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The role of the government in promoting and steering cluster development: The case of an energy cluster

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Abstract

Over the past two decades, clusters have become a popular policy tool to increase the competitiveness of regions and to stimulate job creation. The underlying assumption of cluster policy is that the government can either facilitate the development of a cluster or create one 'from scratch'. So far, limited attention has been given to how the members of clusters reflect on the ways in which the government may influence the running of the cluster. This paper further contributes to this debate by addressing two issues. First, it examines to what extent a cluster that is highly affected by governmental cluster policy is being appropriated by the members. Second, the paper investigates whether the cluster is functioning according to the government's intent. Empirical material is derived from a case study of a French cluster. Besides resulting from a cluster policy initiative, this cluster was recently required by the government to meet a new set of objectives. Our findings confirm that it is difficult for members of a government-influenced cluster to fully appropriate it. We show that new political objectives can destabilise the cluster by putting the current power distribution into question and that it can create incentives from the cluster to renew itself. We also question the cluster's capacity to change its development path. More generally, we reflect on the government's ability to influence the development path of clusters.

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Key words: cluster policy; cluster initiative; innovation policy; energy cluster; case study

1. Introduction

Over the past two decades, clusters have become a popular policy tool to increase the competitiveness of regions and to stimulate job creation (OECD, 1999, 2001; Rosenfeld, 2005). With the aim of supporting cluster development, policies of this kind tend to either support existing clusters or to create new ones by establishing collaboration between firms that do not yet co-operate (Benneworth et al., 2003). The typical policy measures used include direct and indirect financial support, start-up support, aid for administration, networks and cooperation, as well as general assistance for cluster activities (Brenner and Schlump, 2011). Across the world there are many examples of governments implementing explicit or more implicit measures to stimulate cluster development (van der Linde, 2003). The underlying assumption of cluster policy is that the government can either facilitate the development of a cluster (Hospers et al., 2009) or create one 'from scratch' in a top-down manner (Fromhold-Eisebith and Eisebith, 2005; Palazuelos, 2005). Regardless of whether the government plays a facilitating or creating role, one could argue that the government will more profoundly affect the evolution of 'top-down' policy-driven clusters than the evolution of clusters that have developed more spontaneously over time in a 'bottom-up' manner (Su and Hung, 2009).

Still, the extent to which policy measures can effectively facilitate or contribute to the design of new clusters is widely debated. Some studies are rather critical about the capacity of directive cluster policy to influence cluster formation (Bresnahan et al., 2001; Formica, 2003; Guinet, 2003; van der Linde, 2003). The wish for a functioning cluster may justify policy interventions, yet these interventions may misguide the development of the same cluster (Roelandt and den Hertog, 1999). Fromhold-Eisebith and Eisebith (2008) showed, for example, how cluster initiatives have limited impact on member firms' business performance. Similarly, Su and Hung (2009) questioned the capacity of cluster policy to stimulate the

creation of social capital, a crucial element of a well-functioning cluster (see also Andersson et al., 2004). Others are more optimistic about the capacity of cluster policy to influence cluster development (Brenner and Schlump, 2011; Rodríguez-Pose, 2013). For instance, Brenner and Schlump (2011) argued that different types of cluster policy can be more or less effective depending on the cluster's degree of maturity. It has also been illustrated that clusters that provide indirect R&D support in the form of information, advisory services, or organisation of networking events have a strong and positive impact on innovation and firm performance (Nishimura and Okamuro, 2011). While it is uncertain whether and to what extent governments can shape cluster emergence, cluster policy is used widely to promote cluster formation and steer cluster development.

So far, limited attention has been given to how the members of clusters reflect on the ways in which the government tries to influence the running of the cluster. Only a few scholars have partly addressed this topic by examining how cluster leadership affects cluster dynamics (Fromhold-Eisebith and Eisebith, 2008; Menu, 2012; Sydow et al., 2011; Zagorsek et al., 2008). It has been argued that effective cluster leadership is key for cluster development (Zagorsek et al., 2008) and that it can play an important role in fostering a vision and managing partnerships within the context of the cluster (Menu, 2012). This paper further contributes to this debate by addressing two issues in more detail. First, it examines to what extent a cluster that has been established through a cluster policy initiative is being appropriated by the members. We question whether members of a cluster start to make the cluster their own when the government has had such a profound role in creating the cluster. That is, do they actively engage in and contribute to the cluster's activities even if they were not part of the collective effort to set up the cluster? Answering this question is important because if members do not appropriate the cluster, one can have doubts about whether the cluster would survive without sustained government support.

Second, the paper investigates whether the cluster is functioning according to the government's intent. We seek to understand whether cluster members perceive the government's role to keep on being influential along the cluster's path of development. While the government might have set up the cluster initially, we question if the cluster keeps on being a tool for public policy on an ongoing basis or whether it starts functioning more autonomously. Paradoxically, if the government has limited influence on cluster dynamics once it matures, this could either be due to a low degree of member involvement (i.e., lack of appropriation) or because the cluster has taken its own course (i.e., full appropriation); a scenario in which members decide for themselves in which direction the cluster is going. This research thus aims to examine to what extent the members of a cluster established via cluster policy feel that they have become part of a cluster that has a life of its own or of one whose direction is still mostly determined by the government.

To investigate these two issues, we conducted an in-depth case study of a French energy cluster, which was set up in 2005 as part of a broader government initiative that aimed at creating so-called 'pôles de compétitivité' across the whole country. The cluster's main objectives and direction of growth are decided upon by national government bodies, although cluster members still have some room for manoeuvre within these constraints set from above. In our analysis, first we discuss the degree of the members' appropriation of the cluster. For this purpose, we investigate members' perceptions of the cluster's functioning, their degree of activity in and contribution to the cluster, and whether they feel a sense of belonging towards the cluster. Then, we go into how changes in policy objectives are received by cluster members. More specifically, we examine to what extent policy objectives destabilise the cluster, leading for example to disintegration of the main cluster objectives or a power re-distribution among members. Based on the case study findings, we discuss whether members can be expected to appropriate a cluster when it has been established through a cluster policy

initiative and, more generally, whether governments can influence a cluster's evolution once it has been established.

