WHEN LOOSING CUSTOMERS: START-UPS RECOMBINING AND REPOSITIONING

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ABSTRACT

This paper explores how start-ups reposition and recombine resources. This issue is explored in the two challenging situations when all customers are lost and when the start-ups have reached a situation with non-developing customer relationships, which we refer to as a dead-end. The framework builds on the IMP literature and focuses in specific on the processes of resource recombining and actor repositioning. The study underlying the paper consists of interviews with approximately twenty start-ups from Norway and Sweden regarding their development and initial customers. Three of start-ups included in the paper had experienced to lose all their customers, while the other three had reached a dead-end. The paper emphasizes the importance of simultaneously working with finding new customers and combine resources in new ways. The start-ups seemed to backtrack their network to find viable relationships to use as a starting point for a short repositioning and further development. The patterns created showed similarities with reimprinting. Future studies need to explore further what kind of relationships that are likely to remain viable over time and enable firms to easily reposition and recombine resources.

Keywords: Start-up; interaction; actor; repositioning; recombination

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INTRODUCTION

A popular quote is that no business is an island (Håkansson and Snehota, 1989). But what happens if a start-up one day finds that it actually has become an island in terms of lost customers. In 2009 three of the start-ups analyzed in the present paper experienced just that. One of the start-ups witnessed that their first major customer filed for bankruptcy. Simultaneously, all the other customer relationships had also come to a halt. The two other start-ups explained that all their potential customers had experienced financial constraints and suddenly decided to choose a more widely used technology, a cheaper technology or just discontinued the project while waiting for the financial downturn to pass. Start-ups are in the beginning of their development, building up the network of customers and combining resources into products by fitting the product into the customers' production process and adding new features to products and/or facilities of the customer (Aaboen et al., 2011). Given that start-ups are dependent on their first customers for their development it would be expected that if their customers fall, so would they. However, that is not the case here. In 2013 these start-ups are still alive. The situations of the other three start-ups in the present paper were not that extreme as losing all customers. In contrast, these three start-ups had reached a dead end where there were no more customers to be found using the current strategy or the start-up would stop developing further using the current strategy. However, despite the lack of resources and vulnerability of start-ups, this was not the end of the road for these start-ups. They were also still alive in 2013.

In the present paper we explore how the start-ups managed these situations. In business networks, actors are collectively the driving force in resource combination and these resource combinations are conceived in interaction in business relationships (Cantú et al., 2012). Hence, the situations have to do with the position of the start-ups and their possibility to combine resources. In order to change a situation the start-ups need to reposition and recombine. *The purpose of the paper is to analyze how start-ups reposition and recombine resources.* In the paper two research questions are dealt with. The first is: How do start-ups reposition and recombine resources when all customers disappear? And the second research question is: How do start-ups reposition and recombine resources when they have reached a dead end?

Selection of the business partners is an important concern, which relates to the positioning and repositioning of actors (Gadde et al., 2010). In the context of this paper, we use recombining of resources and repositioning of actors to analyze the situations start-ups are facing when their customers disappear. Repositioning refer to the process of which actors to build relationships with and how to develop those relationships. Given that it is the relationships that define the position (Johanson and Mattsson, 1992) of the start-up, losing all customer relationships will destroy an important part of the foundation of the current position as well as the opportunity to reposition. Recombining refer to the process of how to combine resources in new ways in existing and new relationships with customers. Since the value of resources depends on how they are combined with other resources (Håkansson and Waluszewski, 2002) losing all customer relationships will make it more difficult to combine resources and thereby potentially destroy some of the value of the start-up resources.

This paper draws on two streams of literature: the IMP literature and the entrepreneurship literature with the ambition to make a contribution to both streams of literature but in different ways. Seen from the perspective of the IMP literature, where long-term business relationships are emphasized, a firm that ran into problems in existing customer relationships would continue to combine and recombine resources to come up with a suitable solution to that customer. It is also seen that business relationship endings are often not endings, but just some pauses (Batonda and Perry, 2003). The context of start-ups provide a more extreme situation since their relationships have not matured into long-term relationships yet and they have so few relationships that it is actually possible to lose them all at once. The present paper will therefore contribute to the IMP literature by exploring how firms can continue recombine and reposition when the very foundation or these activities, the relationships, are gone.

