

Unveiling exogenous gaps enabling a cluster organization's internationalization process

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Abstract

Purpose – We examined the internationalization process of business promotion organizations. We focused on the key stages and strategies and how the networks formed during this process can support their partners, particularly SMEs, in facilitating international expansion.

Design/methodology/approach – The theoretical lens: We combined the experiential learning-commitment interplay of the Uppsala model with a similar mechanism focused on business network relationships. A qualitative methodology: We used it to explore the question and the various forms of embeddedness within networks, offering an in-depth examination, particularly in the challenging natural settings of a cluster organization in geographic information systems (GIS).

Findings – We found that the cluster organization's internationalization began regionally, forging connections with clusters in the Nordic and Baltic countries and Europe. Over time, the cluster recognized the importance of innovation leadership, leading to the integration of its core competencies with complementary technologies from other global geospatial technology hubs.

Research limitations/implications – The study fills research gaps by examining global linkages between regional clusters and international partners, focusing on external gaps. We explored how clusters can leverage global innovation systems and networks for matchmaking, capitalization and investment. Moreover, we addressed the need for more research on cross-cluster gaps and barriers to global market interaction. By providing insights into expanding beyond local interactions, the study enhances understanding of how clusters can increase the global reach and competitiveness of firms within them.

Originality/value – The platform established during the internationalization process was crucial, as SMEs within clusters often lack the resources, time and expertise to enter international markets alone. This platform helps SMEs overcome barriers such as size, resources and unfamiliarity with foreign markets.

Keywords Formal and informal networks, Small and medium-sized enterprises (SMEs), Global market, Internationalization process, Business promotion organizations, Cluster organizations

Paper type Research paper

Introduction

This study expands research on cluster dynamics by exploring external (exogenous) gaps in cluster internationalization, an area previously underexplored (Jankowska & Główska, 2016; Valdaliso, Elola, & Franco, 2016). It provides insights into how cluster organizations can use

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internationalization platforms to form global linkages, enhancing the global reach and competitiveness of cluster firms by overcoming challenges related to size, resources, novelty, and foreignness.

While earlier studies focused on internal (endogenous) gaps, such as within-cluster interactions between firms, education, research, capital, and policy, we focused on external connections. The study aligns with the regional innovation system concept, highlighting the essential flow of information among people, enterprises, and institutions to foster innovation (Håkansson, 1982; Håkansson & Snehota, 2017). These interactions are crucial for converting ideas into market-ready products or services.

This study offers a new perspective on the internationalization of business promotion organizations (clusters) within regional innovation systems, complementing previous literature (Balas Rant & Korenjak Černe, 2017). It integrates experiential learning and commitment, foundational to both the Uppsala internationalization model and interorganizational network embeddedness. This framework is vital, as many cluster actors, like SMEs, often lack the resources, knowledge, and capabilities to penetrate international markets independently (Chatterjee, Chaudhuri, & Vrontis, 2021). The cluster's internationalization platform helps these SMEs overcome the limitations of size, resources, and network position, aiding their market entry (Johanson & Vahlne, 2009; Kumar, Pullman, Bouzdine-Chameeva, & Sanchez Rodrigues, 2022; Spicka, 2022).

Environmental dynamism is a key construct in strategic management literature (Mohammad, 2019; Rialp-Criado, Gallego, & Rialp, 2022; Mainela, Puhakka, & Sipola, 2018; Rashid & Etemad, 2023; Alcaraz, Martinez-Suarez, & Montoya, 2024), increasingly important due to market instability and broader economic, technological, social, and political changes (Klein, Puck, & Weiss, 2019). In today's interconnected world (LeMahieu, Grunow, Baker, Nordstrum, & Gomez, 2017; Hyder, Sundström, & Chowdhury, 2022), constant turbulence and uncertainty require strategies suited to these conditions, differing from those for more stable, less interconnected times (Osarenkhoe, Fjellström, Abraha, & Awuah, 2020).

Recent studies show that institutional factors, such as political populism, shape the internationalization strategies of emerging market firms. Populist regimes in regions like Latin America create uncertainty and instability, raising transaction costs and risks, prompting firms to delay or adopt cautious international expansion strategies (Alcaraz *et al.*, 2024; Amal, Floriani, & Sosa Varela, 2024).

We posited that the mechanisms for internationalization are similar across firms, cluster organizations, and educational institutions, whether profit-seeking or non-profit. This study aligns with Franco, Haase, and Rodini (2020), who suggest that incubators' international cooperation supports SMEs' internationalization. While incubators foster entrepreneurship through resources and networks (Morant & Soriano, 2016, cited in Franco *et al.*, 2020, p. 2), cluster initiatives enable companies to collaborate and learn (Osarenkhoe & Fjellström, 2017).

The literature primarily views cluster internationalization through the tasks clusters perform and their links with international partners (Xu & McNaughton, 2006; Pla-Barber & Puig, 2009; Zen *et al.*, 2011, 2016; Richardson, Yamin, & Sinkovics, 2012; Valdaliso *et al.*, 2016). We examined how one cluster's internationalization platform integrates with global networks, employing a "matchmaking and capitalization" strategy to attract investment and enhance regional innovation.

This study addresses gaps in the literature on the impact of clusters on the internationalization of individual firms (Caputo, Pellegrini, Dabic, & Dana, 2016) and the positive effects of cluster activities on firm interactions, education, research, capital, and policy (Sölvell, 2009; Xu & McNaughton, 2006; Pla-Barber & Puig, 2009; Zen *et al.*, 2011; Colovic & Lamotte, 2014; Jankowska & Główska, 2016; Valdaliso, Elola & Franco, 2016).

Building on Schreier, Scherrer, and Udomkit (2019), this study calls for more research on external gaps (exogenous gaps) in cluster collaboration with global markets. Advances in ICT and globalization have facilitated the global internationalization of firms and clusters (Caputo *et al.*, 2016), creating new opportunities for international engagement. However, this global reach has also increased competition.

Previous studies focused on internal gaps within clusters (Morgulis-Yakushev & Sölvell, 2017) rather than external gaps concerning global market collaboration. We focused on global linkages between regional clusters and international partners, aiming to highlight critical exogenous gaps in cluster dynamics during internationalization. This study responds to calls for more research on external gaps, including cross-cluster gaps that hinder global collaboration (Jankowska & Głowska, 2016; Valdaliso *et al.*, 2016).

