

Bathelt, Harald; Cantwell, John

Article

Communities in the internationalization process

ZFW - Advances in Economic Geography

Provided in Cooperation with:

De Gruyter Brill

Suggested Citation: Bathelt, Harald; Cantwell, John (2025) : Communities in the internationalization process, ZFW - Advances in Economic Geography, ISSN 2748-1964, De Gruyter, Berlin, Vol. 69, Iss. 1, pp. 55-72,
<https://doi.org/10.1515/zfw-2024-0073>

This Version is available at:

<https://hdl.handle.net/10419/333201>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Harald Bathelt* and John A. Cantwell

Communities in the internationalization process

<https://doi.org/10.1515/zfw-2024-0073>

Received August 2, 2024; accepted April 2, 2025;

published online April 28, 2025

Abstract: Much of the work on industrial location, internationalization and innovation is based on firm- or firm-network-level research, but does not consider the role of industry-based professional communities that can be crucial in providing access to knowledge, resources and personal networks. These communities, whose membership reaches well beyond firms themselves, are indispensable components of firms' everyday activities, yet are often overlooked when investigating firm behavior. This paper focuses on the one hand on the role of local communities and those individuals that form them, and on the other hand on how they link with international communities and become crucial facilitators of internationalization processes. In a co-evolutionary perspective, we investigate the role of local professional communities and the local-global interfaces that are created in internationalization processes, and how such localized activity may be associated with regional development. In a conceptual discussion, we propose that local professional communities and their local-international community connections are crucial to the capacity to engage in internationalization projects. From this, we discuss a number of related questions: First, who are the members of local professional communities and how do they create knowledge? Second, how do local professional communities develop and what are the driving forces that underlie their growth? Third, what are the conditions for the reproduction of local professional communities? We conclude by highlighting that the interrelationship between local and international communities is a critical feature of a permissive environment that facilitates corporate success in the internationalization process, and this favorable interaction between firms and their environment equally impacts

the development prospects of the city-regions where they are located.

Keywords: community development; community reproduction; international (industry-based) professional communities; internationalization processes; local (industry-based) professional communities

JEL Classification: F20; F63; R11

1 Introduction: firms, communities and their local-global interfaces

The work by Porter (1990) and many followers on industrial clusters has shown that firms' competitiveness does not just depend on internal capabilities but is fundamentally tied to their external business environment, especially the regional and national resource availabilities and constraints, demand structure, competitive conditions, and relationships with related and supporting industries with which firms are linked. Indeed, the very development of corporate capabilities themselves generally depends on the munificence of the institutional environment in which firms emerge, and especially on opportunities for collaborative knowledge development, personnel hiring and training (Murmah 2003, 2013). Recognizing the importance of the business context has given rise to a large literature that investigates the conditions and relations which stimulate local industry development and growth, especially in city-regions (Bathelt et al. 2004; Giuliani and Bell 2005; Kerr and Robert-Nicoud 2020).

Much of the work on clusters in city-regions emphasizes the role of local networks in enabling tacit knowledge flows between actors that are more likely to have ties with one another since they are co-located (Breschi and Lissoni 2001; Gertler 2003), as well as the role of localized knowledge spillovers that enable knowledge diffusion and strengthen the collective competitiveness of co-localized firms (Kerr and Kominers 2015). A common argument is that a better connected and more active local inter-organizational network enables firms to expand and spread out, develop linkages with other regions abroad, and sell their products to distant markets. While there is also a rich literature on industrial communities as coherent social groups, especially communities of practice and epistemic communities, within the fields of economic geography, innovation studies and

*Corresponding author: Harald Bathelt, Department of Geography and Planning, University of Toronto, Sidney Smith Hall, 100 St. George Street, Toronto, ON M5S 3G3, Canada, E-mail: harald.bathelt@utoronto.ca.
<https://orcid.org/0000-0002-0938-1765>

John A. Cantwell, Rutgers Business School and Division of Global Affairs, Rutgers University, 1 Washington Park, Newark, NJ 07102, USA, E-mail: cantwell@business.rutgers.edu.
<https://orcid.org/0000-0001-8638-0961>

management (Brown and Duguid 1991; Knorr Cetina 1999; Wenger 1998; for an overview, see Roberts 2017), it is surprising that much of the related literature focuses on the creation and maintenance of networks between firms without scrutinizing the specific role of these underlying professional communities, their capabilities and their actions that are at the very core of the competitiveness and reproduction of regional economies (for exceptions, see Bathelt and Li 2020; Cohendet et al. 2014; Li 2014; Monteiro and Birkinshaw 2017). It is these local industrial or industry-based professional communities (for brevity, also referred to hereafter just as local communities) – not just in clusters but in regional economies more generally – that are at the core of our conceptual inquiry.

Like the cluster literature, the foreign direct investment-productivity-spillover literature largely focuses on firm- and firm-network-level research¹ and assumes that knowledge spillovers take place merely because firms are located in close proximity and thus have more and stronger ties with each other (Boschma 2005; Hamida 2013). The agenda of this paper is therefore to explore the conceptual underpinnings of the omitted-variable bias from not considering the role of communities. Our specific interest in local professional communities is how they support, facilitate and/or influence corporate internationalization broadly defined, as a continued process that ranges from export activities to foreign direct investments and ongoing foreign-market presence through innovation activity. In internationalization projects, these communities can be crucial in providing access to knowledge, resources and personal networks that firms would otherwise not likely develop. Communities have the advantage that connections between members can be quickly made and that the selection of partners is not as costly and tedious as it would be when developing global pipelines (Bathelt et al. 2004) – and they enable access to wider knowledge ecologies.² As such, local industry-based communities are indispensable components of the everyday activities of firms (Li 2018).

A professional community in our sense is a grouping of professionals of various kinds, coming together to contribute to some industry-specific projects (Table 1). We are not referring to artistic, creative or other professional communities but are focusing on those industry-based communities, consisting of managerial and technical staff, and those engaged in a wide range of support services, such

as researchers in science and engineering, lawyers, consultants, or foreign country/region experts and the like, which share knowledge and interests in activities that are applicable to a particular industry context – be it in manufacturing, service or extractive industries (Styhre 2016). Further, we are speaking of open communities, in which participation is voluntary and self-selecting, and is based on having experience and qualifications relevant to the industry, regardless of current organizational affiliation (e.g. Owen-Smith and Powell 2004). In doing so, we distinguish between the looser and more general category of a social network and the more coherent and closer constellation of a professional community (e.g. Amin and Cohendet 2004; Coe and Bunnell 2003). Communities have a clearer group-level identity than do social networks, based on a common knowledge base and shared commitments to develop and apply such knowledge. This leads to greater intensity of interaction across community members as they are concerned with the development of some industry-based area of practice and effective conduct within that domain. Communities may thus have a stronger degree of mutual recognition, a clearer set of shared values or principles, and a greater degree of continuity and identity (or sense of belonging) than a typical social network. Whereas networks, especially transactional networks, are defined by inter-personal or inter-organizational ties, community members do not necessarily (or may not yet) have direct ties with each other. Although networks can also have some communal characteristics, communities move beyond the structure of network ties through the association of participants with the wider community that acts as both a reservoir and a generator of knowledge in a specific industry context.

Professional communities in this understanding are associated with social interaction at the communal level, which is not reducible to the sum of individual actor ties that represent networked social interaction. They are the holders and arbiters of what we might term the communal or public knowledge base of an industry, while firms hold complementary private knowledge depending on their own capabilities. By public knowledge we do not refer to knowledge that is freely available to any actor, but rather the knowledge of professional experts in a domain, which is accessible through the active participation of those experts in the relevant community (for the case of a technological community,³ see Nelson 1989). Table 1 provides an overview of the different types of communities we distinguish. While

¹ Communities are similarly under-conceptualized in the global-value-chain and global-production-network literature.

² Their supportive role in knowledge acquisition, creativity and innovation has been well-explored (Cohendet et al. 2017), but depends on the context and purpose of the community (Roberts 2017).

³ Note that this kind of technological community might be thought of as an innovation commons (Potts 2019), which builds on conceptualizations by Ostrom (1990).

Table 1: A definition of types of (industry-based) communities.

