and what it implies for business model research. Following this insight, section 3 embarks on a narrative of business model innovation in a specific company, which enjoys the roles as both a firm, a framework for other firms, and a facilitator of cooperation between economic actors, and explores how this company has engaged in business model innovation with another company. Finally, the concluding section 4 summarizes our findings and discusses limitations and avenues for future research.

## **2. The transaction costs of collaborating and its implications for business model research**

When firms initiate collaboration they are actively changing the boundaries of the firms and thus the interaction with the business environment. This process has been a recurring point of discussion in both practice and academia, and within economics the change of the boundaries of the firm has been explained by the impact of costs associated with coordination via the market (Coase, 1937). Following this line of thinking and arguing that transaction costs reflect uncertainty, bounded rationality, and the occurrence of asset specificity, Williamson (1975) – to some extent inspired by the Hayekian tradition – has argued that markets and firms are alternative setups for transactional activities. In this line of reasoning, costs associated with transactions are the comparative costs that might occur when conducting a transaction using different modes of institutional contracting. In consequence, transaction costs can be used for explaining the choice of which governance form is more efficient in a given economic context (Amit and Zott, 2001).

Williamson's approach is based on the assumption that uncertainty can be divided into general and behavioral uncertainty. While general uncertainty in the Knightian sense (Knight, 1921) is beyond the scope of management, behavioral uncertainty is not which makes it especially interesting regarding the impact of collaboration. According to Williamson, the behavioral uncertainty is not only associated with bounded rationality and incomplete information, but also the deliberate opportunistic behavior of actors. In order to mitigate these sources of uncertainty, organizational arrangements must be developed, as for instance hierarchies (Simon, 1991) or extended contracting (Williamson, 1975). However, there is a limit to contracting, because as the degree of complexity

increases, there is a diminishing possibility of including every conceivable aspect in a contract while still being able to reap the rewards of external knowledge sharing and development.

Part of the criticism of transaction cost theory has advocated that when comparing organizations and markets, the internal potentials of organizations may be overlooked. In essence, the value of an organization should not be assessed in terms of hierarchical advantages of controlling human behavior, but rather in terms of the ability of actors to take initiative, cooperate, and learn – abilities which might lead to innovation (Ghoshal and Moran, 1996). Thus, the need for considering other combinations along the market-hierarchy dichotomy is pivotal. As argued by Williamson (1985: 85), “transactions in the middle range are much more common”, and expanding on this observation we may argue that intermediate transactional configurations are not only hybrids but organizational forms in their own right (Powell, 1990) that blend hierarchical and market elements (Todeva & Knoke 2005). This argument is of essence when discussing the configurations of transactions and is pertinent to the discussion throughout the present article. Inspired by Powell (1990), our aim is not to add to the existing critique of transaction cost theory, but to include the relevant parameters which need to be considered when building collaboration through business model innovation.

## **2.1. Collaborative business models**

The difficulty of distinguishing the advantages of hierarchies and markets as opposing ends of a continuum is pertinent to the development of business model theorizing, as multiple researchers approach the business model as an architecture or structure (Tapscott, 2001; Teece, 2007) which encompass “the organization of a focal firm’s transactions with all of its external constituents in factor and product markets” (Zott and Amit, 2008: 1). Furthermore, Zott and Amit (2008) describes the business model as “.. the overall *gestalt* of these possibly interlinked boundary-spanning transaction”. Thus not referring to business models simply as transactions but rather highlighting the fact that business models are not confined within the firm’s boundaries, but considered in the context of the external environment. Following Tushman, Lakhani and Lifshitz-Assaf (2012) there is a need for organizational research to move beyond the distinction of open or closed firm boundaries and instead consider more complex ways of organizing through different boundary options. Consequently, business models structured as pure market transactions or hierarchies in the Williamsonian sense are rare phenomena, and, instead, hybrid approaches in which firms purchase

capacities in complement to internal capacities is the most common approach among contemporary firms (Teece, 2010). In other words, the dominant form of economic organization within industrialized countries is converging on activity networks, thus bridging the market-hierarchy dichotomy (Gjerding and Kringelum, 2015).