Summary of gaps filled and contributions

This study explores how the FPX cluster organization uses its internationalization platform to link its innovation system with global networks, enhancing competitiveness and facilitating access to global value chains. This connection promotes innovation and competitive advantage for firms and partners within the regional innovation system.

Previous research has largely concentrated on endogenous gaps—internal factors hindering cluster collaboration, such as interactions between firms, education, research, capital, and policy (Xu & McNaughton, 2006; Pla-Barber & Puig, 2009; Zen *et al.*, 2011; Richardson *et al.*, 2012; Sölvell, 2009; Colovic & Lamotte, 2014). These studies have shown the positive impact of cluster activities on the internationalization of individual firms within clusters (Caputo *et al.*, 2016; Valdaliso *et al.*, 2016).

In contrast, exogenous gaps—external factors related to clusters' global connections and interactions—have received less attention (Morgulis-Yakushev & Sölvell, 2017; Schreier *et al.*, 2019). This study addresses this gap by examining how FPX's internationalization platform connects with global innovation networks, facilitating “international matchmaking and capitalization” to secure investment capital and enhance international connections for start-ups and the regional innovation system.

Table 1 details the gap addressed and the study's contributions to the field of internationalization for clusters and firms.

Against this background, we aimed to answer the following research question:

RQ1. What are the key stages and strategies involved in the internationalization process of business promotion organizations, and how can the networks formed during this process effectively support their partners, particularly SMEs, in facilitating their international expansion?

A systematic literature review following PRISMA guidelines (Moher *et al.*, 2009) reveals that the internationalization process led by business promotion organizations - key players in regional innovation systems - provides a fresh perspective missing in current research on international business and regional development.

Workshops from previous and current regional development projects highlight that the networks or platforms created by these organizations are vital. SMEs within clusters often lack the resources, time, and expertise to enter international markets alone. The internationalization platforms developed by the cluster organization help SMEs overcome barriers related to size, resources, and market unfamiliarity (Falahat, Ramayah, Soto-Acosta, & Lee, 2020; Osarenkhoe *et al.*, 2020).

Theoretical underpinning

Internationalization process model

Scholars have widely examined the international expansion of small and medium-sized enterprises (SMEs), focusing on their access to foreign markets and global competitiveness (Vahlne & Johanson, 2017). This study uses the Uppsala internationalization model (Johanson & Wiedersheim-Paul, 1975) and the Stage Model Approach by Johanson and Vahlne (1977), foundational theories in international business that view internationalization as a series of incremental decisions responding to changing conditions. Experiential knowledge is crucial as

Table 1. The gap addressed and the study's contributions to the field of internationalization for clusters and firms

Aspects	Details
Gap in existing literature	<ol style="list-style-type: none"> <i>Internal vs. external gaps:</i> Prior studies predominantly focus on internal (endogenous) gaps impeding collaboration and mobility within clusters (e.g. between firms, education, research, capital, and policy). Studies include works by Xu and McNaughton (2006), Pla-Barber and Puig (2009), Zen et al. (2011), Richardson et al. (2012), and Caputo et al. (2016), Alcaraz et al. (2024), Rialp-Criado et al. (2022), Mainela et al. (2018), Rashid and Etemad (2023) <i>Focus on cluster activities:</i> Existing literature emphasizes the effects of clusters on the internationalization of individual firms within the cluster (Caputo et al., 2016; Valdaliso et al., 2016) <i>Limited research on global interaction:</i> There is a lack of research on external (exogenous) gaps relating to global linkages and interactions, i.e. how clusters interact with global markets and partners (Morgulis-Yakushev & Sölvell, 2017; Schreier et al., 2019)
Contribution of this study	<ol style="list-style-type: none"> <i>Focus on exogenous gaps:</i> This study shifts the focus to external (exogenous) gaps by examining the global linkages between regional clusters and international partners <i>International integration:</i> It explores how a cluster's internationalization platform can leverage global innovation systems and networks, facilitating international matchmaking, capitalization, and links to investment capital <i>Response to calls for research:</i> Addresses calls for more research on cross-cluster gaps and barriers to interaction with global markets (Jankowska & Główka, 2016; Valdaliso et al., 2016) <i>Broadens understanding:</i> Provides insights into how clusters can expand beyond local interactions to form international connections, thereby enhancing the global reach and competitive advantage of firms within the cluster

Source(s): The gaps presented in [Table 1](#) were identified by the authors through a Systematic Literature Review conducted in accordance with the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) as described by [Moher, Liberati, Tetzlaff, Altman, and the PRISMA Group \(2009\)](#)

it helps firms identify opportunities and allocate resources in foreign markets ([Li, Li, & Dalgic, 2004](#); [Rialp-Criado et al., 2022](#); [Mainela et al., 2018](#); [Rashid & Etemad, 2023](#); [Alcaraz et al., 2024](#)). This theoretical lens combines the Uppsala model's experiential learning-commitment mechanism with a focus on business network relationships and interorganizational network embeddedness.

The Uppsala model's core principles involve how organizations learn and how this learning influences their investment behavior ([Forsgren, 2002](#)). Additionally, the growth of skilled international trade professionals has made it easier for firms to hire experienced workers rather than develop this experience internally ([Hollensen, 2007](#)). As [Osarenkhoe \(2009, p. 287\)](#) states:

In an evolving international economy dominated by growing global integration, emerging fragmentation of traditional markets into global niches, and the birth of new competitive spaces thanks to technological developments, the steps and modes of foreign market entry could experience significant deviations compared to the internationalization patterns of firms characterized by a series of incremental decisions, experiential learning and risk aversion, as envisaged in the traditional sequential models.

The internationalization of firms has been a significant area of study over the past few decades (e.g. [Johanson & Vahlne, 1977, 1990, 1992; 2003, 2009; Dunning, 2000; Johanson & Mattsson, 1988; Sun, 2009; Schreier et al., 2019](#)). However, there has been less focus on the internationalization of small and medium-sized enterprises (SMEs). [Hammond and Groose \(2003\)](#) argue that international business activities should be viewed as a continuous

development of competitive capabilities to enhance firms' competitiveness against domestic and international rivals. As more SMEs begin operating internationally (Coviello & McAuley, 1999; Chetty & Campbell-Hunt, 2003; Franco *et al.*, 2020), understanding how they manage this challenge with limited resources is essential. Ngoma, Abaho, Sudi Nangoli, and Kusemererwa (2017) examined entrepreneurial orientation (i.e. innovativeness, proactiveness, and risk-taking) as a predictor of SME internationalization, establishing a significant relationship between these dimensions and internationalization.

