Abstract

This paper is concerned with actor positions and roles in the emergence of networks. It is important for the actors involved in the evolution process to understand how their own activities and their expectations of the position of the other actors influence the outcome of the network as a whole.

Introduction

During the last few decades, companies have started to build complex relationships in such areas as sourcing, foreign market entry, and technical development. E.g. increasing competition and limited resources have forced companies to participate in cooperative groups in order to create new innovations or facilitate entry to new market areas. Even the public sector has shown interest in supporting the development of cooperative networks between small and medium sized companies through e.g. funding.

Hence, it is important to understand how single activities are related to the development of the network as a whole. This is important to the individual actor as well as to policy makers. However, there seems to be little knowledge about the emergence process of the networks and the roles of different actors in the process. The existing studies often have the aspect of technical change (e.g. Håkansson 1989, Waluszewski 1990, and Lundgren 1991, 1993).

The aim of this study is to analyse the roles and the positions of the actors in the evolutionary process of networks in the service industry.

The empirical part of the study is based on a case "Historical Loviisa", a regional product development project in the travel and tourism industry. The Loviisa case is one of the product development projects funded by the EU. Loviisa is a small town situated in the eastern part of the province Uusimaa, 90 kilometres east of Helsinki. The project involves the municipal tourism organisation, tourism entrepreneurs and associations in town, the National Board of Antiquities, other regions along the Baltic coast having sea fortresses, and intermediaries.

Network Roles and Positions

Networks consist of several actors with different interests and different views. The differences are results of various backgrounds and histories of the actors, of their positions, knowledge and ambitions in the network. Furthermore, actors are linked to other specific
actors through exchange relations and are influenced by them. (Hakansson & Johanson 1993, 44)

Actor position is an important factor in analysing networks. Mattsson (1985, 266) defines position as “a role that the organisation has for other organisations that it is related to, directly or indirectly”. Other organisations define the position of a focal organisation through the relationships they have with it. The position can be described by 1) the functions the company performs, 2) the identity of the organisations that the focal company has relationships with, 3) the relative importance of the focal company in the network, and 4) the different levels of analysis.

In order to analyse the positions of organisations Mattsson (1985, see e.g. Johanson & Mattsson 1988, 296) presents two levels: micro and macro positions. Micro positions refer to relationships between individual companies. They are characterised by the role the company has to other organisations, by its importance to other organisations and by the strength of the relationship. Macro positions describe the company’s relationship to the network as a whole. They are characterised by the identity of the companies with which the company has direct or indirect relationships in the network, by the role and the importance the company has in the network, and by the strengths of the relationships with other companies. In analysing the evolutionary process of networks, macro position level is more comprehensive.

In the network governance model Johanson & Mattsson (1992) separate the actors from the resources and activities: they see the network of exchange relationships as a structure governing the production system formed by resources and activities. Positions can be defined for all the actors in the network and through positions it is possible to characterise network structure and network distance between actors. However, in defining the concept of position Johanson and Mattsson make a distinction between a limited and extended definition. The limited definition refers only to the network level while the extended definition additionally refers to the role the actors have in the production level. The production role has two dimensions: 1) the function the actor has in the production system and 2) the amount of substitutable resources one actor controls.

Anderson et al. (1998) develop further the position and role concepts in industrial network studies. They argue that the position concept alone is not sufficient to describe the dynamics of the networks but the two concepts, position and role, could meet this challenge. According to them, position and role as concepts are inseparable and they have to be defined in relation to each other.

Hence, Anderson et al. (1998) suggest that the dynamics of networks can be studied with the help of a position-and-role framework. They state that the network position of an actor exists as a result of activities performed between actors, and more specifically, it reveals the behaviour of an actor that is expected by the actors, collectively. These expected activities are called “taken-on-activities” Because the taken-on-activities refer to the actors expectations of their positions, position is a stability dimension in a network.

Moreover, an actor’s activities are not only reflections of expectations, but active and subjective. An actor “has a position but acts in a role” (Anderson et al. 1998, 172) Role is a concept for describing an actor’s intentions and creations. These role activities are called “made-up-activities”. Thus, role is a dynamic dimension in a network.