Thus, it seems appropriate to argue in favor of a market-hierarchy continuum along which several hybrid approaches embedded in the value network of firms might be found. Inspired by recent developments in institutional theory (Seibel, 2015) stressing that mechanisms of co-ordination rather than sectorial affiliations create hybrid forms, and by Powell (1990) who set forward the need for considering more specific forms of collaboration as means of exchange, we point to a need for developing a more clear-cut distinction of the approaches to interaction that are being applied by contemporary firms. Consequently, the following section focuses on which dimensions to consider when discussing how the transaction cost approach can guide the development of collaborative business models.

## **2.2. Dimensions of collaboration**

First, when applying the decision principles of transaction cost theory, it is important to distinguish between cooperation and collaboration, as this distinction might be more than a question of semantics. Based on the distinction between co-operation and collaboration set forward by Miles *et al.* (2005: 40) we apply the following definitions: While cooperation may be defined in terms of firms working together in order to achieve individual advantages, collaboration may be defined as firms working together in order to achieve mutually beneficial outcomes.

Thus, cooperation may lend itself more readily to pure transaction cost analysis, while transaction cost analysis becomes more complicated in the case of collaboration, as collaboration is more inclined to be based on intrinsic motivation and caring trust (Miles, Miles and Snow, 2005). The emphasis on mutual interests and behavior (Powell, 1990) presupposes the factoring in of new “entangling strings” including aspects such as reputation, friendship, interdependence, and altruism (Macneil, 1985) which are not captured by pure transaction cost analysis. Thus, in this paper we set forward cooperation as an operational decision, which is traditionally based on transaction cost calculations, while collaboration is termed as a more strategic choice, which in a larger extent is based on the perceived future benefits (Todeva & Knoke 2005). Thus, we aim to challenge the

current perception of transaction costs as solely informing the operational choices of business model innovation.

Second, the degree and direction of the interaction forming the collaborative efforts between firms must be considered. Generally speaking, firms collaborate up- and downstream in their supply chains with the aim of improving activities through cost reduction, optimization, and increased flexibility (Miles, Miles and Snow, 2005). While collaboration taking the form of vertical or horizontal integration may lend itself to pure transaction cost analysis, collaboration may also take the form of cooptation (Brandenburg and Nalebuff, 1996; Bengtsson and Kock, 2000) in which the collaboration includes actors which are not in direct contact with the focal firm, thereby covering both competitors and complementors. In this case the collaborating firms must strike a balance between internalization and externalization which relies more on matching business activities for market expansion purposes than on economizing with costs (Raza-Ullah, Bengtsson and Kock, 2014).

Considering these increasingly complex degrees and directions of interaction, we face the problem of how to define transaction costs. In order to determine transaction costs as a guiding principle for organizational arrangements, we must assume that the transactions between companies are known a priori. However, when engaging in collaboration, the expected output and thus value creation of collaboration is an emergent phenomenon, and, as argued by Foss (2002), strategic aspects of the creation, capture and protection of value become more important. Although collaboration is likely to diminish transaction costs through the establishment of trust (Gulati 1995), collaboration is a dynamic process of value creation where new opportunities arise, thus creating new instances where the calculation of transaction costs is challenged. In effect, rather than regarding the transaction cost approach as a normative guideline, we are inclined to consider the coordination of transactions as a dialectical phenomenon, where solutions and challenges interplay dynamically through time as the collaboration unfolds.

### **3. The evolution of collaboration in the setting of a fourth generation port**

The main impression from the discussion so far is that collaborating firms economize on transaction costs by creating hybrid combinations which are neither market nor hierarchies, but represent various ways of organizing the market. The hybrids reflect that business models are not confined

within the boundaries of a single firm, and that creation, capture and protection of value is an emergent phenomenon dependent on how hybridization occurs and evolves. Collaboration implies that the collaborators create mutually beneficial outcomes, which to an important extent depends on the social ties that link the collaborators together. The nature of transaction costs change over time to the extent that solutions to challenges of collaboration create tensions between collaborators. Tensions occur as new ways of organizing the market substitutes existing hybrids, and a major challenge of collaboration is, therefore, to strike a balance between internalization and externalization which accommodates the needs for organizing the market.

