DIGITAL TRANSFORMATION IN SMALL AND MICRO-SIZED FIRMS; A CASE STUDY OF A PERFORMING ARTS CLUSTER

Tom Roar Eikebrokk, Dept. of Information Systems, University of Agder

Emma Lind, Agder Research Foundation

Dag Håkon Olsen, Dept. of Information Systems, University of Agder

ABSTRACT

There is a growing emphasis on digital transformation in research and business practice. Research has documented that digital transformation is a very challenging endeavour, especially for small and medium-sized enterprises. There is a general lack of research on the digital transformation phenomenon, and in particular on how such transformation takes place in a network of small and medium-sized firms.

This paper reports from a study of a cluster of performing arts organizations, Blender Collective. They realized that audience data is a key issue, and that they lack the tools to work strategically with audiences. Blender Collective members therefore engaged in a project to develop a collaborative approach towards strategic audience development. We found that the most important perceived benefits were better ability to target customers, better ability to share data and knowledge, and the development of the cultural industry. The most important challenges were lack of ownership, lack of resources, lack of incentives and lack of a clear common vision. The results expand our understanding of the dynamics related to digital transformation in multi-actor settings and co-creation in a cluster of small businesses.

Keywords: Digital transformation, Digitalization, Co-creation, Coopetition, Cluster, Small firms, Micro firms, Cultural industry, CRM

1. INTRODUCTION

With the rapid development in digitalization, firms are facing a pressing need to innovate and transform their businesses by implementing digital technologies and related business concepts (Stief, Eidhoff, & Voeth, 2016). Most firms are striving with both understanding the opportunities and consequences of digitalization to their business and how they should manage their digital transformation (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). This challenge is particularly demanding for small and medium sized firms due to their general lack of resources. One strategy to develop this capability to innovate and transform is to cooperate with others. This strategy can be demanding for several reasons including tensions between the participants (Gnyawali & Park, 2011).

There is a general lack of research on the phenomenon of digitalization and digital transformation and in particular on how such transformation takes place and is influenced by cooperation and conflict in different contexts (Stief et al., 2016). To contribute to a better understanding of this phenomenon, this study will report from a case study of a network of more than forty small and micro-sized firms in the cultural sector. The network, called the Blender Collective, has decided to cooperate in their efforts to transform their industry and to improve their cultural services. By initializing a common digitalization project to implement CRM and a ticketing system, the actors have expressed ambitions to cooperate and learn more about their customers by developing a joint capability to analyse customer data as the basis for improved services and improved market coordination. We wanted to explore how the small and micro enterprises experienced the project, including the motivations behind their participation, along with the perceived benefits and challenges that occurred during the project. We have chosen a descriptive study to emphasize the actors' own perceived benefits and the challenges they have faced in the collaboration. We see this descriptive study as a first step towards theorizing in this setting.

We thus raised the following research questions:

What are the perceived motives and benefits of participating in a collaborative digital transformation project?

What are the challenges the small and micro enterprises face in a collaborative digital transformation project?

The rest of this paper is organized as follows: The next sections present related work that describe benefits and challenges in cooperation between firms. Then we present the research method, followed by the results and a discussion of potential implications for further research and practice. Finally, we present the conclusion.

