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## Article

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## MANAGEMENT | RESEARCH ARTICLE

# A business ecosystem framework for SME development through associative and non-associative business structures in the digital age

Amalia Georgescu<sup>1\*</sup>, Marc K Peter<sup>2</sup> and Silvia Avasilcai<sup>1</sup>

**Abstract:** Associative business structures (business associations) and non-associative business structures (those without any formal or juridical associative agreement) provide platforms to share knowledge, gain insights and collaborate. One additional benefit to participate in these structures is the opportunity for business development. In some cases, and especially for SMEs, they provide important market opportunities and access to relevant stakeholders. This literature review is aimed at identifying the concepts about associative and non-associative business structures in the context of the digital age and digital transformation. The



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### ABOUT THE AUTHORS

Amalia Georgescu is an economist and a PhD student at the Faculty of Industrial Design and Business Management at the Technical University GHEORGHE ASACHI in Iași, România. Her research areas are business ecosystems, digital transformation, and SME market development. Amalia research as part of her PhD is focussed on how associative business structures can help companies to adjust to the new digital ecosystem opportunities, leveraging enhanced associative business structures, including Digital Innovation Hubs. At the same time, Amalia is an entrepreneur running two companies (disinfection devices production and public relations services, training and events management).

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### PUBLIC INTEREST STATEMENT

A description of your paper of NO MORE THAN 150 words suitable for a non-specialist reader, highlighting/explaining anything which will be of interest to the general public

This article provides a literature review regarding the concepts describing associative and non-associative business structures in the context of digital transformation. The identified concepts enabled the development of a business ecosystem framework (BEF) for the digital age. The research highlights the importance of associations to take advantage of ecosystem dynamics and to provide services based on the identified BEF components. For example, associations shall seek diversity of actors in their network, provide (digital) platforms to foster networking, engage Digital Innovation Hubs to foster collaboration and innovation, and connect with digital entrepreneurs that provide stimuli to their members. For SME managers, the research provides guidance on how to best leverage a digital business ecosystem to advance their strategy and innovation capabilities. Most importantly, an SME might benefit from membership in an association that provides one or multiple offerings linked to the BEF that will support their business development strategies.

most often referenced concepts (business networks/business relationships, the diversity of actors in a network/business ecosystems, innovative networks, and stakeholder networks/business associations) and not yet prominent concepts (digital associations/digital networks, digital ecosystems/digital environment and digital entrepreneurship, e-markets/e-business environment and e-clusters/e-hubs/digital innovation hubs) provide input and ideas of how associative business structures could be supportive and relevant for SME business development in the digital era. As a navigation aid and for future research, these concepts were summarized in a business ecosystem framework (BEF) for the digital age.

**Subjects: Business, Management and Accounting; Entrepreneurship and Small Business Management; Small Business Management**

**Keywords: business development; business ecosystem; SME; digital business; associative business structures; non-associative business structures**

Digital business enables borderless worldwide access to organizations, no matter the size or industry, providing an opportunity for interconnection between different types of organizations, individuals, stakeholder networks, business associations or other types of collective business structures (Freeman, 1984; Kandampully, 2003; Romestant, 2020).<sup>1</sup>

In this context, digital transformation is rapidly and fundamentally changing existing businesses, organizations and/or markets and it becomes relevant for every actor in both a commercial and non-commercial sector. It is also widely acknowledged that organizations that miss or do not embrace fast enough the trend of digitalization (e.g., the adoption of digital technology, digital marketing, social network sites, e-commerce, on-line customer engagement, cloud storage, on-line broadcasted events, and many other digital opportunities), will most likely be slower, less flexible, more difficult to access and less competitive than other digitally advanced actors. They risk to becoming irrelevant according to new market requirements (Grab et al., 2019; Jelfs & Thomson, 2016; Peter et al., 2020; Westerman et al., 2014).

When drafting and implementing digital strategies, multichannel cooperation with stakeholders at different levels has become a cornerstone of contemporary business development. Multichannel cooperation allows organizations to engage external stakeholders and business associations in their value-creation activities (Lehtinen et al., 2019; Töytäri et al., 2015). Therefore, globalization and digital opportunities became a complex network of processes in which local and global activities are linked together and can operate in several directions, no matter the territory, the actors and/or their financial position (Romestant, 2020; Westerlung, 2020).