In the following, we narrate how the Port of Aalborg has created a new strategy focusing on how the port can evolve through time by balancing three different roles at the market, two of which aim at organizing the market. By combining the three roles, the port is able to engage in hybridization which accommodates the globalization of modern ports. However, this is a challenging endeavor since the process of hybridization creates selection pressures in the organizational field which ties the three roles together. Subsequently, we narrate a case of collaboration where the selection pressures have been mitigated by internalizing the interplay between the three roles in the collaboration as such. From a transaction cost perspective, the case of collaboration is an example of how asset specificity can be developed without being internalized in a single actor, but instead controlled by sharing asset specificity across organizational boundaries.

### **3.1. Port of Aalborg: Emerging strategic roles**

Late September 2013, the management group at the Port of Aalborg engaged in a three day seminar in order to discuss the current state and future development of the activities of the port. The seminar was both a practical and a symbolic event. It was practical in the sense that the purpose of the seminar was to develop strategic responses to current challenges and business opportunities. It was symbolic in the sense that these responses were supposed to reflect a new way of conceiving what a port is and what it is supposed to do. So, the managerial intent of the outcome of the seminar was that the strategic responses which were developed should reflect a qualitative shift in the nature and scope of port activities.

There were two reasons for focusing on a qualitative shift. First, the opinion of the top management of the port was that although the activities of the port had grown impressively in terms of turnover

and profits, the current path of expanding was not sustainable. Future expansion along existing lines was quite feasible, but it would lead to declining profits unless it was linked to new types of value propositions. Second, the contribution of optimization and lean activities to the sustainability of profits was still important, but it would become a dead-lock unless it targeted new ways of combining the activities and capabilities of the port. In effect, the managerial intent of the seminar was to conceptualize how solutions to these different kinds of problems could be combined into a new way of conceptualizing the core business of the port.

During the following year and progressing into 2015, the management group undertook a series of seminars focusing on how to develop the nature and scope of port activities. Several projects and activities emerged from the seminars, and other projects and activities were developed between seminars and fed into the strategic reflections of the management group. These projects and activities were mostly of a practical nature aimed at various purposes such as developing new fields of commercial endeavor, elaborating operating procedures and logistics, changing the leadership approach of the port, and instigating organizational change (Gjerding and Kringelum, 2015; Krabbe and Holstein, 2015). Guiding this process was a managerial intent of promoting three roles of the port. First, the role as a firm which takes care of inwards and outward bound logistics on a commercial basis with the aim of securing stakeholder profits and accumulating capital for future investments; second, the role as a framework for firms operating within the port parameter with the aim of contributing to profits, capital accumulation and employment with the local and regional community; and third, the role as facilitator of cooperation and even clustering among firms, knowledge institutions and authorities with the aim of stimulating long term economic and social development within the local, the regional and the national community. The interplay between these three roles was seen as a way of developing ambidexterity and meeting the challenges of globalization, and was discursively constructed as The Intelligent Port.

While the first and second roles were familiar to the port, the third was not, which represented a break with the established perception among managers of the role and functioning of the port. For centuries, the port had been a profit-earning entity which infrastructural obligations to the local and regional community, and as part of fulfilling these obligations the port had become a land and property owner, selling or renting locations and buildings to private firms, and gradually diversifying into elaborate services such as facility management and construction of specialized buildings for commercial purposes (Gjerding and Kringelum, 2015). In effect, the second role had

emerged from the first role, and the two roles had become intertwined. During recent years, the port had initiated or participated in a number of projects with knowledge institutions with the focus of improving the logistic services of the port and the logistic capabilities of firms within the port perimeter. Increasingly, in some cases associated with ongoing projects and in other cases in order to create opportunities for future projects, the port had come to play an important role as initiator and to some extent administrator of networks among private and public actors. Some of these networking activities aimed at developing commercial opportunities, while others aimed at supporting long term economic and social development of the local and regional community.

