Development of European cluster initiatives: stakeholders’ contribution and enrolment

Inessa Laur, Magnus Klofsten, Dzamila Bienkowska, Joakim Wincent and Ylinenpää Håkan

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Abstract: This study investigated how cluster initiatives’ members contribute to cluster initiatives concerning tasks as well as what dependency patterns exist between maturation level and enrolment of members in these organisations. The content of the work is considered as crucial for organisational functioning and development. The findings are based on survey responses from 136 (53% response rate) cluster initiatives from eight European countries. The results show that, first, all members contribute to initiatives’ development by performing strategic, operational tasks, and provision of resources. Each member tends to focus more on one task than the others that are delegated. Second, two factors influence enrolment of new members in cluster initiatives:
age and presence of other influential members. The more mature cluster initiatives become the more networks and established organisational attributes it will have. This reflects longevity of the initiative and good-quality, intermediary assistance, which are attractive for potential members.

**Keywords:** cluster initiatives; intermediaries; actors’ enrolment; contributions.


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## 1 Introduction

Clusters of related and similar firms are a phenomenon that has received increasing attention in recent decades (Porter, 2000; Sölvell, 2009; Muro and Katz, 2010). Studies have shown that firms in clusters improve their performance relative to other firms in terms of innovation, skilled labour, and partnerships (Lagendijk and Cornford, 2000; Delgado et al., 2010; Shou and Intarakumnerd, 2013). Another important cluster benefit is business formation, which was found to be more intensive than among firms operating independently due to lower experiment costs, access to partners, and entrepreneurial fall back in case of possible failure (Wennberg and Lindqvist, 2008). Many of these
outcomes occur because of co-location, but purposeful organisation of networking and collaborations can further reinforce the outcomes (Lukach and Plasmans, 2003). Such purposeful organisations are special type of cluster, called cluster initiatives (cf. Porter and Emmons, 2003; Sölvell et al., 2003; Fromhold-Eisebith and Eisebith, 2005; Ketels and Memedovic, 2008). They foster joint actions of actors involved in clusters, develop networks, improve infrastructure, organise training, as well as open new markets (Waxell and Malmberg, 2007; Wincent et al., 2012; Nakwa et al., 2012; Bakici et al., 2013). Cluster organisations can be defined as organisations or projects that perform “collaborative actions for companies, research and educational institutions, governmental agencies and others, to improve the competitiveness of a specific cluster” [Ketels and Memedovic, (2008), p.382; cf. Viassone et al., 2016]. These cluster initiatives as organisational units are the main focus of this paper.

This unique position in between and purposeful organisation of brokering, facilitating, and promoting activity for the surrounding stakeholders makes cluster initiatives being intermediary organisations (Etzkowitz et al., 2000; Howells, 2002; Smedlund, 2005; Ketels and Memedovic, 2008; Van der Meulen et al., 2005; Moss et al., 2009; Leydesdorff and Zawdie, 2010). Several scholars have demonstrated substantial similarities between cluster initiatives and intermediaries (Intarakumnerd, 2005; Teigland and Lindqvist, 2007; Visser and Atzema, 2008; Inkinen and Suorsa, 2010; Zhang and Li, 2010; Bakici et al., 2013; Katzy et al., 2013). As an intermediary, cluster initiatives strive to fulfil members’ changing needs and demands by continuously adapting their goals, activities, and future planning. In return, members contribute to cluster initiatives by executing certain tasks and providing resources in order to create a win-win situation for all involved (Bititci et al., 2004; Smedlund, 2005).

One example is ‘I Amsterdam’ the initiative started by the city, the community of Amsterdam, and actors from the private sector, which aims to make Amsterdam one of the top three hubs in Europe by attracting talent, helping businesses to grow, both through involving multinational actors and organising events. Examples like this one often represent small intermediary organisations with the skills to manage large and diverse networks containing cluster tenants (Arthurs et al., 2009). Their small size allows them to be flexible, fast moving, and efficient in rejuvenating old and starting-up new clusters (Klerkx and Leeuwis, 2009; Laur et al., 2012). The present study views a cluster as the underlying phenomenon and a cluster initiative as the purposeful organisation acting within the cluster context and thereby contributes to cluster development (OECD, 1999; Hanusch et al., 2009). Returning to the example, ‘I Amsterdam’ is an intermediating initiative, which strives to boost creative industry in the area and perhaps build a cluster.

The emergence of such cluster initiatives is often initiated by a mix of actors from public and private sectors and academia. Existing studies underline that cluster initiatives success depends on enrolment of all these actors so called stakeholders or members (Fung et al., 2007; Lindqvist, 2013; cf. Braja et al., 2016). The relationships with the members require special management from cluster initiatives’ leaders, which lead to the satisfaction of all enrolled (Visser and Atzema, 2008). The initiatives, similarly to other organisations, develop over time in terms of structure and processes, which become more professionalised (Bessant and Rush, 1995; Klerkx and Leeuwis, 2009). This means that they gradually become better at managing relationships with their members, performing different activities, and building networks. For example, it is not unusual that cluster initiatives have a small number of members when starting, but over time, the number of members’ increases. However, we argue that there is still a need for more detailed
insights into how cluster initiatives grow in terms of membership. Despite the fact that the number of stakeholders increases with maturation, practice shows that the selection process of potential stakeholders currently lacks organisation in many initiatives and can be characterised as impromptu or muddled (cf. Rosenfeld, 2003; Howells, 2006; Aziz and Norhashim, 2008; Antikainen and Vaataja, 2010). Therefore, this research work focuses on crucial aspect of initiatives (1) stakeholders’ enrolment, which is linked to the development stage of cluster initiatives (maturation).

In addition, the enrolment of members assumes certain contributions in terms of executing assigned tasks to promote well-functioning initiatives (cf. Goodman and Dean, 1982; Weick, 1979; Feldman and Pentland, 2003). The larger share of members’ contributions makes cluster initiatives less dependent on their key financiers and provides more space for autonomous decision-making (Schein, 2016; Aziz and Norhashim, 2008; Fromhold-Eisebith and Eisebith, 2005; Rosenfeld 2003). However, the variety of tasks carried by the members leads to a weak understanding of their individual contributions and, consequently, the type of stakeholders that initiatives need for achieving established goals. Therefore, this work also addresses (2) stakeholders’ contribution, that is, the overall tasks that are usually performed by the members for their initiatives as a central aspect of cluster initiative development. The contributions of actors also change over time; however, the authors of this paper believe that this change, in most cases, depends on the level of members’ enrolment: that is, the higher the enrolment, the more extensive the contributions of tasks usually performed by members.

