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Véronique Préchoux

► To cite this version:

Véronique Préchoux. Can top-down cluster policies give birth to team players? The emergence of a French competitiveness cluster. International Conferences on Economics and Management of Networks, EMNet, Nov 2013, Agadir, Morocco. hal-04571402

HAL Id: hal-04571402

<https://hal.science/hal-04571402>

Submitted on 7 May 2024

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Can top-down cluster policies give birth to team players?

The emergence of a French competitiveness cluster

Véronique Bossard-Préchoux

Ph.D.

Université de Nantes - France

Keywords:

Emergence of clusters, French competitiveness clusters (pôles de compétitivité), rules, regulation, regulation work, collective actors.

Introduction

Created in 2005 at the initiative of the government, French “competitiveness clusters” (“pôles de compétitivité”) aim to make private businesses, research laboratories and training institutions collaborate in a specified area. These actors are invited to work together on collective innovation projects in order to support local development, and thus enhance the competitiveness of companies and create jobs. The clusters were selected through a top-down process via a call for projects initiated by the French national authorities, and were organised by a management team.

For M. Porter (1998, 2000), a cluster is most often a private initiative and built in a bottom-up manner. He also considers that clusters can be a spontaneous phenomenon, which can go unrecognized. As a result, members of a cluster may even be unaware of being part of it (Porter, 1998: 79).

M. Fromhold-Eisebith and G. Eisebith (2005) differentiate between explicit cluster policies implemented top-down by regional authorities and implicit initiatives that are organized and financed bottom-up by groups of firms.

Although clusters have been increasingly widely used around the world as part of regional development strategies (Lundequist and Power, 2002: 685), their emergence has been left apart. D. Wolfe and M. Gertler highlight a lack of consensus over the emergence of clusters (2004: 1073), as do Teigland and Lindqvist (2007: 767) and Fornahl et al. (2010), identifying a gap in literature on emerging clusters. In this paper, we want to contribute to filling this gap by analysing if and how a top-down policy implemented by authorities can give birth to a collective actor, as an organised group of interested parties.

To address this question, we have observed a recent cluster to trace its construction process from the very beginning and its evolution, in order to understand how clusters are built and how they evolve, how local players manage to create collective actors from a top-down policy. This work is based on a qualitative research conducted from January 2010 to March 2012 and takes the form of a case study of the French competitiveness cluster iDforCAR¹.

We show how the project starts with only a few people involved, who answer the call for projects initiated by the government. At that point, these people do not create the actual cluster but what we call the initial coalition. They are willing to work together as a group and define rules in order to do so (Reynaud, 2003; De Terssac, 2003).

Local actors can then join this initial coalition. They must voluntarily accept the rules established by the initial coalition. If they do so, the coalition grows larger, and will turn into a collective player if its members accept common rules; otherwise they remain a sum of individual actors. Clusters can indeed be started by a cluster policy, but we show they can only carry on if their members accept common rules. These rules will enable them to work as a unit and gain the autonomy required to assimilate and take ownership of the policy established by higher authorities. Only then can they achieve collective goals, such as supporting local development to enhance the competitiveness of corporate enterprises and create jobs. We show the role played by the cluster management team in this construction process.

We begin by presenting the emergence of clusters. We then suggest the use of the Theory of Social Regulation to analyse this emergence, before introducing the particular case of French competitiveness clusters (Section 3). The case of one of these clusters is then presented, along with the methodology used to collect data (Section 4), prior to the empirical results and their implications in Section 5. Final conclusions are drawn with proposals for further research.

1. The emergence of clusters

Clusters are not a recent phenomenon. The first type of clusters identified were the industrial districts, originally highlighted by Marshall in 1890. These industrial districts were defined as a large number of small independent businesses specialized in the same production and that combine their resources to allow for large scale production. In these districts, the coordination is done by the market and by reciprocity, unlike the technical division of labour within a large

¹ <http://www.id4car.org/en/join-us-cluster-pole-id-for-car.aspx>

company (Benko et al., 1996). Marshall showed how those districts, thanks to the concentration of a large number of small businesses of the same type in the same locality, allow lower production costs and agglomeration economies (Marshall, 1919). Spatial proximity promotes the division of production processes; external economies, mutual trust, traditional know-how and the “industrial atmosphere” also lead to incremental innovations (Marshall, 1890).