Consequently, the third role as a facilitator was gradually coming into being. While this was part of the agenda of the first seminar, the significance of the third role had to be elaborated upon during subsequent seminars and specific projects and activities, before becoming a strong part of managerial intent. The essence of this process was that shared understandings of the third role had to emerge from the combination of ongoing activities and critical reflection (Cunliffe, 2001; Shotter and Cunliffe, 2003; Chia and Holt, 2008), and a leap in shared understandings did not occur until the management group co-jointly defined key performance indicators and managerial intents which entered the strategy report of 2014, the first ever to be produced at the port. This was a kind of arresting moment (Greig et al., 2012) where shared managerial intent emerged from the disruption of previous shared understandings.

While the development of the three roles can be seen as adaptation to industrial evolution in the local and regional community, it also reflects how the Port of Aalborg accommodate to processes of globalization which requires the port to become increasingly entwined in value chains and value networks, implying that markets increasingly become organized (Gjerding and Kringelum, 2015). As such, the development of the port of Aalborg and the shift in the managerial intent of the port reflects a long term international evolution of port activities, which can be identified with successive generations of ports that represent qualitative changes in policy, strategy, scope, and organizational arrangements of port activities (Beresford et al., 2004). Currently, the general inclination of maritime research is to identify four generations of ports. According to UNCTAD (1992), the first generation of ports was “merely the interface locations for cargo between land and sea transport” (ibid. p.13) characterized by low value added activities governed by informal relationships between the port and its users (Beresford et al., 2004: 95). However, during the 1960ies ports were increasingly regarded as industrial and commercial centers which contributed to

local and regional development by supplying industrial and commercial services to users, including users which were not necessarily a direct part of the logistics activities of the port. The scope of port activities gradually became larger with an increasing focus on the improvement of value added, and the relationship between the port and its users became closer and more formalized. While the labor/capital ratio had been a decisive factor in the activities of first generation ports, access to capital became more dominant in second generation ports. During the 1980ies, third generation ports emerged, “principally due to world-wide large scale containerization and intermodalism combined with the growing requirements of the international trade” (UNCTAD, 1992: 14). Third generation ports are characterized by a strong position in international value chains, diversity of services offered, and knowledge-intensive production methods. Thus, while capital is still a decisive factor, technology and knowhow aimed at guiding information flows and improving activities have become more important as drivers for growth and increasing scope of activities. Furthermore, ports have become vehicles for industrial agglomeration, contributing widely to local and regional development.

In effect, the evolution of ports has changed the system of governance from one of loose coordination between the port, its users, and the local and regional authorities, to one of closer integration between port authorities, user strategies, and public policies for industrial and economic change. These changes have interacted with industrial, technological and social innovation aimed at creating a diversity of knowledge-intensive production and services contributing not only to the value added of commercial activities, but also to the development of local and regional industrial districts through agglomeration and interfaces between business models.

Theoretically and practically, this development has induced a discussion on what the next generation of ports may look like. UNCTAD (1999) has proposed that fourth generation ports may become horizontally integrated by common operating and administrative activities and describes the strategic alliance between the ports of Copenhagen and Malmö as an example of fourth generation governance and innovation. Observing that international logistics activities are increasingly being concentrated by global multi-port operators, Paixão and Marlow (2003) have suggested that fourth generation ports will be characterized by increasing integration of logistic subsystems guided by lean production philosophies. However, they argue that fourth generation ports will have to focus on agility in logistic chains, because they will encounter drawbacks associated with lean production.

Even though the lean theory of production provides ports with greater flexibility and lower internal and external variability over their production processes, it prevents ports from developing the extra flexibility and capacity utilization they require to exploit the opportunities arising in the near future.

(Paixão and Marlow, 2003: 361)

Consequently, they urge ports to focus on “strengthening the links between the internal and external business environments” (Paixão and Marlow, 2003: 361) aimed at creating knowledge-based agility as a proactive response to the increasing rate of change in globalized commercial activities. This argument is elaborated by Petitt and Beresford (2009) who focus on the role of ports as districenters and distriparks, i.e. agglomerated spaces for distribution within value chains and for industrial development.