Thus, the overall purpose of the present work is to study how cluster initiatives’ stakeholders contribute to different tasks in cluster initiatives. Furthermore, the study examines dependency patterns between maturation level (defined as how long ago the initiative was started) and stakeholders’ enrolment. This purpose addresses two main research questions:

1. By which tasks do stakeholders contribute to cluster initiatives?
2. What type of dependency patterns exist between maturity and stakeholders’ enrolment in cluster initiatives?

The present paper highlights the crucial importance of the development process of an organisation. In his study of how firms develop, Howells (1999) considered this to be a critical issue. Likewise, the development process could be critical, even deterministic, for organisations other than firms, such as cluster initiatives (cf. Ketels et al., 2006). An understanding of the initiatives’ development processes helps to explain the overall functioning of an organisational organism like the initiative. The term and concept commonly used to explain such a development process is called maturity, which considers how initiatives evolve over time a maturity continuum comprised of the start-up phase and development (Becker et al., 2009). These two phases cover the second objective of the paper and fulfil a comparative purpose, which is to observe whether a change in actor enrolment appears later or builds upon previous enrolment, or whether actor enrolment remains stable from the start throughout the course of development. The enrolment aspect, if positively developed, is an important baseline for initiative development planning: it allows initiatives to master their intermediary function and to expand other components, such as their vision and goals, networks, and reputation in and outside the national borders of operation. The present empirical paper explores this aspect through survey results of the initiatives in eight European countries, considering maturity...
level of the cluster initiatives. Mature cluster initiatives, in this work, are those representatives, which have passed the start-up phase and are occupied with establishing and developing tasks; immature ones are occupied with start-up activities.

In the literature, the only available advice for managing the initiatives stem from cluster practices, which are not entirely suitable for initiatives due to central differences between them (Tödtling and Trippl, 2005; Fromhold-Eisebith and Eisebith, 2005; Hanusch et al., 2009). This study contributes to academic research by combining literature sources from the areas of entrepreneurship, clusters, and intermediary organisations and focuses on such special organisations by generating relevant advice for:

1. Managers and stakeholders aiming to improve the strategic planning, governance, and support of cluster initiatives.
2. To scholars striving to develop the field by classifying this type of organisation into the hybrid category and initiating a special research direction.
3. In a limited context to policy-makers.

Policy action unrelated to stakeholders per se would most likely require a broader view of events, not only internally (as this study provides), but also externally to cluster initiatives, which future elaborating studies could provide. Policy action sheds light on cluster initiatives’ development and exchanges, and contributions occurring in this context may be applicable in the context of other innovative intermediaries, which are rapidly growing in number. The present paper explores challenges that initiatives face regarding growth in memberships and governance of members’ influences. Studies on cluster initiatives, like this one, are essential and might help establish better strategies for managing the enrolment of the stakeholders their number and specificity and thus promote the beneficial development of cluster initiatives (Brown, 2000; Enright, 2003; Cassidy et al., 2005; cf. Sutton and Staw, 1995).

1.1 Stakeholders within cluster initiatives and their roles

The major focus of a cluster initiative in its role of an intermediary is to facilitate linkages between various types of actors (Leydesdorff and Zawdie, 2010). Laur et al. (2012) presented a model that clarifies cluster initiative stakeholders and their relationships (Figure 1). These actors are further named as cluster initiative stakeholders or members, which may be considered as synonymous in this context. Presence and contributions of the stakeholders in cluster initiatives is linked to their satisfaction with cluster initiatives, which might result in longer time periods and shorter-term repetitive memberships and consequent change in contributions (Aziz and Norhashim, 2008; Feldman and Pentland, 2003).

The active enrolment of the stakeholders straightens cluster initiatives by improving their differentiated strategies, financial independence, and attractiveness for potential strategic partners (Ketels and Memedovic, 2008). Additionally, large memberships have effects that are observable over the long term, for instance, when initiatives gain enough power to influence policies, facilitate creation of new spin-off businesses, and thus help create a stronger business environment (Braun 1993; Holm et al., 1999; Foreman and Whetten, 2002; Fromhold-Eisebith and Eisebith, 2005; Fung et al., 2007; Turner et al., 2013; Lindqvist, 2013), all of which make initiatives more visible and influential actors in regional and international arenas.
Three types of actors orbit a cluster initiative: key players, target groups, and support groups. At least one key player, with the central role of resource provider and guarantor for continuity and long-term commitment, will be associated with a cluster initiative. Universities, municipalities, and large firms are examples of key players. Target groups consist of businesses in a specific sector or region, or of a certain maturation level. The main focus of the cluster initiative is the target group and the needs of its members. Finally, a support group comprises actors, such as regional development funds, chambers of commerce, universities, employment agencies, science parks, as well as service firms. These members become involved as do target group firms in the initiative to achieve their own purposes (e.g., policy development, academic research, commercial profit) (Laur et al., 2012). Organisations from support groups can, for example, be connected to cluster initiatives through common leadership and even common office spaces. Support group members add value to a cluster initiative by providing learning, financing, and organisation-building capacity as well as political and social influence; though their involvement is less substantial than that of key players. A unique feature of support group is that they can periodically switch from being passive to active members and vice-versa as well as occasionally contribute to different tasks and resources. Such fluctuations in supporting organisations normally do not critically influence the initiatives due to their less dependent position on the support group enrolment. Their contributions can, to some degree, be compensated by new target group members or extra support from key players. However, losing the influence of support group members, such as development funds and governmental agencies, could mean that the initiative would minimise their influence on local and even national political agendas and probably potential financial and legal support in the future (MacDonald, 2008).

These stakeholders and cluster initiatives expect a win-win situation from their relationships, meaning that they both give in order to take. The text above describes the contributions that stakeholders provide their cluster initiatives with a special focus on financial means. However, this is just one part of the total support package that cluster initiatives receive from their members. Examples of contributions not mentioned above and those that have not been a special focus of previous studies include participation in the daily operations of cluster initiatives; that is, strategic, operational, and administrative tasks designed to attract financial resources from regional actors (cf. Holm et al., 1999;
Heydebreck et al., 2000). These contributions benefit initiatives by providing them with resources needed for intermediary activities, assuring that they follow the established course and that their activities comply with governmental support programs and address members’ needs (Ketels et al., 2006; Rosenfeld, 2003). This paper investigates these aspects, which are particularly approached as an important prerequisite for becoming a recipient of intermediary services.