Within the entrepreneurship literature, some discussions on how start-ups have adapted in extreme situations can be found. In this stream of literature, start-ups are viewed as more vulnerable to change, compared to larger firms, due to fewer internal resources, narrower customer base and product line (Smallbone et al., 2012). Furthermore, the start-ups lack legitimacy due to liabilities of newness and small size (Venkataraman et al., 1990). "*The dependence of small organizations on their network partners, where network involvement is large in scale, is proportionally more important relative to that of large organizations*" (Kim et al., 2006, p. 715). In order to survive start-ups need to be flexible and therefore often show a high level of adaptability and flexibility (Smallbone et al., 2012). Venkataraman et al. (1990) argued that unless start-ups have the necessary slack of resources to rebuild its business after a failed transaction the start-up will fail. Hence, if a start-up encounters a failed transaction early in the development process or before it has had time to rebuild its slack resources after a previous failed transaction the start-up will fail. Kim et al. (2006) argue that if an organization has managed to overcome the obstacles of a network transformation it should achieve superior performance. Similarly, Andries and Debackere (2007) demonstrated that start-ups that have made at least one major adaptation in their initial business model have a significantly higher probability of survival compared to the start-ups that have not made any changes. Furthermore, it was found that cumulative changes had a positive effect on survival due to the learning effects related to an improved business focus. Storey (2011) argues that these learning effects are not related to improving the ability of the entrepreneur but rather that the entrepreneur learns about his or her ability and therefore becomes more able to make informed stay or quit business decisions. In other words, it seems that previous studies agree that extreme changes are dangerous but if they are overcome the firm will be improved. By exploring how these start-ups have survived under extreme conditions by repositioning and recombining the present paper therefore contributes to the understanding of how the situation of lost customers or dead ends which is an important step towards creating start-ups, and firms, that are robust and profitable.

The structure of the paper is as follows. We begin by describing the theoretical background of the paper, centered on actors and resources of the industrial network model. Then we explain the research method and give an overview of the empirical data. The start-ups in the present paper are a heterogeneous group of firms depending on their varying user contexts and technologies but that they all share the common trait of being new and exploiting a technology that is new, and thus having high risk and growth potential (Andries and Debackere, 2007). Thereafter, we thematically present and analyze the cases to come up with approaches how start-ups reposition and recombine resources. In the end of the paper we provide conclusions and implications.

RESEARCH METHOD

This paper builds on six cases of start-ups that have experienced major changes with regard to customers. Those six are made anonymous, using the names Firm A, B, C, D, E and F. Firms A, B and C had the most extreme situations where all the customers disappeared. We have also included firms D, E and F. These firms did not lose all customers but they realized that they were no longer able to develop without changing market position. The situation of those three firms is referred to as “dead ends”.

Those six start-ups are part of a study including Norwegian and Swedish start-ups, all based on a new technology. In the context of this study, about 20 start-ups were interviewed in the end of 2012 and the beginning of 2013 regarding their development. The ten start-ups in Sweden were interviewed both in 2009 and 2012, thus giving us information about how the start-up had developed both when it was taking place as well as afterwards. The twelve start-ups in Norway were interviewed in 2012 and the beginning of 2013 and regarded the start-ups initial phases and how they developed their first customer relationships. The interviews were conducted, recorded and transcribed by the authors. All the start-ups were selected based on the criteria that they were technology-based, rather recently had formed their initial customer relationships and at least had one paying customer. Both the start-ups in Sweden and Norway were selected with help from representatives from incubators in connection to the technical universities.

The cases rely on interviews with the start-ups and for three of the cases only one interview has been conducted per case. This hinders us from making a multi-faceted analysis of various perspectives. Still the start-ups are small and the selected interviewee had often been in the firm since the foundation and the interviewee in all cases knew about the considerations taken regarding losing customers and/or dead ends. Hence, for the purpose of this study, the start-up centered collection is argued to be appropriate.

