

# Formal clusters supporting small firms' internationalization: a case of public–private interaction

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## Abstract

**Purpose** – This study aims to explore the role played by a formal cluster initiative in supporting small firms' internationalization processes. Taking a public–private interaction perspective, this study aims to understand interaction mechanisms within an internationalization project implemented by a formal cluster initiative.

**Design/methodology/approach** – This study uses a qualitative approach based on a case study of a Swedish formal cluster initiative involved in an internationalization project. The case is analyzed through the industrial marketing and purchasing approach, relying on the Actors–Resources–Activities (ARA) framework.

**Findings** – The analysis highlights the role of formal clusters as supporters and “accelerators” of internationalization processes. Based on the ARA framework, the roles of the public and private actors emerge: the cluster plays the role of orchestrator, supporter and financier, while on the businesses' side, participants assumed the role of customers, displaying various degrees of interest and commitment and giving rise to a leader–follower pattern. Activities occurred at multiple levels, interorganizational, intraproject, interprojects, through different timings and typologies. The main resources at stake were the combination of knowledge, complementary capabilities and financial incentives.

**Originality/value** – This empirical study provides novel empirical evidence and theoretical development over the phenomenon of formal clusters. This study contributes to the current debate on public–private interaction mechanisms and to the upgrading and circulation of international business knowledge.

**Keywords** Projects, Internationalization, ARA framework, Formal clusters, Public–private interaction

**Paper type** Research paper

## 1. Introduction

Locally contextualized aggregations of firms – qualified as industrial districts or clusters – are deemed important to enhance innovation and internationalization (Lazzeretti *et al.*, 2014; Hervas-Oliver *et al.*, 2015). Internationalization represents a key factor for the competitiveness of cluster firms in terms of opportunities for revenue growth, knowledge exchange and capabilities enhancement (Wilson, 2006). At the same time, internationalization is crucial for cluster initiatives themselves to allow long-term excellence and the development of capabilities, which are influenced by the involvement of its members in internationalization activities and cross-border knowledge transfer (Jankowska and Götz, 2018).

The literature has widely acknowledged the support provided by clusters to small firms (SMEs) and their internationalization processes (Chetty and Holm, 2002). Indeed, clusters can provide specific advantages by acting as supporters and connectors between the local and the global markets (Colovic and Lamotte, 2014; Felzensztein *et al.*, 2019) and help SMEs compensate for their internal technological and organizational resource constraints (Bocconcelli and Pagano, 2015; Mendy *et al.*, 2020) by relying on network relationships to acquire knowledge about

internationalization. Internationalization knowledge, comprising both market and product knowledge, is conceived as an enabler and means to leverage capabilities in new markets (Riviere *et al.*, 2018) and has been defined as “experiential knowledge of a firm's capability and resources to engage in international operations” (Eriksson *et al.*, 1997, p. 345).

Among the internationalization modes identified in the literature, projects are emerging as a distinct one (Owusu *et al.*, 2007), and internationalization projects are increasingly being activated to facilitate cluster firms' engagement in international markets and to boost regional development (Fourth European Cluster Policy Forum, 2019). These projects have often resulted in a strict collaboration and interaction between public and private

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actors and in the exchange of market and product knowledge related to internationalization. Given projects' characteristics (Kronlid and Baraldi, 2020), public–private interaction happens on different basis and with different dynamics within this context, and projects are particularly suited for investigating interorganizational interaction as “project-based business activities are part of all private firms and public organizations” (Arto and Kujala, 2008, p. 470).

Based on these assumptions, cluster-related initiatives, policy efforts and internationalization projects at the national and regional levels have been settled (Obadić, 2013). This has led to the emergence of “formal clusters,” defined as “geographic concentrations of actors characterized by formal governance structures and the formal membership of firms and other institutions” (Colovic and Lamotte, 2014, p. 451). The phenomenon of formal clusters and on how they interact with firms for internationalization has received so far only limited academic attention (Colovic and Lamotte, 2014). Yet, formal clusters might represent an advanced and more articulated form of support for small firms' internationalization, which deserves further research because of their implications, as formal clusters in the context of internationalization can be understood as a form of control and direction for policies.

How institutional actors can support SMEs' internationalization and their positive network impacts have been investigated in the literature, but studies have focused on general institutional networks without dealing with specific actors. The relevance of the topic has been raised by several scholars, who argue for the need to understand the differences between formal and informal networks, which are usually overlooked when studying internationalization (Morrish and Earl, 2020; Dymitrowski *et al.*, 2019) and on the resulting combinations and synergies of different policy tools (Chen *et al.*, 2021).

Against this background and in line with recent calls for an in-depth understanding of the dynamics of interaction between public and private actors in time-constrained relationships, such as those occurring within projects (Kronlid and Baraldi, 2020), and of formal forms of support for internationalization (Morrish and Earl, 2020), this paper aims to explore the role played by a formal cluster initiative in supporting small firms' internationalization processes. In particular, taking a public–private interaction perspective, it aims to understand interaction mechanisms within an internationalization project implemented by a formal cluster. Notably, the main research question of the paper is the following:

*RQ1.* How do public and private actors interact within a formal cluster's internationalization project?

Given the pertinence of relationships and networks to the issue addressed in this paper, the IMP approach – and its perspective on place and public–private interaction – is particularly suited to understanding the variety and complexity of interaction in a project for internationalization. The adoption of the IMP conceptual and analytical framework is also in line with recent calls for pictures of the contemporary business world, which include the interaction between private companies and public bodies, and for an in-depth analysis of the features of public–private interaction (Munksgaard *et al.*, 2017; Waluszewski *et al.*, 2019b; Kronlid and Baraldi, 2020). In particular, the three dimensions of the Actors–Resources–Activities (ARA) framework, developed within the industrial marketing and

purchasing (IMP) approach (Håkansson and Snehota, 1995; Håkansson *et al.*, 2009), have guided the analysis to understand the role of the formal cluster and of firms participating in internationalization projects, the activities and interaction patterns and the impact of this kind of interaction on formal clusters' and firms' resources development processes.

In light of the exploratory nature of the research objective, this paper adopts a qualitative methodology and develops a single case study based on an internationalization project implemented by a Swedish formal cluster to address microenterprises. The analysis highlights the role of formal clusters as accelerators and orchestrators of internationalization processes, and it sheds light on the complexity of the internationalization project within a formal cluster initiative regarding the effects on the larger business network of firms and organizations and the less positive and more problematic aspects of the role of formal clusters.

The remainder of the paper is organized as follows. Section 2 is devoted to a critical review of the literature on clusters and internationalization and an overview of existing studies on the project dimension within clusters, including public–private interaction within projects in IMP, with the aim to provide the theoretical framework for the study. Section 3 addresses the research methodology adopted in the study. The fourth section describes the formal cluster and project in focus in the study and presents the empirical findings. In the fifth section, the main results of the empirical analysis are discussed drawing from existing literature. The final section highlights the main contribution of the research and draws the limitation of the study and future research lines. It also outlines the main implications of the study for policymakers and practitioners.

## 2. Theoretical framework

### 2.1 Formal clusters and internationalization

The traditional definition of clusters as groups of firms from the same industry, based in the same place and connected through knowledge, skills, inputs, demand or other linkages (Porter, 1998; Delgado *et al.*, 2016), emphasizes the role of geographical concentration and proximity as a basic attribute of the cluster structure (Becattini, 1990; Camuffo and Grandinetti, 2011; Lis, 2019). Following this approach, the policy effort has promoted cluster-based initiatives (Obadić, 2013; Calignano *et al.*, 2018), which has led to the emergence of formal clusters, defined as “geographic concentrations of actors characterized by formal governance structures and the formal membership of firms and other institutions” (Colovic and Lamotte, 2014, p. 451) and as “an organized business association, geographically and sectorally concentrated” (Dana and Winstone, 2008, p. 2178). Formal clusters can be regarded as deliberate top-down initiatives, created by intentionally administrative or institutional decisions, in contrast to more informal or bottom-up phenomena, which are the result of the spontaneous initiative of local firms (Jankowska and Götz, 2018; Fromhold-Eisebith and Eisebith, 2005). Formal clusters take responsibility to foster cluster activities, are mainly based on public support and rely on intentional building on the cluster notion.

