

On the Right Track? Network Strategies for Innovation and Renewal

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Abstract

Designing sectorial regulations that promote innovation and development is a key concern for many authorities throughout the world. There is plenty of discussion about how such regulations should look, both in the field of economics and among new public management scholars. However, missing from this discussion is the perspective of *those who are regulated*, and who are supposed to provide the entrepreneurship and create the innovations that are sought. In this paper, we supplement research into regulations and de-regulation with a “user” perspective which we base on; a) research into industrial networks and b) the insights and experiences of the people actually being regulated.

In a series of case studies, we have investigated how private and public actors in the railway sector have interpreted a new regulatory framework. We have also investigated how (and to what extent) this has spurred renewal and innovation among them. In particular, we focus on how they perceive their roles and how they have acted in order to make use of the new opportunities created by the changes. We also relate our results to the ambitions of the regulators.

A key finding emerging from these studies is the profoundly embedded nature of the strategizing processes. What we see is not a free market of independent actors; instead, the railway sector is a complex network of dependencies and interactions. This is in line with previous research into industrial networks, but it is also a situation not usually accounted for in the deregulation literature, where ideals concerning classical free markets prevail.

Keywords: Service Innovations, Embeddedness, Networks, De-regulation, Railways

Introduction

Sweden’s railway sector used to be a highly-regulated state monopoly. During recent decades, however, a number of changes have been made to its institutional foundations in an attempt to create conditions of greater flexibility, efficiency, and innovative capacity [1]. Promoting innovation and development is a key concern for many regulatory bodies throughout the world. Far from the conception of regulations as bureaucratic impediments to innovation and entrepreneurship, as found in some branches of economics, there is an increasing understanding nowadays that regulations are not only

capable of spurring innovation, but that they are also, in fact, indispensable when it comes to making the complex and intertwined systems of today's society function at all. What we require are regulations that support innovation and development, i.e. the right kind of regulations.

One of the ambitions of the changes to Sweden's railway sector has been to create a more market-like situation, providing space for new actors and changing the roles of the existing ones so as to decouple them more from the technical systems and from each other. The logic behind this is the preconception that independent operators acting in competition with each other are supposed to have stronger incentives to improve their operational activities and to develop new, customer-oriented service concepts and efficient production solutions than do state monopolies. However, it should be noted here that ambitions to deregulate the railway sector never included building a pure market in the traditional sense. Rather, the idea was to create a market-inspired organizational form capable of implementing and achieving transport policy objectives more effectively. By creating the right conditions, in terms of frameworks, it was hoped to establish a market-like structure which in itself would operate in such a way that policy objectives would be met without the need for direct government intervention. This market model, with the roles it prescribes for the actors involved, is believed to result in both greater efficiency and an improved alignment of public services with users' needs [cf. 2].

The basis for the reform was the separation of Sweden's national rail monopoly into one government agency, responsible for track maintenance, traffic management, and overall sectoral development (Banverket), and one state-owned commercial transport operator, SJ. SJ retains its dominant position, but a number of independent actors have gradually entered the market. While some parts of the railway sector are still considerably regulated (e.g. all local public transport services and most passenger traffic between major cities), there are other areas where market forces are now being allowed more leeway. Freight and the provision of rolling stock are two examples that will be in focus in the present paper.

In the theoretical literature, there is plenty of discussion about how regulations promoting development and innovation should look, both within the field of economics and among new public management scholars. However, often missing from this discussion is the perspective of those *who are regulated*, and who are supposed to provide the entrepreneurship and create the innovations that are sought. In this paper, we supplement research into regulations and deregulation with a "user" perspective which we base on the insights and experiences of the people who are actually being regulated. Further, we would also like to pay particular attention to the embedded nature of many innovations. While network dependencies have sometimes been dealt with as part of the problems that regulations are supposed to overcome, there are still sectors where the actual key to competitive advantage lies in the integrative use of network structures. The railway industry is one such example. Some research indicates that neither market solutions nor governmental regulations are enough, in themselves, to drive innovation in situations such as these [3]. Instead, innovations are more likely to occur 'at the interstices' of collaborating groups and organizations [4, 5]. Based on this, the functioning of networks, as regards matters of innovation and development, emerges as an area of key concern.

In three case-studies, we investigate examples of innovation among private and public railway sector actors who are adapting to the new market situation created by the regulators. The first example concerns a group of entrepreneurs who saw a gap in the market which emerged because of liberalization, customer needs, and the strategies of the major railway operators. The second example concerns how a constellation of actors joined forces to develop a new train that would meet the challenges of tomorrow's passenger transport market. The third case concerns how a major transport user/customer acted in order to create a transportation solution that better matched its logistical needs.

The rest of the paper will be structured as follows. Next, we will develop a conception of innovation as an embedded, network-based phenomenon. After that, there will be a brief discussion of the method used in the three case studies. Subsequently, there will be an empirical part where the cases are presented together with an introductory analysis. In the fourth part of the paper, we discuss our findings in relation to previous research into innovation in networks.