The analysis started during the data collection. After the data collection, the transcripts and the literature have been important starting points. A draft of the paper has also been discussed with colleagues raising new lines of thoughts for how to present and analyze the cases. Hence, analyzing how start-ups manage to recombine and reposition in the network is a topic that has emerged from the case stories in interplay with theoretical framework and the case-based method (Dubois and Gibbert, 2010). Several of the interviewed firms have told us about challenging situations where the customers suddenly have changed their minds. There are many reasons for the customer changes, including limitations of the offered products, bankruptcy due to financial down turns or strategic decisions. In particular, six of the start-ups have more extensive experiences of that customers have disappeared or that customer interactions needed to change, and those six are included in this paper. The phenomenon in focus is how start-ups handle the situations of customer change. To be able to capture this phenomenon, a case study method (Yin, 2003: Easton, 2010) has been conducted.

THEORETICAL BACKGROUND

The phenomenon we are to study is a situation in which there is a change in the network of a firm. We are interested in how startups are dealing with the situations of network change in terms of that the customers disappear. For this purpose, the theoretical background is centered on recombining and repositioning.

Resource (re)combining and actor (re)positioning

With our basis in the IMP literature, business markets are understood as networks and those network structures are built through firms' actions and interactions over time (Håkansson et al., 2009). One model for analyzing business networks is the ARA-model (Håkansson, 1987) built around three inter-related dimensions: Activities, Resources and Actors. The definition of those three elements is circular, actors perform activities and control resources and resources are needed to perform activities. Resources are objects that become resources only when they have a meaning for actors and actors control the resources needed in resource combinations. To access resources, developing relationships with different actors are necessary. Hence, resources and actors are "*inextricable interwoven*" (Cantú et al., 2012, p. 140) and therefore resources and actors are in focus of this study.

In the business exchange between a firm and its customers, resources are combined. The resource collection (Håkansson and Snehota, 1995) is made use of in relation to the resource collection of the customer. Resource combining relates to a basic assumption with regard to resources and it is the assumption of resource heterogeneity building on Penrose (1959) and Alchian and Demsetz (1972). Resource heterogeneity implies that the value of resources is not a given but depends on how they are combined with other resources (Håkansson and Waluszewski, 2002). In relation to development of resources and business relationships, Gadde et al. (2010) pinpoint some key concerns. These are concerned with selection of business partners, the development of the business relationships, the evaluation of ongoing business relationships and the organizing of business relationships in relation to each other. Resources are continually combined in business relationships, meaning that there is rather a process of ongoing combining, resource recombining, in business relationships (ibid.).

The relationships with other actors also form the starting point for defining a network position. *"Each actor is engaged in a number of exchange relationships with other actors. These relationships define the position of the actor in the network"* (Johanson and Mattsson, 1992, p. 181). As seen from this quote, actors have a certain position in a business network that is defined from the firm's business relationships. Gadde et al. (2010, p. 112) emphasize time in their description of an actor position: "*The current position of an actor is the outcome of previous interaction, at the same time as the positioning of an actor impacts on the interaction processes"*. Hence, actors' positions are formed in interaction over time. Some authors have pinpointed the interplay between position and role (Anderson et al., 1998). The role is what other actors do in relation to other actors, while each position can hold different roles. Anderson et al. (1998) see the interplay between position and role as driver of dynamics in business networks.

While positioning is a base for an actor's future development of business relationships (Johanson and Mattsson, 1992), it is also a connection with previous interaction (Gadde et al., 2010). In addition, positioning is a concept with regard to network strategizing. Positioning, alongside cognitive and adaptive strategizing are three categories of network strategizing

(Harrison and Prenkert, 2009). Positioning in this regard has to do with conscious efforts to strategize and could for example be done through mobilizing and influencing in business relationships.

Patterns of recombining and repositioning

Network imprinting is the phenomenon that networking patterns tend to be the same, and adjusted to the conditions at the time of the network foundation, over time even if the members of the network change (Johnson, 2007). After a review of the literature, Marquis (2003) argued that the two most important mechanisms behind network imprinting are social institutions as connecting mechanisms and locally legitimate templates of action. "*The importance of local culture, and in particular the local definition of legitimate action, may be particularly salient for the newer organizations that enter these local networks*" Marquis (2003, p. 664). Milanov and Fernhaber (2009) also addressed the phenomenon of network imprinting and more specifically how the size and centrality of the initial alliance partners influence the size of the start-up companies' networks.