Name of communal entity	Type of community	Nature of community type and relationship between types
Social networks	Loose constellations of actors linked by ties of various kinds	Inter-actor ties may develop due to transactional linkages, or some mutual interests or common activities, or personnel movements – and be enhanced by different forms of proximity
Professional communities	Groupings of professionals of various kinds, from relevant professions that come together to contribute to business projects in a given industry	Intentional identification with and voluntary participation in a community whose members share an interest and experience in a variety of types of specialized expertise that are needed to support international business projects in a given industry context
Communities of practice	Coherent groupings of individuals engaged and proficient in some common domain of practice	Intentional identification with and voluntary participation in a community characterized by shared and reciprocal commitments to develop an industry-based domain of practice
Epistemic communities	Coherent groupings of individuals with shared principles and values in the development and application of some common domain of knowledge	Intentional identification with and voluntary participation in a community built upon a strong foundation in a body of knowledge in a specific industry-based domain of expertise, with a shared commitment to develop that body of knowledge over time
Knowing communities	Coherent groupings of communities of practice, epistemic and virtual communities that develop a mutual, coherent understanding of a common domain of knowledge	Intentional identification with and voluntary participation in a community that shares and develops knowledge in a common domain that combines know-how (practice) with know-why (understanding and scientific or conceptual interpretation) in some given industry context
Local professional communities	Coherent groupings of individuals co-located in a region or localized knowing communities, having a cross-industry representation which reflects the specialization of the region	Identification with a spatially defined community concentrated in the main industries of specialization in a region, developing best practice and exchanging knowledge, often relying on shared backgrounds and experiences, and in tune with the local institutional context; local communities fuse together communities of practice and epistemic communities in the domains of the strongest industries in the region
International professional communities	Coherent groupings of geographically dispersed individuals in some common domain of industry-based expertise, who regularly interact with others in the development of frontier expertise of potential interest across various spatial contexts	Identification with a domain-defined community in some particular industrial setting, having a shared commitment to develop and apply the best expertise in the domain, often linked to or organized around some international professional associations; international communities establish channels for the dissemination of the best knowledge and practice in a domain across space; local communities can connect to a select set of international communities concordant with the range of local industry specialization
National subdivisions of international professional communities	Coherent groupings of individuals within an international professional community in a common country of residence, who interact with others at a national level as well as internationally	Identification with a domain-defined community that is active in bringing together expertise on a certain kind of industry-specific projects in a given country; often linked to a national subdivision of an international professional association, which facilitates connections between the relevant international community and local communities in the country in question
Transnational communities	Coherent groupings of individuals that emerge during internationalization processes as local communities merge with international communities and develop transnational capabilities	Identification with a domain-defined community in a given industrial context, in which members of select local communities collaborate directly in their support of international business projects, and in disseminating knowledge about the relationship between projects undertaken in different locations

we acknowledge that local professional communities have both an important epistemic and practice base and form what could be referred to as localized knowing communities (Boland and Tenkasi 1995; see also de Groot et al. 2014; Styhre 2016), the underlying communities of practice and epistemic communities are primarily the building blocks in

our analysis of professional communities and not part of the analysis themselves.

Since this paper is concerned mainly with the influence of communities on corporate internationalization processes, it is important to note that the public or communal element of knowledge we refer to is not restricted just to

knowledge of or experience in internationalization projects as such, but ranges far more widely. Relevant knowledge relates to many issues which are germane to the implementation and continuation of internationalization processes, such as knowledge about the legal and institutional, or linguistic and cultural context of particular countries and regions, and about how practices and applications vary across different industry or market contexts (Bathelt and Li 2020). We view internationalization projects as successful when firms establish, maintain or extend an international market presence and are able to grow through this. In aggregate form, internationalization then has an immediate impact on regional development and is closely connected to it.

In contrast to conventional perspectives, our argument revolves around communities that are associated with different spatial levels. Our goals in this conceptual paper are threefold: First, we focus on the role of local professional communities, the individuals that form them and the way in which they support internationalization processes. These communities become a core part of the skilled labor force of a regional economy and play an essential role in enabling knowledge flows between firms and their environment and guiding corporate internationalization projects.

Second, rather than focusing on the role of local communities in isolation, our goal is to show that they connect with international communities and other local communities and through this expand their competence base. Our argument is that local-international community connections play a crucial role in enabling firms to engage in internationalization projects. International communities (and their national subdivisions⁴) are typically related to professional/industry associations of lawyers, accountants, engineers, patent examiners and so on with domain-specific expertise that have developed across a wide range of industries. Whereas local communities have a strong practice base emanating from their involvement in internationalization projects, international communities in comparison have a defining epistemic foundation. International professional communities have especially been discussed in the

context of particular communities that are not industry-based, such as migrant or ethnic communities (e.g. Cai et al. 2021; Hajro et al. 2021; Hartmann and Philipp 2022; Henn and Bathelt 2017; Portes and Sensenbrenner 1993; Shukla and Cantwell 2018).

Third, we aim to illustrate that city-regions without dynamic local professional communities and without a population of firms that draw on these communities do not as a rule have the required capabilities and connections to engage in continued internationalization processes – although some firms in these locations that have their own international connections may be able to make up for this. Importantly, the latter places do not benefit from the same regional development impulses as city-regions with well-developed communities. In a co-evolutionary perspective, we suggest that there is an intricate connection between corporate internationalization processes, local professional community activities and regional development. The overarching agenda of this paper is thus to provide a better understanding of the conditions under which regional firms can engage in continued internationalization projects by investigating the role of local professional communities, international professional communities and their local-global interfaces. The co-evolutionary dynamic we propose depends on the economic and institutional structure of the city-regions under consideration and the capabilities of local firms, as well as on the capabilities and connections of their local professional communities (Cantwell and Iammarino 2003; Murmann 2003).

The argument of our paper proceeds as follows: In Section 2, we propose that local (industry-based) professional communities crucially impact corporate internationalization processes by developing transnational capabilities that can bridge institutional differences between locations in different countries. They do this by accessing international professional communities and creating intersections with them. These local-international community connections are crucial to the capacity to engage in continued internationalization processes. If successful, ongoing involvement in internationalization stimulates development in the corresponding home regions through reverse knowledge flows, market access abroad and export activity, which in turn has a positive, reinforcing impact on the growth of local professional communities and firms. Having emphasized the critical role of local professional communities, we take a closer look at their members in Section 3 and how they create knowledge. Section 4 investigates how these communities grow and identifies connecting, clustering/specializing, migrating and educating/training as key driving forces that underlie their development. Section 5 then lays out the

⁴ These national subdivisions may have a community life of their own as their reproduction is shaped by national institutional contexts with specific regulations, practices and traditions (Berns et al. 2021). A primary role of these subdivisions in internationalization processes is to link local communities with international communities. In some instances, where a country is itself sufficiently large and diverse in character and internationally connected, these national subdivisions (for instance in the case of some American associations) may have the character of *de facto* international communities. In internationalization processes, foreign chapters of these subdivisions can sometimes operate like extensions of local communities abroad.

conditions for the reproduction of local professional communities. It is argued that self-sustaining feedback processes are supported when local professional communities reach a critical mass, have local amenities, when they are open for an influx of new knowledge and people, have place-based policies and support organizations, individual leaders and anchor firms, and/or when they establish a mid-ground where community members can get together. Section 6 concludes by highlighting the linkages between local and international professional communities, which have changed over time, thus creating a dynamic perspective of their co-evolution. The interrelationship between local and international communities is a critical feature of a permissive environment that facilitates corporate success in the internationalization process, and this favorable interaction between firms and their environment equally favors the development prospects of the city-regions where they are located.

2 Conceptual framework: local and international professional communities in the internationalization process

The starting point of our inquiry is to investigate the role played by local (industry-based) professional communities in urban settings in firms' internationalization processes. By an internationalization process, we refer to the evolutionary process by which firms establish international market presence and develop resources and competencies, and how they sustain this international involvement through a multinational coordination of economic activities, such as production and innovation (Cantwell et al. 2010; Hitt et al. 2016). In short, we refer to internationalization as ongoing processes associated with trading products across borders, investing in foreign locations and generating products and innovating for international markets. This entails continuous adjustments of a firm's portfolio of international projects (potentially including divestments) as they may target natural resource-seeking, market-seeking, efficiency-seeking or strategic asset-seeking (especially knowledge-seeking) objectives (Dunning 1993, 2000). The kinds of community knowledge or expertise likely to be called upon in this process differ for each of type of motivation and stage of engagement, as well as the degree of inter-firm collaboration in each project. In the early stages of corporate development, there may be small and medium-sized local firms which become competitive and grow. Subsequently,

they engage in cross-border trade and make investments abroad (Håkanson 1979; Johanson and Vahlne 1977; Vahlne and Johanson 2013). In the later stages of development, more mature firms may develop a multinational production structure (Dunning and Lundan 2008), access foreign markets with customized products and utilize international knowledge connections to support their innovation activities in specialized locations or urban centers (Cantwell 2009).