2. RELATED WORK

The interdependence of firms, resulting in social relationships and networks, have for years been recognized as important in the management literature (Czakon & Kawa, 2018; Grönroos & Voima, 2013). These interactions are sources of information and opportunities for competitive advantage to the participants. One important stream of research has developed rapidly since the early 2000s, and conceptually describes these interactions as co-creation, that offers significant input to the innovation process (Nambisan, 2002). By unlocking joint sources of value creation through co-creation, these networks enhance competitive power (Prahalad & Ramaswamy, 2004). This interaction is particularly important when the market is dynamic and the companies are small with limited resources for innovation. Firms cooperating in such networks or ecosystems share knowledge and resources in co-creating interpretations and responses. This relates to a range of common issues including the use of supply chains, innovations in service production, implementation of information technology, or other aspects that relates to the nature of their business and related challenges for management (Kohlbacher, 2007). Despite the fact that co-creation can result in substantial advantages for companies, there is a general lack of research on the nature of co-creation in different contexts and how it can be managed (Felzensztein, Gimmon, & Deans, 2018; Frow, Nenonen, Payne, & Storbacka, 2015). Questions that need more research include how different firms that are not suppliers or customers to each other, collaborate horizontally in business networks and how co-creation as a dynamic process contributes to the well-being of the participants as well as the whole ecosystem (Galvagno & Dalli, 2014).

These latter issues in the literature are of particular relevance to the network we study, where digital transformation resulting from co-creating a customer focused strategy might be challenged by rivalry between firms who are also competitors to each other. One relevant stream of research to understand this simultaneous process of cooperation and competition is coopetition research (see Dorn, Schweiger, and Albers (2016) for an overview). Coopetition research focuses on many different antecedents that can explain how co-creation is influenced, including regulatory bodies outside of the network, how the network is governed, firms' perception of strategy and goals, as well as how the relationships between the firms are influenced by relative position, compatibility and trust (Dorn et al., 2016). For example, Das and Teng (2000) found that the risk of opportunistic behaviour is reduced with increasing levels of trust, whereas studies within the SME context have identified resource endowment, goal characteristics, firm capabilities, strategy formulation and perceived vulnerability as factors that determine coopetition (Gnyawali & Park, 2009). The coopetition literature provides only limited knowledge on the impact of multi-actor settings, where a number of SMEs participate. In the recent review of the coopetition literature, Dorn et al. (2016) conclude that there is a pressing need for research to understand how the dynamics of multi-actor networks create specific management challenges and requirements. Since co-creation is described as a particularly important enabler for digitalization of firms (Lenka, Parida, & Wincent, 2017), it is important to understand the nature of co-creation in multi-actor settings and how co-creation can be managed to avoid rivalry that reduces joint value creation.

3. SETTING AND RESEARCH METHOD

3.1 Research setting

Blender Collective is a network of approximately 45 small and medium sized businesses in the creative industry sector in the Østfold county of Norway. It initially was called Arena Magica, and it developed as a project initiated by Østfold County Council (ØFK) in 2009 to stimulate growth and value creation in the creative industry sector. Previous initiatives to strengthen collaboration and co-operation in this sector had not been fruitful, but in 2010 the project was successful in their funding application to the national cluster and network development programme – ARENA. The project received funding for three years (2010-2013), from the ARENA programme, Østfold County Council and member organisations. Arena Magica was the first cluster development project in the creative industry sector, and their goal was to develop and strengthen the relationship of businesses across the creative industry field and value chain; including music, stage, film, media and design.

Most Bender enterprises sell their tickets through Fredrikstad Kino (Cinema) or Billettservice, a subsidiary of Ticketmaster, the world's primary seller of event tickets. Ticketmaster has been the subject of several US anti-trust investigations due to its excessive service fees, market power and alleged monopolistic practices. Billettservice was generally perceived as too expensive and providing little benefits. In addition, some tickets are also sold at location by the performing arts enterprises. These ways of selling tickets all imply significant costs, and they don't provide any customer data for the Bender enterprises. They are therefore not able to analyze audience data.

The performing art organisations in Arena Magica identified audience development and audience engagement as a key area for skill development, and in 2013, they engaged in a small research project together with Agder Research Foundation to investigate the options for a collaborative approach towards strategic audience development. The organisations involved realised that the audience data is a key issue, and that they lack tools and skills to work more strategically with audiences. This triggered a larger collaborative project together with Østfold County Council, Agder Research Foundation, University of Agder and Østfold University College. The aim of the project is to establish a collaborative platform for audience data collection and audience development by using marketing tools such as CRM across the member organisations. The project is financed by the Regional Research Fund Oslofjord, and is part of their program for public innovation. The innovation in this project is designing a new model for collaborative audience development between local government (Østfold County Council) and industry (Blender Collective).