However, as emphasized by Petitt and Beresford (2009), the succession of qualitative change observed by UNCTAD (1992, 1999) has been challenged by maritime researchers who argue that “rather than developing in discrete steps, ports evolve continuously, adapting to new technologies, fresh legislation, revised working practices and other influences on an as-required basis” (Beresford et al., 2004, p.93). Beresford et al. (2004) show that the governance structures across ports differ considerably in terms of the composition of public and private ownership, and that the forms of cargo processed and the processes and technology en-tailed in logistic activities cannot be associated with individual generations of ports as assumed by the UNCTAD conceptualization. Actually, “even the most advanced ports in terms of systems, equipment or terminal design often have remnants of earlier stages of development which are still contributing to the ports overall effectiveness” (Beresford et al., 2004: 97).

What appears to be the main consensus within maritime research is that the dominant features of port evolution are (1) an increasing integration between the business environments of ports and their users as a response to competitive pressures from globalization, (2) strong relationships between the innovation of port systems, and local and regional development, and (3) increasing knowledge-intensity in production processes and services within port systems. These regularities may assume various disguises such as different types of competition within and between port systems (Meersman, de Voorde and Vanelslander, 2010) and different patterns of regionalization

(Notteboom and Rodrigue, 2005) which reflect how port system stakeholders respond to competitive pressures.

As the co-existence of the roles as firm, framework and facilitator in the Port of Aalborg reflects these dominant features, the port is in a favorable position to accommodate what triggered the evolution of managerial intent within the port, i.e. the need to create new types of value propositions and new ways of combining the activities and capabilities of the port. But the co-existence of the three roles is not without challenges. The three roles do not co-exist in the sense that they function side by side in isolation. Rather, the roles are mutually reinforcing in the sense that the firm provides the short term economic basis for investment and development, while the framework secures the market in which to operate, and the facilitator pioneers new commercial opportunities which can become part of the activities within the port perimeter (Gjerding and Kringelum, 2015). However, the benefits from mutual reinforcement depend on the ability of the port to create a balanced evolution of the three roles, where each role is able to support the other two roles. As the port becomes increasingly successful as framework and facilitator, and as activities pioneered by the facilitator becomes part of the activities that the interplay between the roles as firm and framework has to engage in, the firm needs to become increasingly efficient in order to secure the economic foundation of the development of the firm.

This is, inherently, a process by which the interplay between framework and facilitator creates selection pressures on the firm (Gjerding and Kringelum, 2016). These selection pressures will reflect that the port becomes entwined in an increasing number and scope of joint activities with other actors. As quantity and scope of activities grow, the port will find it increasingly difficult to control the outcomes of events and will become more sensitive to market failure and opportunistic behavior. In consequence, how to organize the market is becoming a major strategic concern of the port management, especially because legislation and resources restrict the ability of the port to cope with uncertainties by creating hierarchical solutions to market failure. Instead, the port has to rely on processes and arrangements which do not make hierarchical control over assets and organizational processes necessary. Currently, the port engages in cases which can create a learning curve on how to develop such processes and arrangements, and the currently most important one is narrated below.

### **3.2. Internalizing the strategic roles and creating shared asset specificity**

During the period of December 2013 to December 2015, we have followed and taken part in an evolving collaboration between the Port of Aalborg and Mammoet Wind. We have conducted studies of business models within both companies and organized a series of seminars where core actors in both firms have been meeting in order to develop joint activities and organize the market on which both companies operate. The research method has been one of engaged action research (Van de Ven, 2007), and the empirical foundation of the following narrative consists of observations and interaction in the everyday activities of the companies, and organization of and participation in the seven seminars that have been held so far with the aim of developing a collaborative business model spanning activities within the two companies.