Small and medium-sized enterprises (SMEs) have an opportunity to participate in global collaboration via associative and non-associative business structures and become digitally engaged and connected to access more opportunities and to fast-forward their learning process. Being digitally engaged, the SME transformation process helps SME to remain competitive in global, uncertain environments (North et al., 2019). This also helps SME develop their products and services, grow their notoriety and access new potential markets with the help of these new digital opportunities (Georgescu et al., 2021).

Associative business structures are defined as “organizations through which a group of independent firms, typically in the same industry, pool their resources and coordinate their efforts so that they may speak with one voice on matters of shared interest” (Barnett, 2013), p. 214. Associative business structures, known usually as business associations, differ from other forms of interorganizational collaboration such as alliances (Gulati, 1998), business groups (Granovetter,

2005), or multistakeholder partnerships (Selsky & Parker, 2005). These three forms of interorganizational collaboration have a formal membership structure composed exclusively of organizations with enforcement mechanisms to ensure that members abide by the collectively agreed-upon norms and rules (Hollingsworth & Boyer, 1997; Parmigiani & Rivera-Santos, 2011). Business associations, on the other hand, differ from such within-group arrangements in one key respect based on their sole focus on collective action and common interest (Marques, 2017).

Non-associative business structures are created occasionally by organizations or individuals with a specific interest and/or around a specific project, without any formal or juridical associative agreement. Their group members collaborate or create a network to reach a specific number of objectives, to promote a specific product or service, to share common concerns, or to support a specific cause or a community. They can work in specific groups to exchange know-how and can thus form which is commonly referred to as a Community of Practice (CoP). CoPs are different types of groups of individuals, who might represent an organization who choose to come together to share their practice or ideas and learn from each other (McDonald & Mercieca, 2021).

As an example, in Romania, an emerging country located in the Eastern part of the European Union (EU) with its 1.33 million businesses, there are many associative structures with activity in the business ecosystem (i.e., over 400 business and professional associations), but there are only 15 associations dedicated to SME digital transformation (including Digital Innovation Hubs (DIH)). There are a small number of associative structures supporting SME in their digital journey (European Commission, 2022; National Trade Registration Office, 2022).

One of the most active associative business structures to help Romanian companies in the digital transformation process are DIH and IT cluster associations. All Romanian DIHs are young, with no more than 10 years of experience, and are mainly coordinated by academic specialists with few representations from entrepreneurs. It is the same situation as in most Eastern European countries where they had only in the last decades the opportunity to adjust their business development strategies and access funds for investing in digitalization, technology, and innovation (European Commission, 2022; National Trade Registration Office, 2022).

In Germany, one of the most developed countries in the EU, there are more than 2.7 million businesses that are represented by more than 300 large professional business associations and chambers. Of these, 65 are Digital Innovation Centers that continuously support SMEs developing digital business strategies (European Commission, 2022; Schröder, 2022).

Outside of the EU, the Silicon Valley of the San Francisco to San Jose Bay area in the USA was rated number one globally for its activity around innovation hubs (Ling, 2020). According to the global study, the Silicon Valley benefits from a balanced development of research innovation, an innovation economy and innovation ecosystem (Randolph, 2019).

However, despite the provided examples from Romania, Germany and the USA, the existing understanding of associative and non-associative business structures have, in many instances, not evolved from a digital transformation point of view. They risk becoming irrelevant for start-ups and established SMEs that need fast access to markets, relevant business networks and other means to better market their business in the digital age and on digital markets. Therefore, associative and non-associative business structures have an opportunity to invest in their own digital transformation to increase their digital capabilities and embrace new and upgraded (digital) offerings for their members in the digital age. This is especially relevant because one factor which contributes membership to business structures is the opportunity for business development for SME, because in many cases, organizations need to access relevant associative structures to help reach their financial and non-financial objectives, especially in a global, digital world.

## 1. Business development and digital transformation

Organizations across industries are responding at different levels to the emerging opportunities and challenges presented by the digital age and need to strategically adapt faster to implement new digital technology and business models and to remain competitive (Berman, 2012; Cascio & Montealegre, 2016 Peter et al., 2020). Digital transformation followed by a detailed outline of the impact on business operations and strategic considerations of companies are a strategic necessity to effectively manage the latest wave of technologically infused change (McKensey, 2018).