3.2 Research Method

The study draws on a longitudinal case study of the firms in Blender Collective. A case study is considered a suitable approach when investigating emerging complex phenomena (e.g., digital transformation) within real-life settings (Eisenhardt, 1989), to induce theories (Benbasat, Goldstein, & Mead, 1987). Case studies are relevant when answering research questions such as 'how' and 'why' things are done (Yin, 1994). This approach is well suited when theories are at their formative stage (Benbasat et al., 1987).

The empirical data was collected over a project period of three years between May 2015 and April 2018. The data was collected from 17 in-depth interviews, four workshops, two study trips, two surveys and four steering group meetings. All primary data were collected, transcribed and analysed by the same team of researchers.

4. RESULTS

This chapter presents the results of the data analysis. We will first present the findings about the perceived potential benefits, and then go into the challenges.

4.1 Benefits

We found that the perceived benefits primarily related to four areas: better ability to target customers, better ability to master CRM technology, better ability to share data and knowledge, and the development of the cluster and the cultural industry.

First, we saw that the activities in the project made the project participants more aware of the value audience data represents. The owner of a production company, a micro business, noted that “Data is important, not necessarily to see names, numbers and emails, but how to use the data and apply it to something.” The cluster members gradually became more aware of the potential that audience data creates for them if they can control it and learn how to handle it, particularly when their data is aggregated with that of other cultural organisations in the region. This comment from the owner of another micro production company, is illustrative: “It is important to identify the customer group and know who they are […]. That has to be the most important goal. If you know that, the ticket sale and profit will come as a result.” The manager of a small producing theatre company corroborated this: “It is important to know, whether you target the customers the way you planned.”

The manager of a small production company commented that “At the moment we use [large international ticket agent]. [If we want to access customer data] What we have do, then, is to ask for a pdf-file from the venue [who uses the ticket agent] and we get a list (sometimes in excel) with “Anne Hansen, lives at….” and then someone in my office manually has to feed this information into Mailchimp, […]. I can’t access my CRM relevant data or information or make a system work, I can’t run a ticket selling system or an extra business in addition to everything else. If I can get audience data through [a new system] and get help to use it strategically, I think it would enable me to do things I wouldn’t be able to on my own.” He continues on this path of thought “we don’t really know who our audiences are, and we certainly know nothing about their user habits, this is where we are currently working in blindness. We would like, actually we need, to get into position, because now it feels like we are more producers than audiences, and we need a way to retain and develop our own audience”.

Second, the cluster members also saw that technology, and the ability to master this technology, was key to achieve a better customer relations management. They appreciated that by undertaking this project they would be able to implement a CRM system that would be far out of reach for them as individual members.

Third, the cluster members also saw that they would achieve a better ability to share customer data and knowledge about customer relations management. The owner of a micro production company noted that “The more we market each other, the better it will be for all – my audience and your audience are different, but at the same time they are the same people.” Since the members of the clusters are mainly micro businesses, they lack the very essential capabilities in customer relations management, and they are too small to raise these capabilities on their own. They thus realize that need to assemble these capabilities in the cluster. So, this is viewed as both an important prerequisite for the CRM project, and an important benefit of the project. They perceive that this project will make them better at sharing important customer data for the benefit of the cluster members. This comment from the manager at a small theatre, is illustrative: “What could benefit others is exchange of experiences, e.g. how to extract information on consumer behaviour”. The managing director of a micro event business noted that “I don’t see how [the cluster] or any of the other smaller producers in [the cluster] could ever benefit from the larger and more sophisticated systems like [arts and culture specific ticket agent, US], if we weren’t doing this together. It would be unattainable both in terms of time and financial investments.”