2. Literature review

2.1. The formation and function of clusters

The notion of a cluster is featured by different dimensions, which include geography, firm heterogeneity, agglomeration economies, and diversity of local actors' strategies. A multitude of definitions exist and the concept has been criticised for being fuzzy and chaotic (Martin and Sunley, 2003). Most definitions, though, focus on the "localised" dimension of firm agglomerations, the production processes of which are closely linked through the exchange of goods, services, and/or knowledge (van den Berg et al., 2001). By relying on a common denominator among them all, we regard a cluster as "a regional agglomeration of sector or value chain related firms and other organisations (like universities, R&D centres, or public agencies) which derive economic advantages from co-location and collaboration" (Fromhold-Eisebith and Eisebith, 2005:1251). Among the main ambitions of a cluster is the desire to increase local competitiveness and innovativeness through lower transaction costs (Baptista and Swann, 1998; Iammarino and McCann, 2006) or a stronger ability to attract R&D funds (Broekel et al., 2015). In practical terms, this means facilitating access to specialised labour and infrastructure, enabling knowledge spillovers, and fostering inter-firm cooperation as well as competition (Lublinski, 2003; Malmberg and Maskell, 2002; Porter, 1990, 1998; Wolfe and Gertler, 2004).

Clusters can be the result of either implicit bottom-up or explicit top-down driving forces (Fromhold-Eisebith and Eisebith, 2005). Bottom-up types of clusters are initiated and governed by private firms that want to benefit from regional cooperation (Su and Hung, 2009). Firms spontaneously try to establish linkages and develop joint strategies (Andersson

et al., 2004). Top-down clusters – also referred to as cluster initiatives (Fromhold-Eisebith and Eisebith, 2008; Kowalski and Marcinkowski, 2014) – are the result of government policies that promote regional competitiveness and are largely financed and governed by public institutions (Fromhold-Eisebith and Eisebith, 2005; Su and Hung, 2009). In the latter case, a cluster management team is formally set up by governmental bodies to act as broker, to create appropriate structures, to manage the cluster, and to provide services to registered members (Jungwirth and Mueller, 2014; Sölvell et al., 2003). Okamuro and Nishimura (2015) investigate the local management of national cluster policies and the associated effects on performance. By comparing clusters based in Germany, Japan, and France, they found that differences among clusters are explained by the interplay between basic conditions, the type of national cluster policy, and the type of local cluster management (Uyarra and Ramlogan, 2016a).

2.2 Comparing top-down and bottom-up clusters

A few studies explicitly compare top-down and bottom-up clusters. A key characteristic of top-down clusters is their ability to facilitate access to important external sources of money through (inter)national funding schemes (Fromhold-Eisebith and Eisebith, 2005). They are, however, at the mercy of tightening budgets and changing political objectives (see also Jungwirth and Mueller, 2014). Indeed, government support does not last indefinitely. Beyond the initial support, clusters are expected to gradually become financially independent (Jungwirth et al., 2011; Jungwirth and Mueller, 2014). Perhaps unsurprisingly, switching to private funding is challenging for the cluster management, because members are less willing to pay for higher membership fees or additional services (Jungwirth et al., 2011).

Regarding decision-making, Fromhold-Eisebith and Eisebith (2005) highlighted that while members can exert some influence on the cluster's activies and direction of growth,

top-down clusters are centrally coordinated. Public authorities control the performance of the cluster and assess the achievements of funded activities, and cluster management has to frequently report on the results. Building on that, Jungwirth and Mueller (2014) show that top-down and bottom-up clusters have different governance regimes which may depend on the specificities of the industry. For bottom-up clusters, member firms assign specific tasks to cluster managers, generally with the aim of increasing firms' competitiveness thereby fulfilling private goals. For top-down clusters, task allocation is in the hands of the government instead. However, it sometimes demands from cluster management to simultaneously fulfill two very different goals: increase local attractiveness (a public goal) and improve member firms' innovation capacity (a private goal). The achievement of these objectives requires very different strategies and trying to do both simultaneously thus limits the efficiency of the cluster's management decision-making (Jungwirth and Mueller, 2014).

Finally, top-down clusters are quite inclusive. Potentially any organisation can become a member of the cluster, although administrative and spatial boundaries can set limits on membership. However, Fromhold-Eisebith and Eisebith (2005) argued that only a few members within the clusters are highly motivated and active. The remaining part hardly participates in or contributes to the cluster activities. It follows that cluster members may have difficulties with appropriating a top-down cluster; that is, they might be formally part of the cluster without feeling a real sense of belonging to it. Linked to that is the observation that top-down clusters lack social capital, are characterised by loose networks, and often have difficulties with developing linkages or building a shared vision (Andersson et al., 2004; Su and Hung, 2009). In contrast, bottom-up clusters tend to be characterised by a stronger sense of community and higher degree of member participation (Beckeman and Skjöldebrand, 2007; Rosenfeld, 2003).

2.3 Cluster policy: creating and steering cluster development

Holding the promise to enhance local competitiveness, cluster policies have been widely promoted by international bodies, such as the European Union and the OECD, and they have proliferated worldwide both at the regional and national level (Benneworth et al., 2003; Sölvell et al., 2003). Policy-makers often aim at nurturing clusters by building or activating them (Feser, 2008). Still, given the large amount of government funding invested in cluster policy, the ongoing debate about cluster policy's effectiveness is not surprising (Brenner and Schlump, 2011), even more so given the rather mixed results about its impact. Evidence from worldwide surveys and meta-studies indicates that cluster policy only plays a very minor role in cluster creation (Enright, 2000; van der Linde, 2003). Nevertheless, there is some empirical evidence suggesting that government policy can influence cluster development (Brenner and Schlump, 2011; Rodríguez-Pose, 2013), for example by adopting a brokering role (Roelandt and den Hertog, 1999), or by creating conditions that facilitate cluster emergence and growth (Bresnahan et al., 2001; Desrochers and Sautet, 2004). This includes investing in education or infrastructure and setting up institutional frameworks that support entrepreneurship (Feldman and Francis, 2004).

However, few studies rigorously evaluate cluster policies and their impact is not well understood (Uyarra and Ramlogan, 2016b). Evaluating the effect of cluster policy is challenging (Fromhold-Eisebith and Eisebith, 2008) and requires the mobilisation of different methods depending on the purpose and scope of the evaluation (Schmiedeberg, 2010). Among existing studies there are quantitative studies that try to evaluate the macroeconomic impacts of cluster policy (Learmonth et al., 2003) and compare the innovation performance of firms within a top-down cluster to the performance of firms not belonging to any cluster (Falck et al., 2010). There are also studies that question how explicit cluster policies are successful in enhancing the performance of member firms and inter-firm relationships

(Fromhold-Eisebith and Eisebith, 2008; Nishimura and Okamuro, 2011). Although the growth of regional clusters, either top-down or bottom-up, is a cooperative long-run process that involves a wide variety of actors and stakeholders (Hallencreutz and Lundequist, 2003), still little is known about how members themselves perceive the consequences from being part of a cluster that is the result of governmental cluster policy and act upon it. The remaining part of the paper will therefore examine cluster members' perceptions of being part of such a cluster.