The geographical definition of cluster gives important insights into the role of spatial proximity for relationships development within clusters and for knowledge exchange mechanisms. Yet, geographical proximity is neither a sufficient nor a necessary

condition for learning and interaction, and it does not provide any understanding of how interactions and thick relationships are developed across the geographical borders of clusters (Staber, 2009; Balland *et al.*, 2015). In this sense, IMP studies can provide the analytical tool to catch the underlying complexities of relationships and content, by focusing on microinteraction processes and the network context (Eklinder-Frick, 2016; Guercini and Tunisini, 2017). IMP shows that interaction is not an exception deriving from being spatially close to each other (Håkansson and Waluszewski, 2020), as firms-specific linkages have no boundaries (Eklinder-Frick and Linné, 2017). Space is conceived as a source deriving from ongoing local companies' dynamics (Baraldi and Strömsten, 2006; Håkansson *et al.*, 2006), where each organization represents unique combinations of resources related to specific places and a unique channel to these resources enacted in interaction (La Rocca and Snehota, 2014; Waluszewski, 2004b).

Taking into consideration the space-related knowledge dynamics and heterogeneity of firms within spatial borders – that is, accounting for the cluster approach – and combining it with the idea that place is a significant resource in the form of how resources can be combined – that is accounting for the IMP tradition (Håkansson *et al.*, 2006; Waluszewski, 2004a) – give a complete picture of the complex processes behind international networks embeddedness.

On the impact of networks and clusters on the internationalization process of firms, the literature has repeatedly acknowledged that one of the drivers of small firms' internationalization is the development of a set of exchange relationships in networks (Johanson and Vahlne, 2009; Kowalski, 2014). The network of relationships can drive, facilitate, inhibit a firm's international market development, can influence the choice of foreign markets and can provide access to external resources (Coviello and Munro, 1997). This is of major importance for SMEs, as no company controls by itself all resources and activities needed to operate, especially microenterprises.

The role of clusters in SMEs' internationalization fits into this line of reasoning, as their contribution is that of providing access to specific networking opportunities and resources (Ciabuschi *et al.*, 2012; Colovic and Lamotte, 2014). Networks and clusters are the primary sources of an extended knowledge base, which can help to reduce uncertainty and, at the same time, facilitate the development of new knowledge (Gulanowski *et al.*, 2018; Galdino, 2019). Knowledge concerning internationalization derives from the combination of firms' direct experience and prior foreign market knowledge with new knowledge (Fletcher *et al.*, 2013). In this sense, clusters can provide a twofold contribution to firms' international expansions: directly, by implementing dedicated and designed internationalization measures and activities and, indirectly, by supporting a natural conducive environment to internationalization (Jankowska and Götz, 2018). Because of their features and nature, clusters have been described as cognitive labs (Camuffo and Grandinetti, 2011), characterized by diversity and complexity of learning mechanisms, that rely on a mix of related local/global and formal-deliberate/informal-emergent structures (Belussi and Sedita, 2012; Crespini-Mazet *et al.*, 2021).

## 2.2 The project dimension in clusters

The existing literature on clusters' facilitating role for internationalization has pointed out the different shapes that

such support and facilitation can assume, including networking activities, collaboration, cooperation and projects (Ingstrup, 2013; Ferasso and Grenier, 2021). When implementing internationalization projects, the cluster works for the development of enablers to share and access knowledge and works with internal and external actors, resources and activities (Ingstrup, 2013). In this sense, projects assume interaction-intense and problem-solving character.

In the context of clusters, projects have been defined as having a paradoxical nature, being the most suited form of interorganizational partnership but presenting context-specific management issues (Calamel *et al.*, 2012). Indeed, projects implemented in clusters are characterized by a structured and planned development within a given timeframe (Fornahl and Hassink, 2017), involving firms having their own goals and institutional independence. Yet, in spite of their temporary and episodic nature (Palmer *et al.*, 2017), projects are not conceived and developed in a vacuum. They are rather embedded in wider and more permanent contexts and processes (Lind and Dubois, 2008). In this sense, clusters may function as intermediaries to fill in and link the distinction and disconnectedness between the temporary level linked to the project and the permanent one of firms (Crespini-Mazet *et al.*, 2021; Ingemansson Havenvid *et al.*, 2016) and of the cluster.

To get a complete understanding of projects, it is necessary to look at the environment where the project takes place, as projects are often dependent on the external actors and resources that are present in the context. Indeed, the project and the companies participating in it are actors, who perform activities and control resources. By looking at the project embeddedness in terms of actors, activities and resources (Håkansson and Snehota, 1995), it is possible to capture how the project relates to its context (Lind and Dubois, 2008), that is the cluster in which it has been implemented. The ARA framework, developed within IMP (Håkansson and Snehota, 1995), is here conceived as the analytical tool to investigate interaction within projects implemented in a cluster initiative. The framework suggests that the content of a business relationship can be described in terms of three interrelated layers: actors' bonds, resource ties and activity links. Interconnectedness among the three dimensions occurs, as activities are performed by actors, who use resources and what occurs in a specific relationship impacts not only the individual organization but also its relationships and the wider network.

The context of projects implemented within clusters also calls for an intensified public-private interaction. Clusters are traditionally characterized by the presence of actors other than private business firms, such as institutions, public organizations and universities. Public-private interaction is extremely uncertain and time-consuming, and the characteristics of projects like temporality, discontinuity, episodic interaction, complexity and uniqueness (Kronlid and Baraldi, 2020), as well as a combination of collective and self-interests of the actors involved (Ingemansson Havenvid *et al.*, 2016; Munksgaard and Medlin, 2014), further accentuate this.

In public-private interaction, actors differ in nature (Keränen, 2017; Elbe *et al.*, 2018), objectives, cultures, decision-making processes, organizational setups and approaches, and this might result in a different perception of the project's goals and divergent



interests (Munksgaard *et al.*, 2017). Such differences require a high demand of resources spent in interaction and in getting an understanding of the counterpart's culture and mindset, forcing actors to prioritize and preclude certain activities and actors. Heterogeneity among teams (Nissen *et al.*, 2014) might also lead to frictions that need to be mitigated by developing partnerships and spurring continuity across projects (Crespin-Mazet *et al.*, 2015).

Within projects, both formal and informal mechanisms are implemented for learning and sharing knowledge. While formal mechanisms, mainly in place to achieve the project's objectives, are related to the project's tasks and to the exchange of codified knowledge (Nissen *et al.*, 2014; Mouzas and Ford, 2012), informal mechanisms are related to collaboration, strong linkages with a long-term orientation, crucial for sharing tacit knowledge (Munksgaard *et al.*, 2017; Nissen *et al.*, 2014). A failure to recognize interactivity and independency among public and private actors might lead to the project's failure, as public-private interaction requires active engagement from both parties for it to be successful (Waluszewski *et al.*, 2019a; Munksgaard *et al.*, 2017).

The literature has also pointed out the benefits that both public and private actors can exploit from participating in projects. Studies by Munksgaard *et al.* (2017) and Leite and Bengtson (2018) have shown that for private actors, building relationships with policymakers represents an opportunity for meeting new partners, initiating new contracts and opportunities for adaptations; an asset for long-term benefits and leverage for engaging in future projects or, more in general, to access relationships with potential public partners; and a driver for expanding one's knowledge base as projects can be understood as a way of collecting information, knowledge and reputation benefits.

### 3. Research methodology

#### 3.1 Research design

This study investigates how public and private actors interact within an internationalization project implemented by a formal cluster initiative. Studies have shown how cluster dynamics can be captured by using qualitative research techniques and primarily through the mean of a case study (Chain *et al.*, 2019; Ortega-Colomer *et al.*, 2016; Wolfe and Gertler, 2004), as the qualitative aspects outweigh input quantities in cluster studies and dismiss a top-down "one-size-fits-all" solution (Fromhold-Eisebith and Eisebith, 2005). Further, different empirical studies using qualitative methods rely on cluster initiatives to investigate the role that clusters can fulfill to foster small firms' internationalization (Andersson *et al.*, 2013; Colovic and Lamotte, 2014; Jankowska, 2015). Based on these reasons and coherently with existing studies on clusters, this research aims to reach its goal by adopting a qualitative methodology based on a single in-depth case study (Yin, 2017).

The empirical setting under investigation is a formal cluster initiative based in Sweden, operating in the field of innovative and increased use of geographic information technology and active within the area of Smart Cities, Health and Sustainability. Notably, the cluster provides both technology and expertise to contribute to data-driven community solutions. The cluster's environment is characterized by a quadruple helix perspective,

with members being representatives from Research (including the local University College and adult educational associations), Policy (i.e. Ministries and Swedish administrative authorities and nonprofit associations) Business (i.e. investment companies, consulting firms, accelerators and both high-tech global companies and small local firms) and both the Swedish Municipality and Region where the cluster is located.