A comparison of 18 digital transformation frameworks and models with 115 dimensions (Bumann & Peter, 2019) revealed six strategic action fields of digital transformation, namely 1) strategy (the importance of building a sophisticated digital strategy for successful digital transformation), 2) organization (a collaborative and partnership driven approach by actively pursuing and fostering respectful relationships with various stakeholders), 3) culture (with digital leaders who have the ability to manage complexity, inspire and develop distinct digital cultures conducive to success and promote the development of innovative digital solutions despite investment risks), 4) technology (the organization's approach to the use of new digital technologies), 5) customer (the changing customer behavior around digital requirements), and 6) people (the organization's employees with their skills and capabilities).

While during the pandemic years of 2020/21, due to various Covid-19 restrictions, SME have increased their adoption of above action fields including digital platforms and on-line facilities (such as e-commerce websites, video streaming and online collaboration platforms), associative business structures, non-associative business structures and other types of professional networks still have not entirely embraced digital transformation and therefore not leveraged their potential (Eimhjellen et al., 2014; Hulubei (Georgescu) & Avasilcai, 2019; Nagel (2020), Webber et al., 2020).

Associative business structures tend to use and update information on their websites as their main online platform and post updates on their social network sites. Yet, the potential of other digital platforms and channels seems to remain unused and/or undiscovered, limiting their digital potential and strategy. This lack of digital skills including digital marketing capabilities, which can help business associations to gain more online visibility and digital engagement from their members or followers, remains an important strategic measure that has further potential. Grab et al. (2019) suggest in such an instance that self-managed teams might support organizations, such as associations, to benefit from market disruptions imposed by the digital era. Here, SME can still embrace and leverage massive potential by the opportunities provided from digital transformation (Chen et al., 2016; Hinings et al., 2018; Peter et al., 2020; Vial, 2019). Emerging technologies, as diverse as they are, offer a range of applications for them to improve performance and overcome the size-related limitations they face in doing business. However, SME must be better prepared and stakes are high. SMEs are an important economic factor in most countries and regions, and they create jobs and are the cement of inclusive and sustainable societies. The digital gap in individuals' skills and society overall has increased inequalities among people, regions and firms, and there are concerns that the benefits of digital transformation could accrue to early adopters, further broadening these inequalities (OECD, 2021). Enabling SME digitalization has therefore become a top policy priority in OECD countries and beyond.

## 2. Research question and methodology

Based on the hypothesis that associative and non-associative business structures have the potential to embrace digital transformation and provide platforms and tools for their members for relationship building and business development, this paper attempts to answer the following question: What are the most prevalent topics in the literature on associative and non-associative business structures that might provide business development opportunities to SME in the digital age?

A literature review with the goal to identify and analyze relevant literature regarding the connections and opportunities between the requirements of the digital age and current strategies of associative and non-associative business structures will be provided. The review will be carried out by considering digital transformation and further acceleration of digitalization with the Covid-19 pandemic crisis. The literature review was conducted via online research on the academic database platforms of ProQuest, Science Direct, Scientific.Net, ResearchGate, Google Scholar, and Semantic Scholar. Following a process of elimination of off-topic papers, 140 relevant articles and publications from these sources based on the pre-defined keywords and their multi-dimensional approach were identified. Keywords included business to business relations and networks in the digital/internet era, SME digital transformation, digital adoption process in associations/business network structures, digitally engaged associations, digital growth in SME, digitalization of associations/business networks and of SME, digital entrepreneurship, and associative networks in SME growth processes.

The identified articles were validated according to the importance of the study (i.e., its relevance to associative and non-associative business structures). Thirty-six articles were identified that allowed a deeper review and inclusion in this study. Based on the search terms and conceptual frameworks in the literature, key terms were classified which allowed a review and categorization of the articles, and thus a comparative study. Finally, the identified concepts were summarized and visualized in a business ecosystem framework (BEF) for the digital age, providing a navigation aid for SMEs, associative and non-associative business structures as well as other actors of ecosystems to innovate and leverage new digital technology for strategy and innovation purposes.