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The active role of actors has been emphasized in the network research, e.g. Johanson & Mattsson (1992, 205) state that “…actors have intentions, they make interpretations of conditions in the industrial system and they act.”

Additionally, position concept improves the understanding of how the individual actor is related to, or rather embedded in, the environment (Johanson & Mattsson 1992). Thus, the positions of other actors in the network characterise the environment in which the actor is embedded.

**Network Dynamics**

Easton (1992, 23 - 24) states that networks are stable but not static. New relationships between companies are formed and old relationships disappear. The interaction processes are stabilised within the context of existing relationships. This continuous interaction between companies offer the opportunity for innovation in a better known environment.

However, stability also provides a platform for change. The networks transform over time, merge, and shift in focus and membership. The events external to the relationships and the transactions which help to define them change the networks. In these changes evolution is the main mode; revolution is possible but unusual. According to Håkansson & Henders (1995), a great deal of the changes in industrial networks is small, but create a development pattern that can be characterised as evolutionary. A revolution, or basic reorientation, might occur when the changes in the network are remarkable, or when the revolutionary initiative comes from outside the network. In many cases, the revolution is due to the governments through e.g. legislation. However, all change requires network support.

The position of an actor changes as well (Johanson & Mattsson 1992, 210). The change is not only affected by the development of new relationships, by the interruption of the old ones or other changes in character, but also because the counterparts’ positions are changing and, furthermore, the positions of third parties are also changing. In order to understand better these changes, the active and passive roles of the actors should be distinguished.

Lundgren (1992) separates concepts coordination of activities and mobilisation of resources and actors in explaining changes in industrial networks. According to him, coordination is a process of mutual adaptation and learning. Coordination leads to increased structure and hierarchisation in the network. The change is continuous, and a change in one part of the network involves changes in other parts of the structure.

Discontinuous changes are, on the contrary, caused by a mobilisation process. Mobilisation refers to “the process of acquiring resources to achieve changes in industrial activities”. (Lundgren 1992,) Lundgren separates the mobilisation process into two categories: network integrative mobilisation and network changing mobilisation. The former refers to the process of expanding the network with existing activity cycles, the latter to the process of establishing new activity cycles.

Network changing mobilisation is likely to involve the emergence of new networks, because it disturbs the existing coordination process and threatens the existing network structure. This process, however, is complicated and often needs support in order to achieve required
mobilisation in e.g. developing new technologies. This support could come e.g. from authorities and universities.

The evolution of networks has often been studied through technological development. Industrial systems exist in order to create products and services. Innovation can be seen as an important force in networks. It is argued that innovations occur between companies and not within them. Many of these studies have a focal firm’s viewpoint (e.g. Håkansson & Eriksson 1993, Waluszewski 1990). The holistic perspective of the whole system is rare. However, e.g. Lundgren (1991, 1993) has studied digital image processing through network perspective.

**Network Development - Focal Firm’s Perspective**

When studying the change from a focal firm’s viewpoint, there are two issues which appeal critical to the goal performance in business: first, how to mobilise the various different counterparts of a company and, second, how to develop cooperative attitude and mechanisms in interaction with others in order to solve problems as they arise (Håkansson & Snehota 1995, 6)

Håkansson & Eriksson (1993) found four key issues concerning the handling of cooperative development processes when studying corporate collaboration in technical development. They investigated the relationships through companies, which try to involve its suppliers in technical development. The four key issues in the process are prioritising, synchronising, timing and mobilising.

First, in prioritising the problem is that of choosing partners. Because close relationships require resources and resources are limited, there is a need for a mutual process of both giving and receiving priority in order to establish a collaborative relationship. In choosing an “ideal” partner, there are several important dimensions, such as proximity, technical competence, the partner’s connections to other actors, and its interest in cooperation. Additionally, the authors found out an “interactive effect” in networks, coming from the confrontation of actors with different knowledge bases.

Second, synchronising concerns the way in which the company’s and the counterparts’ activities and resources are related to each other. In a network, efficiency as well as innovation are largely created through different actors’ mutual adaptations in technical and other dimensions. To manage this process is one of the key factors for success. For the individual actor, the problem is to find its own possibilities for technological specialisation in line with the development of the counterparts. It is understandable that this process is filled with conflict, differing ideas and power struggles. This concept synchronising seems to be very close to the concept coordination Lundgren (1992) presents in describing the changing process of networks.