The unit of analysis is an international business project implemented within the cluster and aimed to enable the internationalization process of microenterprises in three Swedish regions. Projects can be considered as a "temporary resource constellation and activity pattern in which the actors form a distinct logic and develop new solutions in relation to each other" (Ingemansson Havendvid *et al.*, 2016, p. 86) and where, according to recent IMP studies, network relations emerge and get activated (Manning, 2017).

The suitability of this context is given by the nature of the cluster initiative, which has been initiated by and partly owned by public actors and by the purpose of the activities and projects implemented, which work according to market logics but, at the same time, have a public interest aim. The cluster initiative does not fully adhere to the definition of public actor, but it can be considered as a hybrid actor, given its features and the public function it plays. Within the project in focus, it works in synergy with other public actors. Thus, the cluster initiative is investigated as the public side of the public-private interface.

#### 3.2 Data collection

The first source of data used is one-to-one semi-structured interviews (Kvale and Brinkmann, 2009). This typology of inquiry has been widely used in the IMP tradition to understand the complexity of relationships, and it has been described as "the most effective means of gathering data" (Lindgreen *et al.*, 2020, p. 2). To select informants, a list of actors involved in the project has been compiled based on the project's documentation and on the information acquired from a critical preliminary meeting conducted with two key informants of the cluster initiative. Therefore, potential participants have been chosen based on the preliminary information collected, and they have been asked to participate in the interview process. In all, 11 interviews have been conducted with all available informants from the cluster side that played a role in the project, with actors from the public organizations involved and with informants from the companies. As the project addresses microenterprises, for each firm selected, interviews were conducted with the main person involved in the project, who in most cases was the CEO of the microenterprise. The interviews were supplemented by written notes of the interviewer, and all interviews were recorded and transcribed verbatim. Table 1 summarizes the information about the interviews conducted.

The resulting sample is representative of the different organizations involved in the project and of the project network depicted in Figure 2. Indeed, the governance level of the project is represented by the interviews conducted with the cluster initiative; the operational level is exemplified through the interviews with the business incubator and the science park (SP). Resource providers and companies have also been represented in the sample.

In relation to the cluster initiative, the informants labeled in Table 1 as belonging to the cluster initiatives are employees of the cluster who were directly involved with the projects' initial

Table 1 Interviews with key informants

Organization	Code	Interviewee	Number of interviews	Period	Duration
Cluster initiative	CL	Process Manager Academy and Research	1	April 2019	1.15 h
Cluster initiative	CL	Operations Manager	2	April 2019	1 h
Regional incubator	BI	Business Coach	2	May 2019	1 h
				June 2019	2.30 h
Science Park and EEN	SP-EEN	Project Manager and representative	1	May 2019	1 h
Company	CO	CEO	1	May 2019	1 h
Company	CO	CEO	1	August 2019	40 min
Company	CO	CEO	1	September 2019	1 h
Company	CO	CEO	1	September 2019	1 h
Company	CO	CEO	1	September 2019	40 min

Notes: CL = cluster initiative; BI = business incubator; SP-EEN = Science park and Europe Enterprise Network; CO = company

conception and activities; informants from the SP, business incubator and EEN are not formally in the cluster, but they are rather external actors already familiar with interacting with the cluster initiative because of previous shared activities and projects. Concerning the firms' side, two of the interviewed firms were already members of the cluster before the projects or have become members as a result, while one is a member of the business incubator. To sum up, the informants selected from the public side cover all the central actors involved in the project, while those chosen from firms represent a smaller sample of the project's participants. However, these companies are deemed as representing a good range in terms of activities undertaken within the project, heterogeneity in industry and heterogeneity in project outcomes. At the same time, given the membership of participating firms in the cluster/incubator, it has been possible to retrieve information concerning six companies that were not available for interviews, thanks to the knowledge of the respondents from the incubator and of one additional company that worked with the cluster's respondents during the project.

The interview questions are designed according to the nature of the actor interviewed and cover themes ranging from the activities implemented within the project, the roles played by the various actors and the interaction mechanisms adopted, to difficulties encountered, resources needed, participation in the activities among others. In addition to interviews, secondary data has been collected, through the companies' official websites and the available official documentation of the projects to integrate interviews and collected data as well as comparing data gathered from different sources. This second group of data has been used to track the project's process, interdependencies, key facts and main results.

### 3.3 Data analysis

Primary and secondary data has been analyzed by adopting a systematic combining approach (Dubois and Gadde, 2002) to highlight the interplay between the research object, methodology and theory. The data collected from the meetings, interviews and secondary sources has been used to map up a chronology of events. Data coding and analysis has been based:

- on the project process; and
- on relevant IMP concepts, such as the ARA framework (Håkansson and Snehota, 1995).

First, to investigate the nature of actors in interaction, these are conceived in relation to their roles. The categories addressed are public actors (the formal cluster initiative, incubator and SP) and private actors (firms participating in the project). Concerning the interaction patterns and features between the formal cluster and the firms within the project, an effort has been made to point out functional/operational activities within the project and project management-related activities (Engwall, 2003), also considering formal and informal processes (Belussi and Sedita, 2012). Second, by analyzing the single activities within the project, interaction is explored at different levels. The focus on activities also allows for discovering interdependencies within the same project and with other projects. This helps understand each activity's efficacy compared to the others and see differences in activities implemented by different public actors in supporting SMEs' internationalization. The last layer addresses the resource development processes deriving from interaction to understand how heterogeneous resources are activated in relation to exchanges involving different actors, acknowledging the space-related dimension.

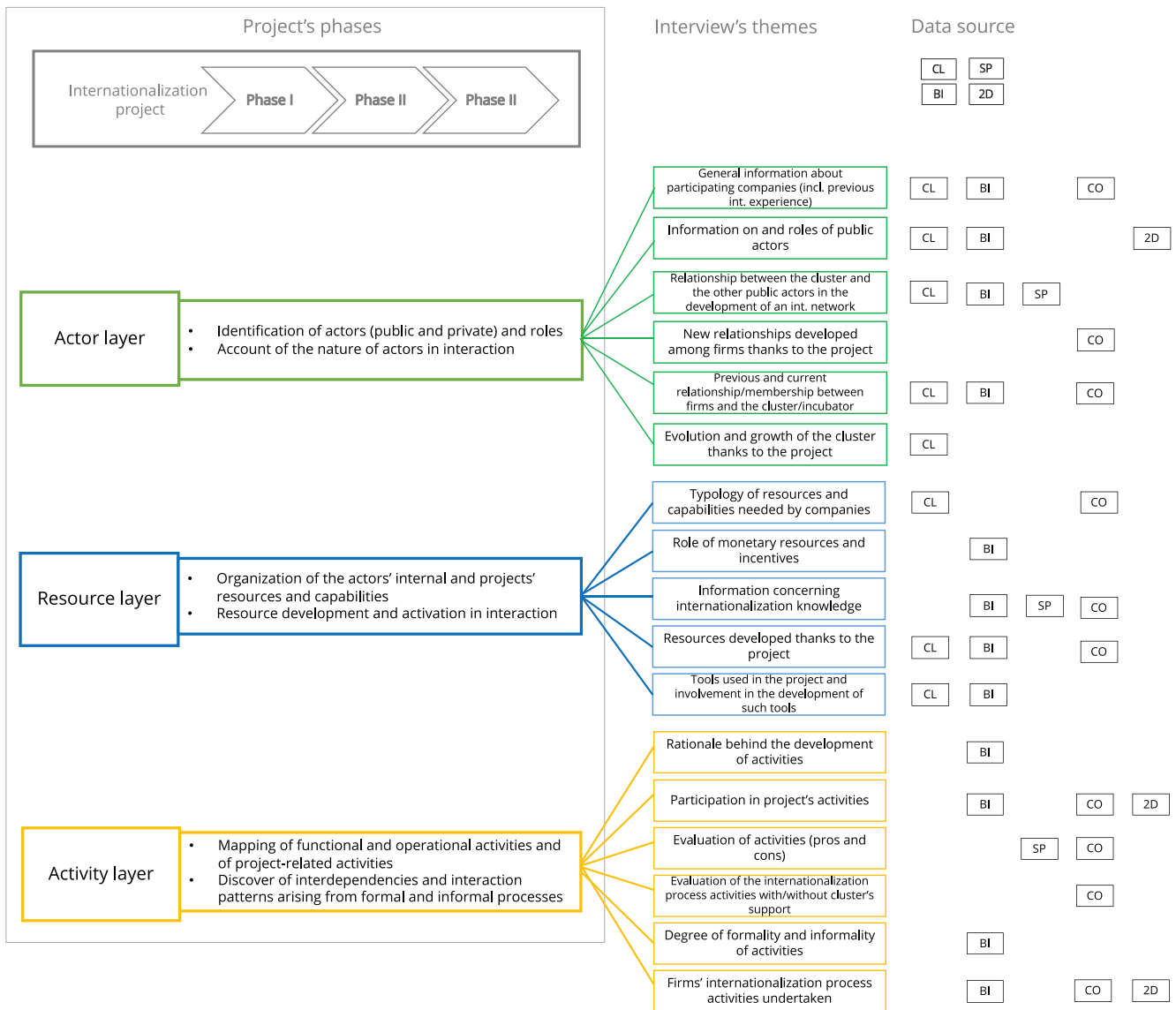
Figure 1 highlights the link between data collection and findings' display. In particular, the left side of the Figure shows the guiding aim of the three ARA dimensions, while the right side shows how they have been translated into questions/themes and from which sources information has been gathered.