1.2 Cluster initiatives – research hypothesis

The main focus of this paper is the cluster initiative as an organisational unit. Its main leverage stems from policy actors as well as actors from other sectors whose purpose is to achieve economic diversification and cluster growth. However, numerous external forces, such as member demands, the infrastructure, and political trends, may influence the development of cluster initiatives. These forces may effect changes in initiative programs, intermediary activities, and stakeholders’ constellations (Cassidy et al., 2005; Ketels and Memedovic, 2008; Klofsten, 2010; Laur et al., 2012; Klofsten et al., 2015). Therefore, it is essential that initiatives develop the capacity to identify the current needs and demands of their members and adjust accordingly. Such a skillset would help these intermediaries remain attractive for new and retained members (Hudson and Ritchie, 2002; Singh, 2003; Van Dijk and Sverrisson, 2003). Exploring the prerequisites for attaining such goals would allow visualisation of the link between the context and actions of cluster initiatives (cf. Feldman and Pentland, 2003).

The present study focuses on enrolment of stakeholders and their contributions as inalienable ingredients in the attainment of strategic goals, such as independent decision-making, market positioning, and economic stability (Intarakumnerd, 2005; Perry, 2007; Aziz and Norhashim, 2008; Inkinen and Suorsa, 2010). To accelerate enrolment of new members in a cluster initiative (Laur et al., 2012; Allen and Gale, 1999), the initiative’s vision should be clearly defined (cf. Lundquist and Power, 2002). A well-established vision emphasising the stability of a cluster initiative and inspiring trust in its value to stakeholders is attractive for new members (cf. Wolfe and Gertler, 2004; Prashantham and Menaughton, 2006; Laur et al., 2012; Klofsten et al., 2015; Katz et al., 2013).

These two aspects, the abilities to establish and update a clear vision, can be achieved only after a cluster initiative has been operating on the market for some time (cf. Stinchcombe, 1965; Frykfor and Jonsson, 2010). Thus, we have hypothesised that the longer a cluster initiative has been in operation, the more likely it will satisfy member needs and have a defined vision. Mature (older or less recently started) cluster initiatives would then have a higher potential of attracting new members and keeping existing members on board, and would certainly have a higher number of members compared with immature (younger or more recently started) ones. Consequently, the greater the number of target members in a cluster initiative, the stronger the basis for execution of their intermediary role, and, consequently, the greater the likelihood of its longevity. Additionally, the greater the number of target groups, the better it is for both target group members and initiatives in terms of sharing and delegation working tasks, receiving support from the network, and exchanging innovative ideas and solutions (Yah and Hu, 2008; Cox et al., 2005). The intuitive logical flow that cluster initiatives grow when mature goes against findings on a firm level, where growth decreases as firms age (Evans
Hypothesis 1 Mature cluster initiatives have more target group members than their less mature and developed counterparts.

Apart from the stimulation of a proactive environment in cluster initiatives, new members will also join due to the involvement of existing members (Raines, 2002; Hallencreutz and Lundequist, 2003; Sölvell et al., 2003; Intarakumnerd, 2005). For example, in rapidly developing industries, the direct involvement of the state as the primary financier (i.e., key player) plays an important role in attracting new members to initiatives as well as in sustaining their competitive edge (Porter and Emmons, 2003; Van Dijk and Sverrisson, 2003; Sölvell et al., 2003; Ketels and Memedovic, 2008; Shou and Intarakumnerd, 2013; cf. Viassone et al., 2016). In other words, the presence of influential members in cluster initiatives makes these become more attractive intermediaries for potential new members.

The challenge of involving new members is greatest for immature (recently started) cluster initiatives that have not yet developed clear ideas and are unable to offer attractive intermediary activities to their members (Caves and Porter, 1977; Ethier, 1998; Klofsten et al., 2015; cf. Wihlborg and Söderholm, 2013). Immature initiatives at least those examined neither seem to be as selective as mature ones regarding members’ constellations nor do immature initiatives appear to choose members based on the tasks to be shared. They tend to put their efforts into recruitment in order to garner financial contributions and secure their survival (Smallbone and Welter, 2010; Boekholt and Thuriaux, 1998; Waxell and Malmberg, 2007; Nakwa et al., 2012). Furthermore, immature initiatives can hardly expect any support from the authorities because fragmentation and ad hoc approaches tend to characterise the financing of recruitment to initiative start-ups (Perry, 2007; Jacobs and De Man, 1996; Bakici et al., 2013).

In this situation, another approach to attract members might be to strategically involve various influential actors as key players (Laur et al., 2012). It is not evident that increasing the number of key players is beneficial for the cluster initiative overall, but their presence could stimulate members from other stakeholder groups to become involved. This would create a perfect environment for intermediation when several parties are present in the relationship and their wishes are a starting point for the initiatives in terms of choosing a suitable intermediation approach, e.g., intermediary activities and events (Howells, 2006). Such a strategy might also be relevant for mature initiatives (cf. Raines, 2002), which leads to the following hypothesis:

Hypothesis 2 The number of key players correlates with the number of target group members, regardless of the maturation level of the cluster initiative.

Support group members, such as university-industry collaborations, new clients, and regional development missions, join cluster initiatives to satisfy their goals. Thus, effective intermediary activities, networking channels, and stimulation of start-ups are prerequisites for the active enrolment of support groups in cluster initiatives (Jones-Evans et al., 1999; Ketels et al., 2006; Malik et al., 2011). Hence, as an intermediary with an up-to-date portfolio of activities and wide networks, initiatives will remain attractive for both previously involved as well as fresh support group members. Such involvement of support groups is also advantageous for the cluster initiative. Their participation could influence the initiative positively by offering access to political processes, garnering financial or other types of contributions, sharing work tasks and, as
in cases with key players, by facilitating the involvement of new members (cf. Feser, 1998; Jacobs and De Man, 1996; Perry, 2007; Floeting, 2008; Bergek et al., 2008; Klofsten et al., 2015; Shou and Intarakumnerd, 2013). From the above, we derive that the number of support group members in a cluster initiative is associated with the number of target group members, which the following hypothesis tests:

Hypothesis 3 The number of support group member’s correlates with the number of target group members, regardless of the maturation level of the cluster initiative.