### 3. Findings

The literature review (see Table 1) revealed that the concept of business networks and notion of business relationships is most referenced in the identified literature (in 29 articles). In most cases, a business emerges from an idea or an opportunity in the market. From a value creation context, every business once formed, starts to create something new in the form of a product or service. This creation is most often only possible through connections and cooperation with other businesses and/or organizations, such as suppliers, distributors, government, or different types of experts. Cooperation, communication, and collaboration between companies for accomplishing certain objectives defines business networks and business relationships. It is a process of mutual beneficial relationship with other businesses, clients or professionals that relate in a specific industry or domain. Through engaging with business networks and utilizing business relationships, a business can develop innovative business processes, become more competitive and establish formal or non-formal agreements to fulfil strategic or operational business objectives, or share a specific business know-how.

The diversity of actors in a network or business ecosystem is the second most often referenced concept in the literature in 26 articles. Considering the actor-network theory of Romestant (2020) and business ecosystem theory of Fuller et al. (2019) as theoretical references, networks and business ecosystems are models of how business environments are built and how actors contribute to the development of activities in a network, but also in the business ecosystem. The proposed definition is the multitude of actors, factors and stakeholders that act in a specific environment or business field and, by constantly interacting in multiple ways at different levels with different types of expertise, they influence, provide value, and thus form the constantly evolving business ecosystem.

Innovative networks, the third most referenced concept in 20 articles, represent a group of organizations or specialists that collaborate, share knowledge, and common goals for research and development of new products, services, or technologies, according to the network objectives. As such, they provide input into the development processes of organizations and are a valuable source of information to advance businesses strategically. Stakeholders define different types of people, groups, or organizations that can influence the way a business or other entity works in its

**Table 1. Comparative analysis—concepts of associative business topics linked to digital business**

Topics source	Business networks/ Business relationships	Diversity of actors in a network/ Business ecosystems	Stakeholder networks in business associations	Innovative networks	Digital ecosystems/ Digital environment	Digital associations/ Digital networks	e-market/ e-business environment	e-clusters/e-hubs/ Digital Innovation Hubs	Digital entrepreneurship
(Achril & Kotler, 1999)	x	x	x	x		x			
(Autio et al., 2018)		x			x	x			x
(Barnett, 2013)	x	x							
(Becker & Schmid, 2020)	x	x	x	x	x	x			x
(Bennett & Ramsden, 2007)	x		x						
(Berman & Marshall, 2014)	x	x	x			x			
(Brey, 1999)	x	x	x	x		x			
(Castellani et al., 2017)		x				x			
(Cavinder et al., 2017)	x						x		
(Chen et al., 2016)	x	x		x					
(Dumitriu et al., 2019)	x	x			x		x		
(Freeman et al., 2006)	x	x	x	x					
(Georgescu et al., 2021)						x		x	x
(Håkansson & Ford, 2002)	x		x	x					
(Håkansson & Snehota, 1995)	x	x	x	x					
(Harris & Rae, 2010)	x	x		x					
(Hulubei (Georgescu) & Avasilcai, 2019)	x	x		x	x				
(Jelfs & Thomson, 2016)	x	x		x					
(Kärriäinen et al., 2020)	x	x	x	x	x	x			x
(Kandampully, 2003)	x					x		x	
(Lehtinen et al., 2019)	x	x	x	x					

(Continued)



**Table 1. (Continued)**

Topics source	Business networks/ Business relationships	Diversity of actors in a network/ Business ecosystems	Stakeholder networks in business associations	Innovative networks	Digital ecosystems/ Digital environment	Digital associations/ Digital networks	e-market/ e-business environment	e-clusters/e-hubs/ Digital Innovation Hubs	Digital entrepreneurship
(Lockett & Brown, 2000)	x	x						x	
(Marques, 2017)									
(Menzies, 1999)	x	x	x	x		x			
(Meynhardt et al., 2016)	x	x		x					
(Papa et al., 2018)		x			x	x			x
(Peter et al., 2020)					x		x		x
(Prüfer, 2015)	x		x						
(Pyle, 2005)	x	x	x						
(Rampersad et al., 2010)	x	x		x					
(Reypens et al., 2016)	x		x	x					
(Romestant, 2020)	x	x	x						
(Sahut et al., 2019)					x		x		x
(Turker, 2018)	x	x	x	x	x	x	x		x
(Utami et al., 2019)	x	x	x	x					
(Fuller et al., 2019)	x	x	x	x	x	x			x
<b>TOTAL</b>	<b>29</b>	<b>26</b>	<b>18</b>	<b>20</b>	<b>10</b>	<b>13</b>	<b>6</b>	<b>3</b>	<b>9</b>