Ferriani et al. (2012) used the term reimprinting in relation to spin-offs for describing the change that is made when the initial imprinting from the organization of origin is changed as a response to customers and market conditions. The reason for the term reimprinting is "*because it has lasting impact and reconstitutes past experience to enable both continuity and change*" (Ferriani et al., 2012, p. 1013). The definition of path dependence, in contrast, is "*a property of a stochastic process which obtains under two conditions (contingency and self-reinforcement) and causes lock-in in the absence of exogenous shock*" (Vergne and Durand, 2010, p.737). In order to avoid lock-in and to shake the system free of its history exogenous shocks are needed (Vergne and Durand, 2010). Building on the existing business network structure, Guercini and Runfola (2012) identify two relational paths in business networks: integration and substitution. The integration path is more oriented to reinforcing existing relationships with customers, while the substitution path is oriented to developing relationships with new partners.

Stability and change in networks

The IMP literature emphasizes how typically well-established firms tend to develop long-term business relationships (Håkansson, 1982; Håkansson, 1987). Jahre et al. (2006) introduced a model where interaction episodes were seen in a time context. Previous episodes and expectations for the future were influencing the current interactions. Business interaction was also seen in a space context in which other actors influenced the focal interaction. Time is important in relation to business relationships, typically characterized by a long term perspective, adaptations, investments and trust rather than formality (Gadde and Håkansson, 1993). Still business networks are dynamic in character and constantly change. Resource combining is an ongoing process in the business relationships of firms. Both stability and change seem to be characterizing aspects of business networks. This was seen in a study taking a thirty-year perspective on a supplier relationship. The authors concluded that there are both elements of stability and change among firms' relationships (Dubois et al., 2005). There is also heterogeneity of demand over time (Easton and Araujo, 1997). Some studies focus at business relationship ending and have found evidence that business relationships come to a pause or a phase of very low activity in order to then again come into more active phases (Batonda and Perry, 2003) as well as transformations of the relationship energy into new relationships (Havila and Wilkinson, 2002). In other words, these studies argue that what at first may look like relationships ending may instead only be temporary or part of a network change.

CASE DESCRIPTIONS

Start-ups A, B and C: Our business is an island

Firms A, B and C had the most extreme situations. The manager of firm A explained their situation as “*as soon as the financial crisis came there was just a pause*” and added that “*this was the problem with the financial crisis that nobody dared to do anything, nobody dared to buy, nobody dared to, everybody just sat there and waited*”. The three American firms put all projects on ice. Firm A was almost certain that they would get a large project at a bank since it had passed all the tests for fire etc. but it was cancelled the week before the signing of the contract with the motivation “*sorry, we do not dare to do this*”. This meant that firm A had 5 employees and no sales. Prior to this situation firm A had sold their product to cruise ships and different official buildings such as one of the largest hospitals in Norway. Firm A had also explored business opportunities in USA and started to collaborate with the three companies within acoustics and design. The product of firm A is a thin flat sound absorber in plastic, developed at the local university, which can be installed primarily in offices. Firm A had received funding from Innovation Norway but the main investor is a Norwegian who had made a fortune in the oil industry.

When the first major customer, an Italian manufacturer of flight trolleys, filed for bankruptcy, the manager of firm B even used the expression “*It went to pipsvängen completely!*” to describe the situation. It is a Swedish euphemism for the more offensive expression of going to hell. Firm B had also lost their German potential customer since their product never passed the tests, the relationship with a collaboration partner did not work out and the research project related to aircraft chairs had not received any funding. Prior to this situation firm B had already started over once after a failed attempt to sell their product, a light-weight but still hard metal, to the defense industry. After a shift in focus towards the aircraft industry firm B soon formed a relationship with the Italian manufacturer of cabin food trolleys. A contract had been signed for 5000 units of a component for the trolleys and indications had been given of an additional order of 10 000 units. Simultaneously, firm B had started to develop a relationship with a German firm that wanted to use the material for boat kitchens since it was light weight and hygienic. The product of firm B had become included in the product catalog of their global collaboration partner. In addition, firm B had initiated a collaborative project together with a research institute and three potential customers within the aircraft industry to develop chairs for aircrafts. An application for funding to the project had been made to a funding agency. However, then all of a sudden everything had changed and firm B no longer had any customer relationships at all.