## 4. Case presentation and empirical findings

### 4.1 The cluster organization

The study is centered on a cluster initiative, a nonprofit organization, situated in central Sweden and among Europe's leading clusters for highly qualified competence in innovative and increased use of geographic information technology and active within the area of Smart Cities, Health and Sustainability. The cluster cooperates and partners with "quadruple helix" actors, such as researchers, innovators, entrepreneurs, governments, municipality organizations, citizens and stakeholders implementing projects within research, development, monitoring and evaluation in both the private and public sector. The cluster organization's owners include public actors as governmental agencies, the County Council, University, the municipality and others. In addition to these, more than 200 companies participate

Figure 1 The link between data collection and findings



**Notes:** CL = cluster initiative; BI = business incubator; SP = science park; CO = company; 2D = secondary data

in the projects and activities of the cluster. The cluster has enclosed more than 15 countries in its network through its own offices, established through internationalization strategies and relationships within research projects. The cluster initiative is financed by the Region, the Swedish innovation agency, the European Regional Development Fund and the municipality.

The main project in which the cluster is involved is an initiative centered around services and technologies in the Region where the cluster operates (Vinnova, 2014). During the implementation of the project, the clusters produced an action plan identifying different practice areas. To address the area of “entrepreneurship and commercialization,” it has developed an internationalization innovation platform to create access to

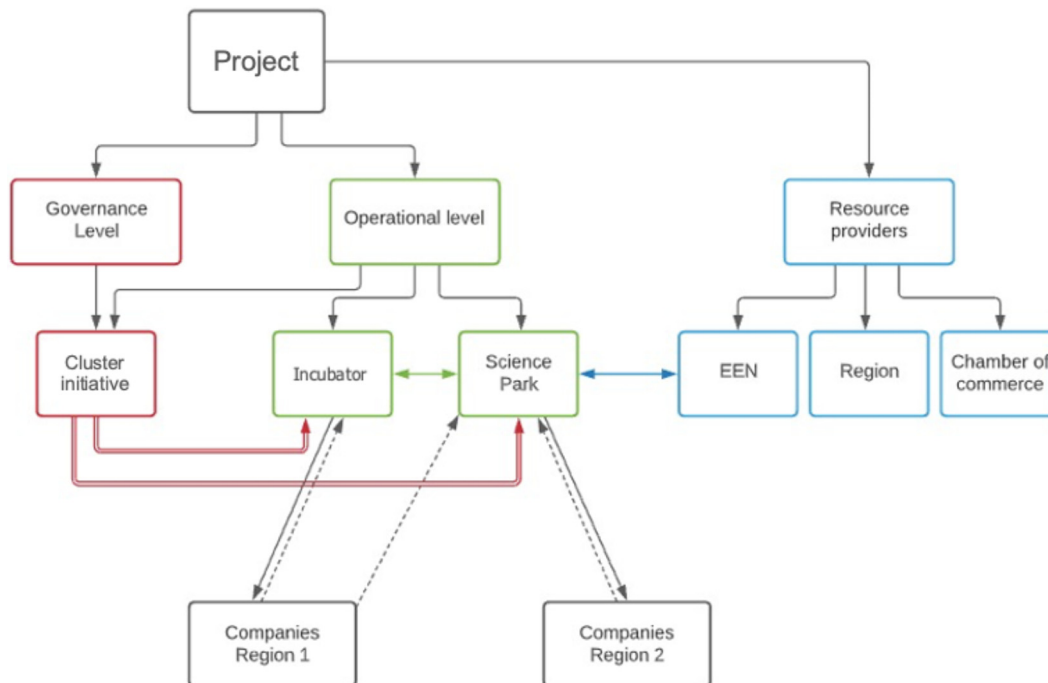
internationalization and growth capital for the companies in the cluster’s network. Starting from this internationalization goal, the cluster has run the internationalization project to establish an investment fund to stimulate internationalization and develop models to support the companies’ internationalization process.

#### 4.2 The innovation internationalization project

##### 4.2.1 Background of the project

The project aims to enable the internationalization process of microenterprises in three Swedish regions, through the development of business models to help new and innovative companies enter the international market (Osarenkhoe and

Figure 2 The project network



Fjellström, 2019). The budget of the project is of 2m euros, and it is cofinanced by the European Regional Development Fund. The project started in 2016 and ended in 2018, and it implied some mandatory requirements for firms to participate, that is, location in one of the three regions foreseen by the project and status of microenterprises (less than ten employees and an annual turnover of less than 2m euros). The project's goal was to involve at least 60 companies and get 20 of them through the whole process of the project. Another planned final output was to develop a model for the internationalization of microcompanies with a good potential for replicability to be diffused so that other companies could follow the successful steps for internationalization.

The idea of this project arose within the scope of another program. During the implementation of the program activities:

[...] the cluster grasped the difficulties of the businesses they were dealing with to penetrate international markets, and they decided to develop a project aimed at preparing companies to become international (Operations Manager – Cluster initiative).

The cluster is the project owner. It is responsible for the interaction with the participating companies, the promotion and implementation of the project activities, of the development of the internationalization model. Other organizations were involved in the project, including the Region, which is one of the financiers of the cluster and which provided consultants to the projects and helped with marketing and activities in the project. A regional business incubator provides business coaches for companies and support throughout their internationalization process. The corporate incubator is owned by the Region and offers business coaching, a wide network and well-established startup methodologies (including a “Boost Chamber” to verify the so-called problem-solution-fit) to motivated entrepreneurs and innovators to help them develop their ideas and turn them into commercial products and services. The SP assists in recruiting

companies for the project and business coaches and plays a role in the marketing of the project and developing methodologies related to the model. SP is an innovation arena that supports the development of people and companies' ideas intending to contribute to the high-quality development of trade and industry in the Region. The Chamber of Commerce of Central Sweden was involved in workshops, as they could provide experts in different fields of business relating to internationalization. Enterprise Europe Network (EEN), the world's largest support network for SMEs with international ambitions, has been involved in the project. They have an office at the SP, and EEN's project manager has the SP as a host organization, and they work as a team. EEN has different roles, as it markets the project, helps with the recruitment of companies, workshops and coaching and supports the development of the model for the internationalization of microenterprises.

#### 4.2.2 The project's activities

The project was publicized through the cluster's web page and network, and companies could apply by filling a preliminary self-assessment of their maturity and capacity to manage an international launch (i.e. knowledge of export customers and customer's situation in the export market). In a second stage of the application process, the cluster and the project manager would conduct a face-to-face interview with the companies to assess their readiness to get into the project and assign them a business coach from the incubator or SP, depending on the region the company is based in. The application had no cost for companies, while those that got further accepted into the program and qualified for support had to pay a fee of 500 euros for participating in the project's activities. The fee was considered as financial support to enable companies to participate in the activities foreseen by the project.



At the end of the entry phase, 34 firms from two regions engaged in the project. No company from the third region could be involved, as there lacked coordination between the organizations involved and

[...] because there was already a project running with some similar features, so the region wanted the companies for that project (Project Manager and Representative – SP and EEN).