3. Research methodology

3.1. Research setting

The empirical setting of this research is Tenerrdis, one of the four French competitiveness clusters that focus on energy. In the spring of 2004, the French government initiated a nation-wide cluster policy called "Pôle de Compétitivité" or competitiveness cluster in English. The aim was to stimulate the so far lacking interactions between research centres/universities, on the one hand, and large corporations and small and medium-sized enterprises (SMEs), on the other. The aim was to enhance local competitiveness, economic growth and job creation (La Documentation Française, 2008). A consortium had to respond to a public tender and, if selected, would be endorsed by the government as being a competitiveness cluster (Shong, 2009). Seventy-one proposals throughout France were endorsed that way by the government.

To support competitiveness clusters in their tasks, the government introduced a specific R&D funding programme, the "Fonds Unique Interministériel (FUI)" (in English, Unique Interministerial Fund), which targets research projects with high Technology Readiness Levels (TRL) and can only be granted for collaborative R&D projects that (i) involve both firms and research institutes and (ii) have received a label of approval by any of the competitiveness clusters. Before giving their label, cluster management teams consult

with experts coming from member organisations to assess the relevance of the proposal and/or suggest improvements if deemed necessary. The government also allocated a specific budget to financially support cluster management teams in their activities, which usually represents ~20% of the total budget. For the remaining share, clusters are funded via local governments' resources and membership fees. The fee is proportional to the size of the firm: start-ups pay a few hundred euros to join a cluster while the contribution of large firms is slightly more than 20,000 euros. Since the clusters were created, they accompanied the development of more than 1,200 R&D projects, which accounted for a total public spending exceeding €2.3 billion. Competitiveness clusters are evaluated every three to five years to decide whether they can maintain their government endorsement.

Tenerrdis was established as a response to the government initiative to set up competitiveness clusters in 2005, with the joint effort of the Rhône-Alpes region, the Department of Savoie, an engineering school, and a national research lab. Some firms that already played an active role in the region positively welcomed the initiative. These firms decided to join the cluster from relatively early on. The cluster's foundations are highly connected with those of the founding members, at least with respect to its focus and governance structure. In fact, the cluster covers six themes, which are aligned with the research activities of the research lab and the engineering school: biomass, hydrogen, solar PV (research lab), smart grids, energy efficiency in buildings (research lab and engineering school), and hydropower (engineering school). Moreover, with regard to its governance, representatives from one of the local industrial actors have chaired the cluster and general managers have either been selected from within the research lab (until December 2013) or from a major local industrial actor. Since its creation Tenerrdis has grown significantly. With less than 50 members in the early stages, it currently has 178 paying members, almost 60% of which are SMEs. This cluster shows great resemblance with top-down clusters that have been

described in the literature (Fromhold-Eisebith and Eisebith, 2005). Even though the initiative taken by the early founders may be seen as bottom-up, for the large majority of the members that joined later, Tenerrdis is the product of a top-down initiative pushed forward by the national government. The top-down nature is reflected in the cluster being regularly evaluated by the government based on objectives it has decided upon. This guides the day-to day activities of the management team. Moreover, the organisation of this type of cluster tends to operate according to a hierarchical structure.

As of 2013, the French government set out a new objective for the competitive clusters; that is, to make sure that subsidised collaborative research projects give rise to marketable products or services, both in France and internationally. In using the French Ministry's terminology, clusters were required to shift their overall mission from managing a "usine à projets" (factory of projects) to managing a "usine à produits" (a factory of future products). The government would like to see jobs being created as a result of the significant investment made into R&D projects. Although support for the development of R&D projects will remain a core mission, clusters now have to make sure that funded projects lead to the creation of new products or services. Of importance to reach this goal is the specific support that clusters should give to SMEs to facilitate their access to external funds, their internationalisation, and allow them to better anticipate their needs for new competences.

These changes in the mission of the clusters are reflected in the objectives stated in the "performance contract" signed between each cluster and the (local) government(s). These contracts, valid from 2013 to 2018, specify that clusters (i) have to start evaluating the economic impacts of funded projects and (ii) are expected to increase the proportion of private funds in their overall budget. Tenerrdis has sought to meet these ambitions by attracting new members and adapting their services to better meet the needs of their members. They have also considered increasing the share of private funds by offering paid

services to their members. While at the time of the data collection no transition had happened yet, both the cluster management team and member firms were already reflecting on the ongoing changes.

3.2. Data collection and analysis

To explore the role of the government in promoting and steering cluster development, we rely on primary as well as secondary data sources. In line with the exploratory nature of the research, data collection followed a loose timeline in which it had some overlap with data analysis, a common feature of theory building that draws on a case study (Eisenhardt, 1989). This approach enriches the validity of the data and facilitates the adjustment of objectives that are pre-established in a deductive way with elements that are identified later on, according to an inductive logic.

The project started at the outset of 2014 with the collection of secondary data about French clusters. In particular, we gathered documents about cluster policies of the French government and benchmark reports about the performance of existing French clusters. These were complemented by secondary data about the specific cluster our research focused on including results of a survey conducted to assess members' satisfaction as well as the latest performance contract signed between the cluster and the French Government. Finally, we analysed how the specifications written in the calls for FUI projects evolved over time.

Afterwards, we conducted semi-structured interviews with 20 members of the cluster. A representative set of cluster members were pre-selected jointly with the cluster management team by taking into account the following criteria: size, date of joining the cluster, member firms' engagement in activities organised by the cluster, and business focus. Three of the member organisations that act as so-called anchor tenants were included in the selection (see Baglieri et al., 2012). This set of criteria sought to prevent a bias in the

findings. We also conducted semi-structured face-to-face interviews with representatives from the cluster management team, which included the general manager, the innovation and partnership coordinator, and the business development and IT project manager. Interviews were conducted between July 2014 and December 2014 and lasted 60 to 90 minutes (see Table 1 for details about the interviews). Interviews were transcribed verbatim and analysed by using the Dedoose data analysis platform. Transcripts were sent to all interviewees to verify these were consistent and get their consent.