Firm C, who had developed a measurement device for measuring the content in tanks from the outside, experienced a similar situation as firm A in that large corporations were afraid to take chances during the financial downturn and therefore did not proceed in their trials. Simultaneously the market for private boats, where firm C had originally sold the device for measuring the level of content in the septic tank, did not benefit from customers getting less money in their wallet and this market was therefore not enough for firm C to rely on. Before all trials came to a halt, a battery manufacturer had been trying out the device for measuring the content level in batteries. A medicine manufacturer and a food manufacturer had started to try it for the large stainless steel tanks. In South Africa the device had been tested for monitoring the contents in transformers in order to detect theft and there had also been indications of interest from Japanese companies. Furthermore, firm C had also started to initiate relationships with actors within freight boats and ferries. When the private boat market was in better shape firm C had no trouble finding distributors all over Europe.

Start-ups D, E and F: Our business has reached a dead-end

The situations of firm D, E and F were not as extreme. These firms did not lose all customers but they realized that they were no longer able to survive without developing their situation in the market. Firm D only had small firms as customers and during the financial downturn these customers experienced tight margins. Some of the customers went bankrupt while others survived but were no longer able to invest in their homepage. In other words, to continue with only small firms as customer was no longer a way forward. Firm D had created a tool that could be used by anyone in order to create and update professional homepages and offered small firms the possibility to use this tool for a monthly fee. In order to be able to increase the monthly fee firm D had complemented their tool with templates that could be used when creating the homepages as well as additional services that their collaboration partners could provide. Firm D had around 3 employees and was about to launch the second version of their software tool when they realized that their current customers were no longer able to invest.

Firm E had both large and small customers for their software tool for 3D mapping of spaces where there can potentially be oil. The small customers generated small revenues that was not enough for growth and claimed many man hours from the founder and the 1 employee. In order to increase the cash flow firm E needed to find customers that would buy licenses. Firm E had also got several small Norwegian customers since many of the former co-workers of the founder had left the large oil company and started to work for one of the small oil searching companies instead. Using the founder’s network from the research institute and a large Norwegian oil company before that, firm E had already been able to sell the product to the large Norwegian oil company as well as a large Italian oil company. But so far the product had only been used by expert users.

When firm F had signed a contract for their monitor device of freezers, energy level, ventilation and fridges, with all the four food store chains in Norway they had no potential customers left. “*There are not that many customers, there are four customers. There are Norgesgruppen, COOP, ICA, and Rema 1000 that is what it is.*” Firm F had worked their way up to this point. Firm F first collaborated with contractors in order to get them to install the equipment. Firm F then moved on to initiate relationships with food stores before moving on to food chains, which then had become their main focus. Firm F had needed the relationships with contractors and stores in order to be able to initiate contacts with the chains. The advantage of having relationships with the chains was that the firm F could sell their equipment to several stores at once and that the chains are powerful enough to convince their suppliers of fridges and freezers to adjust their products in order to fit the software that firm F provides.

Identifying a new way forward

All of the firms needed to identify and approach types of customers that they had not approached before. Firms D and F had current customers and fewer resource constraints compared to firm E. The two firms therefore felt confident to continue to sell their current product. Firm F decided to sell their monitoring product to industrial- and office buildings. One reason was that it was the closest to food stores and that firm F therefore had a couple of relationships that they could use as a starting point. The other reason was that it is a large market. Firm F estimated that there are 40 000 shops and gas stations in the entire Nordic area while there are 240 000 industrial- and office buildings in Norway alone. First firm F tried to collaborate with the contractors like they had done in the food store market but that did not work out in the new market. Based on the other experiences from the food stores firm F then aimed for the chain level, which in this market are the constructors. It takes time to understand the new market and build trust in relationships with different actors and make adaptations. *"You have to use different words and a different terminology. If we say alarm center here it may not be possible to use the same word in relation to industry- and office buildings. Then you may have to call it production control, even though it is the same service."*