A negative aspect emerging from the involvement and selection process identified by participants is:

[...] the absence of additional selection criteria addressing as, for example, being involved in certain industries so to be able to create more synergies between participating firms and have business coaches with expertise in that fields (CEO company 4).

[...] Even though “having different industries helps get new insights on things and markets” (CEO company 5).

The project officially started in August 2016, but companies were allowed to join the project until December 2017. At that time, some project’s core activities already started, but companies were still joining, and business coaches were still being recruited by the cluster. Thus, the application stage overlapped with the implementation of the project in terms of activities. According to participants, the cooperation between partners, their roles and responsibilities should have been developed before starting the project, as this has taken valuable time from the project and delayed the actual start of common activities.

As the project started, different activities have been implemented. The activities offered include business ideas and innovation development, strategic marketing planning, branding, product and service packaging and communication development. In particular, the core activities planned and implemented in the projects are: i) business coaching; ii) workshops; iii) *timbank*; iv) trips; and v) export lab.

4.2.2.1 *Business coaching and workshops.* The business coaching activity was at the core of the project and consisted of 20 h of bilateral meetings that each enterprise could use to work together on their individual needs with the coach assigned to the company by the cluster. Business coaches, in charge of the operational part of the project, were recruited at the beginning

of the project by the cluster initiative from the other public actors involved. The bilateral meetings were devoted to conducting market analysis about firms’ business strategies. Firms recognized individual coaching

[...] as the best and most efficient activity to get insights from an expert from outside the business and to get an appropriate preparation, to plan and research. (CEO company 5).

While firms’ individual needs were addressed through business coaching, three workshops were planned to address common needs through knowledge and experience exchange among the companies. The workshops were about:

- the export journey’s visions, market choice and identification of distribution channel;
- product strategy and distribution; and
- planning the pitch in the international market.

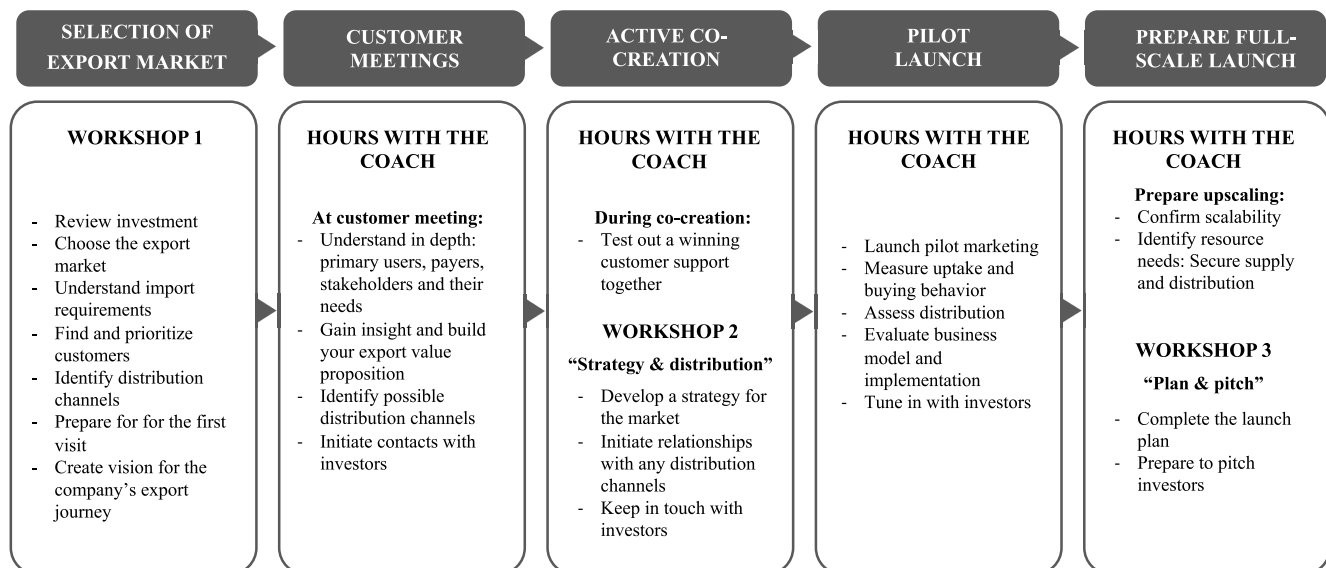
Experts for the workshops were provided by the incubator, the SP, the Region, the Chamber of Commerce of Central Sweden and EEN. Workshops represented a good opportunity for networking and learning,

[...] as they involved a small group of people and problems were faced from a practical point of view. (CEO company 5).

After the workshops, some companies decided to drop the project. Dropouts were because of difficulties in time management from the companies, and workshops represented an opportunity for firms to realize that they were not ready to go international, as they still had to work on their product and get a strong position in the Swedish market.

One of the business coaches described interaction in workshops as happening unexpectedly, as the workshops’ organizers could not predetermine beforehand a cohort of companies. According to the business coach, organizing workshops was challenging because “the groups for the workshops were difficult to make in terms of commonalities” and “the scale was probably too small,” as the workshops were organized according to geographical criteria. Thus, it could have been more useful to organize them with the other region so as

Figure 3 Activities’ process – workshops and business coaching





[...] to distribute companies depending on their characteristics and, for example, on the nature of distributors they needed [i.e., physical distributor or possible influencer to engage in the market]. (Business coach – Incubator).

Figure 3 depicts the activities process related to business coaching and workshop activities.

4.2.2.2 *Timbank*. The project provided access to external consultants and experts, as lawyers and translators, through the *timbank*, which consisted of a pool of hours with external consultants that firms could apply to use to get help with patents, negotiation, translation, social media management, communication and marketing. This activity, although defined as essential for the internationalization process, implied the downsides deriving from the process of activities and budgeting's approval from the cluster:

[...] The activity was useful, but we would have needed a lawyer even without the project [...] it would have been easier for us to go to a lawyer directly instead of using the *timbank*. (CEO Company 4).

The project's bureaucracy and reporting were perceived as a loss of control by firms, that reported how

[...] with the cluster [...] one gets the money easily by participating but loses control and has to comply with bureaucratic issues and reports/documents, which make things slower. (CEO company 3).

Another negative aspect highlighted by firms in dealing with such activities was time management and time perception

[...] as there was a discrepancy between the business' needs and the formal requirements of the project to get funding [...] we had to arrange things and communicate them months ahead, which is not possible in our business. (CEO company 2).

4.2.2.3 *Trips to the international market(s)*. Companies also had the opportunity to apply for a trip to the international market selected to meet customers, suppliers and investors and participate in exhibitions and fairs to pitch their products.

One of the companies applied for the trip to participate in a trade fair in the USA and defined it as:

[...] the most important activity as it allowed getting contacts and partners. [...] Participating in the tradeshow gave me a different input than what he expected on how and in which way to change his product (CEO Company 4).

During the first trip, he had networking opportunities and

[...] through the support received on the spot by the business coach, we got introduced to the right contacts in China. [...] We will launch a new product at a fair in Shanghai. (CEO company 1).

Trips and participation in exhibitions and fairs are described in reports as:

[...] a success for the company as they had the opportunity to network and pitch their products [...] As new contacts were established in China during the exhibition, there is interest in moving on to sell to Shanghai

and as:

[...] During the fair, the company signed up with one new customer and one new retailer. They also sold three products during the fair and the retailer has since the fair sold more than fifteen products.

4.2.2.4 *The export lab*. The project also developed an innovative methodology through the export lab, based on the two concepts of "international incubation" and "international acceleration" that could fit the needs and characteristics of the participants dealing with innovation. The export lab started with a rational and logical choice of the market the company wanted to enter and with a market analysis and face-to-face meetings with international customers to co-create or re-create the product with the customer (international incubation). The business coach would then encourage the company to organize a pilot launch of the product

or service in a specific region of the target country to prepare for the full launch. The pilot launch gave the opportunity:

[...] to measure customers' reactions and responses to the product or service regionally and to learn from them, as the company might need to go through several iterations until they have the perfect product for the whole target market (Business Coach - Incubator).