In the 1980s and 1990s, scholars brought the cluster concept up to date and confirmed its advantages (Piore and Sabel, 1984; Saxenian 1994; Martin and Sunley 2003). The work of Porter in particular (Porter, 1990; 1998) had a considerable impact. He demonstrated that clusters increase productivity and innovation, and that location remains central to competition even in a globalized market. He defined clusters as “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate” (Porter, 2000, p. 16). But mainly, he highlighted the new role to be played by governments in helping existing and emerging clusters, as a new tool for economic policy. From then on, many governments around the world initiated clusters policies, in a phenomenon of “clusterization” (Pecqueur, 2005).

Clusters are now considered as the basis of local, or even national policies in many countries (Torre, 2006:16). They have become “*increasingly widely used and recognized as an essential part of regional development strategies and thinking*” (Lundequist and Power, 2002: 685). The question is no longer about knowing if cluster policies should be set up, but about knowing how to set them up (Sölvell et al., 2003). “Across the OECD and beyond, government agencies, local authorities and private sector actors alike have been rushing to uncover, discover, invent and reinvent ‘clusters’ as an attempt to improve their sectors’ and regions’ competitive position” (Lundequist and Power, 2002: 685). The World Bank identified 266 clusters around the world in 2000 (in Lundequist and Power, 2002). Five years later, 1,400 cluster initiatives were listed in the 2005 Global Cluster Initiative Survey (GCIS). To cope with globalization and competition between countries and regions, many areas of the world are indeed seeking to obtain recognition of their specificity.

Clusters have therefore been widely studied in the past decades. However Wolfe and Gertler highlighted a “striking lack of consensus over how clusters are started and to what extent their emergence can be set in motion by conscious design or policy interventions” (2004: 1073).

For Porter (1998; 2000), clusters are most often of private initiative and built in a bottom-up approach. He even considers that clusters can be spontaneous phenomenon, which can go

unrecognized. Members of a cluster may then be unaware of being part of it (Porter, 1998: 79). Porter's clusters are then rather informal connections created by proximity than actual organized collectives. Fromhold-Eisebith and Eisebith (2005) differentiate this type of emerging and implicit initiatives, which are organized and financed bottom-up by groups of firms, from explicit cluster policies implemented top-down by regional authorities. In both cases, they consider clusters as a voluntary construction, whether from the authorities or from a group of firms, that gives birth to a collective.

Teigland and Lindqvist (2007: 767) noted: "*while research on clusters is abundant, research specifically focusing on these emerging organizations 'i.e., cluster initiatives' is scant to date*". Later on, Fornahl et al. (2010) still identified a gap in literature on emerging clusters. The emergence of clusters has since been analysed, to detail the factors and mechanisms of cluster emergence (Brenner and Mühligh, 2012), to understand how the emergence conditions of technological clusters affect their viability (Crespo, 2011), or to illustrate the emergence and growth of particular clusters (Zamborsky, 2012). This paper aims to continue filling this gap on emerging clusters. It analyses the construction process of a cluster from inside a cluster, to enlighten the role of clusters managers, which was considered by Ingstrup (2010) as understudied: "*asking what the role of cluster facilitators is in the cluster and management literature, the answer is simple: until now, the role has been almost non-existent*" (2010: 30). Provan and Sydow (2008) had already observed that there were few empirical studies on the cluster management, which was later confirmed by Lefebvre (2013). However, the European Commission considers that most cluster policies lead to the creation of cluster organisations, referring to the legal entities engineering, steering and managing the clusters, usually including the participation in and access to the cluster's premises, facilities and activities (European Commission, 2008: 10). Indeed, Sölvell et al (2003) and Menu (2012) pointed out a request for strong leadership by cluster members in terms of a vision or strategy. This leadership requirement calls for strong cluster management. It then seems relevant to study the role of cluster managers. This paper will highlight the way a cluster is actually built, in other words the way a group of organizations turns into a unit to create a cluster, analysing the role of cluster managers.