These tests are not an attempt to construct an all-encompassing theory of the cluster initiative development. Rather, they provide a possible roadmap for planning growth based on the motivational perspective of the leaders. It could even become a strategic issue (cf. Delmar and Wiklund, 2008). The main thought of the authors here is that expanding enrolment is a primary requisite for the initiative if they wish to achieve independence, improve the likelihood of survival, and increase its longevity. If the empirical data support these hypotheses, an increase in target group membership, depending on the maturation level of the initiative and the other stakeholders (key players and support group), might become a motivational factor for leaders and employees to implement an involvement strategy as a way of exercising their power, as a solidification of existing strategies, and as a mechanism for promoting change in current practice (cf. Adler et al., 1999).

2 Cluster initiatives – sample characteristics

Cluster initiatives are the subject of investigation and the unit of analysis in this paper; thus, in 2012, we identified a sample of 253 European cluster initiatives using Europa InterCluster, tci-network databases (intercluster.eu, tci-network.org), and generally accessible Internet sources. These two sources contain large number of cluster initiatives registered in the eight European countries that were investigated for this study. To our knowledge, it does not seem to be any other existing database covering all populations for cluster initiatives in the focus countries. Here, it is worth mentioning that there is a willingness of all cluster initiatives to become a member of such databases to increase their networking channels via access into the pool of potential members. However, it might still be that very young cluster initiatives and the ones that do not afford memberships (e.g., stagnating initiatives) are not represented in such databases. This is not considered as a limitation for this work because such types of initiatives were not of the main focus in this study (sample criteria are presented below).

Moreover, we also used some other sources to access cluster initiatives, but they were focused on one country, which even helped in spreading our survey and receiving larger number of responses. One such example was in Belgium as well as in the Netherlands: an organisation tracked cluster initiatives working within agricultural, food, and wine sectors. Therefore, data captured from the chosen sample on actors’ contribution and enrolment could be considered representative due to their high range of existing variations and alternatives in cluster initiatives for this work, drawing on prognosis and forecasting (cf. Wang et al., 2015).
First, Ketels and Memedovic’s (2008) definition of a cluster initiative was used to identify suitable organisations for the sample. Second, the selection process followed pre-defined criteria for sampling: clear objectives behind the initiatives, presence of leadership, established relationships with stakeholders, clear portfolio of activities, and a minimum of six months of operations. Third, confirmation from the interviewees that their organisations could be defined as cluster initiatives was required before the interviews commenced.

Table 1 Characteristics of the cluster initiatives in the study sample (n = 136)

<table>
<thead>
<tr>
<th>Variable</th>
<th>% (no.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start year (n = 136)</td>
<td></td>
</tr>
<tr>
<td>1911–1990</td>
<td>5.9 (8)</td>
</tr>
<tr>
<td>2001–2010</td>
<td>72 (98)</td>
</tr>
<tr>
<td>2011–2012</td>
<td>3.7 (5)</td>
</tr>
<tr>
<td>Country (n = 136)</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>16.2 (22)</td>
</tr>
<tr>
<td>Denmark</td>
<td>11.8 (16)</td>
</tr>
<tr>
<td>Finland</td>
<td>7.3 (10)</td>
</tr>
<tr>
<td>Germany</td>
<td>16.2 (22)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>8.8 (12)</td>
</tr>
<tr>
<td>Norway</td>
<td>10.3 (14)</td>
</tr>
<tr>
<td>Sweden</td>
<td>17.6 (24)</td>
</tr>
<tr>
<td>UK</td>
<td>11.8 (16)</td>
</tr>
<tr>
<td>Industry (n = 128)</td>
<td></td>
</tr>
<tr>
<td>Automotive</td>
<td>0.8 (1)</td>
</tr>
<tr>
<td>Electronic</td>
<td>10.2 (13)</td>
</tr>
<tr>
<td>Environment</td>
<td>15.7 (20)</td>
</tr>
<tr>
<td>Food processing</td>
<td>10.2 (13)</td>
</tr>
<tr>
<td>ICT</td>
<td>8.6 (11)</td>
</tr>
<tr>
<td>Paper and pulp</td>
<td>2.3 (3)</td>
</tr>
<tr>
<td>Pharmaceutical</td>
<td>19.5 (25)</td>
</tr>
<tr>
<td>Textile</td>
<td>0.8 (1)</td>
</tr>
<tr>
<td>Transport and logistics</td>
<td>8.6 (11)</td>
</tr>
<tr>
<td>Tourism</td>
<td>3.0 (4)</td>
</tr>
<tr>
<td>Other</td>
<td>20.3 (26)</td>
</tr>
<tr>
<td>No. of key players (n = 132)</td>
<td></td>
</tr>
<tr>
<td>1–5</td>
<td>57.6 (76)</td>
</tr>
<tr>
<td>6–10</td>
<td>20.4 (27)</td>
</tr>
<tr>
<td>11–20</td>
<td>12.9 (17)</td>
</tr>
<tr>
<td>21–100</td>
<td>9.1 (12)</td>
</tr>
</tbody>
</table>
We interviewed representatives from 136 (53%) of the cluster initiatives in the sample, who showed an interest and willingness to participate in the study (in the next section, the data collection procedure is described in detail). The sample comprised all registered cluster initiatives from eight European countries: Belgium, Denmark, Finland, Germany, the Netherlands, Norway, Sweden, and the UK (Table 1). These countries were chosen for their similarities in regulations and policies concerning support of cluster initiatives (Boekholt and Thuriaux, 1998; Roeland and den Hertog, 1999; Rouvinen and Ylä-Anttila, 1999; Archibugi et al., 2009).

To the best of our knowledge, the sample of 253 cluster initiatives included all formally established cluster initiatives within these European countries. It included initiatives of different ages, locations (within the eight EU countries), industries, visions, and strategies. The meaning behind such diversity was to provide overall picture of cluster initiative development and maturation patterns. Table 1 provides detailed information on the cluster initiatives in the study sample of 136.

For example, Table 1 shows that the most mature initiatives were launched between 1911 and 1990, while the most immature ones commenced in 2011–2012 (see Table 1, ‘Start Year’). Most initiatives in the study sample, however, were launched during 2001–2010. The responding initiatives were spread among eight countries, where Finland was represented by the smallest number of initiatives (ten initiatives, some examples were edu-cluster and food development) and Sweden by the largest number (24 initiatives, Pressrum Bio-refinery, and Printing Arena). The number of initiative
representatives of the other focus countries varied between 12 and 22 initiatives in each of the countries. Most initiatives started from scratch, while a minority were spin-offs from other initiatives (not shown in Table 1). Almost all respondents conducted the intermediary activities of ‘networking’, ‘marketing’, and ‘start-up of common projects’. Activities, such as ‘provide resources and facilities’, ‘matchmaking’, and ‘monitoring and coordination of members’, however, were less common.