Fourth, the cluster members perceived that this project would be beneficial for the development of the cluster and the cultural industry. It would support innovation and change in the individual cluster members, and it would help make them be more relevant to their customers in the future. This again would increase sales and improve the economy of the cluster members. The manager of a small production company confirms this: “If everyone partakes and really share their data, and work together to make [the cluster] a success.” The manager of a small producing theatre company corroborated this: “I genuinely believe the more the better, the more we market each other, the better it is for all of us, because x- festival’s audience, and my audience, are two very different audiences, and at the same time, they are the same people. I think this thing of competition is just nonsense. There is no competition in our business.”

4.2 Challenges

The ultimate goal for the collaborative CRM is to facilitate data analytics expertise and business consultancy for individual and collaborative purposes. However, the development of such a collaborative model has not been straightforward, certain challenges have emerged and attempts to resolve them have failed in some cases so far in the process. These challenges are both external and internal.

First, we found that the lack of leadership was a significant challenge. The cluster received funding for the project through a regional research and innovation fund, Regional Research Fund Oslofjord, and a requirement for the funding was that ØFK should head the project. We claim that this was very unfortunate for the progress of the project, because the director in ØFK that headed the project did not have a strong commitment or presence throughout the project. Although, interestingly, several of ØFK's staff who were involved in the project were both committed and very engaged to begin with. Both communication advisor and artistic staff understood the potential of accessing and sharing data. A producer at ØFK noted that "We have not been allowed to use our funding, like they have in England, to really investigate our audiences."

It is interesting to note that while ØFK members of staff appeared optimistic and enthusiastic, management were more careful and reserved when considering their role in the project. A managing director at ØFK commented that "for me, it is very important to be aware of roles, particularly when it comes to buying services. I am a little concerned of partaking in a collaborative venture, where the goal (ticket sales, data, targeting) is very important to the other participants. Also, if we as a collaboration agree that we are to help each other and buy services of each other, I fear this could be a threat to our freedom to choose a service based on quality." This comment shows that senior staff at ØFK sees collaboration that can be perceived as "services" rather than for "the greater good" as more complex and more of a threat than perhaps operational staff at ØFK do. This may be because at senior level there are other and more wider considerations to take, such as political considerations. In any case, as the project progressed, so did the enthusiasm and presence of ØFK.

Several of the cluster members noted that ØFK had a limited understanding of the collaborative CRM's potential, and were also concerned that ØFK might take full ownership and not share. The fact that ØFK led the project also meant that there were no strong actors among the cluster members in charge of driving the project through. They were essentially waiting for the ØFK director to carry the project through. Despite the fact that this model would give significant savings to funded organisations, and increased opportunities for cultural engagement, the public authorities were not engaged nor enthusiastic about the project. On the other hand, ØFK as a public body would not be allowed to fund the investment in the CRM system, or enter into the consortium on the owner side, as the cluster consists of private enterprises. The managing director at a small event business noted that: "I believe, that if they [County Council] has said no, that it is due to principles of what public bodies can participate in. There is a market system here, so I think they are cautious about entering into these types of enterprises, on the owner side". A manager at ØFK adds some weight to this observation "I believe that if we think of this collaboration as a ticket system, we've already failed before we get started. We have to think much bigger than ticket system. A ticket system is great, we can use it to collect data through the ticket system, but the communication that we want to do requires a more sophisticated CRM which is flexible and enables us to create tailored content to users […], I will generally never sell tickets, I sell subsidized content to partners".

Second, lack of resources was an important challenge. All except two of the cluster members were micro enterprises, with an average of 3 employees. They lack both financial and human resources to undertake significant innovations, and they are therefore quite conservative. A manager at a festival commented that "Do we have to be so involved that it starts to be a load on our working hours?" We found that they had a limited understanding of the required investments in the CRM system and in building competency. As noted above, they therefore relied on external funding and an external partner to head the project. While this helped build the appreciation of what they could achieve by a collaborative CRM, it also led to a lack of leadership among the cluster members. The lack of financial resources among the micro enterprises was a significant challenge. The project would require an up-front investment, which none of the partners were willing or able to find, even though the business model clearly demonstrated a medium term saving for all organisations.