Romanelli and Khessina had partially answered this question by identifying the issue of cluster identity in 2005. Beebe et al. recently (2013) demonstrated how identity is a key to cluster development and success. They have shown that cluster identity formation is the result of internal developments and external validation. This study adopts a complementary perspective, analysing at a micro level the process by which the parties involved can actually

build a collective identity, and the role played by cluster managers in this process. We suggest a theoretical framework based on the rules necessary for action, built on the theory of social regulation (Reynaud, 1989), which precisely analyses the way rules constitute the identity of a collective unit (*id.*, p. 80).

2. Analysing the emergence of clusters with the Theory of Social Regulation

In the perspective of the Theory of Social Regulation, regulation is defined as the ability to take initiatives and to develop rules (Reynaud, 2003: 103). Social action requires a set of commonly accepted rules. To undertake a social action, actors decide on rules, by which they will later have to live and that will both allow and constrain their actions. The definition of these rules gives birth to a collective actor: the regulation process that will be necessary to establish common rules will in itself constitute the identity of the collective actor.

The Theory of Social Regulation recognizes two sources of regulation:

- a control regulation, which corresponds to the rules imposed by a power structure willing to define the aims and methods of action of the collective;
- an autonomous regulation, which shows that the actors subject to control always have a degree of autonomy that allows some opposition to the control regulation, but is also a way of adjusting and adapting to the incompleteness of the rule (Reynaud, 1989).

In this perspective, a rule is not by itself a control rule or an autonomous rule. It is only the place of the one who emits the rule, and the use made of the rule, that will define the quality of the rule: control and autonomy refer to the use of the rule, not to its nature (Reynaud, 2003: 104). For instance, a rule initially defined independently by a group of actors in order to undertake social action, as an autonomous rule, will later constrain actors willing to join the group, therefore turning into a control rule.

Autonomous regulation and control regulation meet and influence each other, leading to a form of joint regulation. In a way, any regulation is a joint regulation (Reynaud, 1989) because any regulation involves a plurality of regulation sources. The rules implemented in the collective action will then emerge in the encounter between the different sources of regulation (Reynaud, 2003: 105).

The work of De Terssac (De Terssac and Lalande, 2002; De Terssac, 2003) on organizational work helps to clarify the emergence of a collective player, by showing how actors first get together when facing a problematic situation. This problematic situation leads actors to start a regulation process to define autonomous rules in order to find a solution to their problem.

Three steps can be identified in the regulation work implemented by the actors facing a problematic situation:

- First, an actor facing a change analyses a situation as being problematic. He will then mobilise other actors and elaborate autonomous regulation work in order to establish rules. By this regulation work, actors identify and define a common problem and try to find a common solution. This is the emergence step, involving an initial coalition of actors.
- This initial coalition tries to enlist other actors to the regulation that has been established. Actors that identify the same problem and accept the solution proposed can join the group. The autonomous regulation initially established then evolves into a joint or control regulation. This second step is a step of generalization of both the coalition and the regulation it carries.
- When new changes occur, new problematic situations are identified, and the solution proposed by the collective is then challenged. New autonomous regulations emerge and meet the regulation that had been established. New coalitions emerge, and enter the same regulation process. This third step is a transformation step, as the coalition evolves into various coalitions, which each enter a new emergence step (Bossard-Préchoux, 2013).

This theoretical framework allows a new perspective on the emergence of a cluster, which will be applied to a French competitiveness cluster.

3. The emergence of French competitiveness clusters

France did not escape the phenomenon of “clusterization” (Pecqueur, 2005): in 2005 the French government, drawing on the work of the territorial networks and foreign experiences, initiated a call for projects to identify competitiveness clusters (“pôles de compétitivité”) across France. The objective was to make private companies, research laboratories, and universities or other training organizations, collaborate on a specified field and area. These actors were invited to work together on collective innovation projects in order to support local development, and thus enhance the competitiveness of corporate enterprises and create jobs.