domain, directly or indirectly influencing its actions and decisions. The stakeholders interconnect with one another, can work together in a network or in a specific partnership and can mutually influence each other or a specific organization. The importance of stakeholder networks in business associations was mentioned in 18 articles.

Other concepts/types of associative business topics linked to digital business include associations and networks that operate digitally, e.g., on digital platforms (13 articles), the impact of digital ecosystems and the digital environment to businesses (10 articles), digital entrepreneurship in terms of ventures in the digital domain (9 articles), electronic markets and e-business as platforms and channels (6 articles), and finally, electronic clusters and digital innovation hubs as platforms to collaborate with digital methods and tools (3 articles).

#### **4. A business ecosystem framework for business development in the digital age**

Networking and being connected in business networks/ecosystems at different levels and layers supports organizations in innovation, to increase their competitiveness and thus implement their strategies. When an organization is established and starts operating in the market, immediately it begins a long and on-going process of communication, cooperation, and development of different business relations with a wide range of stakeholders. This means that the business ecosystem, in which the organization operates, evolves, grows, and changes constantly by that organizations' actions, its products or services released to the market.

Being part of a business ecosystem, organizations, in this specific case SMEs, learn how to develop their business and take advantage of collaboration opportunities. They tend also to become part of cooperative platforms, especially members in associative business structures and non-associative business structures. The literature review revealed that there is a true distinction between the types and the benefits that offline traditional model of associative and non-associative business structures offers and those focused on promoting those more widely recognized in the digital age, including digital platforms, co-working hub models, digital innovation co-working projects, and digital transformation concepts. These concepts provide a basis and requirements for a new potential framework to define and take advantage of new business development opportunities for SMEs in the digital age.

The review identified that concepts such as e-market places, e-hubs, digital innovation hubs, e-clusters, and digital entrepreneurship embody at a higher degree the concepts of innovative business models, business networks, and business relationships between different organizations focused on integrating new digital technology and making them accessible to its members or stakeholders as part of digital transformation. However, they might not yet be fully leveraged by SMEs and embraced or understood by the market and its stakeholders. The proposed business ecosystem framework for SMEs to drive business development through associative and non-associative business structures in the digital age provides a navigation aid to leverage these business structures.

Business ecosystems have been explained first by showing similarities with the biological ecosystem (analogies with biological ecology, alliance clusters, and business symbiosis) and more recently from an industrial point of view (the economy as an ecosystem) where stakeholders interact for economic purposes and thus influence different types of actors in the market (Adner, 2013; Gălățeanu Avram & Avasilcăi, 2014; Hart & Sharma, 2004; Moore, 1993, 1997; Peltoniemi & Vuori, 2004).

Digital Business Ecosystem (DBE) literature appears as a subset within the business ecosystem literature and also includes the digital ecosystem terminology. DBE is a relatively new concept, which started in Europe to improve SMEs' efficiency using Internet & Computers Technology (ICT) for collaboration with seamless interoperability and networked architecture in a collaborative environment and to becoming more competitive in the market (Bharadwaj & Yeo, 2020; Chituc et al., 2007; Gupta et al., 2019; Kalenov, 2022; Russo Spina et al., 2021).