Local professional communities are crucial components in a steadily rising knowledge connectivity across actors and across space (Bathelt and Li 2020; Cantwell and Zaman 2024). The membership of these communities comprises those individuals in a city-region that have had relevant training in some domain of expertise, and some of them become part of the local industrial workforce with competencies related to internationalization processes in production, innovation and/or investment planning (Table 1). Local professional communities incorporate both epistemic communities (Knorr Cetina 1999) that share a common body of knowledge owing to their similar backgrounds, training and common understandings about technologies and technological change in a particular domain, and communities of practice (Brown and Duguid 1991; Wenger 1998) that have similar experiences from working in related jobs relying on similar technologies or methods in a given industrial context. Members of these communities directly or indirectly interact in day-to-day economic activities and solve problems through exchanges within or between corporate teams, through producer-user interaction, or via local associations that operate as contact agencies or support services (Bathelt and Cohendet 2014). They interact through what can be referred to as the presence of more or less local buzz (Bathelt et al. 2004; Storper and Venables 2004), i.e. a specific local knowledge ecology that involves all sorts of relevant information flows and constant updates thereof leading to intended and unintended learning processes in organized and random encounters, based on face-to-face interaction and a shared institutional context (Glückler and Bathelt 2017). Such interaction triggers knowledge transfer and knowledge generation processes.⁵

As specialized employees, experts or consultants, participation in these local professional communities helps enable firms to become competitive and engage in internationalization projects. Local professional communities

⁵ Local communities are not only important in vertical value-chain-related knowledge transfers but also in horizontal learning processes. Li (2017a) identifies four crucial mechanisms that stimulate such processes: socially embedded learning, labor mobility, interaction and monitoring, and collective invention.

develop distinct transnational capabilities during internationalization processes that provide them with relevant knowledge about different countries and foreign business contexts (Harrington and Seabrooke 2020). They develop the capability to communicate and explain institutional differences between locations and to develop networks across borders (Bathelt et al. 2018).⁶ As local communities in a city-region grow, they become increasingly internationally connected (Cohendet et al. 2014), and their transnational capabilities are reinforced when they get involved in successful investment and export activities (Bernard and Moxnes 2018; Buchholz et al. 2020; Faulconbridge 2007; Forsgren et al. 2006; Rauch 1999). These activities contribute to urban growth through income increases, reverse knowledge flows from abroad and market opportunities, which altogether stimulate production and innovation activities in the home location and, in turn, trigger further community development (Bathelt and Buchholz 2019; Crescenzi et al. 2022).

Local communities draw parts of their strength from the wider international professional communities they connect with. These international communities are primarily defined through their shared epistemic base (Adler 2019; Cohendet et al. 2014) within an industrial or technology field (DiMaggio and Powell 1983). They develop frontier expertise in some specific domain (for instance as international lawyers, patent examiners or mechanical engineers) and, as a whole, become global repositories of expert knowledge. As opposed to local communities, they are less connected through quotidian direct interaction and personal relationships. Instead, they exchange knowledge based on a common reference to publication series, news blogs, online platforms and all sorts of codified knowledge channels, yet they are also linked through international trade fairs, business conferences and other local-global interfaces where knowledge is informally exchanged and reproduced (Bathelt and Sydow 2025; Maskell et al. 2006).⁷ International communities can be formed and sustained, and become visible globally,

through professional associations, industry consortia and standard-setting organizations. By getting involved in these associations/organizations, local communities gain access to a latent contact network worldwide that can be mobilized if needed.

By connecting with international professional communities, local communities are able to extend and update their knowledge about foreign locations and provide crucial advice to firms during the internationalization process, for instance with respect to site selection and facilitation of cross-border knowledge linkages (Bathelt and Li 2020; Faulconbridge 2007; Monteiro and Birkinshaw 2017; Phelps and Wood 2018). Government agencies, transnational services or membership in business associations may help establish initial crucial contacts for firms investing abroad. In this way, they help firms to overcome the liability of foreignness (Zaheer 1995) and reduce the risk of operating in an unknown or little-known business context. Even though established multinational firms may not face such challenges, their reliance on local professional communities in connecting with international communities may be at least as great as for other firms since, for instance, continued innovation in international markets crucially relies on familiarity with relevant specialized journal publications, awareness of prior inventions (e.g. patent citations) and background state-of-the-art or practitioner knowledge (Cantwell and Zaman 2024). Knowledge flows through such local-global interfaces often benefit from a defined pool of knowledge that is codified or otherwise familiar to those active in the world community, so it can then be accessed and understood by local communities in the form of global buzz (Maskell et al. 2006) – for instance at an international trade fair, business conference or convention (Bathelt and Henn 2025).

Being part of an international professional community also helps making connections with different local communities that develop in other city-regions and countries and have their own distinct local knowledge ecologies (Henn and Bathelt 2018; Li 2018). Local knowledge ecologies are shaped by their specific institutional-sectoral contexts and thus develop specializations which can differ from country to country and from place to place. When connections with other local communities are made, the resulting interaction through cross-community linkages is more directed and focused than informal exchanges or codified local-global interfaces, such as community blogs. Exchanges can develop into distinct ties with organizational relationships, similar to global pipelines (Bathelt et al. 2004; Lorenzen and Mudambi 2013; Owen-Smith and Powell 2004), geared

⁶ We might refer to the individuals that develop transnational capabilities or have these based on prior lived experience as transnational professional communities (Faulconbridge 2010; Faulconbridge et al. 2021; Saxenian 2006). Members of such transnational communities, as we define them, collaborate with others across selected locations based on kinship/friendship relations or shared experience (Bathelt and Li 2020; Kennedy 2004). They tend to be more self-referential and cohesive, with access being more narrowly regulated than in local and international communities.

⁷ These local-global interfaces are temporary organizations (sometimes organized by international business associations) where local community members can make contact with other local communities and through which future transaction networks may be forged (Bathelt and Henn 2025; Li 2017a). Such events also play an important role in the reproduction of international communities (Bathelt and Sydow 2025).

toward specific problem-solving or collaboration in networks (Cantwell and Piscitello 1999). For firms that invest in a different country, links between the local and international community help facilitate access to firms and networks in the host region, thus enabling affiliates over time to participate in the host region's local knowledge ecology (Malecki 2009). As such, local-international community interfaces help forge cross-community and eventually inter-firm linkages that are instrumental to overcoming firms' liability of outsidership from local networks (Johanson and Vahlne 2009).⁸ This then is a crucial step to conduct successful business and become integrated in foreign networks.

As local communities connect with international communities, they become part of these international communities but the two types of communities do not simply merge and differences between the two remain. Especially in large city-regions, local communities are very broad and diversified in terms of their membership base, competencies and skill base and more or less loosely connected through some form of local buzz, whereas international communities have a more homogenous composition of members with a shared epistemic core and strong commitments of their members to their communities. Local communities (or parts thereof) reach out to different international communities and members of the former become part of the latter over time. These overlapping communities can be viewed as intersections of various local and international communities (see also Figure 1). Overall, this suggests that the ability of firms in a city-region to engage in internationalization processes depends in part on the composition of their local community and their ability to link with relevant international communities (Bathelt and Cohendet 2014). In city-regions where firms are international technology leaders, internationalization is associated with strong support by local communities and specific institutions (Murmman 2013), which in turn helps these firms (and city-regions) to sustain knowledge-seeking activities at an international level (Cantwell and Janne 1999). Immigrants can be especially helpful in making connections with their country of origin (Shukla and Cantwell 2018).

As a corollary, the above discussion develops two propositions that are closely interconnected: On the one hand, it suggests that intersection and integration processes

of local industrial firms and local professional communities become essential for firms' internationalization. On the other hand, the connections between local and international professional communities and the connections with other local communities trigger the development of transnational capabilities and enable firms' sustained internationalization and ongoing cross-local knowledge flows. As such, processes of community development and firm internationalization go hand in hand and, in aggregate, stimulate economic development in the home location through reverse knowledge flows, demand triggers and exports (Bathelt et al. 2023). These propositions are relevant to scholarship in both international business/strategy and economic geography, but clearly also beyond. They require the inclusion of a community perspective and creating a link between these disciplines. And they suggest that virtuous feedback loops of corporate and regional economic development can unfold if local firms and professional communities link with international communities to develop cross-local community connections and interfirm networks.⁹ However, clearly not all firms have the capability to engage in internationalization projects and neither have all city-regions the economic preconditions and institutional settings to participate in and benefit from such processes. Therefore, there are likely winners and losers in this process (Buchholz et al. 2020).

3 Local professional communities: who are they and how do they create knowledge?

Local professional communities incorporate different combinations of communities of practice and epistemic communities that when they come together constitute localized knowing communities (Boland and Tenkasi 1995) in a city-region (Table 1). If local communities are spread across different industry contexts, they may not have much overlap and be only loosely connected in city-regions characterized by a diversified economic structure, but their synergies become stronger and connections tighter if some core domain of economic specialization emerges. In this

⁸ When trying to access to business networks in the host economy, efforts to build connections between the local professional communities at both ends play an essential role, yet it is surprising that the international business literature largely maintains a firm perspective in its analysis and does not focus on the supporting role of communities (Belderbos et al. 2024; Goerzen et al. 2013; Lorenzen et al. 2020).