71 projects were approved, covering all kinds of activities and sectors: clusters were created in fields as diversified as biotechnologies, automotive industry, finance or food-processing industry.

French competitiveness clusters appear as part of an explicit top-down cluster policy, since they were initiated by the government. However, as Wolfe and Gertler (2004) questioned the

way clusters are started, the literature on French competitiveness clusters reveals a great indecision over the direction of this policy. Some scholars consider that these competitiveness clusters are imposed by the state on the actors involved (private companies, research laboratories and universities) and are therefore top-down clusters (e.g. Mendez and Bardet, 2009). Others consider that the call for projects generated bottom-up clusters built by locally concerned actors (e.g. Menu, 2012).

There is a major difference between clusters as described by Porter and French competitiveness clusters. According to Porter, a cluster is born most often of private initiative and built in a bottom-up approach. He goes even further in his definition of clusters, considering that clusters are spontaneous phenomena which can go unrecognized (Porter, 1998: 79), meaning that actors can be part of a cluster without being aware of it. In contrast, French competitiveness clusters arise from a public initiative. The state promoted the cluster policy, selected the clusters and defined their operating procedures. As part of these procedures, each cluster was provided with a management team with public funding, in charge of selecting collaborative innovation projects involving local actors. These projects are at the heart of the French cluster policy. Once selected locally by each cluster's management team, they go through a call for projects launched twice a year by the national government, which in turn selects some of these projects for funding.

Local actors are the recipients of this policy, and must therefore take ownership of it, in order to achieve the goals of competitiveness, local development and employment. Actors must decide on the subject of the cluster locally, as no guideline has been given. Competitiveness clusters therefore take up on many subjects, such as finance, biotechnology, perfume, horse industry or automotive industry.

The use of a call for projects to select clusters did generate new initiatives. Some clusters were created "from scratch", with no former basis, to take advantage of the new opportunity offered by the call for projects and of the financing available. This is why the French cluster policy can be considered as a bottom-up approach, as it generated the emergence of new clusters. However, these initiatives took place within the framework of a top-down cluster policy.

Thus it is interesting to analyse the way these competitiveness clusters emerge, in order to understand if, and how, a top-down policy implemented by the authorities can actually give birth to a collective actor, able to meet the objectives of competitiveness and employment they were assigned.

This emergence can be enlightened by the Theory of Social Regulation: the public cluster

policy can indeed be analysed as a control regulation, and the effort from the actors to seize this policy as an autonomous regulation. Observing the regulation work can then explain how local actors (private companies, research laboratories, universities or other training organizations) take ownership of the public policy for competitiveness clusters.

4. The case of a French competitiveness cluster: iDforCAR

Methology

Clusters can take diverse forms with vague organizations and unclear boundaries (Martin and Sunley, 2003). Observing a cluster is then an uneasy task: the cluster has no place to live or existence of its own, apart from the living areas of the management team. Following the theoretical framework based on the Theory of Social Regulation, this study involves an analysis of the regulation work organised by the management team. It is based on a qualitative research conducted from January 2010 to September 2012 and takes the form of a case study approach of the French competitiveness cluster iDforCAR. The objective of this research is to contribute to the knowledge of clusters rather than to test a theory (Eisenhardt and Graebner, 2007).

I was hired as a member of the operational team of this cluster, as part of a French industrial research training agreement². I was considered from the very beginning as a researcher, this role being recognized and accepted by all. The operational tasks were thus limited to topics directly related to the subject of the on-going research, one of my main assignments being the preparation of the evaluation of the cluster in February 2012. This provided me with a privileged position of participant observation, which promoted access to the field: I spent 130 days within the cluster, observing and collecting data. I could therefore observe many and varied situations: “ordinary” workdays, meetings in small groups, meetings of the animation team, plenary sessions with most members of the cluster, thematic meetings, workshops, formal and informal exchanges between members of the animation team, between members of the cluster, etc. These observations led to the transcription of detailed notes and “memos”, in order to “accumulate observations taken from life and ideas still in their ‘initial freshness’” (Kaufmann, 2011: 77). Some situations (strategic workshops and meetings) resulted in recordings, which were analysed. To complete these observations, interviews semi-structured were performed with members of the animation team and with members of the cluster. Over 70 hours of recordings were collected and analysed.