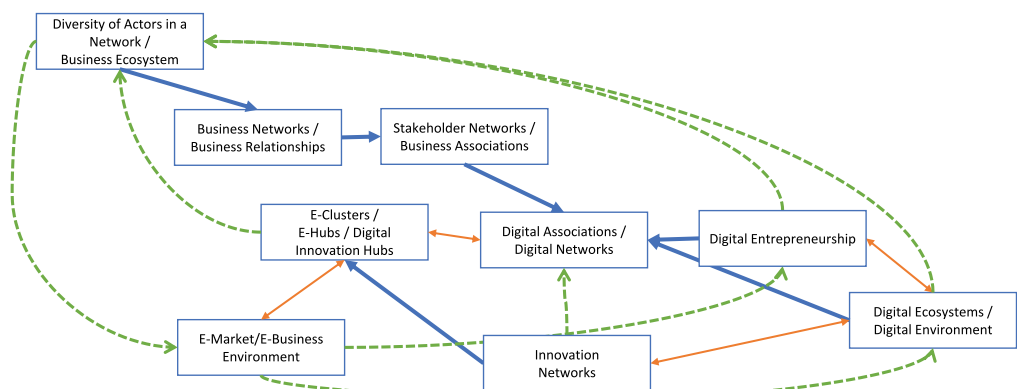
Without separating the ecosystem terminological and structural types, the ecosystem concept has been proposed to be unified under realization of a value proposition that is supported through an alignment structure and affiliation between different types of ecosystems, collaboration opportunities, partners or as a specific set of actors with multilateral complementarities that are not fully or hierarchically controlled but are bound by collective work (Adner, 2013; Gupta et al., 2019; Jacobides et al., 2018).

Having in mind the interconnected relations between different types of organizations, which are part of different emerging ecosystems, and in the context of digital transformation, a business ecosystem framework (BEF)—which considers the requirements of the digital age—is proposed (see Figure 1), not excluding all other impact factors and roles of other actors that could influence the development of an ecosystem at a certain point in time. Some of these interconnections are known in the literature as the quadruple and quintuple innovation helix framework that emphasizes the knowledge economy, cooperation, and interactions between different types of networks, hybrid organizations (universities, different industries, governments, European Union-sponsored projects and policies) and the collaboration or cross-learning opportunities involving the civil society, the creative industries, and other potential benefits of a specific cultural influence or natural environment (Carayannis & Campbell, 2009, 2014; Galvao et al., 2019; Höglund & Linton, 2018; Peris-Ortiz et al., 2016).

SMEs and other types of organizations are encouraged to access different forms of collaborative partnerships to gain knowledge, information, partnership opportunities, and competitive advantages in local or global business environments including financing opportunities for digitalization (Hettche & Walker, 2010; Kalenov, 2022). Collaborative partnerships can be formed in formal or non-formal associative structures with a specific objective or project, using different types of resources for reaching a specific result. Partnerships can be formed by different types of specialists or organizations and can work together even if they are working in the same industry or are competitors. From here, networking can develop opportunities for collaborative competition to innovate, to impact a specific industry and influence the normative or market regulations. The above framework reveals some of the most important objectives of business networks and business relationship, namely the importance of collective action, collaborative work for a specific objective, influential groups to mobilize masses or different institutions, support and know-how for internationalization or accessing new markets, changes, and new directions in a specific industry or society.

Therefore, the BEF framework for the digital age visualizes the interconnections at micro- and macrolevels between different potential actors, networks, associations, and how the elements of business environment, investment climate, the entrepreneurial culture and attitude of SMEs can work together to emerge into and develop the digital ecosystem to leverage business development opportunities.

**Figure 1. The business ecosystem framework (BEF) for the digital age, based on identified concepts from the literature review.**



The business ecosystem framework (BEF) provides the direct and indirect relations between different actors. The direct relations are those that derive as a natural result when actors work in the market environment and develop their businesses. Therefore, the business ecosystem becomes a platform for different types of cooperative forms (shown with the blue/bold connectors), such as business associations that can connect and impact other (digital) associations, as digital entrepreneurship automatically becomes part of the business network in a complex business ecosystem.

The direct cooperative relations influence each other and can impact both levels, generating new ideas and new market opportunities (shown with the orange/thin connectors). For example, digital entrepreneurship has a direct impact in developing and influencing the digital ecosystem. This also helps and encourages collaborative projects and innovation opportunities in digital associations, like digital innovation hubs/e-hubs/e-clusters, depending on their common objectives, with a direct impact in the e-market/e-business environment.