⁹ In debates about the role of various proximities in regional development (Boschma 2005), these community effects are imperfectly captured since geographical proximity is a category that is too broad and organizational proximity too narrow. Within a regional context, it is the local professional community that drives interaction in knowledge and practice, while interaction that occurs within firm boundaries (within or between firms) is merely a subset of overall community interaction.

case, they develop a mutual understanding and interaction between community members increases. Members of local professional communities can be particularly found as employees in multinational enterprises (MNEs), international organizations and institutes of higher education (especially universities), and public policy agencies, but some may also be spread more widely within various segments of the local economy, for instance within service organizations, business associations, media outlets and so on. They consist of managers, accountants, engineers, technicians, practitioners, consultants, experienced workers, researchers, foreign country/region and language or policy experts and so on that self-identify with the community and are recognized by others as members. Large city-regions with sophisticated business services and manufacturing sectors that host many MNEs are in an advantageous position as they attract skilled professionals and immigrants that become part of local communities (Cantwell and Zaman 2024; Sassen 2001; Taylor and Derudder 2004). They can be drivers, facilitators and/or influencers of internationalization processes and stimulate regional development through their aggregate action. In a co-evolutionary perspective their growth is affected by the outcomes of the internationalization processes they support.

Some members of local communities have a transnational multi-cultural background in that they have lived and worked in one national context and then moved to another context for family, education or work reasons (Bathelt and Henn 2025; Fitzsimmons et al. 2011). For instance, foreign students may be admitted to university programs and later be hired by local firms that engage in international investments and utilize the students' transnational knowledge and contact base. Additionally, managerial and technical staff in MNEs become part of local professional communities when they collect work experience in other national contexts over their professional career and develop transnational competencies. Members of immigrant groups and their children may not initially be part of local professional communities but can become members if they participate in specific training and education programs that put their transnational knowledge base into economic context. Whether referred to as transnational entrepreneurs (Henn and Bathelt 2017; Portes and Sensenbrenner 1993), industry experts or New Argonauts (Saxenian 2006; Saxenian and Sabel 2008), they have in common that they ease and speed up local firms' internationalization processes as they already have cross-local community connections that can be utilized for new ventures and do not have to be built up from scratch. The capacity for local migrant populations to facilitate internationalization

processes depends on the degree of institutional affinity and connectedness between the region in which they reside and their countries of origin. This capacity also depends on whether migrant populations have achieved a critical mass locally (Buchholz 2021; Kloosterman 2010; Sandoz et al. 2022; Shukla and Cantwell 2018).

But immigrant groups do not automatically play a significant role in firms' internationalization processes. Many may lack the necessary skills or professional experience or their skills are not recognized (Shukla and Cantwell 2023). While there is a positive association between migrant networks and professional communities in a location (Cai et al. 2021; Hajiro et al. 2023; Shukla and Cantwell 2016), in general we can distinguish between active and passive members of local communities depending on how their transnational capabilities are used. Active members are directly involved in mature MNE activities or in firms' early internationalization stages, or in other organizations or freelance activities which support internationalization processes. They are in a position to successfully link corporate networks across locations in different countries. Passive members may have been overlooked or are unknown to firms, or not trusted by them. It is also possible that they may choose not to be actively engaged in projects or related discussions. Passive members are individuals that have the skills or potential to become active community members but may not always be in jobs that would allow them to do so. They may not themselves self-identify as community members, but are likely to be recognized by at least some others, and so they may be indirectly consulted about projects, even though they are not involved in them. As such, they may still contribute to community knowledge dissemination.

In our conceptualization, those who identify with a community do so voluntarily, and their participation in community activities or knowledge sharing is self-selecting (Cantwell and Zaman 2024; Owen-Smith and Powell 2004; Rappa and Debackere 1992), given that they hold the relevant skills and capabilities. The key characteristic of a community (as opposed to just a network) is that as it develops, knowledge spreads across its members, especially the most active ones, through a variety of informal social connections, rather than through intentionally created channels of communication or cooperative endeavors between specific actors. This describes the difference between communal buzz and organized pipelines in disseminating ideas (Bathelt et al. 2004). Participants become aware of the value of the contributions of other community members and the potential relevance of the knowledge that others have developed or acquired. Thus, individuals that identify with a community enjoy mutual recognition by other members,

even if they do not know one another personally or have any direct ties.

Given its informal, socially dispersed or impersonal nature, a community can also be described as an ‘invisible college’ (Crane 1972; de Solla Price and Beaver 1966), yet it is not to be confused with a collective actor. Based on a large variety of informal channels, whether through direct interaction face to face in meetings or events, or virtually in online fora or via websites, by referrals, or by using the same sources of codified knowledge, community participants learn about the experiences of other members which may have relevance for themselves. These processes of course differ, depending on whether interaction takes place inside local communities or with international communities. In the case of the local buzz elements within local communities, the knowledge which is communally disseminated tends to be more practice-oriented, with tacit elements related to the shared local industry context. When interaction involves international communities, the knowledge which is communally disseminated tends to be more narrowly defined, and is often more technical and more abstract with stronger codified elements.

4 How do local professional communities with transnational capabilities develop and grow?

Local professional communities are not ubiquitous across city-regions and do not emerge in a homogenous way as their development is strongly shaped by the institutional-sectoral settings in their locations (Roberts 2017). Since local communities require the presence of many members with complementary skill levels to be able to thrive, they are especially likely to develop in urban regions with a sizable economy. Because of different institutional contexts and different triggers that can spark the growth of local communities, their knowledge base likely differs from city-region to city-region – even if the sectoral composition of two locations is similar (Bathelt and Li 2022). This also suggests that international and local communities never have identical knowledge ecologies. As knowledge from international communities enters local communities, it is contextualized and becomes part of location-specific feedbacks that drive specialization. According to Amin and Cohendet (2004: 102), “[t]he ‘stickiness’ of knowledge ... stems from the unique interactions and combinations of bodies, minds, speech, technologies, and objects that can be found there” (Asheim 1999). Without

claiming these are the only drivers of local community development, there are at least four driving forces that play a decisive role in their emergence and growth, which are prevalent in certain city-regions: connectivity, education/training, migrating and clustering/specialization (Figure 1):

(1) Connecting. Connecting is a particularly strong driver of community development in global/world cities that are prime locations for the emergence and growth of local professional communities. They are characterized by a large concentration of headquarters of multinational firms in finance, knowledge-intensive services and manufacturing and develop close linkages with other global cities as well as with secondary cities that become locations of subsidiaries with manufacturing and service functions (Sassen 2001; Taylor and Derudder 2004). Global/world cities exercise dominance and control through the networks and connections they establish with a broad set of international locations. They develop this dominance as they are able to actively recruit, train and attract specialists with transnational governance and knowledge creation capabilities (Florida 2002). Global/world cities develop large professional communities, which are highly connected with international communities and have strong cross-local community linkages. Their high connectivity is based on personal networks that community members establish during their managerial/technical career with different multinational employers, as well as on membership in international professional associations/Internet forums and shared practices of utilizing the same codified knowledge sources (e.g. professional magazines). It is the high breadth and depth in connectivity, both of firms and community members, which drives the growth of local communities in these cities and strengthens their transnational capabilities (Cantwell and Zaman 2018, 2024).