² CIFRE : convention industrielle de formation par la recherche

Data was also collected by exchanging e-mails with cluster members. According to Kaufmann (2011: 57), exchanges by e-mail are similar to an interview situation, and provide a large number of accounts in a short period of time. They allow “immediate and permanent conceptualization”. While the usual survey separates the collection phase of the material and its treatment, here both are simultaneous and feed each other. The face-to-face “suggestive stuttering and impulsive spontaneity” might be lost, as well as the “poetry of oral formulations”, but the concentration of information is improved (id.). I thus collected very large amounts of data, both general data and data corresponding to very specific requests, specifically while preparing the evaluation of cluster iDforCAR in 2012. Literature reviews (clusters’ websites, iDforCAR internal documents, documents Observatory clusters, etc.) and the participation to various seminars on clusters completed these field data, in order to develop in-depth knowledge of cluster iDforCAR.

From this data, I could very accurately identify the actions of the iDforCAR cluster management team, and enlighten the regulation work.

The iDforCAR cluster was created in January 2006 as a non-profit association, initially called “pole automobile haut de gamme” (up-market cars). The cluster’s aim was to develop innovation and competitiveness of the up-market automotive industry in Western France³. The choice of up-market relied on the individual strategy of a local company, PSA Peugeot-Citroen, one of the two major French automotive manufacturers, whose activity in this territory was geared towards large and high-end vehicles.

This cluster emerged from a former cluster called “Performance 2010”, already involving PSA Peugeot-Citroen, which carried the project to be acknowledged as a “competitiveness cluster”, as a response to the call for projects from the French government.

Many actors parties joined the cluster in the early years: the memberships went from 61 in 2006 to 106 in 2008. Renault, the other major French automotive manufacturer, joined the cluster in 2008. Each new member brought new questions to the management team.

After three years of activity, the relevance of the premium positioning was questioned. This questioning was supported by the results of the national evaluation of competitiveness clusters organized in 2008 by the government, which concluded that the cluster was only “partially successful”, inviting the management team to intensify the structuring efforts.

The buds of a new strategy had arisen in the early years of the cluster, based on the activities

³ The territory of the cluster covers three administrative regions: Brittany, Pays de la Loire and Poitou-Charentes.

and skills of local actors: beyond up-market cars, it appeared that what actually drew these parties together was a set of skills around small series of vehicles. The “specific vehicle” concept then emerged as a common denominator between the different actors: the cluster then rethought its strategy on this basis, changing its name from “up-market cars” to “iDforCAR” and henceforth focusing on specific vehicles. Indeed, studies around the automotive industry of Western France have pointed out the many businesses in the area and the many jobs, in businesses that are not single-chain. *“This is what helped in the evolution of the cluster to take into account the many actors who did not identify themselves in cars, but in the specific vehicle”* (the President of the cluster). The cluster’s territory does host several manufacturers of recreational vehicles and professional and light commercial vehicles, which are often leaders in their markets (coach builders and car body designers, motorhomes, fire trucks, light electric vehicles, etc.). On the territory of the Western France, over 90,000 jobs (900 companies and 235 laboratories) are involved in these issues.

From the deployment of the new strategy in 2009, the membership increased by 18% in 2009 (19 new members) and 24% in 2010 (30 new members), as did the number of approved collective projects: when only four projects had been certified and financed through public funding in 2008, 10 were funded in 2009, 23 in 2010 and 17 in 2011. iDforCAR had over 200 members in 2012, 63% of them being private companies.