Innovation as an Embedded, Network- Based Phenomenon

In the introduction, we argued that market solutions are not so good at providing innovative change [3]; instead, innovation is more likely to occur 'at the interstices' of collaborating groups and organizations [4, 5]. Different forms of networks should be emphasized, rather than purely hierarchical or market-based forms of governance. Rothwell [6] argues that different kinds of cooperation within strategic alliances and/or networks will constitute one of the most important factors when creating successful innovations in the future. In industries and organizations whose activities are associated with a high degree of uncertainty, and where change is rapid, more interaction with external actors is required in order to gain access to both the required knowledge and other important resources [7]. On a more general level, it can be seen that the increasingly complex market situation and the increased pace of the marketplace are forcing companies to shape new horizontal and vertical alliances in order to meet the new market conditions, while maintaining and balancing flexibility and efficiency. This is also something being argued for by the Interaction and Network perspective of the BtB sector. In this research tradition, innovation and development are seen as the results of various forms of interaction and co-operation between a changing set of actors, each one of them pursuing individual interests on each occasion while also contributing to the performance of the network as a whole [8]. Collaboration between various actors could be driven by either the need to fill a missing part of the value chain (or value star, see [9, 10] or by learning considerations, i.e. gaining access to new knowledge [7].

Lincoln et al. [11] highlight two main strategies concerning how networks can be used to provide access to critical resources. The first approach lies in the networks, and the relationships that these are made up of, giving the organization access to a range of skills and resources without the attendant need for the organization to invest directly in them. Instead, the resources belong to other actors involved in the network that the organization is working with. This way of working provides access to resources, but without these resources being internalized within the organization that owns them.

The second approach to using the network and its accompanying relations is more closely associated with the company's development of internal knowledge. Here, the network is used as a tool for increasing the organization's internal knowledge by gaining

access to a variety of skills which enhance the knowledge base of the company, i.e. external knowledge is internalized through various forms of learning.

A network is composed of three interrelated variables—actors, activities, and resources [12]. Of these, the *actors* play the crucial networking role because they perform the activities and they control the resources. These actors can be individuals or groups; indeed, they can also be an organisation or a part of an organisation. The *resources* can be divided into: (i) tangible and (ii) intangible. Examples of tangible resources include physical assets (such as production equipment, components, and materials). Examples of intangible resources include knowledge, skills, and routines. Resources can be under the control of a single actor or jointly controlled by several actors. Using the resources, the actors undertake *activities* whereby these resources are either transformed, by being combined with other resources, or transferred between actors. If resources are in short supply, or if they are important for either transformation or transfer, the question of who controls them will assume greater significance [12, 13].

Regardless of how the network is used, the company gains increased access to knowledge and other resources. In brief, companies interact and thus develop their relationships with one another in order to exploit and develop their resources for each other's mutual benefit [14]. It is this value, or rather the expected value, that encourages the interaction and development of relationships and networks. Different resources, e.g. natural, human, educational, and financial, are combined and transformed by means of the activities and processes in order to create added value in the form of goods and services laying the foundation for market offerings. The network thus provides access to a diversity of resources and combinations exceeding what would otherwise be possible to assemble and manage, either via a market of fully-independent actors or via a centrally-governed hierarchy.

Drawing a conclusion from the above, we note that innovation takes place within the framework of a dynamic constellation of relationships. How the companies act is affected by various relationships which frame or embed the action. This expresses the "embeddedness" and refers to the fact that "*economic action and outcomes, like all social actions and outcomes, are affected by actors' dyadic relations and by the structure of the overall network of relations*" [15 p. 4].

Method

This study builds empirically on a case-study approach [16] using data from three cases connected to the deregulation of Sweden's railways. Our argument for using a case study approach is that we wanted to focus on more detailed information about a few cases, in order to understand the complexities of embedded innovations, as outlined above.

Data was collected using a combination of semi-structured interviews and documentary studies of secondary data. The interviews were recorded and transcribed while the statements made during them, which to some degree discussed the different aspects of innovation, were coded using open coding [17] and organized so as to gain an understanding of how the studied companies had acted in the matter being investigated. The coded statements were then formed into detailed, empirically-driven descriptions of how the actors had acted during each respective case. Furthermore, we have also used statements and quotations from the interviews illustratively [17]. Case selection was based

on the notion of the systematic and intentional sampling of an information-rich case, i.e. cases from which a great deal can be learnt about the relevant phenomenon [18]. In this study, we wanted to obtain information about how actors had made use of deregulation. The analysis was carried out using steps that are traditional when analysing qualitative data [17]. Coding was done using marginal remarks identifying keywords.