(2) Educating/training. Educating/training plays a distinct role for community development in city-regions with well-known, prestigious research and higher-education facilities. It is through continuous educating/training that local professional communities emerge and grow in these places, subject to having a local economic base where cohorts of graduates can find work. In most industries, university knowledge is crucial to enable access to international epistemic communities, especially when firms engage in advanced research and gain legitimacy in these communities (Pavitt 1991). Places with strong local research universities attract a large international student body in business, engineering and science programs that can trigger start-up and spin-off processes if there is a good match between the educational focus and the sectoral composition of the local economy (Bramwell and Wolfe 2008). While university

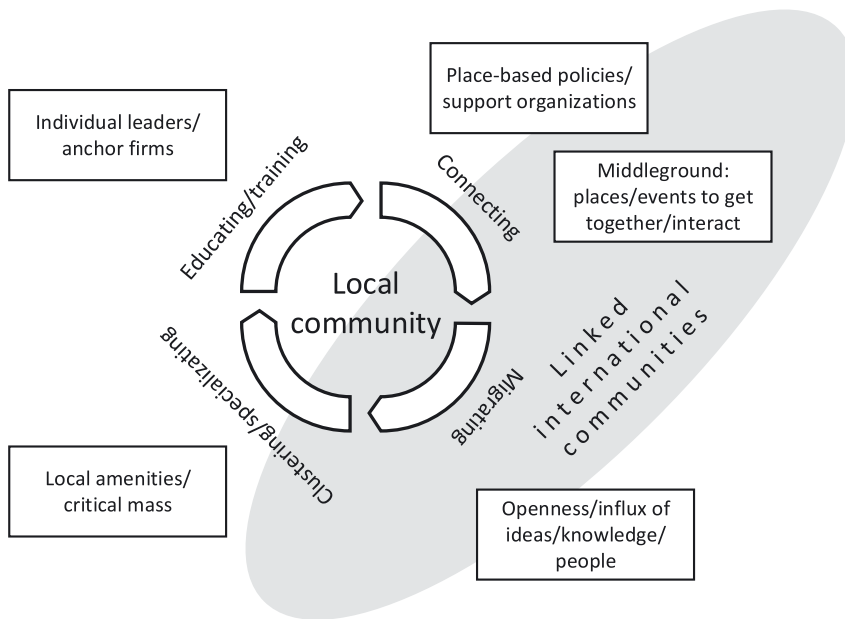


Figure 1: Driving forces and conditions influencing the development and reproduction of local (industry-based) professional communities.

graduates are initially less experienced with international networks when they start up businesses or work for local firms, international social science and engineering co-op programs aim to develop such capabilities. And it may only require a few lead firms with multinational linkages in a city-region to then trigger the emergence of a local professional community with capabilities to connect with knowledge bodies and resources abroad. Foreign students may act as New Argonauts by setting up new ventures in their host and home economies and establish global pipelines between different locations, such as between Silicon Valley and Taiwan or Israel (Saxenian 2006; Saxenian and Sabel 2008). The latter individuals are part of specific international communities that can effectively connect and make sense of different national production and innovation systems at home and abroad, thus sparking further internationalization (Bathelt et al. 2018).

(3) *Migrating*. Migrating is another important driving force, through which local professional communities can develop. City-regions with large immigrant and/or migrant populations may thus develop significant, dynamic local communities that draw professionals from other local communities to connect to the regional knowledge base. This may strengthen the local community and improve linkages with international communities, thus resulting in a self-reinforcing process of community development. Like the New Argonauts, immigrants with a pre-existing professional background or after receiving training in their destination countries may utilize close linkages with their

country of origin to establish new businesses that connect both economies, exploiting their double-embeddedness in different cultural contexts (Hartmann and Philipp 2022; Kloosterman et al. 1966; Portes and Martinez 2020; Sandoz et al. 2022). Beyond triggering entrepreneurship, migrating can act in a broader sense as a driver of the development of communities which helps sustain ongoing international linkages (Cai et al. 2021; Hajro et al. 2021; Shukla and Cantwell 2018). There are multiple triggers of how immigrant diversity can generate positive spillover effects on local labor markets (Kemeny and Cooke 2018); through interaction/learning, complementarity and niching processes, as well as exposure effects, immigrants can strengthen labor markets and increase local firms' competitiveness (Buchholz 2021).

(4) *Clustering/specializing*. An important driving force of community development is associated with strong industry clusters and a high degree of specialization. Corresponding city-regions have manifold opportunities to expand internationally and access new markets through replicating/augmenting and connecting strategies based on competitive advantages (Bathelt and Li 2022; Bathelt et al. 2004; Giuliani and Bell 2005; Kerr and Robert-Nicoud 2020; Porter 1990). Across different industry contexts, economic clustering/specializing seems to be an important, in fact almost natural, driver of strong local professional communities that develop transnational capabilities. In small emerging clusters, this may proceed initially through trial-and-error processes but, as clusters grow and mature (Fornahl et al.

2010), their increasing competitiveness and international reputation make it easy to attract talent from distant communities and through international community linkages. Again, the capabilities of the local community and the local firms' successful internationalization are connected in a reflexive manner. As in the case of global/world cities, large urban centers are often characterized by multiple industrial milieus or clusters (Crevoisier 2001) and thus develop large diversified local communities with broad specialized skill portfolios. They form highly attractive labor markets for talent and are, at the same time, attractive locations for firms in related industries (Krugman 1991). Not only do these places develop dynamic and rich localized knowledge ecologies with high internal innovation potential, they also build global pipelines with other sophisticated clusters abroad and become priority destinations of investment linkages from foreign clusters (Bathelt and Li 2022; Owen-Smith and Powell 2004).

While the four driving forces are of fundamental importance for the development of local professional communities, they may hardly ever operate in the same way. Due to different combinations, empirically there will likely be multiple different growth trajectories in different places. Firms in other, less urban places or normal regions (Storper 1997), which are smaller and have a diverse set of industries, do not benefit from strong community growth. However, they may be able to make up for the lack of local buzz and find a different pathway to develop international market presence. Faced with a weakly-developed local community and a lack of meaningful local buzz, certain technical or managerial staff may link with international communities that have a matching epistemic base through online forums and Internet blogs, which are used to support ongoing problem-solving and innovation activities. While these connections may be virtual, firms will typically also send specialized staff members to participate in international trade fairs and business conferences to present their new production programs to customers, enquire about new developments and market dynamics, and make contact with potential future partners and members of other local communities worldwide (Bathelt and Henn 2025; Bathelt and Sydow 2025; Maskell et al. 2006). Former virtual communities may thus get personalized as the staff members meet peers from international communities. Through temporary and virtual proximity, firms in these normal regions can therefore develop routines that help strengthen their competitiveness and support internationalization. If successful, this may, in turn, stimulate other local firms to engage in similar processes and also engage with international markets. Gradually, this can lead to the development

of a small local professional community, encourage more internationalization and stimulate regional development. As opposed to the urban contexts discussed before, however, the local communities in normal regions may lack effective feedback and growth triggers and be vulnerable as their existence depends on a few firms and their staff members.

5 How do local professional communities reproduce themselves?

Once local professional communities have emerged in specific city-regions, a number of localized conditions can play an important role to ensure their continued growth and reproduction, some of which are emphasized below: (i) local amenities and a critical mass, (ii) openness for an influx of new ideas, knowledge and people, (iii) place-based policies and support organizations, (iv) individual leaders and anchor firms, and (v) a middleground where local communities can get together and interact (Figure 1). These conditions should not be viewed as having deterministic effects and can be found in forms and combinations that differ between industry contexts and city-regions. Two important prerequisite conditions for community reproduction are related to scale and the attractiveness of place. First, it is necessary that local communities reach a critical mass to trigger self-sustaining, positive feedback processes where foreign direct investments stimulate community development that in turn enables further investments (Buchholz et al. 2020). Second, if the corresponding city-regions are dynamic urban economies with a high quality of life and attractive amenities, they may develop into prime locations of the creative class (Florida 2002) that forms a critical core of local communities. In city-regions with strong community-building triggers that satisfy these conditions, positive feedback loops almost automatically enable the continuous reproduction of local professional communities.

The four driving forces supporting the development of local professional communities, discussed in the previous section, are also crucial in the reproduction of these communities. Connecting, educating/training, clustering/specializing and migrating are conditions that support ongoing growth and renewal of community membership and continuous upgrading of community skills. Important triggers of local reproduction are co-evolutionary ties between firm internationalization and community growth. Successful internationalization processes of firms, at the

same time, have direct positive effects on regional development (Bathelt and Buchholz 2019) by channeling additional demand and new knowledge into home regions. On the one hand, ongoing internationalization supports the continued growth of regional industries and drives further specialization in the home regions (Birkinshaw and Sölvell 2000; Sölvell and Birkinshaw 2000). On the other hand, this generates an incentive structure that encourages both the growth of local communities and drives further internationalization. Connecting processes thus lead to an expansion of local professional communities (Bathelt et al. 2023).

Continued immigration and the attraction of workers with complementary skills from outside a city-region is an important way of broadening knowledge about foreign markets, cultures and institutions (Hajro et al. 2021; Henn and Bathelt 2017; Shukla and Cantwell 2018). This is associated with the openness of local networks for an influx of new ideas, different sets of knowledge (even deviating from existing knowledge bases) and new people. Migrants and immigrants are associated with important boundary-spanning capabilities (Aldrich and Herker 1977; Fuchs et al. 2017) that enable firms to connect with foreign locations and make sense of different production and innovation systems. The establishment of new and revision of existing postsecondary education and training programs is another essential way of updating local community skills and supporting the ongoing specialization of knowledge bases. Such educational opportunities may include the leading-edge entrepreneurship and engineering programs that attract a substantial foreign student base, as well as inter-cultural training programs for managerial and technical staff (Bramwell and Wolfe 2008). Continued migrating and educating processes in city-regions can thus be important drivers of the reproduction of local communities that enable firms to overcome liabilities of foreignness and outsidership in internationalization processes (Bathelt and Li 2020; Johanson and Vahlne 2009; Zaheer 1995). These driving forces are related to local firms' hiring practices, and their capacity to attract and manage talent globally (Collings et al. 2019). On the one hand, actively hiring graduates from local educational programs strengthens these programs and makes it attractive for talent from outside to apply to them. On the other hand, local firms directly contribute to the expansion and enrichment of local communities when hiring internationally.