5. Reading the emergence of a cluster through the Theory of Social Regulation

The iDforCAR cluster fits into an already well-established story and collective project. In Brittany, the presence of PSA Peugeot Citroen had long initiated a collective dynamic: PSA Peugeot Citroen needed qualified suppliers and relevant parties, and local companies were seeking market opportunities. All of these parties were willing to interact, which was both a choice and a constraint. However, these interactions did not, at first, exceed the classical framework of customer-supplier relationships. The creation of the cluster Performance 2010 formed a coalition of actors gathered around a collective project of quality development, performance, technical innovation, and people management.

The opportunity offered by the French government through the call for projects for competitiveness clusters changed the situation. Actors belonging to the Performance 2010 cluster, but also other actors concerned in the field, could access new resources. These new resources could help broaden the objectives of the cluster, and aim for a European or international recognition. This was the change that triggered the regulatory process.

Some actors from Performance 2010 chose to consider this offer from the government, and

initiated work to understand the control regulation proposed by the government and contemplate their involvement. They sought to mobilize other actors. For Reynaud, understanding is taking over, it is “reinventing”. It is “a cognitive approach”, “the first step in coming into play” (Reynaud, 2003: 406).

These parties chose to respond to the call for projects for competitiveness clusters. They engaged in a collective action and seek to cooperate and coordinate. They were constrained by the cluster policy set by the government, which applied to them as a control regulation, but they sought to appropriate this policy, in other words to “reinvent” (Reynaud, 2003: 406). By the regulation work involved, these parties recognized a common problem, which is to respond to the call for projects of the state and to create a cluster. However, at this point, the cluster is only an idea. It is not an actual cluster, but only what we call the initial coalition. These parties were willing to work together as a group and defined rules in order to do so (Reynaud, 2003; de Terssac, 2003). As part of the cluster policy, they adopted internal rules on the basis of their knowledge, making the choice of a niche strategy focused on up-market cars. They thus sought to “*establish a way of living together*” (Reynaud, 2003: 322), they developed rules to achieve a common solution to the parties involved. They were subjected to autonomous regulation regarding the incomplete control rules of the cluster policy. The call for projects of clusters did not specify how to achieve competitiveness, and each cluster project had to establish its own regulation. The initiative was left to local parties involved “*to define locally how these activities will be implemented and whether other value-creating processes can be added to the agenda of the clusters*” (Fen-Chong, 2009: 141). There was a place for autonomous regulation in the cluster policy.

These parties chose to give birth to a new up-market cluster. They sought to defend competitiveness through innovation projects oriented towards high-end automotive industry. They were personally involved as volunteers, and engaged their business, their laboratory or school. They often devoted a lot of time to the cluster. As part of the cluster policy rules, they hired a management team. Together with the members of this team, they decided on their operating rules: they established the strategic business areas that they would cover, printing their vision on the collective. This was the emergence stage of the cluster as a coalition. The management team members’ skills were key to the rules defined. For instance, special attention is paid to embedded systems as part of up-market car equipment, because one of the project managers hired had considerable experience and a strong network regarding this technology. A thought process was also started on the uses and functions of cars as a way to innovate, because the cluster general manager was particularly interested in this subject.

Regulation was largely influenced by the members of the operational team.

This initial coalition then tried to mobilize other parties to bring the cluster to life. The management team started prospecting the territory looking for parties concerned by the competitiveness problem. These new parties joining the cluster had to accept the project and the rules that were defined. However they “*are not subject to a higher authority which might compel them to take part in such a collective action*” (Michaux et al., 2011). They had to voluntarily accept the rules established by the initial coalition, and had to pay a fee to enter the cluster. These parties recognized a common competitiveness problem, and accepted to work as a team on up-market car innovation projects to solve it. When accepting these common rules, they took part in a collective action. The rules defined during the emergence step had to evolve to include the new parties that joined the coalition and their problem. Actors would only join the coalition if the common problem was close enough to the problematic situation that they were experiencing. The management team of the cluster therefore had to make the necessary changes to the rules to include these parties. For instance, several actors joined the cluster with a need for help on individual research and development projects, which were not foreseen in the cluster’s regulations, nor in the national cluster policy’s regulations. The management team then dealt with the incompleteness of the established rules (Reynaud, 1989), and defined a new rule consisting of guiding individual research projects as a first step towards collective projects. The members of the management team were the ones dealing directly with these new members and their problems, and therefore had to set up the regulation work required to include the new parties in the overall regulations. They were responsible for regulation, and had to select problems in order to guarantee cohesion. The cluster then came to life as a collective. This is the generalization stage.