Cases

TÅGAB

The first case deals with a company that is in the business of transporting goods by rail. This company was founded at the beginning of 1994 as a result of the reorganization and down-sizing of state-owned train operator SJ (the National Swedish Rail Company). As a result of this reorganization and down-sizing, SJ's goods division was looking for independent actors that could manage short routes (feeder routes) that were not profitable for SJ to handle, as a major public actor. Many of the actors responding to this were local ones who believed that it was important to maintain traffic in the area. One such actor was TÅGAB. This company was founded by Lars Yngström who had previously worked as a manager of freight division SJ Gods in the county of Värmland in western Sweden. The company was started up to serve a short route in the eastern part of the county. Initially, TÅGAB had 13 employees and was owned to 80 % by its founder and four other members of the management team. The remaining percentages were owned by two major customers. Their role as owner was to function as a link with the market, providing TÅGAB with important feedback and information about market trends. Today (late 2008), the company has 90 employees and a turnover of about 15 MSEK.

Initially, 90 % of TÅGAB's business was with SJ Gods, but today SJ Gods only accounts for 6-7 %. Today, TÅGAB has four business areas; transporting goods by rail, leasing out trains and train drivers, operating a repair shop for trains, and conducting passenger traffic on the route between the rural towns of Borlänge and Kristinehamn. Even though SJ Gods (or Green Cargo as it is branded today) is less important as a customer, it remains very important as a partner. This is something that Yngström very firmly argues for;

“ ... it's quite clear that Green Cargo is a very good partner. We work together on the wagon load traffic, we help them with drivers when they need these, we lease locomotives from each other, indeed it's a very trusting collaboration... we have not been in competition over the same business... what's important to this company is that we're not looking to become a miniature Green Cargo, ... we're a regional company”

The theme of cooperation is very important to TÅGAB; as it is a relatively small actor on the rail market, it has to cooperate with other actors. This is expressed by Yngström thus;

“TÅGAB has a working philosophy that's based on cooperation... we're small and we have to cooperate with other actors, both large and small, within the industry. This goes for rail and maintenance companies as well as for government agencies... Developing concepts with our customers and creating trust.”

Another reason for its success is that it has been very successful in attracting highly skilled employees. The staff hired when the company started up were previously laid-off employees of SJ Gods. Due to Swedish legislation, those made redundant were the ones most recently hired, entailing that these were the youngest and best trained; something that was very advantageous for TÅGAB. Another very important factor for TÅGAB's success was the General Manager's personal network, which he had built up during his years as a manager at SJ Gods. On a general level, TÅGAB could be described as an entrepreneurial company driven by the manager's and the management team's ambition to do something good for the local community, by developing an environmentally-friendly yet financially-viable transport option.

GrönaTåget

GrönaTåget (the Green Train) is an R&D program initiated by Banverket (the National Rail Administration) in order to develop and procure the next generation of high-speed trains adaptable to Swedish and Nordic conditions. GrönaTåget is a joint venture between government, industry, research institutes, and technical universities. The project's vision entails Swedish railway research playing a leading role in Europe through contributions relating to new solutions and vehicle standards. GrönaTåget will also be an inspiration to, as well as a source of knowledge for, rail companies and vehicle manufacturers in the development of future trains and railway operating concepts. The focus will especially be on meeting the technical and business requirements that the special conditions in the Nordic area entail.

These conditions (climate, type of traffic etc.) require vehicles and other equipment which in some respects differ from what is generally available on the European market. Further, the fact that Swedish and Nordic high-speed passenger services will, for the foreseeable future, operate along mixed traffic runways also creates specific requirements that are not currently being met by the vehicle market. This includes trains being flexible and able to function in various kinds of traffic – both long- and short-range, as single carriages and when forming longer trains. All these specific requirements regarding vehicle design and maintenance practices require continued capacity-building.

Meeting all these requirements calls for significant development work in terms of technology, behavioural science, economics, and when it comes to the functioning of the market. The initial projects were started up in 2005 and the programme is planned to last until 2010 at least. The programme includes a wide range of interesting themes: economy, market conditions, traffic and capacity, bogies, running characteristics and stresses on wheels and tracks, basket slope and active suspension, current collection, noise (inside and outside trains), drive systems, energy consumption, reliability in winter climate, aerodynamics, and driver environment. But the biggest ongoing project deals with how to create an attractive passenger environment.

The programme was launched by the National Rail Administration in 2005. However, from the outset, several other collaborating partners were involved. Train manufacturer Bombardier is making great efforts to develop hardware for trains and is conducting a lot of technical studies. The Royal Institute of Technology is conducting research in selected areas. The Institute also has a coordinating role and is responsible for disseminating information originating from the project. Transitio (a company formed by SJ and local transport authorities in order to buy and own rolling stock) is lending a

Regina train for the test. The association is responsible for train operators running test trains. Chalmers University of Technology, VTI (a transport research institute), and Interfleet and Transrail (two railway consultancy companies) have also been important partners in this R&D programme. Last but not least, there is the National Rail Administration which initiated the entire programme and which plays an important role as the provider of the infrastructure which the new train will use.