2.1 Cluster initiatives – research design and measures

A quantitative approach using telephone interviews with cluster initiative leaders and other central stakeholders was used in data collection. A key respondent contact, where primary cluster reference persons were selected as the key respondents (i.e., leaders, directors), was found appropriate due to the crucial importance of these individuals in the initiatives (cf. Heckathorn, 1997). In many cases, the potential respondents were contacted several times before receiving an online response or finding an available time slot for the interview call. The main reason convincing potential respondents to participate was the importance of their answers for the future of their cluster initiatives; this argument inspired initiative leaders and therefore increased the response rate (53%). The rest of the initiatives chose to not participate in the study due to a lack of time, and there were some instances of incorrect contact information and terminated initiatives.

Both e-mails and phone calls assumed time and space for preliminary conversation, which introduced respondents to the key concepts and interview procedure. At least ten minutes, according to the interview guide for the researchers, had to be spent on introductory conversation. The interview guide was made because the data collection was carried out by several researchers simultaneously, so the guide was designed to make the interview format as identical as possible across the research team, which played an important role in the quality of the results (Hair et al., 2009). The questionnaire and interviews were in English. No difficulties were observed using the same questionnaire in the eight countries.

Interview responses were collected between autumn 2012 and spring 2013, mainly via structured interviews over the telephone and in some cases through a web-based form (about 10% of respondents). The questionnaire comprised 39 questions dealing with general characteristics, types of actors involved, activities, tasks, and resources in the cluster initiatives. The questions related to actors’ enrolment were designed to capture two-time periods: during the start-up and the present (for example: How many key players are currently enrolled in your cluster initiative? How many key players were enrolled in your cluster initiatives at the start?). The thought behind this design was to obtain the data for comparable testing of development patterns in cluster initiatives. Questions regarding actors’ contributions capture usual practices in cluster initiatives and do not aim to elaborate on contributions over time (for example: How often do your support group members in carrying out strategic tasks in your cluster initiative?). The questionnaire was pilot-tested (spring 2012) by representatives from five cluster initiatives located in Sweden. The questions were well-received, and a few adjustments were made, for example, related to the clarification of concepts, such as cluster initiative, key player, and support group. Then, the questionnaire was sent back to the pilot group for re-testing. Because the pilot group reacted to the length of the questionnaire, we reduced the number of questions so that the interview could be completed in one hour.
Telephone interviews were used to increase reliability and validity as well as the response rate; a direct dialogue with the respondent gave the possibility to clarify questions (Hair et al., 2009). Interviewees who were unable to respond to questions on the development of their cluster initiatives were asked to query other staff that had been working for the initiatives from the start – it was a productive and accepted tactic. Four qualified investigators collected all responses, which were jointly discussed before being included in the final data file.

We collected data using Agrolink, an online tool for carrying out surveys and statistical investigations (the authors obtained a license). All data from phone interviews as well as from individual online responses were collected there, which later were exported into an SPSS file. This data was codified and analysed using SPSS (version 22); tests included ordinary-least-squares (OLS) regressions as well as descriptive and frequency statistics. These simple techniques are used because of their ability to clearly illustrate the relationships between the constructs and interpreting the output (Hair et al., 2009). This choice is also based on the strength and power of OLS regression in approaching turning points like cluster initiative development and illustrating such complex processes with simple models.

Most of the variables in this research were drawn from the above framework, such as cluster initiatives’ start year, internal and external actors, leaders/key players, diversified goals, and resource base. Most of the variables were captured in absolute numbers through the open questions as in, for example, ‘start year’ (date of the formal establishment of cluster initiative), ‘number of targets’, and ‘support groups’. Variables, like ‘tasks’, were categorical, providing the choice for the respondents to select which kind of tasks they perform (the list was generated from numerous literature sources and contained several options). The ‘frequency of the tasks’ was measured by a seven-point scale stretching from ‘always’ to ‘never’. The other variables, for instance, ‘members’ diversity’ was also captured in members’ selection of different categories, such as the cluster initiatives in which they would prefer to enrol, for example, organisations of a particular age, sector, and development phase. Initiatives leaders, regarding this question, were provided with the possibility to choose multiple categories from the provided list of potential members, having in mind a diversity goal of the initiatives. Table 1 presents a selection of variables investigated in this work.

While performing statistical tests using these variables and their interactions, we controlled for any potential effects that our variables could cause. We chose three variables as controls: the origin of the initiatives, the number of central individuals, and member diversity (see Table 2). Before analysis, we standardised the variables to avoid multicollinearity, which is important for the interaction effects used to test the hypotheses (Aiken and West, 1991). Additionally, in further analysis, a multicollinearity check with variance inflation factor analysis suggested that no multicollinearity problems had occurred in the results. We acknowledge that several variables may interfere within the tests described below; the input interactions and others, if found, will be treated as a part of the analysis, providing additional explanatory power.

There were several researchers interpreting the data, and generated results were discussed as a group to avoid misunderstandings. Moreover, some of the cluster initiative leaders (for example, from Sweden and Belgium) showed interest in deeply understanding the results of the study. So, the results were also discussed with some of the engaged leaders. This was important to confirm that the results mirrored the real
development of the initiatives (therefore, our study design could be called interactive). At the same time, these leaders have highlighted that they got clarifications and guidelines from this study meaning that they have got some clear insights for better management of the initiatives in the long run.

Table 2 Variables and their measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type of variable</th>
<th>Measured by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target group members</td>
<td>Numeric</td>
<td>Absolute number (open question)</td>
</tr>
<tr>
<td>Independent variables:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster initiative start year</td>
<td>Ordinal</td>
<td>Year of formal establishment (open question)</td>
</tr>
<tr>
<td>Key players</td>
<td>Numeric</td>
<td>Absolute number (open question)</td>
</tr>
<tr>
<td>Support group</td>
<td>Numeric</td>
<td>Absolute number (open question)</td>
</tr>
<tr>
<td>Resource diversity</td>
<td>Numeric</td>
<td>Absolute number (open question)</td>
</tr>
<tr>
<td></td>
<td>Ordinal</td>
<td>Five types: strategic (e.g., human, intellectual), operative (e.g., offices spaces, facilities), administrative (e.g., accounting, marketing, management), and financial (Likert-type response format 1 = always; 7 = never).</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Origin of the initiative</td>
<td>Categorical</td>
<td>Two categories: new initiative or spin-off</td>
</tr>
<tr>
<td>Central individuals</td>
<td>Numeric</td>
<td>Absolute number (open question)</td>
</tr>
<tr>
<td>Member diversity</td>
<td>Categorical</td>
<td>Sum of six categories, e.g., organisations of specific age, sector, development phase, area, size or all kinds of organisations.</td>
</tr>
</tbody>
</table>

3 Cluster initiatives – research results and analysis

One of our specific interests was to analyse the various types of actors and their contributions concerning tasks and the provision of resources to cluster initiatives. In Table 3, we present the survey results regarding the contributions of three types of actors in strategic and operative tasks, and in the attraction and provision of financial resources.