Firm D decided change their aim from small firms to medium-sized firms based on the reasoning that larger customers would be less sensitive to changes in the economy. In their interactions with these larger customers, firm D learned that they are more demanding than the small customers. Firm D has broadened their offering to the customers. Today they offer knowledge with regard to web strategies including planning about the intensions with the web site, how to work with social media, newsletters, etc. Recently, firm D has also changed their name to mirror the broader set of competencies. The larger customers were willing to pay more. Firm D could therefore focus on a smaller number of larger customers interested in a larger portfolio of services. In total Firm D has went from around 120 customers to 75 of today. Firm D also shares offices with two potential collaboration partners, one architect and one advertising agency, with the plan that those three firms together could take on joint assignments.

Finding customers that could buy software licenses was difficult because at the customers firm E was only communicating with the expert users. *"We want the users sitting behind the expert to get insight in the technology. We believe that it is when they are aware of the technology and see what it can deliver. It is then there will be a demand. The expert generates very little desire for the technology."* Firm E also needed to approach new customers, more specifically their end-users, with their product using limited resources. Firm E decided to create a project where firm E studied a large part of the North Sea and then sold this information to several firms. This type of study is usually made for a smaller area for a single customer. However, it is not until the next phase that the customers compete in detecting and analyzing the likelihood of the existence of oil and the customers would therefore benefit from sharing the cost for the initial information of the area. Firm E achieved three things by doing this project. They gained new contacts by presenting the study to potential customers, they may make money on the study if they are able to sell it and most importantly they get to present their technology to the end-users. Since firm E has limited resources the entire project has been pre-financed through sales of the future result to a couple of firms.

Firms A, B and C not only needed to approach new customers but they also needed to reconsider their product, as also firm D did. At the time of the interview in 2012 firm B had 27 active development projects running in interaction with potential customers within construction, electronics and vehicles. Within the vehicle industry firm B benefits from their current participation in two major national research projects where many important actors within the industry are found among the other participants. Most of the development projects would save the company alone if they materialize. However, until a new production facility is built firm B will not be able to deliver. In addition to this firm B has focused on internal product development to be able to perform well in the development projects. In September

2011 firm B made their first delivery to their new "first" customer. The relationship was initiated by coincidence. The customer manufactures trolleys to be used in hospitals for carrying medicines and other equipment. However, when the relationship was initiated firm B was not able to meet the quality requirements for the needed boxes for the trolleys. The new customers had faith in firm B and allowed firm B to deliver the boxes in solid material during the year it took until the quality issues with their own material had been solved.

Firm A also needed to find new customers and reconsider their product but firm A was now only consisting of one person. A relationship was initiated with a research institute in Oslo that does research on packaging material for the food industry. The research institute and firm A organized a research project to research on a cheaper version of the product of firm A. Together with four other firms and a couple of British and Irish universities they wrote an application for funding to the European Union and was granted 1 100 000 Euros. In order to continue to sell the original product of firm A to new customers, relationships were initiated with distributors in Norway and Germany. Firm A had to spend a long time teaching the two firms about acoustics and how the sound absorbers should be placed in a room in order for the distributors to be able to handle customers independently. Simultaneously, firm A has been involved in projects exploring the possibility of using the material off-shore and in ventilation. A spin-off company has also been started from firm A that makes loudspeakers using the same material.

Firm C also needed to find new customers and reconsider their product with a very small organization. However, firm C was not able to see any other applications of their product except for the options they had already tried. Firm C therefore initiated a relationship with a German consultant who got the task to explore the possibility of transforming firm C into a sellable concept in terms of what parts of the firm that should be included in such a package and what type of potential buyers that should be approached. Firm C has received a couple of offers but no acceptable offers so far.