BasePort

Baseport is a transport solution initiated and developed by forestry industry company Stora Enso at the end of the 1990s. In this transport solution, Stora Enso assumes greater responsibility in developing and managing the entire transport solution, instead of outsourcing it as previously. One reason for this was the fact that the entire project to develop the required transport solution would have been too complex and too integrated into Stora Enso's internal operations for any other single actor on the Swedish market to be able to handle. The BasePort solution consists of a self-produced railway wagon container (developed in cooperation with Green Cargo) which is bigger than the ISO standard and which takes advantage of the generous allowed dimensions on Sweden's railway tracks. From Stora Enso's Swedish mills, these special containers are transported to the port of Gothenburg on dedicated trains for further transportation by ship to European ports which then serve as loading ports for onward transportation to the company's European customers. For the sea transportation, a Belgian shipping company is used. The trains in Sweden are run by Green Cargo, which also owns the approximately 170 special wagons used. The system is now being implemented in Finland as well.

Previously, Stora Enso sent a large part of its shipments from Sweden to its European customers by means of ships from Sweden and trains through Germany. However, during the latter half of the 1990s, the European railways were becoming increasingly congested, causing rail tariffs to rise. This led to the situation where Stora Enso felt too restricted in having the German railway network as a single transport route and thus started searching for alternatives. Stora Enso initiated a project to review its transportation options and identify alternative solutions in order to reduce its dependence on the German railway network, in addition to a more open-minded review of the cost of transportation in general. It was this analysis that eventually evolved into the BasePort solution.

This interest in alternative transport systems was spurred on by the structural changes taking place in the forestry industry during the 1990s, including the merging of Stora with Enso and other companies. These mergers shifted the geographical centre of the company since a series of new production plants were added. This change in location led to the need for new means of transportation since the new plants were not located near ports. Simultaneous to this, the National Rail Administration and SJ Gods approached their major industry customers and asked them how the transport system and the railway could be used more efficiently. As one of the largest companies in Sweden, and in great need of a functioning and competitive transport solution, Stora Enso was able to argue its case. Eventually, both the National Rail Administration and SJ Gods (which had now become Green Cargo) embraced the BasePort concept and made the required investments (upgrading infrastructure to cope with the new container, procuring rolling stock etc). These investments, driven more by a request made by an important

customer on the deregulated market than by political decisions, were an important reason for realizing BasePort.

The project involved collaborating with various stakeholders, most of whom shared an interest in the logistics field. However, there have also been conflicts with stakeholders from different environments who have different corporate cultures and partly diverging interests. For example, the National Rail Administration is more politically-governed and has long lead times; while Stora Enso, as a commercial actor, is dependent on quick decisions and prompt action. Since BasePort was a new way of seeing the transport system, whereby Stora Enso took the initiative and developed a transport solution that included all parts of the chain, a partly new transport network was created which altered the established roles and power relations of the participants. The creation of the new solution was largely dependent on the fact that Stora Enso was a very strong actor within the network and able to persuade other actors to develop solutions and participate resource-wise to an extent that they would not otherwise have done. By and large, one could see the development of BasePort as a redesigning of the transport network on the initiative of one of its users. Stora Enso worked actively to re-engineer its network and gain new positions in order to make the network better suited to its needs.

Results and Discussion

The three cases illustrate the different ways in which the different actors benefit from deregulation of the railways. The first case (TÅGAB) shows how a single actor identifies a market opportunity created by a new market situation. This could be described with an entrepreneurial perspective, since the actor has identified an opening in the marketplace where it is possible to launch a new business. Today, the company has grown into an established actor on the market. In order to reach this position, the emphasis has been on collaborating with other actors in the network, both customers and others, since this company, as a relatively small actor, does not have all of the necessary resources. Despite the fact that the company has grown, it is still trying to retain a high degree of flexibility in order to be able to work in a more entrepreneurial spirit.

The second case, GrönaTåget, is an example of a network created from above with the purpose of developing a new technical solution, i.e. a networked innovation [3]. In this network, a number of actors possessing different competencies and skills have been brought together by a government agency, the National Rail Administration, and given a broadly-defined task to solve, which draws on their respective competencies and resources. This could be compared to the system view way of thinking [19]. According to the system view, there is a specific goal or task that needs to be resolved and, in order to do that, someone (an actor) creates a system (consisting of resources, other actors engaging in activities). The actor strives to create the optimal, or at least satisfactory, combination of actors, resources, and activities required to complete the task.

The third case (BasePort) is an example of yet another way of using deregulation. Here, a large and powerful actor (a purchaser of transportation) has used its power to create changes in its network. This was done because the key actor assumed the responsibility of designing a tailor-made transport solution and managed to persuade other actors to commit to it. In doing this, it created new relationships with other actors and reconfigured the existing network in various ways, both physically and operationally. By using its relative power as a major customer on the transport market, Stora Enso made

other actors engage in the development process to a greater extent than would otherwise have been the case.