Criticism of the stage model approach

The Stage Model Approach, traditionally used to explain internationalization, has faced criticism for its limited applicability to SMEs, which often internationalize through networks of relationships rather than following an incremental path (Kahiya, 2020; Paul, 2020). This critique has led to the development of International Entrepreneurship (IE) as a concept, emphasizing a more dynamic, learning-based approach (Linan, Paul, & Fayolle, 2019). In the IE framework, the internet is a critical source of market knowledge (Sinkovics, Sinkovics, & Bryan, 2013). Studies suggest that digital transformation can enhance SMEs' international engagement (Knight & Liesch, 2016), allowing them to gather foreign market information more rapidly and effectively manage knowledge within the firm.

Internationalization research has highlighted the importance of knowledge in firms' global expansion decisions. Country-specific knowledge significantly influences foreign direct investment location (Davidson, 1980), market selection (Erramilli, 1991), export performance (Ogasavara, Boehe, & Barin Cruz, 2016), and the scale of international expansion (Jiménez, Benito-Osorio, Puck, & Klopff, 2018). Such knowledge is critical for firms' commitment to foreign markets and is often more valuable than other types of knowledge (Pellegriano & McNaughton, 2017). Gulanowski, Papadopoulos, and Plante (2018) note that the pace and strategy of internationalization, as well as the importance of knowledge, vary among firms, leading to a distinction between "incremental" and "non-incremental" internationalization paths.

New perspectives on internationalization theories

Martins and Sarasvathy explore the application of effectuation theory in SME internationalization. Effectuation, an entrepreneurial concept, involves making decisions based on available resources and leveraging networks to manage uncertainties, rather than relying on predictive strategies. This approach provides SMEs with a flexible pathway to international markets, contrasting with traditional models that focus on forecasting and structured planning.

Rialp-Criado *et al.* (2022) offer a systematic review of how dynamic capabilities impact SME internationalization. "Dynamic capabilities" refer to a firm's ability to integrate, build, and reconfigure internal and external competencies to respond to changing environments. The study identifies essential capabilities, such as sensing market opportunities, seizing them through effective resource management, and transforming organizational structures to meet international demands. This highlights the importance of adaptability and flexibility in SMEs' international growth.

Mainela and Puhakka (2023) incorporate entrepreneurial cognition into the Uppsala model of internationalization, focusing on how entrepreneurs' cognitive processes, such as heuristics, biases, and learning, influence their internationalization decisions. This approach provides a refined view of the traditionally incremental Uppsala model, suggesting that cognitive factors significantly impact international expansion strategies.

Rashid and Etemad (2023) investigate the role of digitalization in internationalization, highlighting how emerging technologies, such as artificial intelligence, big data, and digital platforms, facilitate faster and more efficient market entry. Digital tools enable firms to gather information, engage with customers, and streamline operations, lowering barriers to international expansion and enhancing overall business efficiency.

In summary, these newer perspectives on SME internationalization emphasize a shift from traditional, incremental models to more dynamic, flexible approaches that account for uncertainty, digitalization, and diverse institutional environments. In other words, these new findings underscore the importance of understanding the institutional contexts in which emerging market firms operate, as they directly affect the strategic choices and internationalization processes of these companies.

Study on knowledge acquisition in networking for internationalization

Business networks are vital for firms, especially for the internationalization of born-global and international new ventures. Networking literature (Håkansson & Ford, 2002; Bell & Cooper, 2015) emphasizes cooperative relationships and their impact on actors, activities, and resources, highlighting the significance of quality and change in networking. Using Fletcher and Harris' (2012) framework on knowledge acquisition in internationalization, Bell and Cooper (2015) explore the roles of third parties in networking for internationalization within the knowledge-based natural health products (NHPs) sector in Canada.

Their study of three cases reveals that firms employed multiple network-related internationalization processes, including Johanson and Mattsson's (1988, 2006) network theory, Johanson and Vahlne's (2003) Uppsala Model update, and the resource-based perspective (Ruzzier, Antončič, & Konečnik, 2006). The firms networked extensively with third parties, such as government bodies, trade associations, advisors, consultants, and international networks, to acquire technical, market, and internationalization knowledge, confirming Fletcher and Harris (2012).

Bell and Cooper (2015) found that weak ties (Granovetter, 1973) with new third-party entrants enabled NHP firms to gain competitive advantages, helping them overcome the liability of outsidership in new international markets. The type, content, and sources of technical, market, and internationalization knowledge from third parties all significantly contribute to the internationalization process.

Study on networked internationalization in transition economies of Central and Eastern Europe

Central and Eastern Europe (CEE) spans from the Baltic to the Black Sea and from Germany's eastern borders to Russia's western limits, featuring diverse demographics and population sizes. Historically part of the Soviet Eastern Bloc, CEE countries transitioned to democratic governance and market economies after 1989–1991. Many have joined the EU and NATO, integrating more with Western Europe. The region has experienced economic growth and attracts foreign investment, although disparities exist. CEE boasts a rich cultural heritage and good education but faces demographic challenges and inequality. Infrastructure modernization is uneven, with expanding tech sectors. Key concerns include environmental sustainability and reducing energy dependence on Russia. Notable countries in the region with unique development paths include Poland, the Czech Republic, Slovakia, Hungary, Romania, Bulgaria, and the Baltic States.

A study by Osarenkhoe *et al.* (2020) examined the internationalization of Scania in Croatia and Statoil in Estonia using a network-based model. These firms entered markets with different characteristics from their domestic markets, making the traditional network model (Axelsson & Easton, 1992; Mattsson & Johanson, 2006) inadequate for fully explaining their establishment in these transition economies. Since the network perspective (Ashton, 2006; Johanson & Vahlne, 2003) generally applies to development processes, Osarenkhoe *et al.* (2020) argue it needs modification for diverse economic contexts. The establishment process model was more effective in explaining these firms' entry into less structured markets like Croatia and Estonia. Manolova, Manev, and Gyoshev (2010) emphasized the importance of inter-firm networks and called for more research on transition economies, noting their study in Bulgaria focused on the network effect on internationalization.

Formal and informal networks

Networks can be either formal or informal. Jeong (2016) defines formal networks as structured business relationships, while informal networks are based on personal relationships. Zhou, Wu, and Luo (2007) highlighted that informal networks provide knowledge about foreign market opportunities, counseling, and experience-based learning, fostering trust and loyalty. Participating in formal networks allows companies access to shared skills and resources, whereas operating independently often involves higher costs and risks. Both network types offer distinct advantages (Fernhaber & Li, 2013).