------TABLE 1 ABOUT HERE------

The data analysis followed a thematic approach and tried to unpack two main themes: (i) the extent to which members appropriate the cluster and (ii) how members view the government's objective of steering the cluster in a new direction. We carefully read and re-read our interview transcripts to define and agree upon a coding structure that we would use for analysing the interview data. Consultation between the three researchers was essential at this stage. To address the first theme, we structured codes around the significance of the membership for firms. More in particular, the following aspects were analysed: the motivation behind the decision to join the cluster; the nature of and extent to which member firms participate in the activities proposed by the cluster; the expectations from joining the cluster; and the extent to which members believe that they are 'receiving from' or 'contributing to' the cluster. The insight gained into these aspects gave us a rich overview of how members appropriate the cluster.

To address the second theme, we structured the codes in a way that would capture both the macro and micro levels of implementation of the new policy objectives. At the macro level, we focused on how members perceive the role of the cluster and members'

expectations of what the cluster should bring. This analysis allowed us to distinguish between members who see the cluster mainly as a breeding ground for collaborative R&D projects and thus seem to favour the status quo and those who see the cluster as a place of connecting to prospective customers and therefore more clearly align with the new, commercial objectives of the cluster that the government tries to push for. Subsequently, the analysis zoomed in on examining members' opinion on the new commercial focus of the cluster. To this aim, our code list sought to include how member firms see a role for the cluster in helping members to commercialise their product. If they disagreed with this role for the cluster we tried to understand why they disagreed and what the role of the cluster should be instead. At a micro level, we analysed how members reacted to the possibility for the cluster to propose paid services, i.e., market studies, technological benchmarks, and grant proposal writing services. This set of services was not part of the cluster offering at the time of the interviews. The secondary sources described before were used to triangulate the analysis of our primary data (Yin, 2009).

4. Findings

This section introduces the main findings of our analysis. In particular, the focus will be on investigating whether cluster members appropriate the cluster (Section 4.1) and how they perceive the government's recent attempt to steer the development of the cluster in a new direction (Section 4.2).

4.1 Appropriation of the cluster by member firms

First, we were interested in understanding to what extent members seem to appropriate the cluster. We explored what 'appropriating the cluster' means by examining members' motivations to join the cluster, the extent to which they are benefiting from the cluster

activities, and their sense of belonging to the cluster. Based on analysing these three aspects, we found a considerable degree of diversity in our sample in the ways in which member firms seem to appropriate the cluster. To explain this diversity, we tried to uncover the reasons for the observed differences in the degree appropriation and the different perspectives on the cluster dynamics at play. Table 2 shows representative quotes that support the findings on appropriation.

On one end of the spectrum, we found that one government lab and two large incumbents are clearly appropriating the cluster. They participate in many of the events organised by the cluster and provide free support for various cluster activities such as providing feedback to cluster members who have requested the label for their R&D project proposal. From the empirical evidence, we could also observe that these members' degree of appropriation seems relatively strong in part because they are well aware that they are themselves one of the major funders of the cluster. As members of the Board of Administrators, they have the possibility to "*give [their] opinion about the orientation […]* and the choices made by the cluster". They may propose themes that should be included in the cluster and thereby influence the cluster's path of development in a major way. For the research lab, appropriation of the cluster even went as far as them stating that an energy cluster could not really exist without them in it. This clearly shows a dominance of the large members in the functioning and steering of the cluster. However, this dominance of members large in size does not mean that smaller members are completely left out of the process. In fact, we also found that some smaller firms proactively participate in the cluster's activities. These smaller members were a driving force behind the cluster dynamics, for instance, by means of proposing specific initiatives, contributing to the organisation of events, and regularly sharing their specialised expertise (e.g., knowledge of specific markets and experience in setting up collaborative projects). Nevertheless, these members are conscious

of their small size, which weakens their belief as to whether they can, or cannot, steer the cluster's direction eventually.

On the other end of the spectrum, we found firms that hardly appropriate the cluster. They failed to do so for various different reasons. First, a lack of appropriation was the result of not having a genuine interest in the cluster apart from obtaining the label that helps to gain access to government funding (i.e., FUI funding). Several firms even mentioned that they became member "by accident". For these firms, being involved in a research project with other organisations that were already member of the cluster meant that they felt the pressure to also join the cluster.

Second, we identified firms that have used the cluster rather opportunistically. Such opportunistic behaviour typically concerns start-ups that take advantage of their membership by using some of the services offered by the cluster (e.g., help in obtaining a bank loan) or large firms that are interested in meeting local actors with whom they may share objectives of future growth. Similarly, some firms have joined the cluster to gain visibility and legitimacy, especially in the eyes of firms and stakeholders outside of the cluster. These firms try to leverage the reputation of the cluster for their own purposes, without truly taking part in any of the collective initiatives. While firms in this group benefit from their cluster membership, they still do not seem to fully appropriate the cluster as they do not actively contribute to the cluster's life themselves.

Third, we found start-ups that became part of the cluster because it represented another venue for them to meet firms already part of their network. Not joining the cluster might thus have been perceived as "awkward". Despite the best intentions of wanting to make a commitment to the cluster, their everyday business activities would leave them little time to actively contribute to the cluster's life in practice, as the following quote illustrates: *"I really don't* have much time to dedicate to [the cluster] *"*.

Fourth, there were firms whose lack of appropriation derived from a misfit between their expectations of joining the cluster and the possibility to benefit from their membership. In this group we find small members who hoped the cluster could help them in finding potential customers, but whose involvement in the cluster's life did not generate any real business activity. Among the main critique they had on the cluster, interviewees described the cluster as having been made "by researchers for researchers". That is, they criticised the cluster for paying less attention to more applied research projects like their own. Last, some firms felt that their business focus was only vaguely overlapping with that of the cluster. As a consequence, they felt a distance towards other cluster members, which resulted in a weak sense of belonging and thus a limited degree of appropriation of the cluster.

A significant share of our sample also felt that the process of cluster appropriation was not as straightforward as one might expect. Smaller firms expressed the intention to be more active, yet their willingness to appropriate the cluster has been discouraged by the presence of larger, anchor tenant firms playing a deterring role. The reason for this phenomenon is twofold. On the one hand, smaller firms are in direct competition with some of the incumbents and, as a result, are given very little visibility in the cluster. On the other hand, incumbent and small firms may not have a constructive relationship, which leaves hardly any room for the latter to benefit from the services or network offered by the cluster. The ultimate outcome is that the engagement of some small firms within the cluster's life is limited to attending some cluster meetings only. Moreover, we found that geographical and institutional distance deters members from appropriating the cluster. Some interviewees openly criticised Tenerrdis for being very 'Grenoblois'. What they meant to get out of the cluster has been partially left unfulfilled because of a weak embeddedness in the local community.