After the pilot launch, companies would evaluate the success of their product positioning and their communication strategy, work on it and then enter the international acceleration phase and penetrate the international market. One company dealing with sealing technology took part in the export lab successfully. The company made the rational decision to enter the North American market. Still, they had to re-create their product to fit that market's needs and then go through a technological upgrade to handle internationalization's effects. The export lab represents a success story for this company, which had the opportunity to participate in a trip to North Carolina and to attend a fair in its sector, during which they had the chance to "sign up with one new customer [...] and with one new retailer" (Report of the company).

One of the project's goals was the creation of a model for the internationalization of microcompanies, which was supposed to be developed through the cooperation between the public actors, who started working together on an eCoach tool. However, the cluster developed the tool by itself, as "the actors had a diverging idea on it, and the incubator and the SP decided not to contribute in this as there was no synergy" (Business coach – Incubator and Project Manager and representative – SP and EEN).

The project encouraged community meetings to share knowledge and experience and develop connections with other projects, where the cluster had the opportunity to present the project to other European clusters companies, which could be matched with some activities and experience exchange, such as transfer workshops on good practice.

With the ending of activities, firms had to report the project's results and feedback to the cluster, through phone interviews and research. The cluster reported to the financiers and stakeholders of the project, through two analysis seminars delivered by the cluster initiative to the Swedish Agency for Economic and Regional Growth. The project supported 55 companies, and 38 of them could find contacts and international partners for their products. Firms evaluated as highly positive the impact of the project in terms of competencies gained through participation in workshops and business coaching. The project also helped 12 companies in developing new prototypes.

The project's impacts also relate to the new connections and interdependencies among actors and activities. Firms could become members of the cluster or the incubator and, thus, enter other programs. This is the case of "a company that could engage in the Incubator's Boost Chamber which acts as pre-intake to the incubator and represents a first step into the region start-up-community" (Business coach – Incubator). Or, an innovative company that had gone through the preincubator program and already had some coaching sessions a couple of years earlier and which was able, thanks to the participation in the internationalization project to go through a technical and technological upgrade, to handle foreign market entry.

The project paved the way for companies to participate in other programs led by public actors, and it supported the development of capabilities to apply for public innovation support funding. This is the case of one company in the wine industry, that “could engage in another project aimed at the Asian market with the Science Park” (Project Manager and Representative – SP and EEN).

## 5. Discussion of findings

Before the start of the project’s activities, public–private interaction mainly occurred indirectly through deliberate mechanisms, tools (Belussi and Sedita, 2012; Ingemansson Havenvid *et al.*, 2017) and standardized steps concerning the application, such as prefilled forms and standardized interviews. Informal and personal contacts have been activated to spread information about the project’s start. Interaction between the cluster and the other public actors is mainly formalized through contracts and agreements (Mouzas and Ford, 2012), settled for the business coaches.

With the start of the project, both informal contacts and unintentional interactions, as well as more structured mechanisms, are in place. The project’s core activities occur as planned through formal interaction mechanisms. One of the aspects emerging from formal activities, such as workshops, concerns spontaneous informal mechanisms among the participants that may take place, giving rise to so-called deliberately emergent interaction (Ingemansson Havenvid *et al.*, 2017). The interaction between the public and the private side happens through deliberate formal mechanisms and often in a noncomplex contact pattern among actors (Fröberg *et al.*, 2020). Interaction among businesses is mostly informal and spurred by implementing more structured activities. Interaction among public bodies occurs during the project through planned weekly meetings through ICT tools aimed at reporting and planning activities.

At the end of the projects, firms were asked to complete reports and interviews on the project’s activities to gather feedback. In this phase, informal activities go on beyond the project’s boundaries, as some companies active in similar industries started collaborating, and there are signs of continuity across the project as many companies participated in other activities sponsored by the public actors involved in the project.

Table 2 summarizes the main features of interaction throughout the project focusing on the interaction mechanisms

occurring among public actors, among private ones and among public and private ones.

Following the ARA framework (Håkansson and Snehota, 1995), it is possible to understand the role of key actors, the nature of activities carried out within and beyond the project’s boundaries and the relevant resources at stake in the process.

### 5.1 The actor dimension of public–private interaction within formal cluster’s internationalization projects

On the public actors’ side, the cluster is the orchestrator of the project network (Andresen, 2020; Dessaigne and Pardo, 2020), as it is in charge of assembling and managing the interorganizational network composed of public and private actors to achieve the project’s common goals. The cluster does so by taking on many roles, primarily acting as supporter and financier. These roles are not separate but rather coexistent (Guercini *et al.*, 2020) and have been focused on initiating and outlining the overall project strategy, coordinating the project activities – as the cluster enabled and constrained the government and the enactment of practices – and intermediating and promoting interaction (Andresen, 2020). While the roles are partly given by the project structure itself and they are acknowledged and accepted by the other actors (Dessaigne and Pardo, 2020), what characterizes this actor is its dynamism throughout the process of role-switching (Hurmelinna-Laukkanen and Nätti, 2018) and multilayers reconfigurations it assumes in synergy with the other public actors. This can be discussed in terms of the role it assumes as the orchestrator of the network, or as “architect” and “leader,” as defined by Andresen (2020), that is a resourceful actor, with a controlling approach who has the ability to take the initiative to act and to initiate relationship development, manage alliances, map and influence stakeholders, initial coordination and integration of resources.

The cluster plays a role in helping firms overcome obstacles deriving from their scarce resources and limited international experience. It goes beyond the role that it has been assigned by the project, as it does not merely facilitate internationalization but also participates actively in forming relationships with local and international partners, acting both for business development and capability building activities (Colovic and Lamotte, 2014). The support provided by the cluster in developing new relationships with foreign partners has been functional for firms to expand internationally and position themselves in their network (Guercini and Milanese, 2019).

Table 2 Summary of results on the evolution of the project

Beginning of the project	Implementation of activities	End of the project
<p>Interaction is mainly indirect through deliberate mechanisms and tools</p> <ul style="list-style-type: none"> <li>• Sporadic informal and personal contacts are activated</li> <li>• Public–private interaction happens at the level of the cluster and firms in the form of standardized steps concerning the application</li> <li>• Interaction among public actors is formalized through contracts and agreements</li> </ul>	<p>Combination of structured and emergent interaction</p> <ul style="list-style-type: none"> <li>• Deliberately emergent interaction among firms</li> <li>• Public–private interaction happens through formal mechanisms</li> <li>• Business interaction is mostly informal and spurred by structured activities</li> <li>• Interaction among public actors is planned and aimed at reporting and planning</li> </ul>	<p>Informal activities going on beyond the boundaries of the project</p> <ul style="list-style-type: none"> <li>• Formal membership in the cluster/incubator</li> <li>• Sign of continuity across the project in terms of formal activities</li> <li>• Activities from both public and private actors are mainly aimed at reporting and gathering feedbacks</li> </ul>

In doing this, the cluster initiative has been supported by other public actors: the incubator and the SP as operational partners and the other regional/national actors as providers of *ad hoc* resources in terms of experts and market knowledge. Therefore, the cluster has mainly acted at the governance level of the project, and the other organizations involved assumed a role linked to the different operational tasks. The project implemented within the cluster allows for the activation of actor bonds involving public and private actors, governed by the structure and rules of the game.

Actors showed a high degree of synergy during the project implementation; yet this joint action was also characterized by some frictions (Lind, 2015; Munksgaard *et al.*, 2017), which led to a delay in the start of the activities and the failure in the achievement of some of the project's expected results, because of role conflicts, competition and divergent views ambiguity (Chowdhury *et al.*, 2016; Elbe *et al.*, 2018). The geographical division of competencies was clear from the beginning of the project, thus facilitating the process initially, but on the other side, the similar nature of the public actors involved gave rise to frictions. Tensions could be managed and overcome only through existing personal relationships (Halinen and Salmi, 2001; Dahl and Pedersen, 2004), highlighting the importance of social capital (Bondeli *et al.*, 2018). The study shows the importance that public actors agree on rules concerning roles and scopes of activities, as well as define the network to avoid conflicts (Finke *et al.*, 2016; Fröberg *et al.*, 2020). One emerging aspect is the role played by the formalization of collaboration (Drejer and Jørgensen, 2005) in ensuring smooth interaction among the project's participants, which helps make sure that potential conflicts are dealt with.

On the business side, firms assumed the role of project "customers," displaying various degrees of interest and commitment, which derive from their heterogeneity in industry, maturity and previous internationalization strategies. In this sense, a leader-follower pattern can be identified (Guercini and Runfola, 2015; Parrilli, 2019).