Mammoet Wind is a specialized division of the multinational heavy lift concern Mammoet. The company head office is located at the Port of Aalborg, but operates worldwide as a contractor in the wind energy industry. The activities of the company are mainly project based and depend on a wide scope of capabilities and physical assets. While most of the industry focus on minimizing costs, Mammoet Wind focuses on developing high value added solutions with a strong emphasis on safety and sustainability. The competition facing the company is fierce, and in consequence the company strives for innovative solutions which can create differentiation.

While there has been instances of cooperation between the two companies, which has occurred because the companies from time to time provides services and solutions to the same logistic chains, collaboration has not occurred prior to the seminars previously mentioned. However, in the beginning of 2013, the CEOs of Port of Aalborg and Mammoet Wind started discussing how they could potentially benefit from a better understanding of each other's business. Although the two companies are separate entities, fundamental parts of their business models overlap. The CEOs realized that if the companies were to explore and exploit the interdependencies while at the same time minimizing the overlap between their business models, the companies could potentially optimize existing activities and at the same time increase the scope of value creation. However, as key actors within the companies were consumed by everyday activities and by new strategic turns in the wake of both companies, the resources to investigate the potentials of collaboration were not present internally. In consequence, the authors of the present paper were invited to actively study and engage in the process of developing collaboration, and the two companies made a joint decision to embark on an unfolding process of developing the economic potential of collaboration. The type

of collaboration was to be determined through a series of seminars organized by representatives of the nearby Aalborg University.

In December 2013, the first seminar was organized, comprising the CEOs and three employees from each company. The competencies of the participants covered both external sales and relations, and the internal primary value creating activities of the companies in order to ensure that a comprehensive knowledge of the structures of the business models of both companies were present. The scene of the first seminar was set in a meeting room at the Port of Aalborg and concerned mainly an introduction of the primary activities of each company. The three distinctively different groups of representatives from Port of Aalborg, Mammoet Wind and Aalborg University, respectively, spent the time mainly sizing each other up with a distinct undertone of trying to figure out, what each group was to gain from a possible collaboration. Even though the Port of Aalborg and Mammoet Wind are quite interdependent but still might be considered as competitors based on similarities in central parts of their business models, it proved considerably challenging for the representatives to comprehend the value created by the opposing company. Thus, the outcome of the first seminar was that most of the participants felt none the wiser as to the direction of a possible collaboration. In consequence, the second seminar was mainly devoted to letting the representatives compare the expectations that they were bringing to the table.

Early in the process it became evident that activities happening backstage (Goffman, 1959) between the formal seminars had a significant effect on the direction and development of the collaboration. Therefore, a representative of the university stayed at each company to experience the daily activities. Converting this insight into intelligible representations of the companies using the business model canvas of Osterwalder and Pigneur (2010) served as a neutral approach to further strengthen the insight into the value generation of each company. The business models identified in the Port of Aalborg were used in an introductory presentation at the second seminar, thus making it possible for the participants to discuss which possibilities to consider when planning future collaborative efforts based on the current value creation. In order to clarify the overview of the company, the representatives of the Port of Aalborg decided to present their newly developed strategy for becoming The Intelligent Port. The insight thus provided spurred the discussion on the possibilities of collaborating, and possible scenarios were reflected upon, e.g. a subcontracting agreement, a joint venture or a collaboration based on an external facilitator. However, as the

representatives had yet to discuss the value they were intending to create through the collaboration, it was impossible to identify preferable scenarios.

Between the second and third seminar a university representative engaged in the daily activities at Mammoet Wind. The objective was to gain insight into how the collaboration between the companies could support the current value creating activities at Mammoet Wind. To establish a more neutral zone for discussing a potential collaborative effort, the setting of the third seminar was changed and thus held at the university. Following an overview of what had happened since the last seminar, the third seminar was initiated by a presentation of the intelligible business models of Mammoet Wind. The intention was to enable the company representatives to apply this knowledge when brainstorming on the collaborative possibilities. However, as the discussion quickly centered on a specific case revolving around how to include third parties, the flow of ideas quickly became extensive, bordering the unrealistic. As it happened, the seminar was concluded without any specific results. In consequence, specific tasks were assigned to the company representatives: The representatives of the Port of Aalborg were to discuss how Mammoet Wind could fit into their current value creating activities, while the representatives of Mammoet Wind were to reflect on their expectations for a future collaboration and how this could be formally organized.