The common theme in all three cases is the role played by networks as a means of gaining access to resources and capacities. The need to use resources held by others actors is pointed out in the interaction and network perspective, which focuses on industrial relationships [13, 20]. In all three cases, loosely-coupled network organisations are formed which transcend the limitations of the individual actors, thereby enabling new and innovative achievements in the transport sector. However, the strategies and mechanism for forming these network organizations differ from case to case. In the first case, something that could be labelled the entrepreneurial personal network was formed; in the second case, a government initiative led to the formation of a network of experts hired to solve a broadly-defined, yet quite specific, task; and in the third case, a powerful actor was able to reconfigure and extend an existing network to enable it to function in a new way.

In all three cases, the innovative activities are performed jointly with other actors and the resources and activities are coordinated by means of interactions between the companies. One important reason for this is the state of affairs that knowledge is increasingly being dispersed across organizational boundaries (e.g. across professions, organizations, and specialized practices). In order to generate development and innovation, this knowledge needs to be brought together. Previous research shows that innovations are more likely to occur 'at the interstices' of collaborating groups and organizations [5, 4]. By joining forces and forming a network organisation, the parties can act as a single unified actor, capable of delivering goods and services that span the boundaries (and capacities) of the individual companies. At the same time, the flexibility and effectiveness of independent specialist actors is retained and the costs and bureaucracy associated with large hierarchies is avoided. This combination of capacity and flexibility might be crucial when it comes to providing solutions to more complex customer needs [21, 22, 9].

Conclusions

A key finding emerging from the studies is the profoundly embedded nature of the strategizing processes. What we see is not a free market of independent actors; rather, the railway sector is a complex network of dependencies and interactions. This is in line with previous research into industrial networks, but it is also a situation which is not usually accounted for in the deregulation literature where ideals concerning classical free markets prevail. Introducing a conceptualization of such networks, stressing the interdependence of three interrelated elements – actors, activities, and resources [12], enables us to offer a more complete account of how innovation and strategic development actually take place in the railway sector, and how these processes have been affected by changes to the regulatory framework.

Just how well a network functions depends on how the three elements interact with each other. When it comes to innovation and change, the actors play a key role because they perform the activities and control the resources, i.e. via their capacity to exercise agency. However, they are also constituted – at least partly – by their position within the network, and by the very structure of the network itself.

Using such a perspective, the institutional reforms of the railway sector can be understood as an attempt to govern the network by instilling identities, structures, and interactive patterns derived from the market concept, in order to promote innovation and development. Based on our cases, we conclude that this has been partially successful, though not always in ways conforming to the market model and the intentions of the regulators. The most successful innovators are those that have been able to embrace the basic nature of the railway network and reconfigure it in innovative ways. This often requires other roles and strategies than those explicitly and/or implicitly assumed by the regulations and the governing bodies.

References

1. Alexandersson, G. & Hultén, S., (1999), "Sweden", In van de Velde, D., (Ed.), *"Changing trains – railway reform and the role of competition: the experience of six countries"*, Aldershot, Ashgate Publishing Ltd.
2. Osborne, D. & Gaebler, T., (1992), *"Reinventing government. How the entrepreneurial spirit is transforming the public sector"*, Reading, Addison-Wesley.
3. Swan, J. & Scarbrough, H., (2005), "The politics of networked innovation", *Human Relations*, 58, pp: 913-943.
4. Carlile, P.R. (2002), "A pragmatic view of knowledge and boundaries. Boundary objects in new product development", *Organization Science*, 13, pp: 442–455.
5. Powell, W., Koput, K. & Smith-Doerr, L., (1996), "Interorganizational collaboration and the locus of innovation. Networks of learning in biotechnology", *Administrative Science Quarterly*, 41, pp: 116–45.
6. Rothwell, R., (1994), "Towards the fifth-generation Innovation Process", *International Marketing Review*, 11. Pp: 7-31.
7. Powell, W., (1998), "Learning from collaboration. Knowledge and networks in the biotechnology and pharmaceutical industries", *California Management Review*, 40, pp: 228-240.
8. Johansson, J. & Vahlne, J-E, (1992), *"Management of Foreign Market Entry"*, Reprint series – Department of Business Administration, Uppsala, Uppsala University.
9. Normann, R. & Ramirez, R., (1993), "From value chain to value constellation. Designing interactive strategy", *Harvard Business Review*, 70. pp: 65-77.
10. Normann, R. (2001), *"Reframing business. When the map changes the landscape"*, Chichester, John Wiley.
11. Lincoln, J.R., Ahmadjian, C.L. & Mason, E., (1998), "Organizational Learning and Purchase-Supply Relations in Japan. Hitachi, Matsushita, and Toyota Compared", *California Management Review*, 40, pp: 241-264.
12. Håkansson, H. & Johanson, J., (1992), "A model of international networks", In B. Axelsson & G. Easton (Eds.), *"Industrial networks- a new view on reality"*, London, Routledge.