------TABLE 2 ABOUT HERE------

4.2 Members' perspectives on proposed changes to the cluster

In the previous section, we have presented evidence of the different degrees by which members have appropriated the top-down cluster. To further analyse the influence that the government can have on the running of the cluster, this section discusses how members perceive the attempt of the government to steer the cluster's path of development on an ongoing basis. As explained in Section 3.1, the French government has required the various competitiveness clusters to make a transition from "usine à projets" (factory of projects) to "usine à produits" (factory of future products). The renewed policy is basically demanding clusters to have a stronger commercialisation focus, a meaningful impact on local economies, and more financial independence. In proceeding with our analysis, we sought to examine whether the government's attempt to steer the cluster in a new direction has been perceived as legitimate by the cluster members. The analysis also addresses how the cluster's current internal dynamics might be disrupted by the new policy objectives, which in part depends on how these objectives are implemented. For instance, the position of certain actors could be strengthened at the expense of others'. Likewise, while the new policy objectives might create opportunities for some actors and lead to a higher degree of appropriation, for others these new objectives might discourage them from maintaining their level of engagement with the cluster's current activities.

Our analysis reveals that members have diverging opinions about the objective of the government to give clusters a more commercial focus. That is, if they had an opinion at all, some failed to articulate a clear opinion on the cluster altogether. A few members, mostly those that joined the cluster to only obtain the label, did not express any opinion in favour or against the development. Other members expressed scepticism about the feasibility of the government plan for the cluster. In this group of sceptics, we could find large incumbent

firms that do not believe that the cluster has the capacity to facilitate the commercialisation of products that are created via subsidised R&D projects. These large firms were of the opinion that the cluster does not have the human or the financial capacity to fulfil this new mission. Engaging in activities aimed at commercialisation would require specific knowledge (e.g., about the market) and competences (e.g., marketing) that the cluster currently lacks. This scepticism was also shared by two smaller members. One small firm in the sample thought it would be interesting if the cluster could help them commercialise their product, but it was not able to envision how this might take place in practice. The other one went as far as to question whether the cluster could actually ever support the emergence of collaborative R&D projects that would result in delivering marketable products.

About one third of the members, including both small members and the research lab, showed some concern towards a situation in which the cluster would have a more commercial focus. These members did not believe that the cluster should play a role in the commercialisation of products or technologies at all. As stated by one interviewee, "they lose their federalising nature if they start being involved in being a Usine à Produits". According to them, clusters have been created to stimulate networking and cooperation between firms and research institutions. The new government objectives should not take clusters away from their original mission. In line with this opinion, we observed how the research lab has tried to leverage its position as founding member to make sure that the original focus of the cluster does not fade away. Not surprisingly, the research lab had a stronger preference for a research focus than a commercial focus.

Finally, about half of the members interviewed – mainly small-sized firms – responded positively to the ambitions of the government. While they generally agreed that the cluster should not directly play a role in helping member firms to commercialise their products, they do see a role for the cluster in helping them reach the market. They would for

instance appreciate feedback on the commercial aspects of their R&D projects such as the relevance of the market addressed or on their pricing policy. Others think that the cluster could help members find potential customers by further fostering networking and organising business-to-business meetings. They believe that the cluster could become an interface between research and practice. Besides, the cluster could boost members' market outreach, for example by giving more visibility to products and services at trade exhibitions. For these members, the new government objectives could constitute an incentive to get to a higher degree of appropriation of the cluster, because such objectives encourage the cluster management team to better tailor their services to members' needs. Finally, some incumbent firms mentioned that the cluster could foster more actively, not only the interactions between firms and research institutes, but also those between large corporation and SMEs; that is, even despite their overall scepticism about this commercial focus. These large firms envisioned that SMEs could have access to potential customers in the cluster, while the large corporation would have the possibility to develop business relations with promising SMEs. Table 3 provides additional evidence in support of the findings presented in this section.

------TABLE 3 ABOUT HERE------

Finally, besides asking for a more commercial focus, the government also expects clusters to become financially more self-sufficient by increasing the amount of private funding in their overarching business. One possibility to do so is to start offering additional paid services to their members. The cluster in fact considered offering market studies and technological benchmarks or consulting members on grant proposal writing. We asked interviewees their opinion about this objective and whether they would be willing to pay for such new services if provided by the cluster. This proposition was generally not received with

much enthusiasm. Only three firms said they would surely be interested in paying a fee, but mainly to receive support in writing bids for EU grants. Regarding market studies and technological benchmarks about half of the start-ups and SMEs responded with a "Why not" provided that reports are comprehensive and/or the fee is maintained at a reasonable level. Most of the larger members did not show any interest in these offers, mainly because they can do these kinds of studies internally or have the resources and know-how to outsource it to competent private firms. Finally, two firms believed that the cluster should not shift to a fee-based system because a publicly-funded institution like the cluster should not operate according to private market rules. What this last finding implies is that even though members are fairly sceptical about the government pushing the cluster into a new, more commercial direction, they do not want the cluster to become fully self-governing either as this would involve becoming self-supporting as well. That is to say, the majority of members currently still seem to dismiss the cluster management's main suggestions that would allow the cluster to become more financially self-supporting.

5. Discussion

Building on the above empirical evidence, in this concluding section we reflect on the implications that our findings provide with regard to how policy changes can affect cluster dynamics (Section 5.1) and theoretical implication of the current research (Section 5.2).

5.1. Discussion of the findings

In this paper we sought to understand whether members of a cluster established via cluster policy appropriate the cluster and to what extent they perceive the government as influential along the cluster's development path. The underlying purpose of these questions was to investigate to what extent such a cluster can function independently or still relies on

involvement of the government to set the course of direction. Our findings confirm that it is difficult for members of a cluster, which is the outcome of cluster policy, to fully appropriate it and make it their own (Fromhold-Eisebith and Eisebith, 2005; Menu, 2012). Even though some SMEs do appropriate the cluster and act as driving forces behind some of its activities, the large firms that show a comparatively high degree of appropriation largely dominate the cluster. This higher degree of appropriation is not surprising as these large firms were among the ones that contributed to its creation. The smaller members' lack of appropriation can be justified by their resource scarcity – they are too small to dedicate lots of time and resources to the cluster – and by the observation that their expectations were only partially fulfilled – some firms felt that they were not given enough space to contribute to the cluster. Moreover, a significant number of members are hardly engaged in the cluster activities. They mostly joined the network because of the possibility of receiving the label or the social pressure exerted by the local community or relevant players in the industry.