At this point, the activities happening backstage at Mammoet Wind proved game changing. A new representative was included in the preparation of the fourth seminar. To pinpoint the advantages Mammoet Wind was to gain by entering a formal collaboration with the Port of Aalborg, the representatives held a preparatory meeting to discuss how the collaboration could contribute to the development of the current value creating activities in Mammoet Wind. Creating a shared understanding of what the company could possibly obtain in their own value creation made it possible to narrow down tangible focus areas for the collaboration. The focus areas were combined on a time line including different levels of aggregation of activities, and a SWOT analysis focusing on the strong and weak points of a potential collaboration was conducted. The corresponding possibilities and threats proved interesting for the discussion of the extent of future collaboration, which was further clarified by value stream mapping illustrating the preconditions for and possible output from collaborating. These analyses were presented at the fourth seminar alongside a presentation of a new Mammoet Wind strategy. Based on the tangible, easily read models that pinpointed the possibilities of collaboration, the seminar resulted in concrete declarations of the collaboration between Port of Aalborg and Mammoet Wind which were translated into multiple

action points that the company representatives had to investigate and develop before the next seminar.

Even though the fourth seminar was concluded by concrete declarations of collaboration, the fifth seminar was characterized by the discussion of a range of new, grand projects going beyond the realistic scope of the collaboration which had emerged from the previous seminar. Although a few of the ideas were appointed as action points to investigate further before the next seminar, the discussion generally stalled due to a lack of formalization of the collaboration. The tangible output of the seminar was insignificant, and the formalization of the collaboration was delegated as a main action point to handle before the next seminar.

The sixth seminar brought a change to the gallery of characters, as the main driver behind the SWOT analysis and push forward in the fourth seminar was withdrawn from the process. However, this did not interfere with the progress of the managerial intent, because the fifth seminar action point of formalizing the collaboration had been completed. An official document describing the obligations of and limitations to the collaboration was presented and signed. Furthermore, a process of merging the primary activities by which the companies could benefit from the interdependence of their value creation was initiated. This significant progress was further consolidated by the discussion of a PR strategy of the now official collaboration. Furthermore, the discussion zoomed in on an important action point from the previous seminar, concerning an idea for a novel solution to an ongoing logistic problem, and it was decided that the solution had significant potentials for further development.

The seventh seminar was expected to follow up on the tangible merging of activities and the PR strategy. However, the idea for a novel solution had now grown into an actual concept which also included a possible third party in the collaboration which was mainly going to cooperate with Mammoet Wind. This was a major breakthrough, for two reasons. First, this opportunity had initially been discussed at the third seminar, but at that point of time the company representatives were not yet in a position to clearly understand how their businesses could benefit from collaboration, and the idea was actually one of the reasons why the process had stalled during the third seminar. Clearly, the company representatives were now in a situation where joint solutions were becoming feasible. Second, the solution required that assets specific to the individual companies were shared in order to create new assets which were specific to the collaboration. The need to control asset specificity was clearly diminishing, and the essence of asset specificity was

changing in the sense that asset specificity was gradually becoming an interorganizational phenomenon. In effect, the locus of transaction cost was being transferred from the interface between the companies to the boundary of the collaboration, as the collaboration became a way of organizing a part of the market at which the two companies operate.

Based on the process towards mutual understanding and shared interpretations, which the series of seminars have created, we may argue that the gradual change of the essence of asset specificity and transaction costs is the outcome of how managerial intent emerge and translate into decisions and actions. This outcome was by no means inevitable. After the third seminar, where progress stalled, there seemed to be a tacit joint understanding that the next seminar would be a make it or break it event. This potential crisis spurred the Mammoet Wind representatives to break away from existing positions and initiate analysis which, as previously described, changed the momentum and essence of the process. An example of a backstage activity which translated into a change of front stage activities:

When two teams present themselves to each other for purposes of interaction, the members of each team tend to maintain the line that they are what they claim to be; they tend to stay in character. (...) Of course, at moments of crisis, a new set of motives may suddenly become effective and the established social distance between the teams may sharply increase or decrease.