Third, timing of activities in the networking process includes timing on different levels: timing within the single company, timing within a relationship, and timing within different relationships. Additionally, timing is important for the mobilisation of other actors outside the network, e.g. customers.

Fourth, to mobilise other actors in favour of a certain technical solution is one of the key issues in order to succeed in the process. If new, even good ideas do not get support from the
main actors within the network, they are not going to be realised. While opportunities for
innovation are inherent in the network, the links between actors cause inertia and reluctance
to change. Accordingly, if the actors do not accept proposed changes, there will be no
changes. The possibility of mobilising other key actors may happen through using direct
relationships or indirect relationships. From this mobilising point of view, it might be more
important that a partner possesses the right relationships than the right competence.
Lundgren (1992) states that in the mobilisation process a collective goal is not necessary,
although the process would be easier if the actors share a common vision.

Emergence of Networks

According to Lundgren (1991, 1993), the emergence of new industrial networks is a
combination of three parallel processes of genesis, coalescence and dissemination, see
Figure 1. Although the processes are parallel, they dominate the evolution in consecutive
order. Critical masses of similar and complementary research and development activities as
well as of investments in complementary industrial networks are necessary in order to
transcend from one process to another.

In his study on digital image processing, Lundgren describes the different processes as
following: Genesis represents the creation of variety, in this stage there are independent
research and development projects, different technological systems and several networks
with geographically, functionally and technologically scattered actors. The genesis process
is, however, characterised by interrelated innovations, the identification of a new
technological system and the mobilisation of resources to solve specific problems.
Coalescence is a dual process: first, the actors grow closer and form a new industrial
network, second, the actors attract new resources by legitimising the activities of the
network to the outside world. Dissemination involves the adaptation of the new technology,
it is characterised by the new roles and positions the actors assume: horizontal networks
become more vertically integrated connecting suppliers and users.

![Figure 1. A framework for the understanding of the emergence of new industrial networks](image)

Source: Lundgren 1993, 168

Both public policy and the activities of individual actors were important in the development
process. The public support was concentrated to one actor as well as to public policy
programmes.
Critical issues in supporting the new technologies were how much money should be invested, to whom it should be distributed and when. Lundgren ads (1993, 167): “Since different problems are critical in different phases of development, the interaction strategies of the actors must vary accordingly. Public policy should not only be geared towards the support of individual projects, but also towards the structuring of the network as a whole.”

Håkansson and Lundgren (1995) identify two interrelated dimensions in the evolution of networks: firm behaviour and network pattern. The term firm behaviour describes individual companies and their changes in internal properties, resources and capabilities, and the development of relationships with other companies. There are three generic types of firm behaviour: performance of activities, control of resources, and the combination of activities and resources. The term network pattern characterises the way in which the changes in firm behaviour create specific evolutionary processes in the network. There are three types of network patterns and these form the total network evolution. These three types of changes are related to performed activities, control behaviour and their interlinking. The performed activities create a tension between specialisation and generalisation, control behaviour creates a tension between hierarchization and extrication of the network power whereas the interdependence causes heterogenisation or structuring.

According to Håkansson (1992), the two processes structuring / heterogenisation and hierarchisation / extrication create the development pattern of the network. This pattern consists of two different phases: The first is characterised by the tendency to structure and to increase the hierarchy; individual companies try to gain control. In the second phase there are fewer companies which control more and more. The other actors have to break the power pattern in order to gain more independence. This phenomenon could be characterised as heterogenising end extrication. However, the mobilisation will only take place when enough actors perceive the same opportunities.

Case “Historical Loviisa”

The historical Loviisa project was launched in January 1997 by the city tourist office. It aimed at creating new cultural and historical tourist products in Loviisa area. The project comprised two main parts: training of entrepreneurs and product development. The aim was to create historical products for the summer season 1998. Additionally, it was important to awaken the interest of the local people for the local heritage.