Table 3 shows that key players frequently involve themselves in strategic tasks while the target group is least involved. One third of respondents’ key players participated in operational tasks. A similar pattern can be observed for support and target groups, where the majority of respondents stated that these actors did not take part in operational tasks.

According to respondents, slightly more than half of their key players and slightly less than half of their target group members were involved in the provision of financial resources. During the interviews, one interesting observation that emerged about Finland was that its initiatives were supported by a few, large key players (the state and large firms). None of their target group members were involved in financing initiatives; thus, the initiatives in Finland were not normally self-financed.
Table 3  Tasks and degree of involvement of the three main cluster initiative actors

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Involvement</th>
<th>Key player</th>
<th>Support group</th>
<th>Target group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic tasks</td>
<td>Often</td>
<td>73.3% (101)</td>
<td>50.0% (69)</td>
<td>40.0% (55)</td>
</tr>
<tr>
<td></td>
<td>Rarely</td>
<td>23.6% (31)</td>
<td>25.4% (34)</td>
<td>39.2% (54)</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>3.1% (4)</td>
<td>24.6% (33)</td>
<td>20.8% (27)</td>
</tr>
<tr>
<td>Operational tasks</td>
<td>Often</td>
<td>32.6% (45)</td>
<td>30.2% (40)</td>
<td>22.5% (30)</td>
</tr>
<tr>
<td></td>
<td>Rarely</td>
<td>14.7% (20)</td>
<td>34.9% (48)</td>
<td>19.4% (26)</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>52.7% (71)</td>
<td>34.9% (48)</td>
<td>58.1% (80)</td>
</tr>
<tr>
<td>Attract financial resources</td>
<td>Often</td>
<td>29.7% (41)</td>
<td>25.4% (34)</td>
<td>17.1% (23)</td>
</tr>
<tr>
<td></td>
<td>Rarely</td>
<td>19.5% (26)</td>
<td>25.4% (34)</td>
<td>19.3% (26)</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>50.8% (69)</td>
<td>49.2% (68)</td>
<td>63.6% (87)</td>
</tr>
<tr>
<td>Provide financial resources</td>
<td>Often</td>
<td>57.8% (83)</td>
<td>30.2% (40)</td>
<td>48.5% (67)</td>
</tr>
<tr>
<td></td>
<td>Rarely</td>
<td>21.9% (28)</td>
<td>23.8% (32)</td>
<td>20.7% (27)</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>20.3% (25)</td>
<td>46.0% (64)</td>
<td>30.8% (42)</td>
</tr>
<tr>
<td>Administrative tasks</td>
<td>Often</td>
<td>10.9% (15)</td>
<td>11.1% (15)</td>
<td>3.9% (5)</td>
</tr>
<tr>
<td></td>
<td>Rarely</td>
<td>11.8% (16)</td>
<td>14.3% (18)</td>
<td>21.7% (29)</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>77.3% (105)</td>
<td>74.6% (103)</td>
<td>74.4% (102)</td>
</tr>
</tbody>
</table>

According to respondents, the majority of key players, target groups, and support groups were never involved in attracting financial resources. A previous study showed that internal and external personnel are often hired for this purpose (Laur, 2014). Administrative tasks are even more rarely done by these groups.

In summary, members contribute to their cluster initiatives through participating in tasks related to strategy and operations as well as providing financial resources. At the same time, members seem to give administrative tasks, and attracting financial resources to cluster initiatives seem a low priority. All actors participate to some degree in the abovementioned tasks, but they vary in focus; for example, key players and support group are more active in strategic tasks, while target groups are more involved in providing financial resources.

3.1 Testing of the hypotheses

Table 4 presents the steps and OLS regression models used to test the hypotheses. The model tests Hypotheses 1 to 3.

Hypothesis 1  Mature cluster initiatives have more target group members than their less mature and developed counterparts.

Hypothesis 1 suggests that the maturation level of the cluster initiative influences its ability to attract target group members. This study confirms that age correlates significantly with the number of target group members. There is a negative correlation between the variables ‘cluster initiative start year’ and ‘target group members’; in other words, more mature cluster initiatives enrol more target group members (Table 4).
Table 4  Interactions and main effects

<table>
<thead>
<tr>
<th>Model (test H1–3)</th>
<th>B</th>
<th>(95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable: target group members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spin-off from another cluster initiative</td>
<td>3.39</td>
<td>−149; 156</td>
<td>.97</td>
</tr>
<tr>
<td>Central individuals</td>
<td>65.34</td>
<td>−240; 371</td>
<td>.67</td>
</tr>
<tr>
<td>Cluster initiative start year</td>
<td>−270.16*</td>
<td>−397; −142</td>
<td>.001</td>
</tr>
<tr>
<td>Key player</td>
<td>215.14*</td>
<td>120; 309</td>
<td>.001</td>
</tr>
<tr>
<td>Support group</td>
<td>−41.61</td>
<td>−112; 29</td>
<td>.25</td>
</tr>
<tr>
<td>Member diversity</td>
<td>127.82*</td>
<td>53; 201</td>
<td>.001</td>
</tr>
<tr>
<td>Resource diversity</td>
<td>64.83</td>
<td>−11; 141</td>
<td>.09</td>
</tr>
<tr>
<td>Cluster initiative age x key player</td>
<td>−792.72*</td>
<td>−1051; −533</td>
<td>.001</td>
</tr>
<tr>
<td>Cluster initiative age x support group</td>
<td>227.77*</td>
<td>50; 405</td>
<td>.01</td>
</tr>
</tbody>
</table>

Note: Model summary: F (9,109) = 10.61; P < .001; R² = .47.