(Goffman, 1959: 167)

In effect, the fourth seminar became an arresting moment (Greig et al., 2012) in the sense that the state of affairs was disrupted and the company representatives became engaged in active and open reflections on how to create a mutual understanding which could open up new opportunities. Similar arresting moments, or peaks in the momentum of managerial intent, occurred at the second and fifth seminars, the former being driven by front stage activities of the Port of Aalborg, and the latter being driven by backstage activities of Mammoet Wind. Finally, the seventh seminar represented a game changing event as the novel solution was conceptualized and the opportunity of adding a third party to the collaboration was explored.

During the process of establishing collaboration with Mammoet Wind based on organizing the market in order to achieve mutual control of asset specificity, the strategic roles of the Port of Aalborg merged into a *modus vivendi* for the intelligent port strategy. At the outset, the opportunity of collaboration was spotted because the Port of Aalborg served a framework for Mammoet Wind while at the same time competing with Mammoet Wind in the role as a firm. By focusing on how the role as a firm could engage in collaboration, the Port of Aalborg became able to develop joint solutions with Mammoet Wind, actually strengthening the role as framework for other firms. In effect, Mammoet Wind remains a competitor, but also becomes part of the framework for other firms. Furthermore, the role as facilitator, which was not present during the first six seminars, came into action during the seventh seminar when the possibility of including a third party was explored. The inclusion of a third party will improve the capability of Mammoet Wind and thus indirectly contribute to the interplay between the strategic roles of the Port of Aalborg as a firm and a framework. Summing up, the process of developing collaboration with Mammoet Wind has been an exemplar of how to achieve interplay between the three strategic roles of the intelligent port, and how the interplay can economize on the cost of using the market and capitalize on the benefits of organizing the market.

#### **4. Concluding remarks**

The present paper has focused on collaboration as a source of hybridization of the market in the case of business model innovation. The basic argument has been that while hybridization economizes on transaction costs, it also gives rise to transaction costs, either by transferring the locus of transaction cost to new interfaces between the firm and the market, or by mingling the removal of transaction cost with the occurrence of transaction cost in cases where collaborators are not only collaborators, but also competitors, e.g. as in the case of co-opetition (Bengtsson and Kock, 2000; Raza-Ullah, Bengtsson and Kock, 2014). The argument has been illustrated by the case of the Port of Aalborg and the company's collaboration with Mammoet Wind, narrating a case of business model innovation. The narratives show how collaborators economize on transaction costs by developing a mutual understanding and shared interpretation of business model innovation where asset specificity is shared, but at the same time gives rise to transaction costs elsewhere in the ecosystem to which the collaborators belong.

The research of business model innovation in interfirm contexts is currently emerging (Bouncken & Friedrich 2016). Our aim throughout the paper has been to further develop this emerging theoretical perspective by including the recent concept of collaborative business models (Rohrbeck *et al.* 2013). However, the theoretical contribution is still limited as the definition and distinction of collaboration versus cooperation is currently a work in progress, which needs a stronger theoretical grounding based on existing research of i.a. strategic collaboration.

The main contribution of the paper is that it demonstrates how a transaction cost perspective can inform the study of business model innovation, and how case study can support this understanding by engaged action research and narration. While this is a novel contribution, it suffers from at least two deficiencies. First, although opportunistic behavior is an important analytical construct in transaction cost economics, it has only been briefly and to some extent implicitly touched upon in the present paper. Second, the analytical construct of transaction costs as a dialectical phenomenon is still in its infancy and would benefit from elaboration. Within an engaged action research approach, these deficiencies can be remedied if future research engage the studied actors in explicit reflections on how processes of collaboration diminish or increase transaction costs, thus making transaction cost considerations an explicit and conscious part of the evolution of managerial intent.

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