Third, we found that lack of incentives was also a problem. The cluster members receive significant proportions of their income from public sources. They have become reliant on such financing. We argue that this has led cluster members to focus more on securing public financing than on developing their ability to innovate to increase income from audience. A manager at ØFK noted that "What surprises me, is that everyone is so set on keeping what they already have."

From the ØFK perspective, they main concern is their social mission. They are more concerned about maintaining quality and the cultural heritage. They essentially see the Ministry of Culture as the main customer. A manager at ØFK noted that “Yes, we are supposed to be the County Council. The same way dental health, high school, public transportation or culture. We are supposed to look the same, taste the same. So how are we really supposed to interact with audience and be noticed by them? Our need for CRM is higher than our need for a ticket selling system.”

Fourth, we found that the cluster members did not have a clear common vision. There was a lack of a strong common vision of the project outcome. This improved through the project, but it did not permeate the cluster. They had different agendas and different goals. We found that they generally had a too strong focus on CRM tools, and too little focus on implementing the new collaborative processes. The cluster companies ranged in size from one-person theatre producers to medium sized venues and festivals. Their perceived needs were sufficiently different, which made it problematic to get agreement on the business model. Different partners in the consortium joined at different times – so whilst there was progress with the initial group, each time a meeting was held, new individuals came along, and they had to start some processes over again. There was no process for ensuring ‘buy in’ at each stage. The manager at a small theatre commented that “We have had to build trust […], so to present this concept to someone who has not been a part of the process and say, ‘- you can be a part of this on the condition that you feed our joint database with your customers’. I think that would be very difficult.” The owner of a small production company verified this: “We cannot forget, that these are competitors fighting for the same audience and who are in similar markets. To the extent that some might share a business plan or strategy, this is good. However, the more peripheral actors we include, the greater the fear becomes.”

5. DISCUSSION

This study explores the co-creation of digitalization strategies in Blender Collective, a cluster of more than forty firms in the cultural sector in Norway. They started the digitalization project to develop a shared capability to analyse customer data as the basis for improved services and improved market coordination. We identified four perceived benefits that were the important motivations for entering into the project. The participating firms generally had weak understanding of the potential benefits at the beginning of the project, but this understanding grew during the project. We also identified four significant challenges that impeded the co-creation of a digitalization strategy.

In this section we discuss how the findings relate to the need for research expressed in the literature. The information gained from our study of this specific cultural context expands our understanding of the internal and external dynamics of interaction in multi-actor settings. This gap in the literature is expressed by many sources in the management literature, including Dorn et al. (2016) and Felzensztein et al. (2018) who emphasize that this understanding as lacking in the coopetition literature. More specifically, our findings from the cultural sector have several implications that address more detailed gaps expressed in the literature. First, the interviews suggested a lack of leadership in the project. Respondents also reported of a lack of a clear common vision in the project, which had led to unclear goals at both the strategic and operative levels, as also observed by Gnyawali and Park (2009).

Second, respondents reported that lack of resources had made it difficult to participate and actively contribute with knowledge input to the project. Low financial resources made it difficult to take the time to participate, and lack of appropriate knowledge reduced the value of their input to the project. It was therefore more difficult for the cluster firms to discuss and agree on joint goals and priorities. This finding provides contextual evidence on how relational mechanisms between firms create challenges for management. It confirms earlier reports in the management literature that lack of resources make firms perceive themselves as more vulnerable, and that coopetition becomes more challenging in situations of low resource endowment and lack of firm capabilities (Dorn et al., 2016; Gnyawali & Park, 2009).