The literature distinguishes between formal and informal networks (Hill, McGowan, & Drummond, 1999; Forsgren, 2002; Hyder *et al.*, 2022). Forsgren (2002) describes formal networks as business networks with interconnected actors. Johanson and Vahlne (2009) view the market as a network of interlinked actors, arguing that establishing in a new international market requires active participation in the current market network. Such engagement can increase knowledge, opportunities, trust, and profits (Franco *et al.*, 2020; Osarenkhoe *et al.*, 2020). Hill *et al.* (1999) define informal networks as social networks incorporating relationships outside the workplace, which present opportunities for firm expansion and development. Granovetter (1973) suggests larger networks offer more opportunities than smaller ones. Scholars also argue that informal networks are valuable assets for firms seeking new markets (Hyder *et al.*, 2022).

While substantial research exists on the importance of networks for firms aiming to internationalize, this study's conclusions differ from existing findings. Researchers like Coviello and Munro (1995), Zain and Ng (2006), and Ojala (2009) have called for further research. Both formal and informal networks are crucial in internationalization, yet Ojala (2008), Eberhard and Craig (2013), and Jeong (2016) advocate for more studies to clarify their roles. Additionally, there is a need for research on how these two network types interconnect (Zhou *et al.*, 2007; Hyder *et al.*, 2022).

Methodology

A systematic literature review following PRISMA guidelines (Moher *et al.*, 2009) identifies a research gap in the limited focus on the internationalization process of business promotion organizations. The review points out that there is insufficient attention to how networks developed during their internationalization can support the internationalization of SME partners. Previous studies mainly address endogenous gaps related to cluster dynamics and the internationalization of profit-oriented firms. This led to the research question: What stages and strategies are involved in the internationalization of business promotion organizations, and how can the networks formed during this process support SME partners in expanding internationally?

To answer this question, a qualitative methodology is recommended to explore different forms of network embeddedness, allowing for a detailed examination in complex settings (Doz, 2011). We adopted a qualitative case study approach, as suggested by Yin (2014), to investigate the phenomenon within its specific context. This approach aligns with the needs of business network studies (Halinen & Törnroos, 1998) and provides a comprehensive perspective for interpreting data at both organizational and individual levels (Koporcic & Törnroos, 2019).

Data collection

We collected data from a cluster organization (business promotion organization) through in-depth interviews with six key managers and officials, as well as 14 “inwardly” and 14 “outwardly” internationalized member firms. Additional data came from roundtable discussions involving ten participants during a visit by international experts from Vinnova (Sweden's innovation agency) to evaluate the first three years of the organization's GeoLife Region initiative. One co-author attended a session on research and knowledge

competitiveness, while the other participated in workshops with the organization and SMEs on internationalization. We conducted two rounds of 2-h talks with four cluster initiative leaders and regional network members, followed by a third round of interviews with ten regional innovation system members via Microsoft Teams.

In total, we conducted 58 interviews – 48 face-to-face between 2017 and 2019, and 10 post-Covid's online via Microsoft Teams in March 2022—reflecting a longitudinal data collection approach. Respondents included six key informants, representatives from 28 SMEs, 10 members of regional innovation systems, and four process leaders from regional and local networks. All interviews were recorded and transcribed to encourage open dialogue on the research questions.

This case study, guided by [Ghuri, Grønhaug, and Strange \(2020\)](#), focuses on a non-profit research and innovation cluster organization in Sweden. We used this to explore the platform created by the organization to facilitate internationalization and assist cluster partners in navigating challenges posed by globalization and shifts in business logic.

Additional methodological considerations

Using an interactive approach, we aimed to elucidate how a cluster organization establishes a platform to support internationalization, enhancing the competitiveness of its regional innovation system partners and their access to global value chains, thereby fostering innovation. We examined how a Swedish cluster organization extends its innovation system globally through its internationalization platform, integrating it with other international innovation networks. This study combined insights from the experiential learning-commitment interplay in the Uppsala internationalization process model with a focus on business network relationships.

Data analysis

The analysis followed a three-step process as outlined by [Miles and Huberman \(1994\)](#). In the data reduction phase, we filtered and selected the collected data. For audio and video-recorded interviews, analysis began during transcription. In the data display step, we organized information to condense data and identify primary themes, focusing on the objectives, activities, and organization of clusters and networks. These themes provided insights into cluster initiatives, regional networks, and local networks in the region studied. The final step involved drawing and verifying conclusions by developing an understanding of the data from the earlier steps. These steps often overlapped and occurred simultaneously throughout the study.

In addition to the [Miles and Huberman \(1994\)](#) approach, we used [Hayes' \(2000\)](#) method for thematic analysis of interview data. This involved applying the four variables of the interaction approach to generate four themes or categories. We used an inductive approach to derive themes from interview responses, identifying recurring patterns to generalize common approaches and thoughts expressed by respondents. We compiled and categorized recorded responses according to research questions, further analyzing emerging themes to develop prototype themes. These prototypes were refined into final themes, which structured the presentation and discussion of the study findings.

Findings

Practical examples of internationalization of firms within the FPX network and internationalization platform

The FPX platform has established an internationalization platform under the Geo Life Region initiative, aiming to support and activate global projects. By leveraging a cross-sectoral and cross-border organizational network, FPX seeks to attract international partners and create a broader collaboration base. This platform facilitates access to international markets and

growth capital for companies within the FPX network, enriching global innovation interactions. Hence, creating an international innovation platform aimed at creating access to internationalization and growth capital for the companies in the cluster's network. Against this background, the detailed interactions in FPX could be framed within the broader context of global innovation interactions.

Moreover, FPX initiated TRIIP (The Regional Innovation Internationalization Project), targeting micro-enterprises in Gävleborg, Dalarna, and Värmland. The TRIIP project aimed to help businesses, innovators, and entrepreneurs with globally viable ideas, products, or services develop methods for international success. The project concluded in 2019, yielding notable success stories:

Tevsjö Distilleri: Through TRIIP, Tevsjö Distilleri received coaching to develop an internationalization plan, including market analysis, product evaluation, and translation for the Chinese market. In May 2018, they attended the SIAL Exhibition in Shanghai, organized by TRIIP.