The travel and tourism industry is a field in which establishing networks is one of the prerequisites of success. In the regional tourism context, the tourist product concept can be seen as a combination of attraction, accessibility and amenities (e.g. Medlik and Middleton 1973, Burkart and Medlik 1974). Middleton (1979), later added the components of image and price to the concept. These components are supplied by tourism companies and other suppliers, e.g. authorities and associations. However, tourists regard the tourist product as whole, as a package including all the components. Therefore, independent tourism companies and organisations should cooperate in order to offer a total attractive product and through this improve their individual positions in the market. (Heath & Wall 1992, 129)

Although the aim of the project was to create new products, it also comprised the idea to create a new image to Loviisa as a tourist destination.
In order to follow the evolution process of a local net and the change in the positions and roles of the actors during the process, all the enterprises and organisations involved in the local project were interviewed in March 1998 and during the end of 1998 and the beginning of 1999. Additionally, all the project material was available. Most of the companies were small (employees 1–5, turnover under FIM 1 million), only one company was considerably bigger (30 employees, turnover FIM 12 millions). Eight of the interviewees, including the municipal tourist office, actively participated the development programme, two left the project during the winter 1998, two had not started the programme, and two had not applied for the incubator activities.

The first interviews revealed that the entrepreneurs’ conception of their own role in the network explains their activity in the project in some respects. All interviewees considered the idea “Historical Loviisa” a good and potential one. The active actors were ready to invest their time and knowledge in training, planning and marketing in order to create a new image to Loviisa - and their own enterprises. The passive actors admitted the importance of the product development in order to attract more tourists to Loviisa, but considered their own products as basic elements. They focused on developing their own infrastructure and were willing to leave marketing to selected experts, e.g. the tourist office.

The Loviisa tourist office and the National Museum of Antiquities have had the leading role in the project through their consultants. The major problems in conducting the project seemed to be timing and mobilising the entrepreneurs. It is essential to find the right partners, but in this case it was not difficult, because all applicants were accepted. The tourist office as a public organisation needs to cooperate with all actors and therefore has the dilemma of neutrality. Inspite of the pressures for cooperation some of the companies found the position of the tourist office too dominant. One of the participants did not accept the leading role of the tourist office and left the project.

In the network evolution the first stage, genesis, could be seen. The cooperation between entrepreneurs was very vague before the project, product development was independent, and the marketing of Loviisa was seen as the task of the tourist office. During the first year the cooperation increased through e.g. training, joint products and joint marketing events.

During the first interviews both coalescence and dissemination were evident, though the horizontal network was more obvious. At the beginning, only the biggest company seemed to be more interested in a vertically integrated network: it was more or less actively seeking subcontractors. Already half a year later the vertical network emerged more clearly.

The concepts of position and role proved decisive here. The roles and positions of the actors had changed during the process. Two of the companies had clearly adopted the role of subcontractors whereas others were working for a horizontal cooperation.

The biggest company was initially involved in the project but with the change of the Managing Director their concept of the network changed. The company’s role and position proved complex. On the one hand it lead to the fact that the company discontinued, because it found the programme unsatisfactory: it considered other companies inexperienced and the contents of the programme useless for itself. Additionally, it regarded most of the participants as competitors. It also actively looked for new partners as subcontractors. On the other hand the position of the company proved important in the new network. Leaving out the most important company was very difficult because of the resources it had.


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Nevertheless, some of the other participants welcomed the possible withdrawal of this dominating actor. The tourist office had a difficult task in coordinating some of the joint events.

Discussion

In the emergence of networks actor position and role are important factors in analysing the process. In the network development process the actors’ behaviour varies from active to passive. The actors’ conception of their own role and position in the network explains their activity in the project. Additionally, the expected position of the other actors has an influence on the behaviour of an actor. All this explains the outcome of the network.

The evolutionary process of the networks can be studied from a focal firm’s viewpoint or from the holistic perspective of the whole system. When having the focal firm’s viewpoint the actions of the focal company will be emphasised. In the holistic perspective the network patterns and evolution process come up together with the firm behaviour.

In the Loviisa case the time perspective in studying the evolution process of a local net was short, only two years. Even in this short time the combination of the parallel processes of genesis, coalescence and dissemination could be seen. In the travel and tourism industry it is important that the independent tourism companies and organisations cooperate. During the process, however, it was evident that the actors invested time and effort in order to define their own roles and the actors’ positions in the network. A network pattern emerged, but it continuously changed.

References:


Appendix 1. Historical Loviisa Project in March 1998

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