Reproduction processes can also crucially benefit from business associations and specific policy agendas that stimulate local community development (Martinez-Vazquez and Vaillancourt 2008; Oughton et al. 2002; Valler 2011). These are particularly important in the context of smaller

city-regions with a diversified economy that neither have well-developed local communities, nor the capabilities necessary to develop them. For instance, national industrial and innovation policies may support the growth of specific industries and provide subsidies for new infrastructure and research capacity to promote the development and specialization of local communities. The focus of these policies is often on firms' international competitiveness and therefore primarily benefits existing technology regions. In contrast, education and migration policies that focus on the development of advanced skills and attract qualified labor from abroad may have a broader geographical effect, albeit in a more indirect fashion. Related policies can positively impact the development of smaller and secondary city-regions if implemented with place-based strategies that target the specific needs and potentials of these locations (Iammarino et al. 2019). Indirectly or directly, targeted policies can support the reproduction of local professional communities and help strengthen transnational capabilities.

The effects of policies on regional development are especially persistent if they lead to shared future visions and collective action within the local community. The initiation of collective action often depends on the presence of individual community leaders, such as outstanding authorities in business or politics that can convince community members to engage in joint projects and mobilize resources for internationalization (Clark 2022; Evren and Odabaş 2024; Grillitsch and Sotarauta 2020). Collective action may also be driven by specific lead or anchor firms as shown in studies on the development of technology clusters (Agrawal and Cockburn 2003; Feldman 2003; Kerr and Robert-Nicoud 2020). Cohendet et al. (2010) emphasize that city-regions need to develop an effective "middleground" that supports interaction processes and knowledge transfers within the local professional community (parts of which may be referred to as "underground") and with firms/business organizations (the "upperground"). Since the actions of firms/organizations versus those of community members are associated with different rationales, there needs to be a fitting local environment in the form of a "middleground" consisting of specific places and events that enable ongoing community-firm interaction and where a mix of local community members and firm representatives regularly meet. These places and events become part of the local commons that form a critical platform for projects to be discussed, implemented, revised or dropped (Cohendet 2022; Cohendet et al. 2017).¹⁰ Specific "middleground" organizations may

¹⁰ In a local commons, organized by a local community (as opposed to firms), resources – including potentially public knowledge – are

support interaction within the local community and actively help to create links with international communities, for instance by providing support to attend international industry events and community gatherings. Such organizations can be established through government policies and/or be linked to local industry associations. “Middleground” structures can develop into a central hub where local and global buzz merge to support internationalization processes.

Community reproduction can also be supported through positive feedback loops between local and international communities. As local communities reach out to and connect with international communities in preparation of firms’ internationalization processes, new contact networks are being formed and local community members become part of specific international communities. This creates important overlap between local and international communities and generates critical local-global interfaces. For instance, local engineers connect virtually with global associations or Internet groups and become active members of these international communities. They acquire knowledge on an ongoing basis and transfer this into the local community and corporate networks. Knowledge transfers can also occur without direct interaction through publication venues of the international community, as in the case of patenting processes (Cano-Kollmann et al. 2022; Cantwell and Zaman 2018). The consequence of such knowledge transfers is a continuous strengthening of local communities.

There may also be a reverse process of how specialized international communities reach out to distinct local communities with the goal to integrate parts of them, thereby injecting knowledge into the local community that is crucial for internationalization processes (Li 2018). For instance, such processes can be triggered if international family or migrant networks link up with affiliated local ethnic diasporas or religious groups across international locations (Bathelt and Henn 2025; Li 2017b). They may reach out and look for local community partners in city-regions where they intend to expand their markets. If such connections are durable, they can have a positive impact on both the local and international communities, as in the case of international family networks of Jewish and Palanpuri Jainas diamond traders that established connections between Antwerp and Gujarat and triggered the growth of local communities at both locations (Henn and Bathelt 2018).

pooled communally to ensure the collective action needed to support the development of new business opportunities (Hess and Ostrom 2003; Potts 2019).

6 Conclusion: evolving linkages between local and international professional communities

While it is true, as Roberts (2017: 342) suggests, that “technological developments in the form of the Internet and social networking platforms have dislocated communities from particular locations”, we have shown in this paper that it is nonetheless essential to distinguish between local and international communities, in our case industry-based professional communities, as they are set up in different ways, complement each other and develop in a co-evolutionary fashion. As discussed throughout this paper, city-regions need to have a mix of industry-based epistemic communities and communities of practice (localized knowing communities) that are sufficiently large and are overlapping with a broad range of related and partially different skill-sets, experiences and views of the world to form strong local professional communities. Through their members’ actions, these communities support firms’ internationalization processes broadly defined, from trading with or investing in foreign markets to extending market presence and engaging in continuous innovation in these markets (Bathelt and Cohendet 2014). Knowledge spreads within these communities in numerous form through local buzz dynamics as community members communicate directly with each other face to face and hear about others’ experiences, but also use codified exchange platforms to connect with others. Through these processes, local communities shape regional technology development, connect with international communities and become part of them, and establish a collective order that frames internationalization processes. This may not always happen automatically and not in all city-regions equally, but requires a combination of triggers to be in place related to four development driving forces we discuss: connecting, educating/training, migrating and/or clustering/specializing. Continued community growth and reproduction is supported by localized conditions, such as local amenities/critical mass, openness/influx of new ideas, knowledge and people, place-based policies/support organizations, individual leaders/anchor firms, and a supportive middleground. However, these drivers and conditions do not define the evolution of local professional communities and their internal structure in a deterministic manner, as their effects will likely vary by city-region, industry context and over time.

In historical perspective, the relationship between local and international communities has not been a static one. It has evolved and become much closer and more important.

For international business in the 19th century, it was just the outreach of firms to local communities in their home region/country which mattered. Since mercantilist times industry-specific capabilities were held mainly by local artisanal communities, and even after the first industrial revolution technological knowledge tended to be held mainly by self-sufficient specialized local communities of independent inventors (Lamoreaux and Sokoloff 2001). The geographical diffusion of technological capabilities was mainly associated with the migration of skilled workers or population groups. Industrial firms that grew up amidst these local technological communities internationalized through exporting their products and/or importing raw material inputs. The most relevant community support for internationalization in early industrializing countries came from the national state, since trading relationships often relied on political ties, including colonial connections, and most foreign direct investments were natural resource-seeking, directed to less developed and colonial territories (Dunning 1983).

By the 20th century, it became increasingly important for internationalizing firms to connect with international and not just local communities. Following the second industrial revolution and the rise of science-based industries at the end of the 19th century, large MNEs developed in-house research and development facilities, administered multi-divisional operations across national boundaries and relied on international technology transfer (Chandler 1984; Teece 1993). Despite (or because of) the growth of internal research capabilities, these firms cultivated relationships with local communities of independent inventors in their home regions, especially in countries that were not technology leaders (Cantwell and Spadavecchia 2023). Still, MNEs steadily developed relationships with communities in host locations through their subsidiaries abroad, especially when they needed to adapt technologies at these locations (Cantwell 1995). This sometimes strengthened dyadic ties between local communities in the home and host regions.

Moving into the 21st century, and the information and digital age, corporate internationalization processes have become increasingly knowledge-seeking in nature and rely on global connections between major technology centers (Cantwell 1989; Cantwell and Shukla 2025; Dunning and Lundan 2008). Along with waves of globalization, communities themselves have become internationalized, and local community development increasingly depends on the strength and diversity of knowledge-based connections with international communities (Cantwell and Zaman 2024). Linkages between local and international communities have become fundamentally interdependent and have co-evolved with

internationalization processes of firms in any major city-region. The better the connectedness between local and international communities in a place, the more firms' internationalization projects can benefit from facilitating community activities (Bathelt and Li 2020). These internationalization processes have a critical impact on home-region growth (Buchholz et al. 2020), as they strengthen community development and create a favorable environment for future internationalization and further regional development. In innovative clusters and major city-regions, we are witnessing the development of strong local professional communities that go hand in hand with firm internationalization and, in fact, become major drivers of both continued corporate growth processes and regional prosperity, while firms in smaller city-regions without major communities may have more risks and struggles in the long run.