Zava Tec: TRIIP helped Zava Tec refine their international marketing strategy, leading to two promotional trips to trade fairs and company visits. They used TRIIP funding to travel to the PaperCon Fair in Charlotte, North Carolina, where they secured a new customer and retailer.

InCoax: Joining TRIIP in 2016, InCoax benefited from workshops and coaching in business models, promotion, and networking. This support led to a trip to China, where they connected with investors and telecom and real estate companies. InCoax launched four new products last year, based on advanced technology and enhancements of existing products.

Findings from this study reveal that the internationalization process of a business promotion organization, a key player in a regional innovation system, offers a new perspective not covered in the existing literature. This investigation finds notable resonance with prior studies published in the *Central European Management Journal*, particularly “How to Successfully Internationalize SMEs...” (Balas Rant & Korenjak Černe, 2017) and “Interorganizational Network Embeddedness and Performance of Companies Active on Foreign Markets” (Balas Rant & Korenjak Černe, 2017).

We adopted a framework that integrates experiential learning and commitment, akin to the Uppsala internationalization process model, alongside a similar mechanism focusing on interorganizational network embeddedness. This approach is crucial because our study found that certain cluster actors, especially SMEs, face challenges like limited time, resources, internal knowledge-sharing activities, and innovative capacity (Chatterjee *et al.*, 2021). Furthermore, they often lack the necessary experience and networks to penetrate international markets independently. Consequently, the platform established by the cluster organization during its internationalization journey presents an opportunity for SMEs to mitigate constraints related to size, resources, novelty, and foreignness when venturing into unfamiliar markets where they lack a pre-established network.

The cluster organization is a prominent non-profit and distinguished cluster based in Gävle, Sweden. Since its establishment in 2006, it has been repeatedly recognized for its excellence, receiving the EU's Management Excellence Gold Award for both 2013–2015 and 2016–2020. Moreover, its managing director was honored as the European Cluster Manager of the Year in 2010. Moreover, the cluster organization attained the status of a Digital Innovation Hub by the EU in 2020.

Being driven by its members, the cluster organization is deeply committed to fostering growth and enhancing the well-being of Gävle's community, with a focus on creating an intelligent, sustainable, and vibrant urban landscape. Through the cultivation of partnerships and collaborations, the cluster organization facilitates the establishment of novel cross-sectoral connections encompassing business, academia, and the public sector.

Furthermore, the cluster organization plays a crucial role in propelling technological advancement by creating platforms and networks dedicated to exploring cutting-edge subjects such as blockchain, the internet of things (IoT), and artificial intelligence (AI). Its financial support comes from member companies, Region Gävleborg, and the European Regional

Development Fund. The cluster organization also leads the GeoLife Region initiative, a research program aimed at stimulating profit growth, which receives backing from Vinnova.

In essence, the cluster organization has emerged as a leading cluster in Europe renowned for its innovative and proficient utilization of geographic information technology. Its primary focus revolves around the development of location-based services, media, and solutions tailored for the smart cities and environmentally conscious societies of the future.

The most common reason for the cluster organization to consider international market expansion is to maintain its leading position in technology development. To this aim, the cluster organization must continue to identify the future needs of the market, respond appropriately to transformation processes, and strengthen its position in markets around the world. The cluster organization began by establishing international links with similar clusters in its Nordic neighbors as well as countries in the Baltic and Europe involved in the same field.

As time progressed, the cluster organization learned that to stay at the forefront of innovation, it must combine its core competencies with those from other, often diverse, areas of technology. To achieve this, it established relationships with several major global geospatial technology hotspots. Thereafter, it began to build new relationships with complementary knowledge and hotspot centers, such as the mobile and new media industry in Malmö, the digital media and gaming industry in China, the health industry in Beijing and Australia, and the sports industry in Åre, Barcelona, and Melbourne. This approach has enabled the cluster organization to engage in cross-cluster international innovation and, importantly, supports the strategy of “innovation to bridge the gaps.” Our findings show that the cluster organization’s internationalization strategy dates to 2005. As of 2012, its stated vision for spin-offs from its innovation system has been that these companies be “born global,” with a focus on China, the largest economy in the world. While the Chinese market has great potential, it also has a high psychic distance from its European counterparts.

According to a key informant,

The cluster organization GeoLife Region Initiative serves as an internationalization platform designed to bolster support and activate projects. Leveraging its extensive organizational network spanning sectors and borders, the cluster organization seeks to engage international stakeholders, expand its network, and forge partnerships to attract new projects, knowledge, and business opportunities. The primary goal of the cluster organization’s international innovation platform is to facilitate access to internationalization opportunities and growth capital for companies within its cluster network, thereby fostering entrepreneurship and commercialization.

Findings show that the cluster organization, overseen by Lantmäteriet, Gävleborg County Council, the University of Gävle, the City of Gävle, and other public entities, operates within the framework of the quadruple helix model, collaborating with a diverse array of stakeholders. This inclusive approach encompasses researchers, innovators, entrepreneurs, governmental bodies, municipal organizations, citizens, and other relevant parties involved in R&D endeavors. The cluster organization’s key partner is Business Sweden. It is a governmental and business sector-owned entity, which specializes in aiding international companies entering the Swedish market and supporting domestic firms in global expansion. Business Sweden has an extensive global network that spans 44 offices worldwide. Through it, the cluster organization gains access to otherwise challenging markets. Moreover, the cluster organization engages with over 200 private sector companies actively involved in its projects. In the academic realm, the cluster organization collaborates closely not only with Swedish universities but also with institutions in Denmark, Norway, Australia, China, and beyond, as well as local educational platforms. With strategic internationalization efforts and research partnerships, the cluster organization has established offices in over 15 countries, utilizing these connections to assist companies in exploring new markets, sourcing suppliers, and accessing cutting-edge research.

The cluster organization’s global network helps local SMEs internationalize and reach new markets. It also attracts international firms to the home market in Gävle, strengthening the GIS

environment in the region. Among the benefits reaped from the cluster organization's internationalization are increased access to knowledge, markets, and key infrastructure. Internationalization also helps the cluster organization access new business partnerships and collaborative research. Furthermore, internationalization expands its knowledge base by sourcing knowledge, technology, and skills from locations other than firms' traditional environment. Transformation processes in value chains drive change, spurring clusters to adopt a global mindset and internationalize in response to that change.

Discussion

The discussion centers on internationalization strategy, learning, competences, and networks. Our empirical study explored the interplay between experiential learning and commitment, which drives the mechanisms in the Uppsala internationalization model (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977). We also identified a similar mechanism within business network connections (Forsgren, 2002).