The leading firm has been recognized as "someone you could send other firms to take as an example" and "who participated confidently and successfully in activities related (and not) to the project" (Business coach – Incubator). The leading firm defined its role in the project as a "learner," understanding the project as an opportunity to develop its knowledge, adapt it to a different context and be able to comprehend the changes needed in terms of product, marketing strategies, distribution channels and communication. Leading firms were also characterized by readiness in terms of industrialization process and technological upgrade, identified as critical aspects to handle internationalization's steps successfully. Another way to illustrate the role of leading firms is based on the outcomes of their more intense activity than other firms. Leaders became committed beyond the scope of formal tasks. Active leading firms were also the most engaged in managing the cross-relational network deriving from joint activities (Munksgaard and Medlin, 2014), thus having more collective interest in mind. Their role is central in initiating network activities to involve other firms in creating a collective interest and shaping network development.

Companies defined as followers did not have a passive role in the project, but rather they had less knowledge and experience,

showing thus a reactive behavior (Gancarczyk and Gancarczyk, 2018), which could be improved through interaction. Other companies had an unclear and nonactive status. This is the case of companies whose main expectation from the project was to get access to funding and did not value "internal" relationships but only the external networking functional to the short-term aim of finding suppliers, customers and distributors.

While confirming previous studies (Gancarczyk and Gancarczyk, 2018) about the proactive and reactive behavior of SMEs in internationalization, the present study adds to them by underlying how the internationalization of firms identified as followers does not happen indirectly or as a consequence of the activity of leaders but is rather because of either material conditions and resource constraints or to a determined choice of exploiting only certain activities, whose results might entail real benefits for the process.

Also, while all being characterized by geographical proximity to the cluster and its network, the study shows that firms displayed very different interaction patterns. Geographical proximity both to the cluster and to the other public actors is overcome by the different degrees of access that firms have to knowledge, which depends on other typologies of proximity and absorptive capacity (Cohen and Levinthal, 1990; Balland *et al.*, 2015).

## 5.2 The activity dimension of public-private interaction within formal cluster's internationalization projects

Concerning the activity layer of the ARA framework, the interaction patterns among public actors and participating firms highlight three main aspects. First, project activities have been well structured in terms of content and processes, forecasting specific steps to be undertaken by the participating firms. Second, the nature and the limited resources of the small firms have been considered through various measures: an in-depth analysis of business needs, flexible involvement of participating firms in the different activities, intense bilateral support and mentoring through dedicated resources. Third, also "collective" activities (Nissen *et al.*, 2014), such as workshops and informal meetings, have been carried out to promote interaction and knowledge exchanges among representatives of public actors and business firms. Joining resources and connecting activities lead to developing business relationships and the network. The collective interests of firms are served by collaborating and coordinating mutual activities in a network (Munksgaard and Medlin, 2014).

The typology of interaction at the activity layer assumed different forms. It occurred individually, between the cluster and the single companies, and in groups through meetings and workshops. The choice to vary the typology of interaction resulted in different learning outcomes. While individual time allowed firms to learn directly and be tutored by their business coach, the choice of grouping firms led to other forms of interactive learning and informal knowledge exchange, in line with what already showed by previous studies (Kowalski, 2014). Therefore, the combination of structured and flexible processes and formal and informal ones helped support companies over a three-year-span effort (Belussi and Sedita, 2012).

Knowledge-related activities have occurred at multiple levels. Workshops took place at the interorganizational level when different firms gathered and worked together around common needs. Coaching has been planned at the intraproject



level, where knowledge is bound up with the project managers and business coaches. Finally, at the interproject level, internationalization knowledge has been shared in the form of “good practice” among participants in different projects. These activities do not occur one after another, but they often overlap, merge and entail knowledge flows across organizational boundaries. Indeed, the formal cluster initiative managed to access and combine activities with other projects’ external efforts (Lind and Dubois, 2008).

Concerning the two main typologies of internationalization knowledge, that is market and product knowledge, this has been used as an assessment for firms, which were first asked to evaluate knowledge of i) the export market to invest in; ii) export customers; and iii) the customer’s situation in the export market. Once the project’s activities started, workshops were organized to transfer market knowledge, manage the different phases of the internationalization process and provide firms with the knowledge to address common needs. Individual coaching and *timbank* also represented useful activities for the exchange of market knowledge. Product knowledge was mainly addressed in the export lab, where products were co-created with the customer. Co-creation is about the joint creation of value between the company and the international customer to better suit the context. The export lab can be defined as a learning process entailing a more active engagement of the private side in creating knowledge related to the product or service to internationalize. Thus, the creation and exchange of market knowledge versus product knowledge require different timings and activities (Galdino *et al.*, 2019; Gebert Persson *et al.*, 2015). While the product is co-created jointly with international customers, market knowledge is a prerequisite for entering an international market and, at the same time, is likely to continue even after market introduction. This suggests that project completion criteria and project management might be different for the product versus market knowledge.

Building on previous studies (Colovic and Lamotte, 2014; Ciabuschi *et al.*, 2012; Gulanowski *et al.*, 2018), the results of the current research show that the formal cluster, and its network of public actors, exploit public support and projects to promote some of their activities such as incubation programs and promotional initiatives. The cluster and its network identified possibilities to combine the resources and activities of some of the companies involved in the project to provide continuity to the results of the project (Lind and Dubois, 2008). Furthermore, other forms of support are here uncovered, which are not based on “traditional support programs” as collaborative workspace in the form of workshops, interproject meetings to address issues arising from international activities and the innovative export lab methodology.

Actor bonds clearly emerge in the implementation of activities, as the cluster highly relies on its network to provide and implement them; this is the example of the activities provided through the business coaching and *timbank* to reduce entry barriers in foreign markets. These are not directly provided by the cluster but rather enacted thanks to its network.

### 5.3 The resource dimension of public–private interaction within formal cluster’s internationalization projects

On the impact of the project in terms of resources, the main resources involved were the financial incentives provided, knowledge and complementary capabilities. The project saw a

combination of actors’ own resources with the project-level ones (Lind and Dubois, 2008).

In line with other studies (Perna *et al.*, 2015), the monetary dimension is a key factor throughout the phases of the project. First, it has been crucial to raise the interest of microenterprises, primarily through the low participation fee and the money available for the trip. Second, it has been a reason for quitting the project, as the bureaucratic hurdles to get the project’s money for the international trip has been perceived as challenging to handle for firms with few employees and where, generally, it was the owner and CEO himself/herself to be personally involved in the project.

Also, knowledge and knowledge access are among the key resources (Gulanowski *et al.*, 2018). The project has represented a valuable experience and has been assessed as a good practice, thus embodying valuable knowledge to support small firms in international markets and helping the cluster to achieve its institutional goals in terms of regional internationalization. The project also endorsed the cluster in gaining a stronger international reputation among European formal clusters and institutions, increasing its knowledge and strengthening relationships with other local actors, local businesses, international institutions and business partners.

A significant output is the online internationalization tool, developed, distributed and owned by the cluster initiative in the project’s aftermath. Microenterprises could easily access different resources and materials. This has become an organizational resource for institutional and business actors, even though its development has shown frictions among the project’s partners (Lind, 2015; Munksgaard *et al.*, 2017). Another essential resource is the Export Lab process developed by the incubator before starting the project and implemented successfully within the project. In this sense, while projects involving different actors might give access to a broader set of expertise and purposes, they also imply struggles with coordination and interfacing issues.

On the business side, participation in the project has helped small firms further design their product or service package for international markets, gain valuable knowledge of foreign markets and establish critical connections with foreign partners (Guercini and Milanesi, 2019), in line with results shown by Colovic and Lamotte (2014). This knowledge was supported and facilitated by the formal cluster’s internal and external networks (Andersson *et al.*, 2013), which companies could exploit to find the spot’s right contact during their trip. The external and internal relationships of the cluster represented, thus, an important pool of heterogeneous resources to be actively dealt with for firms (Waluszewski *et al.*, 2019a).

Business firms developed both physical resources, through the development of products and prototypes, and organizational ones in the form of managerial knowledge in terms of skills and project management and interaction with institutions and other knowledge providers and brokers. It could be argued that small firms have started to develop the first seed of relational skills, which could become a valuable asset for future involvement and interaction in similar projects (Munksgaard and Medlin, 2014). This pattern has already been shown by some firms involved in the project, which participated in another project or applied for public innovation support from other institutions.

Table 3 summarizes the three dimensions of actors, resources and activities emerging from the project’s implementation.