Regarding the legitimacy of the government's intent to steer the cluster in a new direction, our results illustrate a variety in opinion with some members being in favour, others against, and the remainder neutral about the proposed changes. By contrasting how cluster members reflect on the ongoing transition against their degree of cluster appropriation, it is possible to analyse the impact that the government policy might have on the cluster's internal dynamics. First, we can foresee some tensions among the current anchor tenants. On the one hand, the research lab is concerned about the new direction because this may weaken the central role it plays within the cluster, in particular with regard to its influence on the cluster governance; nevertheless, it uses all possible means to make sure that the new objectives of the cluster do not affect the cluster's original mission. On the other hand, despite their scepticism about the overarching objective, large incumbents tend to agree

with the government initiative to refocus towards commercialisation and consider the cluster as the locus where to meet promising SMEs and implement their open innovation strategy.

Second, our findings suggest that the initiative of the government to have more of a commercial focus could also change the way small members appropriate the cluster. Indeed, those that do appropriate the cluster now are concerned about the new objectives introduced by the government. For them clusters are there to stimulate the creation of collaborative R&D projects. On the contrary, many members that appear not to appropriate the cluster in its current form are showing consensus towards the new direction; more specifically a commercially focused cluster would better meet their needs. The ways in which the cluster management team will choose to meet the new objectives – i.e., by proposing new activities and/or by suppressing existing ones – may reduce the level of involvement of some members while creating opportunities for others to (re)appropriate the cluster.

Finally, many members are neutral about the ongoing developments: they neither appropriate the cluster, nor will the new objectives stimulate them to do so. While they do not really have a stake in the changes that the government is trying to bring about, the cluster management team will not be able to count on their support to implement these necessary changes either. It is evident that having too many "sitting members" may lower the chances for the cluster to successfully implement the policy changes prompted by the government, because of the lack of sufficient goodwill. The empirical evidence suggests that the implementation of policy changes may be further weakened by the ways in which the government is laying them out. Although the government has spelled out new objectives for the clusters, these objectives have not been equipped with additional leveraging power. That is, the need to meet the research objectives set out by FUI still remains the main driver (and concern) of clusters and their members. In fact, the main change brought recently in the FUI research calls consists of reducing the time for project commercialisation from five to three

years, with exceptions. Scholars have argued that successful implementation of policy changes depends significantly on the political, economic, and social contexts. Payne (2008), for instance, argues that only looking for general solutions without acknowledging the particular context can lead to incoherent implementation efforts. The case analysed in this paper draws attention to how governmental cluster policies can fail the implementation phase, if the underpinning incentives mechanisms are not adjusted accordingly.

Based on the analysis, we can raise some doubts about the level of influence that the government can have on the cluster's development path. One can question, for example, the cluster's capacity to change its development path. First, dealing with diverging expectations of the anchor tenants will surely be a challenging task for the cluster management team that relies on all anchor tenants to fulfil the activities they were initially created for and will need their continued support to meet the new objectives. Second, interviews revealed that a consensus is lacking on what the cluster management should do to better support members in the development of products and/or services. We may expect the cluster to struggle to find appropriate ways to respond to the new government ambitions. Another point of concern is that the cluster may have difficulties in fulfilling both public and private goals (Jungwirth and Mueller, 2014) and thus runs the risk of not being able to meet the increasing expectations of the members. To fulfil the original as well as the new mission, the cluster management team will have to either reallocate resources or demand additional support from the members. In the first case the cluster may lose some coherence and underperform on both fronts. In the second case, the cluster may become more dependent on large firms and contribute to further worsening the power imbalance between small and large member firms.

Finally, during our interviews we observed that for many members the function of the cluster as a breeding ground for collaborative research projects was completely taken for granted. Members' requests to receive support for the commercialisation of their technologies

was either ill received or not well understood. This particularly concerned those firms in which it is mainly the R&D department that maintains the relations with the cluster. These members have difficulties envisioning a cluster that would have a different purpose than the initial focus on research. This also raises some concerns given that the capacity of the cluster to make the transition will depend on their ability to mobilise employees from other departments as well.

5.2. Theoretical implications

Theoretically, the main question raised in this paper is how explicit cluster policy initiatives, punctuated in time, can affect the internal dynamics of a cluster and the extent to which there exist conditions that allow a priori set objectives to be met (i.e., stronger focus on commercialisation in the case of Tenerrdis). The above findings allow us to draw some conclusions on the potential impact that governments can have on steering a cluster's direction.

Changing clusters' agendas can be an effective move for governments to trigger an external shock and encourage clusters to adapt and renew themselves (Dalum et al., 2005; Meyer-Stamer, 1998; Staber and Sautter, 2011). Our data indicated that such a move might destabilise the cluster, though, by putting the current power distribution into question. Actors in favour of the status quo may find their position to be contested by those in favour of change. Moreover, power may be rebalanced as members at the core start losing interest in the cluster and move to the periphery, thus leaving space for other actors to appropriate the cluster. It follows that the government can indirectly create internal shocks and affect the dynamics underpinning the cluster's institutional sediment (Amin and Thrift, 1996; Lawson and Lorenz, 1999). However, the capacity of the cluster to evolve according to the

government's intent remains uncertain and different types of rigidities can hinder the process of change.

First, the introduction of new policy objectives mean members would have to start 'using' the cluster in a different manner. However, many members have difficulties envisioning the cluster differently from what it currently is. The initial mission of the cluster – fostering the emergence of collaborative R&D projects – is strongly ingrained in the cluster's identity and may limit the capacity of the cluster to change (Staber and Sautter, 2011). Besides, the new objectives seem to have cast some doubt on where the line between the private and the public role of the cluster lies. Where does the fulfilment of a private mission stop and the intent to support the economic development of the region start? Our empirical evidence suggested that some members would not support a cluster that is acting like a private actor given that this may jeopardise the current positioning of the cluster vis-à-vis the private sector. Second, even though the cluster has been initiated in a top-down manner, it strongly depends on pre-existing local networks in the region. In fact, our analysis brought to the fore how some of the firms were collaborating regardless of the government initiative. Such networks seem to nurture continuous interaction among members and trigger a sense of social pressure that encourages firms in the region to join the cluster, if they have not done so already. While this surely helped the cluster in the early years of development, it also resulted in the cluster being known for its strong local orientation and being experienced as a rather closed network. This may result in a negative lock-in that hinders cluster change as the cluster is too socially embedded (Engstrand and Stam, 2002). Finally, anchor tenants that play a key role in coordinating partnerships and setting up new initiatives may resist change in fear of upcoming rivals taking their positions (see Baglieri et al., 2012). This scenario could be even more problematic given the uneven distribution of power.