These microlevel relations have a general positive impact and influence other types of macro-level relations by encouraging the permanent innovation and cooperation, thus changing the business ecosystem, and forcing it to move to the next development level (shown with the green/dotted connections), having in mind the relationship between the diversity of actors in a network or a business ecosystem. They co-exist and co-work with the new digital ecosystems, which embrace new digital entrepreneurship opportunities, e-clusters, e-hubs, the digital innovation hubs, or other new business channels like e-markets or e-business environments.

The framework suggests how the business ecosystem and the relationships between the diversity of actors might evolve to the next level (i.e., actual projects and outputs) and might generate innovation based on new digital technology, and thus might create a digital ecosystem. At this new level, the connections in the BEF can change, evolve, and create new collaborative opportunities for the digital age. Organizations, being involved in associative or collaborative structures, benefit of individual and collective support, provide insights into different aspects and can encourage the development of business relationships and more powerful business networks.

## 5. Discussion and future research

The literature review identified the most prevalent topics in the literature on associative and non-associative business structures. Four concepts were referenced in more than half of the identified articles. Less mentioned concepts and topics might not be as important or applied in theory and business practice at this point of time but provide alternatives or new means to support SMEs in the digital age. They might provide the basis and requirements for a potential (and to be validated) framework to define and take advantage of business development opportunities for SMEs in the digital age. Therefore, associative and non-associative business structures might benefit from these concepts and the BEF in the future.

The review identified that such less often cited concepts including e-market places, e-hubs, digital innovation hubs, e-clusters, and digital entrepreneurship embody at a higher degree the concepts of innovative business models, business networks, and business relationships between different organizations focused on integrating new digital technology and making them accessible to its members or stakeholders as part of digital transformation but might not yet be fully embraced or understood by the market and its stakeholders.

A second major contribution is the new business ecosystem framework (BEF), supporting the business ecosystem with its actors to drive business development in the digital age. The proposed BEF provides the interconnections at micro- and macrolevel between different potential actors, networks, and associations.

Future research might validate the framework and help to understand the benefits and applications of the BEF and its concepts for business development of SMEs in the digital age. By doing so,

it would offer concrete recommendations to associative and non-associative business structures to enhance their products and services and thus add value to their respective markets and industries.

## 6. Managerial implications

The research highlights the importance of associations to take advantage of ecosystem dynamics and to provide services that consider the concepts of the business ecosystem framework for the digital age. For example, associations shall seek diversity of actors in their network, provide (digital) platforms to foster networking, engage Digital Innovation Hubs to foster collaboration and innovation, and connect with digital entrepreneurs that provide stimuli to their members.

For SME managers, the research provides guidance on how to best leverage a digital business ecosystem to advance their strategy and innovation capabilities. Most importantly, an SME might benefit from membership in an association that provides one or multiple offerings linked to the business ecosystem framework that will support their business development strategies. SME managers can thus tap into a digital ecosystem that supports entrepreneurship, builds innovative networks, and lets them participate in digital markets. As such, associations that provide digital business ecosystem services will support business development as they provide a platform to build the firm's own (digital) ecosystem.

## 7. Conclusion

The focus of the literature review was to discover connections between the needs and requirements of SMEs in developing and promoting their business using different types of associative and collaborative structures in the digital age, and how associative business structures can be supportive and relevant on the SME business development journey. The literature review revealed that there is a true distinction between the benefits that offline traditional model of associative and non-associative business structures offers and those focused on promoting those more widely recognized in the digital age, including digital platforms, co-working hub models, digital innovation co-working projects, and digital transformation concepts.

The most often cited concepts are business networks/business relationships, the diversity of actors in a network/business ecosystems, innovative networks, and stakeholder networks/business associations. Fewer referenced concepts include digital associations/digital networks, digital ecosystems/digital environment, and digital entrepreneurship, and finally, e-markets/e-business environment and e-clusters/e-hubs/digital innovation hubs.

There are still many unknowns and financial limitations for some of the researched structures, depending on the geographical location, the region's economic potential, government policies, and other internal or external factors. In future research, these concepts have the potential to be analyzed in more detail and linked to recommendations for SMEs and associative and non-associative business structures to provide business development opportunities in the digital age. Digital transformation is an on-going process that forces SMEs and associative business structures to change paradigms and to adapt/evolve their business models.

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