Figure 2  Correlation between target group and interaction effect (key player*start year) (see online version for colours)
Hypothesis 2 The number of key players correlates with the number of target group members, regardless of the maturation level of the cluster initiative.

Hypothesis 2 suggests that number of key players matters when it comes to the number of target group members. The model supports this hypothesis for both mature and immature initiatives (Table 4).

This is a positive correlation: the higher the number of key players, the higher the number of target group members. Figure 2 illustrates how this relationship is stronger for mature cluster initiatives.

Hypothesis 3 The number of support group members’ correlates with the number of target group members, regardless of the maturation level of the cluster initiative.

As suggested in the research framework, we posited that support groups are important for attracting target group members, but that the effect is more pronounced in immature cluster initiatives. The model found a negative correlation between the number of support group and target group members (Table 4).

Figure 3 illustrates how the numbers of support and target group members correlate negatively in mature cluster initiatives; in immature initiatives, however, they correlate positively: the higher the number of support group members, the higher the number of target group members.

Figure 3 Correlation between target group and interaction effect (support group*start year) (see online version for colours)
Our results reveal that maturation level and high enrolment are important for attracting target group members to cluster initiatives. This is valid for the majority of cluster initiatives, independent of sector, size, or location.

Mature and recently started initiatives differ in many respects. For example, mature cluster initiatives tend to be better equipped, having formulated clear strategies and accumulated experience in satisfying the needs of its members (Lundequist and Power, 2002; Ketels et al., 2006; Klofsten et al., 2015). The tendency in recently started cluster initiatives, on the other hand, is that they have had insufficient time to define their goals, accumulate experience of actors’ demands, and build trust (Wolfe and Gertler, 2004; Prashantham and Mcnaughton, 2006); thus, more often than not, immature initiatives depend on the enrolment of committed sponsors and key players and focus on member maintenance.

The interesting fact that emerged concerning the strategy of involving numerous members was that it might not work in a mature initiative. Our results show that, in older initiatives, an increase in support groups does not influence the number of target group members. That support group members become more attracted to cluster initiatives over time may be one explanation of this phenomenon. Support group members contribute increasingly to their initiatives by providing diversified resources and eventually become key players, as Laur et al. (2012) observed. Possibly for this reason, the number of key players is higher in later stages of cluster initiative development. This contrasts with commonly known patterns of decreasing numbers of key players over time (Van Dijk and Sverrisson, 2003; Cassidy et al., 2005; Shou and Intarakumnerd, 2013) and suggests that cluster initiatives should not only be attracting key players, but also support groups from an early stage; this would benefit the initiative in later stages of development.

4 Discussion

The study results underline that cluster initiatives are organised in a specific way: as intermediating actors. As any intermediary, they offer contact with their target group members, key players, and support groups by expanding networking channels. These organisations deliver intermediary activities one-off and repetitive for their members in order to fulfil its own goals and satisfy the needs of the members, for example, by helping to create a common identity, both internally within the member network and externally toward surrounding organisations (cf. Boekholt and Thuriaux, 1998; Perry, 2007; Intarakumnerd, 2005; Moss et al., 2009; Muro and Katz, 2010). In return, intermediating cluster initiatives receive various forms of support from their stakeholders, mainly financial contributions and the execution of strategic tasks. The results of this work demonstrate that the key players and support group, often representatives of public, academic sector, and large businesses, possess greater interest in strategic tasks of cluster initiatives. Perhaps this is because they often occupy leading positions among members and influence decisions that affect other members (cf. Sölvell et al., 2003). Target group members are often representatives of private sector actors and distanced from strategic tasks; their main mission is to provide financial resources. Member contributions to the cluster initiative seem to be stable regarding the type of support and can sometimes fluctuate in its extent, that is, more is given in one-time period and less in another. This emphasises that the distribution of tasks is rather clear within the cluster initiatives, meaning that members’ constellation may possibly be able to align with resource gaps.
Members' contributions along with contributions from the cluster initiatives to their members are important prerequisites for achieving win-win situations for all concerned parties (Bititci et al., 2004). Other studies demonstrate that initiatives contributions tend to be wider than members’ contributions in their scope and include roles, such as marketing, research, coordination and monitoring, brokering, as well as strategic planning (Rosenfeld, 2003).

The interesting fact is that cluster initiatives do not seem to resist member participation in strategic tasks. Traditional organisations may consider the interference of external bodies in such sensitive aspects of an organisation as a threat (cf. Milgrom and Roberts, 1988). This might be a proactive step by such networking organisations, as cluster initiatives aim to build a platform for trust and reciprocity and, as a consequence, productive and long-lasting relationships between the initiatives and their members (Lindqvist, 2013). However, key players willing to relinquish their navigating role will still closely observe task distribution. Key players retain the most influential roles, for example, in strategic tasks, and further sustain that through massive resource provision.

The powerful position occupied by key players may make initiatives become more vulnerable to deviations from their course they may become servants of key players (Foreman and Whetten, 2002). In this case, conflicts can arise, and the initiatives risk losing members. As long as initiatives manage to withstand the balance between its own course and the wishes of key players, the situation will be beneficial for all parties (cf. Laur et al., 2012).

One approach that helps cluster initiatives keep a balance in this power game is to actively enrol new members and decrease initiative dependency on single members in the relationships; such an approach also secures initiatives’ resource pool (Braun, 1993; Fung et al., 2007). Therefore, this study emphasises that the enrolment of many members is critical for the initiatives’ well-being and survival. Our results reveal that maturation and the presence of influential members are two important facilitators that positively influence membership growth in cluster initiatives. They address the problem for initiatives to attract new members (Hudson and Ritchie, 2002). This finding highlights the importance of gaining experience while maturation is considered to be advantageous for keeping a balance in the power relations and addressing variations in demand (Lundequist and Power, 2002). Continuous operation helps initiatives to clearly define their own direction and the level of flexibility in relation to members (cf. Raines, 2002). Furthermore, the maturity of cluster initiatives influences their strategy and drivers for attracting members, for example, by finding innovative activities to address their needs. This makes initiatives more visible and widely known by other audiences in- and outside of their cluster spaces (Klofsten et al., 2015).