Third, our study provides specific information on the role of incentives and on how incentives relate to actor characteristics and to the nature of the relationship. Our findings thus respond to the call by Dorn et al. (2016) for more studies on many internal and external antecedents to coopetition in such networks. The respondents reported many different motives for participating in the digitalization project, including the advantage of interpreting market challenges and co-creating strategic responses with other firms in the cultural sector. Others, often micro-sized firms, seemed less intrigued by these incentives and expressed an interest in just being part of the project and thus able to take advantage of any solutions produced. It is likely that the different perceptions of incentives for participation observed in this cultural setting can be explained by the nature of the relationship including firms' different sizes, resources and capabilities. Moreover, since part of the project was publicly funded, it is likely that this worked as an extra incentive for firms that themselves had less pronounced incentives for participating. Unlike the UK where arts funding has been cut considerably, cultural funding has increased in Norway. Arguably, this encourages cultural organisations to stick with the 'status quo' rather than innovate and view the culture above the audience. These findings of external antecedents to coopetition respond particularly well to Dorn et al. (2016), who express a need for more research on environmental characteristics along several dimensions. This includes more studies from contexts outside of the dominating manufacturing-led industries, and how external institutions might influence coopetition relationships. Our findings revealed that public companies in fact were limited both in their motivation to participate and in their actual participation in the network due to laws of competition. We believe this was an important barrier that negatively influenced the performance of the network. As such, our findings fill a gap in the literature on the role of external institutions as expressed by Dorn et al. (2016) and provide more understanding on the nature and role of their influence.

6. CONCLUSION

This paper reports from a longitudinal case study of a cluster of performing arts organizations, Blender Collective, where small businesses, vendors and other actors have found together in collective effort to digitalize, learn from customers with the help of CRM and new ticketing systems, and improve cultural services. Based on the nature of the cluster, we adopted the perspective of co-creation and coopetition as a lens to understand the motives, benefits and barriers that the participants experienced during the project. The results expand our understanding of the dynamics related to digital transformation in multi-actor settings and co-creation in a cluster of small businesses. We found that the most important perceived benefits were better ability to target customers, better ability to share data and knowledge, and the development of the cultural industry. The most important challenges were lack of ownership, lack of resources, lack of incentives and lack of a clear common vision.

Digitalization is a process of innovation that involves co-creation and coopetition. Our findings have several contributions to the literature on digitalization, co-creation and coopetition. First, the findings from our case study show how digitalization in a network of companies is influenced by co-creation and coopetition, which is information that is rare and called for in the literature. The recent review by Galvagno and Dalli (2014) call for more research into how co-creation emerges with the help of a variety of stakeholders other than providers and customers (p.657). Second, we contribute to the management literature by providing new insight into the specific nature of co-creation and coopetition as it evolves over time in a rarely studied context involving small and micro-sized industries in the cultural sector. We identified important sources of coopetitive tension. Third, our findings from this context provide details on internal and external antecedents to coopetition that are rarely observed in the literature. Further research should investigate other contexts to learn more about the mechanisms that influence the ability to digitalize and innovate through co-creation and coopetition. Future empirical research is also needed to investigate whether the nature of co-creation and coopetition involving digitalization in SMEs, as we report here, will need other approaches to managing the tensions and differences in motives, involvement and behaviour from the network of SMEs and third parties (Fernandez, Le Roy, & Gnyawali, 2014).

Although our case study provides rich evidence from a specific context, it's contribution is limited. Our research was exploratory, performed in one county and in one specific industry in Norway. Therefore, it has limited generalizability. Our research provides possibilities for future research and can serve as input for subsequent studies on digital transformation in small business clusters. It would be interesting to see if our findings are generalizable to other industries and regions. Even if we cannot generalize the findings, the study and its findings should serve to enlighten small businesses about the pertinent issues related to digital transformation in clusters of small businesses.

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