FPX's internationalization strategy

FPX's strategy to internationalize and stay at the forefront of technology aligns with behaviors described by Ayakwah, Nicolopoulou, Karatas-Ozkan, and Nouman (2019). The FPX cluster leverages its international platform to integrate into global innovation networks, enhancing "international matchmaking and capitalization" and securing links within its cluster. This supports the idea that innovation is often a collaborative process (Windrum, Schartinger, Rubalcaba, Gallouj, & Toivonen, 2016; Chesbrough, 2003; Bogers, Chesbrough, & Moedas, 2018). FPX blends its core competencies with various technology areas, consistent with the Industrial Marketing and Purchasing Group's interaction approach (Håkansson, 1982; Håkansson & Snehota, 2017).

This strategy enhances international connections for start-ups and the regional innovation system. An innovation system emphasizes the flow of technology and information among people, enterprises, and institutions, transforming ideas into marketable products or services (Pino & Ortega, 2018; Asheim & Coenen, 2005). It involves the interactions needed to initiate, modify, and diffuse new technologies.

FPX's internationalization followed a sequential process, starting with markets close in psychic distance, in line with the incremental internationalization model (Johanson & Vahlne, 1977, 1990; Schreier *et al.*, 2019). The use of experiential learning-commitment mechanisms in business networks allowed FPX to enter more distant markets (Johanson & Vahlne, 2003).

Interaction parties

FPX collaborates with various actors, including innovators, entrepreneurs, companies, organizations, politicians, researchers, students, and citizens, all focused on advancing smart, sustainable cities. FPX supports these stakeholders by providing innovation platforms and models to engage users and markets. Intensive interactions occur through meetings among companies, organizations, researchers, and users (Sölvell, 2009; Ayakwah *et al.*, 2019; Schreier *et al.*, 2019; Tartaruga, 2020).

FPX's global mindset fosters partnerships that secure resources and expertise, facilitating international expansion. This aligns with the traits of SMEs—innovativeness, proactiveness, and risk-taking (Ngoma *et al.*, 2017; Schreier *et al.*, 2019). Combining core competencies with various technologies helps identify opportunities and select entry modes for internationalization (Schreier *et al.*, 2019; Galkina & Chetty, 2015).

Relationship atmosphere

The FPX cluster fosters collaboration between business, academia, and the public sector, bridging endogenous gaps and advancing knowledge in digital fields like GIS, AI, IoT, and

blockchain. The Gävle Innovation Arena digitally models societies, enhancing FPX's role in promoting sustainable growth (Schreier *et al.*, 2019; Tartaruga, 2020). The FPX network is funded by member companies, the Gävleborg Region, and the European Regional Development Fund. In 2020, the EU named it a Digital Innovation Hub. FPX also contributes to the Geo Life Region program funded by Vinnova.

FPX leverages its network, including Business Sweden and Swedish diplomatic channels, to facilitate its internationalization. Business Sweden provides strategic support, practical expertise, and market access through its global offices, enabling FPX to navigate regional business structures effectively.

Acquisition of knowledge in networking for internationalization. Drawing from Håkansson and Ford's (2002) definition of a "network" as a structure comprising interconnected nodes, we situate the business market as a complex network where actors, resources, and activities are intricately linked. This interconnectedness goes beyond individual entities, encompassing various business units, relationships, and technological resources.

Aligned with the network approach (Håkansson & Ford, 2002; Bell & Cooper, 2015), our findings underscore the importance of establishing both formal and informal relationships with network participants in foreign markets (Zhou *et al.*, 2007; Jeong, 2016). The internationalization process hinges on cultivating and sustaining these relationships to access external resources, as proposed by Johanson and Mattsson (1988). This framework of interdependency requires coordinated operations and effective management of ties.

Our study also supports Johanson and Vahlne's (2003) assertion that internationalization can manifest through extension, penetration, or integration into foreign markets. From a network theory perspective, we explored not only firm dynamics but also interactions with network participants, fostering collaboration while remaining embedded in distinct environments, as explained by Johanson and Mattsson (1988).

Our research aims to show how a cluster organization's internationalization platform serves as a gateway to integrate the broader innovation system globally, fostering connections with other international innovation networks. The cluster organization's internationalization strategy contrasts sharply with the core assumption of the Uppsala model (Johanson & Wiedersheim-Paul, 1975) that entities start foreign operations in countries with low psychic distance. To establish itself in China, the cluster organization encouraged its domestic center, the city of Gävle, to partner with Zhuhai City in China's Guangdong province, the world's fastest-growing region. The cluster organization is internationalized to stay at the forefront of technology development, requiring the identification of emerging market needs.

Fernhaber and Li (2013) argue that formal network participation enables firms to access the skills and resources of other firms to complete tasks, supporting the cluster organization's strategy. The organization's innovative, proactive, and risk-tolerant global mindset (Ngoma *et al.*, 2017; Schreier *et al.*, 2019) has led to new partnerships securing resources and expertise necessary for international expansion, including access to investment capital and international platforms.

The findings support the increasing relevance of non-sequential growth trajectories, though this does not necessarily contradict Johanson and Vahlne's (1977, 1990, 2003) model. Key aspects of the traditional model, such as experiential learning (Forsgren, 2002; Johanson & Vahlne, 2003) and international networking (Mattsson & Johanson, 2006; Mort & Weerawardena, 2006), retain validity in non-sequential internationalization processes. According to Mainela (2003), establishing a functional network is crucial. To sustain long-term international collaborations, the cluster organization's management must cultivate both formal and informal relationships with numerous stakeholders.

The study also shows that the cluster organization's initial internationalization strategy followed a sequential process, aligning with Johanson and Vahlne's (1977, 1990) description of how Swedish firms expand internationally. The process began by building links with clusters in Nordic neighbors, the Baltic countries, and Europe in similar technology areas, starting with markets with low psychic distance. This behavior aligns with the observed

tendency of firms to make incremental decisions about their international market engagements (Johanson & Wiedersheim-Paul, 1975).

According to Franco *et al.* (2020), this arises from an entrepreneur's international vision, even for young firms that can be considered born globals. The cluster organization exhibits a born global mindset. Even with non-sequential internationalization patterns, the organization operates within the framework where the sequential model's basic assumption retains validity (Osarenkhoe, 2009). The organization combined the interplay of experiential learning commitment from its previous internationalization process with a similar mechanism focused on business network relationships (Johanson & Vahlne, 2003; Hyder *et al.*, 2022), enabling entry into markets with high psychic distance.