FINDINGS FROM THE START-UPS' RECOMBINING AND REPOSITIONING PROCESSES

The six start-ups described above show that firms use different ways of recombining and repositioning to get new network positions. The three firms (firm D, E and F) that still maintain their current customers even though they are not able to develop based on those customers, highlighted that *the firms tried to find a way forward that very much is related to their current resource collections and network position*. Firm F focused on the industry and application that was closest to their present and firm E used their current relationships to get access to other contact persons. *By keeping their repositioning to a minimum those firms were able to initially offer the same product to new customers and could then recombine resources in interaction with their new customers to fit their needs*. Firm D also focused at a related customer segment in terms of size but most importantly they also recombined resources to be able to broaden their offering to customers. Firm D has also pooled resources together with two other firms to be able to deliver even broader offerings to new customers. It means that firm D does not need to develop those competencies themselves but could if a client has needs with regard to advertisement or architecture, approach this customer together with the partners. In total, firm D has decreased their number of customers implying that they sell more to individual customers. While firm E and F initially repositioned based on its previous network position, firm D simultaneously repositioned and recombined resources in terms of selling a broader offering to new customers.

Similarly, the firms A, B and C that had lost their current customers *also tried to keep their repositioning to a minimum in terms of finding a related position*. However, these firms had no current customers to make this limited repositioning from. In contrast, these firms had to *look at their network further back in time in order to find relationships that were still viable, these firms needed to "backtrack" their network*. The firms A and B both had early relationships with research groups. Using their experience from these early relationships they were able to form new relationships with research groups. Using these new relationships with research institutes and universities as a starting point the firms were able to once again recombining resources into new versions of their product. The recombination process that the two firms have engaged in are different since firm B does a larger share of the activities in-house while firm A have to find collaboration partners that help them develop the new product. The two paths are also different depending on the different actors that the two firms encounter along the way and the experiences that the two firms have from their previous development paths.

Even though the firms A and B had to "backtrack" their network further back in time to find relationships to use as a starting point for their repositioning it does not mean that the other relationships that they had are forgotten. Firm A reported that the American firms had started to make contacts again when the financial situation had improved and firm B reported that the remainder of the Italian manufacturer had become operational again after the bankruptcy and started to make contacts. However, due to the experiences that firms A and B have made in their absence they are now behaving differently in these relationships. Firm A used their experiences from dealing with the distributors in order to identify an English representative for one of the American firms, which is easier to collaborate with than the contacts they had before. Firm B is not devoting as many resources to the Italian manufacturer since the main focus is no longer the aircraft industry. In short, both firms A and B are no longer as dependent on these firms as before since they have repositioned and recombined resources into other applications.

Firm C did not find a starting point among their previous customers to use for repositioning and recombining. In contrast, firm C used its entire network as a starting point for viewing the firm as a collection of resources that may be seen as valuable in the market for mergers and acquisitions.

A summary of the empirical findings can be seen in Table 1 below.

Table 1: Summary of empirical findings.

Firm	History	Problem	Recombining and Repositioning
A	Had sold the product to several customers and initiated collaborations.	All customers "paused" and disappeared.	Recombine by participating in development projects together with other actors in order to reposition.
B	Tried to initiate customer relationships within several industries. Had found their first major customer.	First main customer went bankrupt and all other customer projects failed.	Recombine by participating in development projects together with other actors in order to reposition.
C	Many potential industrial customers tried the product and consumers bought a private market version of the product.	All customers "paused" and disappeared.	Recombine by interacting with a consultant in order to reposition.
D	Many small firms as customers.	The firm would not be able to continue to grow with a small firm focus.	Repositioned by aiming for medium-sized firms. Recombined by broadening their product offering in interaction with their new customers.
E	Both large and small customers that bought the service of the use of the tool.	Needed customers that were large enough to buy licenses in order to grow.	Reposition towards actors that would be able to influence a decision to buy a license. Recombined in order to create a product that provides access to the actors.
F	Had signed contracts with all actors with the industry.	Needed to move into another industry in order to find new customers.	Reposition to a related industry. Recombine to make adaptations to their new industry in interaction with their new customers.

ANALYSIS AND DISCUSSION

The purpose of this paper regards how start-ups recombine resources and reposition in the network. Dubois et al. (2003, p. 427) discussed the change and continuity dichotomy and concluded that it in the context of a firm's supplier base may be a false dichotomy: "*continuity in some dimensions is a prerequisite for changes in others and vice versa*". In this study we see a similar pattern. What we see is that even though the processes of resource combining and actor repositioning are strongly related (Cantú et al. 2012, Håkansson, 1987), either resource combining or actor repositioning was taken as a starting point for the other. In greater detail, there was a difference between the situations of losing all customers and facing a dead-end. The start-ups that experienced a dead-end tended to emphasize repositioning first and then recombining in order to adjust their product to the new position. In contrast, the start-ups that had lost all their customers emphasized recombining first and then tried to find customers for their new or refined products.