13. IMP, (1982), "An interaction approach", In H. Håkansson, (Ed.). "*International Marketing and Purchasing of Industrial Goods – An interaction Approach*", London, John Wiley.
14. Turnbull, P. & Wilson, D., (1989), "Developing and protecting profitable customer relationships", *Industrial Marketing Management*, 18, pp: 233–238.
15. Grabher, G., (1993), "*The embedded firm. On the socioeconomics of industrial networks*", Routledge, London.
16. Yin, R.K., (2003), *Case Study Research – Design and Methods*, London, SAGE Publications.
17. Miles, M. B. & Huberman, A. M., (2004), "*Qualitative data analysis*", London, SAGE Publications.
18. Patton M.Q., (1990), "*Qualitative evaluation and research methods*", Newbury Park, Sage Publications.
19. Von Bertalanffy, L.B., (1979), "*General system theory foundations, development, application*", New York, George Braziller.
20. DeBurca, S., (1995), "Service management in the business-to-business sector. From networks to relationship marketing", In W.B. Glynn & J.G. Barnes (Eds.), "*Understanding service management - integrating marketing, organisational behaviour, operations and human resource management*" (pp: 393- 419), Chichester, John Wiley & Sons.
21. Davidow, W.H. & Malone, M.S., (1992), "*The virtual corporation*", New York, Edward Burlingame Books/Harpers Business.
22. Hamel, G. (2000), "*Leading the revolution*", Boston, Harvard Business School Press.

English Abstract

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Abstract

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Key words: Service Innovations, Embeddedness, Networks, De-regulation, Railways

French Abstract*

On the Right Track? Network Strategies for Innovation and Renewal

Sur le bon chemin? Stratégies de réseaux pour l'innovation et le renouveau

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Résumé

Concevoir des régulations sectorielles, dans l'optique de promouvoir l'innovation et le développement, est un souci majeur pour nombre d'autorités publiques à travers le monde. Il y a une discussion animée, dans le champ des sciences économiques et parmi les nouveaux chercheurs en management public, au sujet de la nature d'une telle régulation. Cependant, dans cette discussion il manque le point de vue de ceux qui sont régulés et qui sont supposés entreprendre et créer les innovations. Dans cet article, nous complétons la recherche sur la régulation et la dérégulation avec une perspective de "l'utilisateur", que nous basons sur : a) la recherche dans des réseaux industriels et b) les points de vue et expériences des personnes qui sont réellement régulés.

Dans une série d'études de cas, nous étudions comment des acteurs privés et publics dans le secteur des transports ferroviaires ont interprété un nouveau cadre de régulation. Nous étudions comment, et à quel degré, ce cadre régulateur a stimulé le renouveau et l'innovation. En particulier, nous regardons comment les acteurs perçoivent leurs rôles et comment ils ont réagi afin de profiter des opportunités créées par les changements. Nous comparons nos résultats aux ambitions des régulateurs.

Un résultat clé qui émerge de nos recherches est la nature profondément ancrée des processus stratégiques. Ce que nous voyons est que le marché n'est pas libre ni composé d'acteurs indépendants. Au contraire, le secteur des transports ferroviaires est un réseau complexe de dépendances et d'interactions. Ceci est conforme à la recherche antérieure dans le domaine des réseaux industriels. D'habitude, cette situation n'est pas prise en compte dans la littérature sur la dérégulation, dans laquelle dominent les idées classiques d'un marché libre.

Mots-clés: innovations dans les services, ancrage stratégique, réseaux, dérégulation, transport ferroviaire

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Spanish Abstract*

On the Right Track? Network Strategies for Innovation and Renewal

¿En el Camino Correcto? Red de Estrategias de Innovación y Renovación

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Resumen

El diseño de regulaciones sectoriales que promuevan la innovación y el desarrollo es una preocupación clave para muchas autoridades en todo el mundo. Hay abundante discusión sobre cómo deberían ser esas normas, tanto en el ámbito de la economía como entre los investigadores de la nueva administración pública. Sin embargo, falta en este debate la perspectiva de *aquellos que son regulados*, y que se supone deberían proporcionar la iniciativa empresarial y crear las innovaciones que se buscan. En este trabajo, completamos la investigación sobre la regulación y liberalización con la perspectiva del "usuario" basándonos en: a) investigación de redes industriales y b) las percepciones y experiencias de las personas que realmente están siendo reguladas.

En una serie de estudios de casos, hemos investigado cómo los actores públicos y privados en el sector ferroviario han interpretado un nuevo marco regulador. También hemos investigado cómo (y en qué medida) esto ha impulsado la renovación y la innovación entre ellos. En particular, nos centramos en cómo perciben sus papeles y cómo han actuado, con el fin de hacer uso de las nuevas oportunidades creadas por los cambios. También se relacionan los resultados con las ambiciones de los reguladores.