Our findings align with the basic tenets of the network approach. The internationalization process relies on establishing and maintaining formal and informal relationships with network participants in foreign markets to access external resources (Johanson & Mattsson, 1988). This structure of interdependency requires coordinated operations and ties management, features utilized by the cluster organization during internationalization. Johanson and Mattsson (1988) propose that internationalization can occur through extension, penetration, or integration. Network theory focuses on the firm's relationships with network participants, facilitating cooperation while firms remain embedded in their unique environments Johanson and Mattsson (1988).

To stay at the forefront of innovation, the cluster organization decided to combine its core competencies with diverse technology areas. Realizing that active network participation helps identify opportunities further influenced its choice of entry modes and nodes during internationalization (Osarenkhoe *et al.*, 2020; Schreier *et al.*, 2019; Sandberg, Holmström, Napier, & Levén, 2015; Galkina & Chetty, 2015; Jeong, 2016). The organization established relationships with several of the largest global geospatial technology hotspots. This aligns with Zhou *et al.*, 's (2007) suggestion that informal network participation increases knowledge about foreign market opportunities and fosters experience-based learning, trust, and loyalty.

The cluster organization also built relationships in industries with complementary knowledge, such as the mobile and new media industry in Malmö, digital media and gaming in China, the health industry in Beijing and Australia, and the sports and recreation industry in Åre, Barcelona, and Melbourne. The cluster's strategy is thus perceived as a gap-bridging one. Our findings relate to Schreier *et al.*, 's (2019) study on developing international partnerships to create, explore, and exploit opportunities, emphasizing the importance of close, trustworthy interpersonal relationships.

Our findings demonstrate that cluster participants benefit from specialized business support services provided by cluster organizations that stimulate and organize actions. As firms increasingly integrate into global value chains to remain competitive, being part of a cluster is advantageous (Pavelkova, Pavel, Bialic-Davendra, & Knapkova, 2015). "Going international" can be crucial for clusters in emerging industries undergoing digital transformation. These processes necessitate a global mindset in the cluster's internationalization strategy. Establishing a global presence can significantly impact firms in these industries, making cluster internationalization essential.

Our findings reveal that effectively leveraging the global innovation ecosystem enhances international connections for startups and regional innovation networks, highlighting the significance of the innovation system. This system underscores the crucial flow of technology and information among individuals, businesses, and institutions in the innovation process. It represents a network of public and private institutions whose activities facilitate the inception, adoption, adaptation, and dissemination of new technologies.

Globalization has become a prevalent phenomenon worldwide, with recognition of the pivotal role of knowledge in guiding firms' international expansion decisions, as evidenced by the business promotion organization's internationalization process discussed in this study. Previous research (Glavas, Mathews, & Russell-Bennett, 2019) and our findings underscore the importance of possessing specific knowledge about different countries, influencing

decision-making across various aspects of the internationalization process. These include identifying suitable locations for international activities (Davidson, 1980), choosing markets (Erramilli, 1991), enhancing market performance (Ogasavara *et al.*, 2016), and determining the extent of international expansion (Jiménez *et al.*, 2018). This knowledge influences an organization's commitment to foreign markets and is considered more valuable than other forms of knowledge (Pellegrino & McNaughton, 2017). As Gulanowski *et al.* (2018) highlight, research suggests that the speed of expansion, strategy, and knowledge importance vary throughout the internationalization process. Consequently, this has led to a division in international business research between companies following an “incremental” or “non-incremental” internationalization path.

Finally, a gap identified by a systematic literature review following PRISMA guidelines (Moher *et al.*, 2009) is the limited focus on how business promotion organizations, like cluster organizations, act as platforms to facilitate SME partners' internationalization processes, despite earlier research highlighting endogenous gaps crucial to cluster dynamics.

Findings in this study show that a cluster organization holds significant social and economic implications for the regions or sectors they represent, as clusters are established when businesses within a particular industry collaborate, share resources, and enhance their collective competitiveness.

Concluding remarks and implications

We examined the internationalization process of business promotion organizations, focusing on key stages, strategies, and the networks formed during this process to support their partners, particularly SMEs, in expanding internationally. Experience-based workshops from our previous regional development projects, revisited in this study, indicate that the networks or platforms established by a business promotion organization during its internationalization process are crucial. SMEs within clusters often lack the resources, time, and expertise to enter international markets independently. The cluster's platform, developed during its internationalization, helps SMEs overcome barriers such as size, resources, and unfamiliarity with foreign markets (Falahat *et al.*, 2020b; Osarenkhoe & Fjellström, 2021).

Our findings highlight that the internationalization platform of a cluster organization plays a pivotal role in the entire global innovation system by integrating with other international innovation networks. This platform is vital because many SMEs in clusters face constraints, including limited time, resources, internal knowledge exchange initiatives, and innovation capacity (Chatterjee *et al.*, 2021). These challenges, coupled with a lack of experience and networks, often hinder their independent entry into international markets. Consequently, these platforms serve as essential tools for SMEs, enabling them to overcome inherent limitations related to size, resources, novelty, and unfamiliarity in foreign markets where they lack established network connections (Johanson & Vahlne, 2009; Spicka, 2022; Kumar *et al.*, 2022).

This study bridges research on the internationalization of not-for-profit organizations with internationalization theory and cluster dynamics by providing insight into the internationalization strategy of a Swedish cluster in the GIS industry. The study emphasizes exogenous activities critical to cluster dynamics that enhance cooperation with global markets. It also contributes to the literature on how location influences firm competitiveness and helps firms gain access to new foreign markets.

We explored the internationalization of a cluster organization to further our understanding of how formal and informal networks come together to support international establishment. The cluster was found to serve as a springboard for SMEs and other firms, boosting their competitiveness and helping them gain access to global value chains and new markets (Franco *et al.*, 2020).

The ability of a cluster organization to manage and coordinate the cluster's business activities strongly affects the competitiveness of its firms. The path to commercializing

innovation and moving from idea to market can be complex, with many possible entry and exit points (Schreier *et al.*, 2019). Cluster participants, often SMEs, are usually short on the time, resources, knowledge, experience, and networks required to break into international markets independently (Hyder *et al.*, 2022). With more of these capabilities, the experience and resources of the cluster organization can be tailored to support and create tools for its participant firms, facilitating their path to internationalization. The combination of a shared understanding, a well-thought-out strategy, and consistent implementation can lead to successful internationalization. Achieving this requires cluster managers to have the skills to build long-term partnerships with clusters in other sectors and countries.