Acknowledgments: This paper, to which both authors contributed equally, was presented in various graduate seminars and at the 2024 Academy of International Business Canada Chapter, AIB US Northeast Chapter and European International Business Academy Conferences, as well as the 2025 Annual Meeting of the American Association of Geographers in Calgary (AB), Boston (MA), Helsinki (Finland), and Detroit (MI), respectively. We would like to thank the participants of these conferences and seminars, especially Nicole Coviello, Anthony Frignon, Chris Jones, Tu Lan, Eunice Okyere, Pallavi Shukla, Yama Temouri and Liu Wang, for stimulating feedback. Special thanks go to the anonymous reviewers and the special issue and journal editors.

Research ethics: Not applicable.

Informed consent: Not applicable.

Author contributions: Both authors contributed equally to the paper.

Use of Large Language Models, AI and Machine Learning

Tools: No such tools were used in any stage of the research process and in writing the paper.

Conflict of interest: The authors state no conflict of interests.

Research funding: None declared.

Data availability: Not applicable.

References

- Adler, E. (2019). *World ordering: a social theory of cognitive evolution*. Cambridge University Press, Cambridge.
- Agrawal, A. and Cockburn, I. (2003). The anchor tenant hypothesis: exploring the role of large, local, R & D-intensive firms in regional innovation systems. *Int. J. Ind. Organ.* 21: 1227–1253.

- Aldrich, H. and Herker, D. (1977). Boundary spanning roles and organization structure. *Acad. Manag. Rev.* 2: 217–230.
- Amin, A. and Cohendet, P. (2004). *Architectures of knowledge: firms, capabilities, and communities*. Oxford University Press, Oxford.
- Asheim, B.T. (1999). Interactive learning and localised knowledge in globalising learning economies. *Geojournal* 49: 345–352.
- Bathelt, H. and Buchholz, M. (2019). Outward foreign-direct investments as a catalyst of urban-regional income development? Evidence from the United States. *Econ. Geogr.* 95: 442–466.
- Bathelt, H., Cantwell, J.A., and Mudambi, R. (2018). Overcoming frictions in transnational knowledge flows: challenges of connecting, sense-making and integrating. *J. Econ. Geogr.* 18: 1001–1022.
- Bathelt, H. and Cohendet, P. (2014). The creation of knowledge: local building, global accessing and economic development — toward an agenda. *J. Econ. Geogr.* 14: 869–882.
- Bathelt, H. and Henn, S. (2025). *Creating knowledge over distance: the role of temporary proximity*. Oxford University Press, Oxford.
- Bathelt, H. and Li, P. (2020). Processes of building cross-border knowledge pipelines. *Res. Pol.* 49: 103928.
- Bathelt, H. and Li, P. (2022). The interplay between location and strategy in a turbulent age. *Glob. Strateg. J.* 12: 451–471.
- Bathelt, H. and Sydow, J. (2025). Thoughtlet — Beyond temporary organizations: trade fairs as temporary markets, clusters and community gatherings. *Proj. Manag. J.* 56.
- Bathelt, H., Buchholz, M., and Cantwell, J.A. (2023). OFDI activity and urban-regional development cycles: a co-evolutionary perspective. *Compet. Rev.* 33: 512–533.
- Bathelt, H., Malmberg, A., and Maskell, P. (2004). Clusters and knowledge: local buzz, global pipelines and the process of knowledge creation. *Prog. Hum. Geogr.* 28: 31–56.
- Belderbos, R., Castellani, D., Du, H.S., and Lee, G.H. (2024). Internal versus external agglomeration advantages in investment location choice: the role of global cities' international connectivity. *J. Int. Bus. Stud.* 55: 745–763.
- Bernard, A.B. and Moxnes, A. (2018). Networks and trade. *Ann. Rev. Econ.* 10: 65–85.
- Berns, J.P., Gondo, M., and Sellar, C. (2021). Whole country-of-origin network development abroad. *J. Int. Bus. Stud.* 52: 479–503.
- Birkinshaw, J. and Sölvell, Ö. (2000). Leading-edge multinationals and leading-edge clusters. *Int. Stud. Manag. Organ.* 33: 3–9.
- Boland, R.J. and Tenkasi, R.V. (1995). Perspective making and perspective taking in communities of knowing. *Organ. Sci.* 6: 350–372.
- Boschma, R.A. (2005). Proximity and innovation: a critical assessment. *Reg. Stud.* 39: 61–74.
- Bramwell, A. and Wolfe, D.A. (2008). Universities and regional economic development: the entrepreneurial University of Waterloo. *Res. Pol.* 37: 1175–1187.
- Breschi, S. and Lissoni, F. (2001). Knowledge spillovers and local innovation systems: a critical survey. *Ind. Corp. Change* 10: 975–1005.
- Brown, J.S. and Duguid, P. (1991). Organizational learning and communities-of-practice: toward a unified view of working, learning, and innovating. *Organ. Sci.* 2: 40–57.
- Buchholz, M. (2021). Immigrant diversity, integration and worker productivity: uncovering the mechanisms behind 'diversity spillover' effects. *J. Econ. Geogr.* 21: 261–285.
- Buchholz, M., Bathelt, H., and Cantwell, J.A. (2020). Income divergence and global connectivity of U.S. urban regions. *J. Int. Bus. Policy* 3: 229–248.
- Cai, H., Meng, Y., and Chakraborty, S. (2021). Migrants and exports: decomposing the link. *J. World Bus.* 56: 101166.
- Cano-Kollmann, M., Mudambi, R., and Tavares-Lehmann, A. (2022). The geographical dispersion of inventor networks in peripheral economies. *ZFW — Adv. Econ. Geogr.* 66: 49–63.
- Cantwell, J.A. (1989). *Technological innovation and multinational corporations*. Basil Blackwell, Oxford.
- Cantwell, J.A. (1995). The globalisation of technology: what remains of the product cycle model? *Camb. J. Econ.* 19: 155–174.
- Cantwell, J.A. (2009). Location and the multinational enterprise. *J. Int. Bus. Stud.* 40: 35–41.
- Cantwell, J.A., Dunning, J.H., and Lundan, S.M. (2010). An evolutionary approach to understanding international business activity: the co-evolution of MNEs and the institutional environment. *J. Int. Bus. Stud.* 41: 567–586.
- Cantwell, J. and Iammarino, S. (2003). *Multinational corporations and European regional systems of innovation*. Routledge, London, New York.
- Cantwell, J.A. and Janne, O.E.M. (1999). Technological globalisation and innovative centres: the role of corporate technological leadership and locational hierarchy. *Res. Pol.* 28: 119–144.
- Cantwell, J. and Piscitello, L. (1999). The emergence of corporate international networks for the accumulation of dispersed technological competences. *Manag. Int. Rev.* 39: 123–147.
- Cantwell, J. and Shukla, P. (2025). Spatial development of technological knowledge and the evolution of international business activity across technological paradigms. *Int. Bus. Rev.* 34: 102356.
- Cantwell, J. and Spadevecchia, A. (2023). Which actors drove national patterns of technological specialization into the science-based age? The British experience, 1918–1932. *Ind. Corp. Change* 32: 622–646.
- Cantwell, J. and Zaman, S. (2018). Connecting local and global technological knowledge sourcing. *Compet. Rev.* 28: 277–294.
- Cantwell, J. and Zaman, S. (2024). International knowledge connectivity and the increasing concentration of innovation in major global cities. *J. Econ. Geogr.* 24: 421–446.
- Chandler, A.D. (1984). The emergence of managerial capitalism. *Bus. Hist. Rev.* 58: 473–503.
- Clark, G. (2022). Agency, sentiment, and risk and uncertainty: fears of job loss in 8 European countries. *ZFW — Adv. Econ. Geogr.* 66: 3–17.
- Coe, N.M. and Bunnell, T.G. (2003). 'Spatializing' knowledge communities: towards a conceptualization of transnational innovation networks. *Glob. Netw.* 3: 437–456.
- Cohendet, P. (2022). Architectures of the commons: collaborative spaces and innovation. *ZFW — Adv. Econ. Geogr.* 66: 36–48.
- Cohendet, P., Grandadam, D., and Simon, L. (2010). The anatomy of the creative city. *Ind. Innov.* 17: 91–111.
- Cohendet, P., Grandadam, D., Simon, L., and Capdevila, I. (2014). Epistemic communities, localization and the dynamics of knowledge creation. *J. Econ. Geogr.* 14: 929–954.
- Cohendet, P., Parmentier, G., and Simon, L. (2017). Managing knowledge, creativity, and innovation. In: Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (Eds.). *The Elgar companion to innovation and knowledge creation*. Edward Elgar, Cheltenham, Northampton, MA, pp. 197–214.
- Collings, D.G., Scullion, H., and Caligiuri, P.M. (2019). *Global talent management*. Routledge, London.
- Crane, D. (2022). *Invisible colleges: diffusion of knowledge in scientific communities*. University of Chicago Press, Chicago.