Uno de los principales hallazgos que emerge de estos estudios es el carácter profundamente arraigado de los procesos de formulación de estrategias. Lo que vemos, no es un mercado libre de actores independientes; por el contrario, el sector ferroviario es una compleja red de dependencias e interacciones. Esto está en consonancia con investigaciones previas sobre redes industriales, pero también es una situación que, por lo general, no se ha tenido en cuenta en la literatura sobre liberalizaciónla, donde prevalecen los ideales sobre el clásico libre mercado.

Palabras clave: Innovaciones en los servicios, arraigo, Redes, liberalización, Ferrocarriles.

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German Abstract*

On the Right Track? Network Strategies for Innovation and Renewal

Auf der richtigen Spur? Netzwerk Strategien für Innovation und Erneuerung

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Zusammenfassung

Branchenspezifische Regelungen zu entwerfen, die Innovation und Entwicklung fördern ist ein wichtiges Anliegen für viele Behörden auf der ganzen Welt. Es gibt viele Diskussionen darüber, wie solche Regelungen aussehen sollten, sowohl im Bereich der Wirtschaft als auch unter Wissenschaftlern im New Public Management Gebiet. Was in dieser Diskussion allerdings fehlt ist die Perspektive derer, die reguliert werden, und die unternehmerisches Handeln vorantreiben und die Innovationen schaffen sollen, die gesucht werden. In diesem Artikel ergänzen wir die Forschung über Regulierung und Deregulierung mit einer "Kunden" Perspektive, die wir auf a) Forschung über industrielle Netzwerke und b) Erkenntnisse und Erfahrungen der Menschen, die tatsächlich reguliert werden, basieren.

In einer Reihe von Fallstudien haben wir untersucht, wie private und öffentliche Akteure in der Eisenbahnbranche neue rechtliche Rahmenbedingungen interpretiert haben. Wir haben ebenso untersucht wie (und in welchem Umfang) dies Erneuerung und Innovation anregt. Insbesondere konzentrieren wir uns darauf, wie die Akteure ihre Rolle wahrnehmen und wie sie gehandelt haben, um die neuen Möglichkeiten zu nutzen, die durch die Veränderungen geschaffen wurden. Wir setzen unsere Ergebnisse außerdem mit den Bestrebungen der Regulierungsbehörden in Beziehung.

Eine wichtige Erkenntnis, die sich aus diesen Studien ergeben hat ist die tief eingebettet Art der Strategieentwicklungsprozesse. Was wir erkennen, ist kein freier Markt der unabhängigen Akteure, sondern vielmehr, dass der Eisenbahnsektor ein komplexes Netz von Abhängigkeiten und Wechselwirkungen ausmacht. Dies steht im Einklang mit der bisherigen Forschung über industrielle Netzwerke, aber es ist auch eine Situation, die normalerweise nicht berücksichtigt wird in der Deregulierungsliteratur, in der klassische Ideale von freien Märkten vorherrschen.

Schlagwörter: Service Innovationen, Embeddedness, Netzwerke, Deregulierung, Eisenbahn

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Italian Abstract*

On the Right Track? Network Strategies for Innovation and Renewal

Sulla strada giusta? Strategie in rete per l'innovazione e il rinnovamento

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Sommario

Progettare regolamenti settoriali che promuovano l'innovazione e lo sviluppo è una attività fondamentale per le autorità di tutto il mondo. C'è abbondanza di dibattiti su come dovrebbero essere sviluppati detti regolamenti, sia nel campo dell'economia che fra studiosi emergenti di temi di gestione pubblica. Tuttavia, manca da questa discussione la prospettiva dei destinatari dei regolamenti, coloro che in senso pratico dovrebbero fornire il senso d'imprenditorialità che alimenta le innovazioni stesse. Questa ricerca costituisce un'integrazione alla ricerca su regolamentazioni e deregolamentazioni dalla prospettiva dell'utente e si basa su: a) ricerca su reti industriali e b) le intuizioni e le esperienze delle persone effettivamente destinatarie dei regolamenti.

In una serie di case study, abbiamo analizzato come soggetti pubblici e privati nel settore ferroviario, abbiano di fatto interpretato un nuovo quadro normativo. Abbiamo inoltre studiato come (e quanto) questo abbia stimolato il rinnovamento e l'innovazione. In particolare, ci concentriamo su come gli stessi soggetti percepiscono il loro ruolo e su come hanno agito al fine di sfruttare le nuove opportunità create dai cambiamenti regolamentari. Abbiamo anche rapportato le nostre conclusioni rispetto a quanto si proponevano di fare le autorità che hanno emesso i regolamenti.