However, the eagerness to increase enrolment may soften or eliminate the selection process; cluster initiatives accept everyone who shows interest rather than choosing members based on the needs of the initiative and the capability of the members to contribute to the initiative’s vision (cf. Howells, 2006; Aziz and Norhashim, 2008; Antikainen and Vaataja, 2010). Multiple enrolments require special governance on the part of cluster initiatives leaders and bring both limitations and possibilities. Development of a custom portfolio of innovative activities for newcomers, and members’ contributions, for example, may be a possibility. In contrast, the greater number and variety of activities may lower their quality, which may cause them to fail to fully satisfy members’ needs (Turner et al., 2013). Additionally, a high number of enrolled international members, which is often considered highly positive for initiatives and their
networks, become an additional challenge (Rosenfeld, 2003). Cluster initiatives tend to struggle with approaches to address the needs of international members due to differences in cultures, business goals, and dynamics of development.

5 Conclusions and implications

This study investigated how cluster initiatives’ stakeholders/members contribute in the areas of tasks and provision of resources to cluster initiatives as well as dependency patterns between maturation level and stakeholders’ enrolment.

Cluster initiatives represent intermediaries that manage multiple relationships with varying members simultaneously (Howells, 2006). Our study demonstrates that all these members contribute to their initiatives by performing certain tasks. In particular, all three-member groups seem to address the strategic, partly operational tasks and provision of resources well. Strategic tasks are the main interest for the key players while the target groups are mainly concerned with providing financial resources for the initiatives. Thus, these members tend to lean toward one type of contribution, while executing others to a minor extent or not at all. For example, administrative tasks and attracting financial resources are tasks normally delegated to specialised professionals and internal personnel. The scope of contributions of each member remains steady, but their intensity fluctuates with proactiveness of members in the initiatives (Laur et al., 2012). The eagerness and actions of the initiatives stimulate commitment among members and willingness to maximise contributions (cf. Holm et al., 1999; Heydebreck et al., 2000; Fromhold-Eisebith and Eisebith, 2005). The authors of this work see the potential of involving members in non-strategic tasks, for example, in administrative ones or in attracting financial resources. This could anchor the cluster initiatives among its members more strongly and enhance commitment (Delmar and Wiklund, 2008). It might also be beneficial in everyday activities and in overcoming obstacles that arise during the lifetime of the cluster initiative.

This study also demonstrates that maturation of cluster initiatives is an important prerequisite for extending the size of enrolment (Wolfe and Gertler, 2004; Klofsten et al., 2015). Hypothesis 1, when tested, showed that the higher the maturation level of the cluster initiative, the more target group members it has. With maturation, these organisations sharpen their organisational attributes and reflect longevity, which attracts new members searching to gain stable support and returns from intermediary assistance (Intarakumnerd, 2005; Inkinen and Suorsa, 2010). Important attributes of an initiative, idea, vision, and driving force, then become well-established and often lead to trust building and the ability to overcome shortages, resulting in attracting numerous target group members (Hudson and Ritchie, 2002; Singh, 2003; Wolfe and Gertler, 2004; Frykfors and Jonsson, 2010). When managing cluster initiatives, not only is the quantity of members important, but also the quality of relationships within the network (cf. Klofsten et al., 2015). Quality can reduce when members’ enrolment becomes too high due to the failure of initiatives to fulfil different expectations. Thus, domestication of special governance approaches is required for managing multidimensional networks and controlling the selection of members as well as retaining the flexibility and responsiveness of initiatives (cf. Rosenfeld, 2003; Howells, 2006; Laur et al., 2012). These approaches would also help organisations withstand the onslaught of multiple influences (cf. Foreman and Whetten, 2002).
And lastly, the study reveals that existing members in the cluster initiatives networks facilitate the enrolment of new members. The number of members is an important indicator of a cluster initiative’s ability to engage other organisations in their activities and is a prerequisite for maintaining valuable network interactions in the long term (Shou and Intarakumnerd, 2013). High enrolment in the initiatives and the presence of influential members as key players, in particular, are signs of beneficial intermediary assistance and a potential for long-term survival (Prashantham and Mcnaughton, 2006; Bakici et al., 2013). The presence of engaged key players and support group stimulates other actors, for example, target group members, to join and support the initiative (Waxell and Malmberg, 2007). Difficulties in recruiting target members to recently started initiatives might explain this finding (Ketels et al., 2006; Perry, 2007) because potential target groups are interested in access to wide networks, which fulfil needs in ways that activities cannot. So, it is crucial that cluster initiatives strive to balance growth in membership, with an eye to all three types of actors in the cluster initiative context. They should govern the scope of their intermediary activities and design tasks and develop skills to improve relationships with all enrolled members.

Although this paper generates important empirical, practical, and theoretical insights, there are some limitations. The survey data comprises cluster initiatives, which operate in different countries and industries. Such an approach might hide specificity of a country and its industry initiatives. Future work needs to be conducted with focus on cross-country and also cross-sector, which may identify benchmarking practices for other initiatives around the world. Such work would be even stronger in cases where the examined country has statistical data on all registered cluster initiatives per sector, for example.

The results generated by this work are applicable to most cluster initiatives; however, the adjustments for industry and country might need to be considered. Knowing that there are some differences in financing cluster initiatives in different countries, directly applying the findings to reach key players in countries like Finland, for instance, might be limited. There are the only one or several main financiers/key players from the start and their number and contribution is unlikely to significantly change over time. However, even in such examples, cluster initiatives could be ‘forerunners’ that follow their own program and create other possibilities for financing despite the fact that there actually is no need for it right now but could be productive in a long-run perspective. Such a study could play an inspiring role.

Moreover, dominant attention in future research should be given to main actors and cluster initiatives; management of and satisfaction out of their relationships with cluster initiatives seem to be problematic for initiatives’ leaders. The suggestion could be to conduct new studies focusing on in-depth pair relationships between, for example, cluster initiatives and key players, cluster initiatives and support groups, and cluster initiatives and target groups. The detailed picture could pinpoint particular strategies, behaviour, and decision-making with each of the involved members as well as possible solutions for potential problems. This study is limited in this direction due to an overall focus on all enrolled actors and their interrelationships, but not on their particular groups and pairs.

And lastly, political agendas regarding cluster initiatives and their members were not the main focus in this work. However, policy still has a great influence on the development of the initiatives. This research provides a sense that there is a divide between policymakers and cluster initiatives and that the real needs of initiatives are hardly addressed in the political sphere. We think that new studies on this topic should
generate a call for listening to voices rising from the bottom-up from the cluster initiatives and their leaders. Therefore, it would be beneficial to design studies, even of a simulating or experimental nature, where both cluster initiatives and policymakers participate simultaneously. The joint work and achievement can become a platform for dialogue and reciprocal relationships.

References