In line with other scholars (Johanson and Mattsson, 1992; Gadde et al., 2010) we agree that the position of the firm is both a base for further development and a connection with future interaction. By making their *repositioning as limited as possible* the start-ups were able to continue to adhere to the locally legitimate activities when interacting with their new customers. Furthermore, in the present paper we in line with Jahre et al. (2006), who emphasize interaction as part of a space and time context, show that *a previous position may be the base for future interaction*. Previous customer interactions form the base for the current and future developments. In contrast to the firms that repositioned to a limited extent within their current network these firms "moved back in time" as little as possible to a point in time to a previous position where the start-up will be able to recombine resources at the current point in time. The recombination of resources then enables these start-ups to reposition from that past position in a different way than before. Since the lost relationships had not had the time to reach a developed phase there is little relationship energy (Havila and Wilkinson, 2002) to transfer to other relationships. However, our findings suggest that the memory of previous network structures seem more important for these firms. The processes identified in the empirical material are related to network imprinting (Milanov and Fernhaber, 2009; Johnson, 2007). Even though the start-ups are not spin-offs their behavior resembled to reimprinting (Ferriani et al., 2012). Their "new" network is both a result of their initial imprinting, the lessons they learned during their early interactions in the network as well as the adjustments and adaptations that had to be made when customer relationships were lost or had to be developed. The identified processes also highlights that start-ups are different from larger firms that are more often discussed in IMP literature. Due to the newness of the start-ups they have not yet established long-term relationships and therefore the integration path (Guercini and Runfola, 2012) is rare for those firms. Start-ups that have some kind of network position and resources to build one are more likely to pursue a substitution path (Guercini and Runfola, 2012).

CONCLUSIONS AND IMPLICATIONS

The main conclusion is that for start-ups in need for finding new customers, the processes of resource recombining and actor repositioning are interrelated and to some extent need to occur simultaneously. The paper also concludes that a limited repositioning is an important starting point in order to manage a start-up away from a lock-in in a network. Then the present resources of the start-up will be enough to initiate new relationships and recombine resources in interaction with the new customers. Thirdly, the paper concludes that when all customer relationships are lost, a previous network position is an important starting point that enables the start-up to recombine resources since it connects the past with the future interactions.

We have been able to understand the start-up development processes in challenging situations. Herein the IMP literature and in detail the actors repositioning and resource recombining has contributed with an understanding of the interactive nature of start-up development. Furthermore, by using the start-ups as focal study objects, the processes become clear since the situations are possible overview and our study thereby add to the understanding of the resource-actor connection of the industrial network model.

Future studies should explore important early relationships to have for a start-up in order to enable future "backtrackings" of the network. In other words, what kinds of relationships that is likely to remain viable over time and enable the start-up to easily reposition/recombine and develop further. In addition, future studies are needed of firms A, B, C, D, E and F in order to find out whether these firms continued to develop or if they failed later and how the repositioning and recombining they made shaped their development.

One managerial implication following from this study is to be open to backtracking. In times of customer change, the situation is not as hopeless as it may seem in times of customer change. Even though start-ups have many special conditions losing customers or meeting dead ends are not unique for start-ups. Another managerial implication is that also larger firms may need to backtrack their network to search for a viable relationship in order to make a limited repositioning in order to continue to build their network when customers are lost and/or not found.

Following the reasoning of Vergne and Durand (2010) the exogenous shock may have been a positive thing for the firms that lost their customer relationships since this made a lock-in less likely. However, the positivity of the situation assumes that the start-ups had the slack of resources needed (Venkataraman et al., 1990) and did not fail. For start-up managers, this paper provides examples of how to use as little as possible of this assumed slack of resources by making as limited changes as possible and thereby keeping new investments to a minimum by utilizing capabilities that are already part of the firm. In addition to the avoided lock-in the major adaptation may have provided a higher probability of survival (Andries and Debackere, 2007).

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