We argue that the above dynamics could hinder the effective implementation of those cluster policy initiatives that are not aligned with the motivations that originally led anchor tenants to join and actively contribute to the cluster (Hervas-Oliver and Albors-Garrigos, 2014). Once the government has set the initial objectives of a cluster, these objectives seem to become institutionalised and, as a result, it is nearly impossible to break free from the established policy "path" (Goldstone, 1998; Greener, 2002). Changing a cluster's path of development seems a rather arduous task. Still, scholars have resisted a canonical negative lock-in interpretation of the path dependence model and favoured a more evolutionary account that stresses continuous change and the establishment of new paths, including for instance indigenous creation of new paths or diversification into technologically related industries (Martin, 2010; Martin and Sunley, 2006). As such our findings corroborate earlier findings in the literature that in a cluster where anchor tenants play an important role, change is more likely to be implemented in the early stages of the cluster development rather than the later stages (Audretsch and Feldman, 1996; van Klink and De Langen, 2001). Nevertheless, the new government objectives may also represent an opportunity for the cluster to renew itself. Because of the pressing need for the cluster to become financially independent, it will have to open up if it wants to attract new members. This could help the cluster increase its heterogeneity and capacity to evolve and adapt to environmental changes (Baglieri et al., 2012; Suire and Vicente, 2014). Besides, the fact that different anchor tenants now try to steer the cluster in a new direction may also help to rejuvenate the cluster (Baglieri et al., 2012).

Finally, and with broader resonance, our case study draws attention to the double-edged sword of government-driven regional policies. Whilst originally set up with the best of intentions – that is, fostering economic and technological progress often through the promotion of initiatives that may attract different types of actors –, the government may actually create a cluster that cannot stand on its own feet. The top-down manner of creating

the cluster not only seems to weaken the degree of appropriation of member firms, but also limits the latter's willingness to contribute more to the cluster and allow it to operate more autonomously. Creating a cluster in a top-down manner thus runs the risk of being a vain exercise.

6. Concluding remarks

With the aim of further our understanding of cluster policy dynamics and their effectiveness towards supporting economic growth, this paper has explored how members of clusters established through cluster policy reflect on the ways in which the government may influence the actual running of the cluster. By defining cluster appropriation as the extent to which members actively engage with the cluster initiatives and/or paths of development, we have explored how and why members differently appropriate the cluster and the implication of this on members' attitude towards embracing policy changes that have been prompted by the government. Our line of enquiry has shifted focus towards examining whether the cluster is functioning according to the government's intent.

Our findings indicate that exogenous changes resulting from political forces can destabilise a cluster and influence the way it evolves. While some members are attached to the original objective, others are eager to embrace the new objectives. Therefore, the direction in which a cluster can evolve seems to depend on the emergence of a change agent that is able to overcome resistance and mobilise enough members to embrace a new vision for the cluster (Meyer-Stamer 1998). It seems unlikely that the government itself could act as such a change agent, as it is not involved directly in the day-to-day running of the cluster. Instead, while the government policy will most likely affect the evolution of the cluster, it is in the interaction with the internal dynamics and power play between different members that the new direction will actually start taking shape.

Whilst this research elucidates the effects of how explicit policy initiatives, punctuated in time, can affect the internal dynamics of a cluster and the extent to which member firms appropriate the benefits of these changes, the heterogenous nature of the members can hinder the possibility of formulating policies that may be consistent over the longer run. Further effort should be addressed towards understanding whether, and if so how, different degrees of appropriation are dependent on the extent to which firms have a common understanding of the main objectives of the cluster, and thus share a vision and identity.

7

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Tables and Figures

Table 1: Details of interviews conducted within the sampled firms (July – December 2014)

Firm	Size	Market Reach	Sector	Informant	Interview date	Length
Member 1	Large	Global	Across thematic/Electricity producer	1) Integration director 2) Expert biomass	09/07/2014	131 min
Member 2	Large	Global	Energy	Innovation and Partnership Manager	16/10/2014	72 min
member 3	Large	Global/Lyon	Components	R&D Manager	25/06/2014	84 min
Member 4	Medium	Global/outside RA	Components	1) Sales Engineers 2) Sales and Marketing Manager	24/07/2014	51 min
Member 5	Medium	Global/Grenoble	Technology producer/CSP	1) Partnership Director 2) Project Manager	15/07/2014	56 min
Member 6	Medium	National/Grenoble	Software/Energy efficiency	Business Development Manager	15/07/2014	74 min
Member 7	SME	Regional/Grenoble	System's components	General Manager	03/09/2014	75 min
Member 8	SME	Regional/Lyon	Components (PV)	Market Manager	29/07/2014	74 min
Member 9	SME	Regional/Chambery	Software; Consultancy /Energy efficiency-PV	Firm Director	18/07/2014	66 min
Member 10	SME	Regional/Chambery	Consultancy	1) Head of the Regional Business Unit 2) Knowledge and Innovation Manager	21/07/2014	37 min
Member 11	SME	Global/Chambery	Energy demand/energy efficiency	R&D Manager	23/07/2014	99 min
Member 12	SME	Global/Grenoble	Components/smart grid (storage)	R&D Coordinator	30/06/2014	61 min
Member 13	SME	Global/Grenoble	Software/Energy efficiency	Firm Director	24/07/2014	62 min
Member 14	Start-up	Regional/Grenoble	Technology producer	Chief Operating Officer	15/07/2014	65 min
Member 15	Start-up	Regional/Lyon	Components (PV)	Founder	24/07/2014	60 min
Member 16	Start-up	Regional/Chambery	Technology producer/Biogas	Founder	30/07/2014	56 min
Member 17	Start-up	Regional/Grenoble	Technology producer/hydro	Founder	02/09/2014	91 min
Member 18	Start-up	Regional/Chambery	Software/Energy efficiency	Founder	07/07/2014	82 min
Member 19	Start-up	Regional/Chambery	Technology producer (biomass)	Head of Strategy, Finance and Administration	05/09/2014	81 min
Member 20	Large	National	Research and development	Scientific Director	17/12/2014	62 min

(20 interviews in total, 23h59m). Most interviews took place face-to-face except those with Member 4; 10 and 15.