A sustainable internationalization platform created by clustering resources is crucial today because information and communication technology fundamentally disrupt traditional industries, labor markets, and the global economy (Einsiedler, 2013; Lee, Kao, & Yang, 2014), transforming various facets of exchange (Hagberg, Sundstrom, & Egels-Zandén, 2016). For companies, this means opportunities for new or revised business models, from marketing and sales channels to logistics (Ivang, Rask, & Hinson, 2009). Increased availability, shorter lead times, faster time-to-market, and lower transaction costs challenge traditional business models and value chains (Holmlund, Kabadayi, & Löfgren, 2017). At the same time, digital advances reduce overall costs and offer opportunities for SMEs previously unable to compete with larger, more established firms and brands. For SMEs with limited resources, collaborative development environments (Mendikoa, Sorli, Barbero, Carrillo, & Gorostiza, 2008; Lin, Nagalingam, Kuik, & Murata, 2012), like the cluster organization internationalization platform, become even more important, reinforcing the need for clusters and firms to manage interactive innovation processes effectively.

Implications for practitioners

Strategic Internationalization: Cluster organizations should start internationalization efforts regionally by forming connections with clusters in the Nordic and Baltic countries. This step-by-step approach supports manageable expansion and establishes foundational networks.

Network Utilization: Cluster organizations should leverage their networks to support SMEs by helping them bridge gaps in resources and knowledge needed for international market entry. This involves integrating the cluster's core competencies with complementary technologies from global partners.

Innovation Leadership: Emphasizing innovation leadership is crucial for maintaining competitiveness in the global market. Clusters should combine their internal strengths with external innovations to enhance their technological and market positions.

Support Mechanisms: To overcome barriers such as limited size, resources, and unfamiliarity with international markets, clusters should provide robust support platforms for SMEs, including access to expertise, market information, and potential partners, thereby enhancing their international expansion capabilities.

Additionally, clusters should target international partnerships in the most dynamic regions to succeed in global markets (Holmlund *et al.*, 2017). Cluster firms can leverage their organization's internationalization activities for better outcomes.

Theoretical implications

External Barriers: This study shifts focus from internal to external barriers in cluster internationalization, emphasizing global connections and the relationships between regional clusters and global innovation partners. It highlights external challenges that facilitate a cluster's international expansion, previously overlooked in the literature (Kumar *et al.*, 2022; Spicka, 2022).

Inside-Out Innovation: Future studies should explore the role of regional innovation systems, such as clusters, in long-term economic development. Research should focus on establishing innovation ecosystems within regions, addressing the needs of policymakers.

Regional Stakeholders: The study underlines the need for a deeper understanding of stakeholders within regional innovation systems, emphasizing the role of cluster organizations in facilitating knowledge exchange and fostering innovation.

Digitalization: While previous studies link international business competencies with SME performance, there is a lack of focus on digitalization's impact. Future research should address this gap to better understand digitalization's role in SMEs' international expansion strategies (Vahlne & Johanson, 2017; Coviello, Kano, & Liesch, 2017).

Social implications

Cluster organizations enhance community ties by fostering a sense of collaboration among businesses, workers, and stakeholders. They provide platforms for networking, knowledge exchange, and skill development, strengthening social bonds. Through community outreach, clusters also contribute to local development, education, and philanthropy, increasing their social impact.

Economic implications

Cluster organizations drive regional development and competitiveness by pooling resources and expertise, leading to economies of scale, cost reductions, and innovation. This results in increased productivity, job creation, and higher wages, enhancing regional economic well-being. Clusters also attract investment by showcasing their collective strengths, which stimulates growth and creates a prosperity cycle.

Moreover, clusters serve as hubs for research and development by promoting innovation and technological advancement. By fostering collaboration between businesses, academic institutions, and research organizations, clusters drive competitiveness and ensure long-term viability. In sum, cluster organizations significantly impact social and economic development by fostering collaboration, driving innovation, and promoting regional growth.

Practical/managerial and theoretical implications for Central and Eastern Europe (CEE)

Implications for practitioners in CEE. This study offers important insights for managers of cluster organizations and SMEs in Central and Eastern Europe (CEE). A regional approach to internationalization—starting with connections to Nordic and Baltic clusters—helps organizations expand internationally within familiar cultural and economic settings.

Given CEE's transition from communist regimes to market economies, strong networks are essential for supporting SMEs with limited resources in entering international markets. Managers should leverage these networks to overcome barriers related to size, resources, and market unfamiliarity, and to facilitate market research, technological integration, and foreign partnerships.

Innovation leadership is crucial in CEE's evolving economy. Cluster managers should integrate core competencies with advanced technologies from global hubs, such as in geographic information systems (GIS), to enhance technological capability and attract international opportunities.

Non-profit business promotion organizations play a key role in regional innovation systems. Managers in CEE should use these organizations to support SMEs' access to global markets and regional economic development.

Implications for researchers in CEE. The study integrates the experiential learning-commitment framework from the Uppsala model with a focus on business network relationships, which is particularly useful for understanding internationalization in CEE's transitioning economies.

Researchers should use qualitative methodologies to explore the complexities of network embeddedness within clusters in CEE, considering the region's unique historical and economic transitions. This study also suggests that theoretical models should include the strategic roles of non-profit business promotion organizations in regions like CEE undergoing significant transformation.

This study enhances understanding of how cluster organizations in CEE can navigate internationalization through regional networking, innovation leadership, and robust support mechanisms, contributing to the theoretical understanding of internationalization in transitional economies.

Suggestions for further research. Future research should consider comparative studies across different CEE countries, focusing on economic data. Larger quantitative studies could provide more generalizable results. Exploring multiple theories could also provide additional perspectives.

Researchers should continue using qualitative approaches to gain insights into the mechanisms driving cluster internationalization, investigate the adaptation of the experiential learning-commitment framework to different regional contexts, and examine the role of non-profit organizations in regional innovation systems.

Integration with global hubs, as revealed in this study, is beneficial for cluster organizations. Future research should explore these dynamics and their impact on innovation and international reach.

Overall, a network-driven approach to internationalization, combined with innovation leadership and support mechanisms, can effectively facilitate the global expansion of SMEs in CEE clusters. This study fills research gaps by examining global linkages and cross-cluster interactions, enhancing the global reach and competitiveness of firms.

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