Un risultato chiave che emerge da questi studi è la natura profondamente integrata dei processi di strategia. Ciò che vediamo non è un mercato libero costituito da soggetti indipendenti, bensì, il settore ferroviario è una complessa rete di dipendenze e interazioni. Questo è in linea con le precedenti ricerche su reti industriali, ma è anche una situazione di solito non considerata nell'ambito di scritti riguardanti la deregolamentazione in cui prevalgono gli ideali classici riguardanti il libero mercato.

Parole chiave: innovazione nei servizi, incorporazione, reti, deregolamentazione, ferrovie

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Arabic Abstract*
On the Right Track?
Network Strategies for Innovation and Renewal

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على الطريق الصحيح؟ استراتيجيات شبكية تكاملية للإبداع والتجديد

ملخص

تصميم الأنظمة والتعليمات الخاصة بالقطاعات المختلفة بشكل يشجع على الابتكار والتطوير هو مصدر اهتمام الكثير من الحكومات حول العالم حيث يدور نقاش بين علماء الاقتصاد من جهة وعلماء الإدارة العامة الجدد من جهة أخرى حول شكل هذه الأنظمة الجديدة و كيفية التعامل معها. إلا أن هذا النقاش يخلو من وجهة نظر أولئك الذين سوف يخضعون لهذه الأنظمة والتعليمات والذين من المفترض أن يكونوا مصدرا للريادية والإبداع المرجو تحقيقه. هذه الورقة سوف تقوم باستكمال الدراسات السابقة في مجال التنظيم والتحرر من التنظيم من منظور "المستخدم" من ناحيتين؛ الأولى: البحث في الشبكات الصناعية؛ الثانية: رؤية وتجارب الناس الذين يتم تنظيمهم. قمنا في هذا البحث بدراسة الطريقة التي قام بها المسؤولين في القطاع الخاص والعام بتفسير الإطار التنظيمي الجديد باستخدام سلسلة من الحالات الدراسية المختلفة حيث بحثنا كيفية ومدى تأثير هذا التفسير على تحفيز التجديد والإبداع في هذين القطاعين. وتم التركيز بشكل خاص في هذا البحث على إدراك الجهات المختلفة لأدوارهم وكيف يتصرفون بناء عليها بشكل يمكنهم من الاستفادة من الفرص الجديدة التي تخلق هذه التغيرات. ونقوم أيضاً بربط نتائج هذه الدراسة بطموحات المشرعين والمنظمين. إحدى أهم نتائج هذه الدراسة هو الأهمية القصوى لعمليات التخطيط الاستراتيجي المرتبطة بشكل أساسي بعمليات الشركة والتنظيم. حيث اتضح لنا أن قطاع السكك الحديدية هو شبكة معقدة من التفاعلات والتبعيات وليس سواها حراً يتكون من جهات مستقلة وهذا ينسجم مع الدراسات السابقة في الشبكات الصناعية ولكنه يمثل أيضاً حالة غير عادية في الأدبيات السابقة للتحرر من الأنظمة والتعليمات الحكومية المقيدة لنشاط الشركات، حيث أن هذه الأدبيات لازالت في معظمها تتبنى المذهب الكلاسيكي في الأسواق الحرة.

كلمات البحث: ابتكارات الخدمات، التعمق، الشبكات، تحرير التنظيمات والتعليمات، السكك الحديدية.

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Swedish abstract*

On the Right Track? Network Strategies for Innovation and Renewal

På rätt spår? Nätverksstrategier för innovation och förnyelse

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Abstract

Att stimulera och stödja innovation och utveckling genom att utforma lämpliga regelverk (ofta med marknadsliknande inslag) är en uppgift som delas av många myndigheter runt om i världen. Det förs en livlig debatt om hur sådana regleringar bör se ut, såväl bland ekonomer som bland förvaltningsexperter. I denna debatt saknas emellertid *de reglerades* perspektiv, dvs de som förväntas bidra med det entreprenörskap och de innovationer som reglerarna strävar efter skall skapas. I denna artikel kompletterar vi den befintliga forskningen med ett användarperspektiv som vi baserar på a) forskning om industriella nätverk och b) insikter och erfarenheter från de reglerade aktörerna. I en serie fallstudier undersöker vi hur privata och offentliga aktörer inom järnvägssektorn har tolkat ett nytt regelverk, och på vilket sätt och i vilken omfattning detta har lett till förnyelse och innovationer bland dem. Framför allt har vi fokuserat på hur de uppfattar sina roller och på hur de agerat för att ta till vara på de möjligheter som det förändrade regelverket erbjuder. Vi jämför också dessa utfall med reglerarens ambitioner. En nyckelinsikt från våra studier är hur djupt invävda aktörernas strategiska processer är i varandra. Vad vi ser är därför inte en fri marknad med oberoende aktörer; istället framträder järnvägssektorn som ett komplicerat nätverk av interaktioner och beroendesamband. Detta ligger i linje med tidigare forskning om industriella nätverk, men är ett förhållande som mycket sällan beaktas i litteraturen om av- och omreglering, där istället idén om den klassiska marknaden dominerar som ideal.

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