Table 2: Additional quotes highlighting how members appropriate the cluster

Members that appropriate the cluster	
Large incumbents fully appropriate the cluster	*"*We also accompanied the evolution of the themes covered by Tenerrdis. It is interesting to see how Tenerrdis presented itself in 2005 and how they do so nowadays. The topic of energy efficiency for instance is something that we integrated in Tenerrdis, together with the smart grid*."* (Member 2) *"If there was a large cluster focused on new energy technologies with a [research lab] that would say 'We look elsewhere, that's not interesting for us', it would simply not be credible"* (Member 20)
Smaller member firms appropriate the cluster, although they feel that their small size can constrain full appropriation	*"*We are not just active in the sense that we participate in things that are organis*ed. We are also a driving force because […] we push projects* forward*"* (Member 9) *"*We participate to events where we give presentations and share our experience on certain topics*"* (Member 10) *"We are ten people so we can't afford to be present at each event. […] As I said, when we are small we have difficulties to ha*ve someone dedicated to these aspects*."* (Member 9)
Members that hardly appropriate the cluster	
Firms solely motivated by the label	*"*It *allowed me to get the label I needed to present my project in front of the government. Beyond that […], the added value (of T*enerrdis) is difficult to pinpoint*."* (Member 12)
Opportunistic behaviour by member firms not are truly engaging in the cluster activities	*"If you have developed a software that helps* to optimis*e energetic gains backed by a cluster with a strong image in energy […] you can certainly* become more visible and commercialis*e it efficiently."* (Member 7) *"*Till now, besides getting support to *obtain a loan […] I clearly did not take enough advantage of Tenerrdis' network."* (Member 16)
Member firms lacking a sense of belonging to the cluster	*"*We don't take advantage of this, because the topics managed by Tenerrdis are not very much in line with our current business*."*(Member 11) *"*Our technology with CPV (concentrated photovoltaics) *is very different from the traditional PV companies. We're pretty much the only ones doing* that in the area*."* (Member 5) "When we entered Tenerrdis we were a bit hesitant because the activity around energy efficiency was not clearly illustrated*."* (Member 13)
Member firms not appropriating the cluster because their expectations have not been met	*"*As of today - *it's been three years we are member of Tenerrdi*s – I spent many hours having fascinating conversations. Generated turnover: zero! *[…] So now* being part of Tenerrdis is simply a communication tool, a commercial tool to say: look we are open to the world and to technologies of tomorrow because we are part of Tenerrdis." (Member 15) *"*I think that the cluster is more something made by researchers, public and private, for researchers *to get more money. […] It's not a mean*s to get experiments and to make progress in research*"* (Member 18)
Member firms joining because of 'peer-pressure' from their network	*"*The president at the time was from Schneider, a friend of mine. I already knew a lot of people that were members here and there*."* (Member 17) *"*During the meetings, we get to meet actors that we regularly work with. It is interesting to meet in another context*."* (Member 10)
Members that experience difficulties appropriating the cluster	

	"We are really hidden by a [large firm] in fact. That's the reason why we don't invest as much time in Tenerrdis at the moment. This firm is everywhere, so we are overshadowed.*"* (Member 6) "We are blacklisted by the [large firm], which means that they would direct potential clients to competitors providing a service similar to ours." (Member 18) *"I live in Lyon […] I am not historically from Grenoble. So I arrive and try to integrate, to understand, to talk to different* people. But this mountain that exists between Lyon and Grenoble is really incredible!" (Member 7)

Table 3: Additional quotes on how members reflect on the new government objectives

Members that are sceptical about the feasibility of making the transition from a research to a market-oriented cluster	"I think that the mission of the clusters is complicated because they are asking to generate real products without having a large budget, simply by *creating incentives…"* (Member 1) *"They don't have the competence; they will never have it. […]* They should either have competence in marketing or a good understanding of the markets and the trends. But I think this requires much more *means than what the cluster has."*(Member 2) *"It is interesting but I really don't see how they could help* us.*"* (Member 19) "Are there really projects that lead to solutions that are marketable*? I don't have the impression."* (Member 6)
Members in favour of a research-oriented cluster	"Why should these people enter the private market when they actually benefit from publ*ic funding? Where is the limit?"* (Member 10) "It is maybe not their role. For me their role is more to develop partnerships*."* (Member 9) "The [clusters] had a meaning when they were seen as factories of projects. Now they are more factories of products. But we should not stop the logic of the factories of projects. I have a strong feeling about this and it is the position I defend when I go to the board of Tenerrdis, I think that *we need to continue to help SMEs emerge […] we need to find the go*od equilibrium again to keep the base, which is the research that creates the innovation.*"* (Member 20) *"Help commercialis*ing, for me it is not the role of a cluster. I did not understand it like this. If the status has changed okay *that'*s very good. But it moves further away from our interest*."* (Member 18)
Members in favour of a market-oriented cluster	"Where Tenerrdis can help us commercialise is by [organising business-to-business meetings] and by networking*."* (Member 8) "[The cluster could] bring together firms that have projects so that we can have professional dialogues*."* (Member 16) "A cluster that accompanied us in the creation of a FUI proposal, I think it could also be interesting if they follow what we are doing and help us, even if it is just by advising and criticising us on the commercialisation*."* (Member 13) "[The cluster could help us] with the exploitation, the commercialisation. I mean to decide upon the price we should charge customers for our license, what this is going to finance, which volume we need? Yes I *think that it is interesting."* (Member 13) "[The cluster could say] we work on energy in France, in Rhône-Alpes, in Grenoble. There are multiple actors that propose various things. Here is a portfolio of the products an*d solutions they have to offer."* (Member 15) *"Tenerrdis […] could bring us a clear direction on okay, you could access this market if you have an add*-on for your proposal*."* (Member 11) *"Let's take a simple example. Suppose that one SME from Tenerrdis develops a great product in the energy sector. Clearly this* SME will have direct access to our company to go and present their idea. If it is worthwhile, we can even invite them to come and talk to us before it is confirmed on the public place because we would have an interest in doing that*."* (Member 1) "I think that the clusters could contribute to bringing large corporations and SMEs closer together*."* (Member 2)