As new parties joined the collective, they brought new problems and made the rules change. The up-market positioning was soon questioned: although it was defined as a collective rule, it was always “*difficult to justify*”, admits the former president of the cluster. “*The high-end seemed scary, small businesses felt left out*” (a small business manager). Local parties had trouble taking ownership of a strategy defined to answer the call for projects, in which they were not involved. They felt the cluster strategy was not congruent with their activity and they questioned the initial cluster project. Many parties went to the cluster management team with problems that were independent from the high-end automotive project, because they thought their problems were related to competitiveness and could be answered through innovation projects. The cluster management team started to deal with these problems, defining new

rules, which were autonomous from the overall regulation initially defined. This was the transformation stage. A new coalition emerged and a new strategy was defined. Some parties left the coalition, either because their initial problem had been solved or because they did not accept the new collective solution, and others joined. New problems were considered. The cluster became “iDforCAR”, and entered a new emergence stage, led by its management team. This transformation was made possible because the management team was able to evolve and accept new parties and new problems, and to change the regulation. The rise of memberships from the deployment of the new strategy seems to confirm that the new regulation offers a solution to more problems, and to more parties.

Cluster members considered it to be a result of the extensive fieldwork and regulation work conducted by the management team, and a sign that the new regulations issued are becoming widespread: *“since we are called iDforCAR, we begin to see the emergence of projects, such as vehicle of the future, electric road train ... They are very innovative projects with high added value”* (iDforCAR general manager).

Conclusions

The French competitiveness cluster policy aims to create clusters as collective players that can have a common project and achieve collective goals, far from the clusters initially described by Porter. This study shows that clusters can indeed be started by a cluster policy, but that they can only carry on if their members accept common rules. These rules will enable them to work as a collective and gain the autonomy required to assimilate and take ownership of the policy established by higher authorities. Only then can they achieve collective goals, such as supporting local development to enhance the competitiveness of corporate enterprises and create jobs. The major difference between French competitiveness clusters and clusters as described by Porter are indeed the existence of a collective.

The theoretical framework based on the Theory of Social Regulation provides enlightenment of the construction of French competitiveness clusters in the articulation case of a top-down cluster policy and a bottom-up emergence. A cluster manager once said⁴ that the story of his cluster could be presented in two ways: either in a bottom-up way or in a top-down way, as there were two stories that met. Depending on the stage we look at in the construction of a French competitiveness cluster, it can indeed be analysed either as a top-down policy created by the government, or as a bottom-up collective built by local actors. What we have

⁴ In a meeting on clusters' emergence hold in Nantes (France) in May 2012.

highlighted in this paper is the encounter of these two stories and their articulation. The Theory of Social Regulation has enabled understanding of how local actors can take ownership of the cluster policy, thanks to the work of the management team, and to show how a competitiveness cluster is built in an emerging and endogenous way, elaborating solutions to solve problematic situations, within the framework of a control regulation.

As most cluster policies created around the world involve the creation of cluster organizations, this work can help understand their emergence.

In this paper we have deliberately focused on the overall coalition of the cluster. The Theory of Social Regulation however makes it obvious that a cluster is not only this overall coalition. Each research project held within the cluster is in itself a coalition, as is each problem brought to the cluster, since these projects and problems lead to the construction of a collective in order to solve them. In each of these groups, rules are set up to define the aims and methods of action of the collective. The management team then ensures the consistency of these local rules and coalitions with the overall regulation and the overall coalition. Further work can be done to analyse the regulation work in this various coalitions and to show the role played by the management team to ensure overall cohesion.

This study is also over a restrictive period of time, and should be taken further to identify the next steps of the regulation process.

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