**Table 3** Summary of results along the three layers of the actors–resources–activities framework

Actors	Resources	Activities
<ul style="list-style-type: none"> <li>• Cluster as project orchestrator – governance level</li> <li>• Incubator and Science park as operational partners</li> <li>• Regional/national actors as providers of resources</li> </ul> <p>Formal interaction characterized by synergies, frictions, competition, divergence and overlapping roles</p> <ul style="list-style-type: none"> <li>• Various degrees of commitment and interest deriving from heterogeneity (private actors)</li> <li>• Leader–follower pattern (private actors)</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge</li> <li>• Complementary capabilities</li> <li>• Financial incentive</li> <li>• Export lab</li> <li>• Internationalization tool</li> <li>• Cluster’s internal and external network</li> </ul>	<ul style="list-style-type: none"> <li>• Individual activities to learn directly and be coached</li> <li>• Interactive learning and informal knowledge exchange through group activities</li> <li>• Export lab aimed at developing product knowledge</li> </ul> <p>Knowledge-related activities at multiple levels:</p> <ul style="list-style-type: none"> <li>• inter-organizational level – WS</li> <li>• intra-project level – coaching</li> <li>• inter-project level – Regional projects</li> </ul>

## 6. Conclusions

This paper presents and discusses a case study on public–private interaction within a project implemented by a formal cluster initiative to explore the role played by a formal cluster in supporting small firms’ internationalization processes and to understand interaction mechanisms in place. The study contributes to the literature on two grounds, that is on i) formal clusters and ii) public–private interaction mechanisms within projects.

First, there is currently a mismatch between the empirical evidence of formal cluster, increasingly guided by policy initiatives, and the academic literature, which has scantily investigated such empirical phenomenon. The study provides a theoretical contribution to the limited literature on the emerging phenomenon of formal clusters (Colovic and Lamotte, 2014) by showing its articulated nature and behavior within regional internationalization programs.

The focus on a formal cluster initiative engaged in interaction with public actors and businesses for internationalization confirms existing findings on the interest in formal network designs for stimulating internationalization (Munksgaard and Medlin, 2014). While, on the one hand, the research supports existing studies on the role played by clusters in internationalization (Kowalski, 2014; Ciabuschi *et al.*, 2012), it also provides novel insights highlighting formal clusters’ networked configuration in terms of different actors involved – composed by public actors and their partners – and the constellation of activities and resources emerging from the project itself as well as from the context in which it has been implemented (Lind and Dubois, 2008). Rather than the cluster initiative itself, it is such complex and networked configuration at the cluster’s internal and external level that allows the formal cluster to be identified as the project’s network orchestrator (Andresen, 2020; Dessaigne and Pardo, 2020), providing the guiding infrastructure in which activities are conducted, and resources interact and are exchanged within the internationalization project. Therefore, this research provides evidence of the degree of embeddedness of the project’s actors, activities and resources in the context in which it is implemented, that is the formal cluster initiative.

Second, the study contributes to the ongoing debate on public–private interaction mechanisms (Kronlid and Baraldi, 2020), by empirically addressing its networked dimension and emphasizing the diversity and interrelation of such mechanisms within projects. Mechanisms include formal and informal information channels, to ensure that companies know what they can gain from the involvement with public actors and how to

approach them, informal and emergent interaction, as well as more formal mechanisms (Belussi and Sedita, 2012; Ingemansson Havensvid *et al.*, 2017; Dymitrowski *et al.*, 2019), such as formal agreements and contracts to manage the divergent interests and perspectives and to deal with issues concerning the management of the project, division of tasks and responsibilities. Despite a prevailing bright view of the project, the study also provides insights on the frictions among public actors in reaching some of the goals and the mismatch between public and private ones because of their different natures, leading to perceived mixed results on the outcomes of activities and resources needed.

The formal cluster and its network of public actors assume dynamic and multilayered configurations and roles throughout the project. The roles are assigned by structure of the project itself, but at the same time, they are determined by the functions that the cluster plays in the wider context in which it operates and by its existing relationships. In this sense, the dyadic dimension of interaction is embedded in the network, as public actors may assume different configurations and roles throughout the project. In public–private interaction within projects, the private actor does not interact with a single counterpart but with multiple public actors, taking different, sometimes overlapping, roles (Drejer and Jørgensen, 2005; Elbe *et al.*, 2018).

This paper entails some limitations. First, the retrospective approach adopted could have hindered data collection and made it difficult to track back the relationships developed over time, because of the different degrees of informants’ knowledge. Second, it could be argued that accounting for the project as a unit of analysis may have been beneficial for the results but, at the same time, it might have hampered ARA outcomes, as accounting for such perspective could show players and actions only in relation to that project (Engwall, 2003). Future contributions to this phenomenon could better explore:

- the interaction patterns within public actors with overlapping and competitive roles in projects;
- within firms’ dynamics in projects and how they influence and are influenced by the orchestration of public actors;
- the activities and resources enacted by the orchestrator to foster alignment among actors when implementing a project; and
- the impact of the project on the internationalization strategy of firms in the years after the end of the project in focus.

### 6.1 Managerial implications

The empirical research entails practical implications that can be translated into operational guidance for managers of the formal

cluster initiative and of microenterprises. On the formal cluster organization side, managers should conduct appropriate planning and structuring of project's activities, which should account for their degree of embeddedness in existing local and international configurations of actors, activities/projects and resources (Lind and Dubois, 2008), requiring a carefully planned joint action with the other actors involved. Second, proposing and implementing an ambitious and complex project should fill a clear and relevant gap in the local business context, and it should promote and effectively manage all possible synergies with previous and ongoing projects developed by both public and private actors. This means that a well-timed and well-judged analysis of the ongoing projects in the extended network should be conducted to avoid the duplication of programs and initiatives enacted by public actors and to provide either a more comprehensive internationalization action program involving more actors or a more differentiated project, targeting only certain industries or certain markets.

On the small firm side, participation in formal cluster internationalization projects can provide a variety of benefits, which can be exploited and transformed into newly available resources through a credible commitment in terms of time and managerial effort, thus developing appropriate relational skills. An important implication for firms concerns the degree of activities to be undertaken in terms of participation in initiatives, programs or projects. Given resource scarcity and the fact that it is often the CEO that manages the participation in projects alongside daily operations, it is crucial for firms to prioritize and preclude activities (Munksgaard et al., 2017) and establish boundaries in engagement by weighing the extent to which their business network can be enriched thanks to such activities. Also, the study has shown that participating in such projects can provide further funding opportunities or participation in follow-up projects. Thus, it is pivotal for managers to actively engage in new relationships thanks to the project's network and to engage in a proactive and long-term oriented strategy for projects to overcome internal barriers.

## 6.2 Policy implications

The study shows the role of formal cluster organizations in becoming a key actor supporting the internationalization processes of small firms, other than traditional players such as export consortia and export promotion agencies. The cluster's initiative formal nature and its mission can be considered a tool and enabler of direct policy intervention and can offer advantages in the light of the interconnectedness of different types of formal cluster initiatives in the area of entrepreneurship, innovation and marketing and able to provide more articulated support for small firms' internationalization projects (Colovic and Lamotte, 2014). Policymakers need to be aware of the different interaction levels and of the expected and desired outcomes of policies that can change depending on interaction among actors at the resource and activity layer (Eklinder-Frick, 2016).

The projects' monetary benefit has been a strong incentive for firms to take part in the project. It is essential to combine this effort with initiatives aimed at promoting a far-reaching commitment and understanding the implications of the project on a wider horizon and beyond the scope of the project. Otherwise, firms might participate in the project without a clear objective and strategy in mind, thus jeopardizing the project's long-term goals. In this study setting, some firms did not

understand the project's long-term aim, adopted an inactive or unclear status and eventually dropped out, because of a misalignment of their interests with those of the cluster and other firms. Some firms sought self-interest from the network rather than building network collective interests and perceived the network as a way to access resources (Munksgaard and Medlin, 2014).

The emergence of formal clusters provides an arena to spur cooperation and collaboration, connect actors and develop business opportunities leading to regional growth through funding possibilities and the provision of an organizational framework (Drejer and Jørgensen, 2005). Still, it is of utmost importance to understand what happens undercurrent among actors in interaction. The promotion of cluster-based initiatives through policies and programs needs to be integrated by an appropriate understanding (and use) of networks and collective initiatives.

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