- Crescenzi, R., Ganau, R., and Storper, M. (2022). Does foreign investment hurt job creation at home? The geography of outward FDI and employment in the USA. *J. Econ. Geogr.* 22: 53–79.
- Crevoisier, O. (2001). Der Ansatz des kreativen Milieus: Bestandsaufnahme und Forschungsperspektiven am Beispiel urbaner Milieus (The creative milieu: state of the art, research perspectives and the case of urban milieus). *ZFW – Z. Wirtschaftsgeogr.* 45: 246–256.
- de Groot, E., Endedijk, M.D., Jaarsma, A.D.C., Simons, P.R.-J., and van Beukelen, P. (2014). Critically reflective dialogues in learning communities of professionals. *Stud. Cont. Educ.* 36: 15–37.
- de Solla Price, D.J. and Beaver, D. (1966). Collaboration in an invisible college. *Am. Psychol.* 21: 1011–1018.
- DiMaggio, P.J. and Powell, W.W. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *Am. Sociol. Rev.* 48: 147–160.
- Dunning, J.H. (1983). Changes in the level and structure of international production: the last one hundred years. In: Casson, M.C. (Ed.). *The growth of international business*. Allen and Unwin, London, pp. 84–139.
- Dunning, J.H. (1993). *Multinational enterprises and the global economy*. Addison-Wesley, Wokingham.
- Dunning, J.H. (2000). The eclectic paradigm as an envelope for economic and business theories of MNE activity. *Int. Bus. Rev.* 9: 163–190.
- Dunning, J.H. and Lundan, S.M. (2008). *Multinational enterprises and the global economy*. Edward Elgar, Cheltenham, Northampton, MA.
- Evren, Y. and Odaş, E. (2024). Towards a comprehensive agency-based resilience approach: myopia and hypermetropia in the Turkish wine industry. *ZFW – Adv. Econ. Geogr.* 68: 81–95.
- Faulconbridge, J.R. (2007). Relational networks of knowledge production in transnational law firms. *Geoforum* 38: 925–940.
- Faulconbridge, J.R. (2010). TNCs as embedded social communities: transdisciplinary perspectives. *Crit. Perspect. Int. Bus.* 6: 273–290.
- Faulconbridge, J.R., Folke Henriksen, L.F., and Seabrooke, L. (2021). How professional actions connect and protect. *J. Prof. Organ.* 8: 214–227.
- Feldman, M. (2003). The locational dynamics of the US biotech industry: knowledge externalities and the anchor hypothesis. *Ind. Innov.* 10: 311–329.
- Fitzsimmons, S.R., Miska, C., and Stahl, G.K. (2011). Multicultural employees: global business' untapped resource. *Org. Dyn.* 40: 199–206.
- Florida, R. (2002). *The rise of the creative class: and how it's transforming work, leisure, community and everyday life*. Basic Books, New York.
- Fornahl, D., Henn, S., and Menzel, M.-P. (Eds.) (2010). *Emerging clusters: theoretical, empirical and political perspectives in the initial stage of cluster evolution*. Edward Elgar, Cheltenham, Northampton, MA.
- Forsgren, M., Holm, U., and Johanson, J. (2006). *Managing the embedded multinational: a business network view*. Edward Elgar, Cheltenham, Northampton, MA.
- Fuchs, M., Henn, S., Franz, M., and Mudambi, R. (Eds.) (2017). *Managing culture and interspace in cross-border investments: building a global company*. Routledge, Abingdon.
- Gertler, M.S. (2003). Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there). *J. Econ. Geogr.* 3: 75–99.
- Giuliani, E. and Bell, M. (2005). The micro-determinants of mess-level learning and innovation: evidence from a Chilean wine cluster. *Res. Pol.* 34: 47–68.
- Glückler, J. and Bathelt, H. (2017). Institutional context and innovation. In: Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (Eds.). *The Elgar companion to innovation and knowledge creation*. Edward Elgar, Cheltenham, Northampton, MA, pp. 121–137.
- Goerzen, A., Asmussen, C.G., and Nielsen, B.B. (2013). Global cities and multinational enterprise location strategy. *J. Int. Bus. Stud.* 44: 427–450.
- Grillitsch, M. and Sotarauta, M. (2020). Trinity of change agency, regional development paths and opportunity spaces. *Prog. Hum. Geogr.* 44: 704–723.
- Hajiro, A., Brewster, C., Haak-Saheem, W., and Morley, M.J. (2023). Global migration: implications for international business scholarship. *J. Int. Bus. Stud.* 54: 1134–1150.
- Hajro, A., Caprar, D.V., Zikic, J., and Stahl, G. (2021). Global migrants: understanding the implications for international business and management. *J. World Bus.* 56: 101192.
- Håkanson, L. (1979). Towards a theory of location and corporate growth. In: Hamilton, F.E.I. and Linge, G.J.R. (Eds.). *Spatial analysis, industry and the industrial environment. Volume i: industrial systems*. Wiley, Chichester, pp. 115–138.
- Hamida, L.M. (2013). Are there regional spillovers from FDI in the Swiss manufacturing industry? *Int. Bus. Rev.* 22: 754–769.
- Harrington, B. and Seabrooke, L. (2020). Transnational professionals. *Ann. Rev. Sociol.* 46: 399–417.
- Hartmann, C. and Philipp, R. (2022). Lost in space? Refugee entrepreneurship and cultural diversity in spatial contexts. *ZFW – Adv. Econ. Geogr.* 66: 151–171.
- Henn, S. and Bathelt, H. (2017). Transnational entrepreneurs and innovation. In: Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (Eds.). *The Elgar companion to innovation and knowledge creation*. Edward Elgar, Cheltenham, Northampton, MA, pp. 638–651.
- Henn, S. and Bathelt, H. (2018). Cross-cluster knowledge fertilization, cluster emergence and the generation of buzz. *Ind. Corp. Change* 27: 449–466.
- Hess, C. and Ostrom, E. (2003). Ideas, artefacts and facilities: information as a common pool resource. *Law Contemp. Probl.* 66: 111–146.
- Hitt, M.A., Li, D., and Xu, K. (2016). International strategy: from local to global and beyond. *J. World Bus.* 51: 58–73.
- Iammarino, S., Rodríguez-Pose, A., and Storper, M. (2019). Regional inequality in Europe: evidence, theory and policy implications. *J. Econ. Geogr.* 19: 273–298.
- Johanson, J. and Vahlne, J.-E. (1977). The internationalisation process of the firm – a model of knowledge development and increasing foreign market commitments. *J. Int. Bus. Stud.* 8: 23–32.
- Johanson, J. and Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: from liability of foreignness to liability of outsidership. *J. Int. Bus. Stud.* 40: 1411–1431.
- Kemeny, T. and Cooke, A. (2018). Spillovers from immigrant diversity in cities. *J. Econ. Geogr.* 18: 213–245.
- Kennedy, P. (2004). Making global society: friendship networks among transnational professionals in the building design industry. *Glob. Netw.* 4: 157–179.
- Kerr, W.R. and Kominers, S.D. (2015). Agglomerative forces and cluster shapes. *Rev. Econ. Stat.* 97: 877–899.
- Kerr, W.R. and Robert-Nicoud, F. (2020). Tech clusters. *J. Econ. Perspect.* 34: 50–76.

- Kloosterman, R.C. (2010). Matching opportunities with resources: a framework for analysing (migrant) entrepreneurship from a mixed embeddedness perspective. *Entrep. Reg. Dev.* 22: 25–45.
- Kloosterman, R., van der Leun, J., and Rath, R. (1999). Mixed embeddedness: (in)formal economic activities and immigrant businesses in the Netherlands. *Int. J. Urban Reg. Res.* 23: 252–266.
- Knorr Cetina, K. (1999). *Epistemic cultures: how the sciences make sense*. Chicago University Press, Chicago.
- Krugman, P. (1991). *Geography and trade*. Leuven University Press, Leuven; MIT Press, Cambridge, MA.
- Lamoreaux, N.R. and Sokoloff, K.L. (2001). Market trade in patents and the rise of a class of specialized inventors in the 19th-century United States. *Am. Econ. Rev.* 91: 39–44.
- Li, P. (2014). Horizontal vs. vertical learning: divergence and diversification of leading firms in Hangji toothbrush cluster, China. *Reg. Stud.* 48: 1227–1241.
- Li, P. (2017a). Horizontal learning. In: Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (Eds.). *The Elgar companion to innovation and knowledge creation*. Edward Elgar, Cheltenham, Northampton, MA, pp. 392–404.
- Li, P. (2017b). Family networks for learning and knowledge creation in developing regions. In: Glückler, J., Lazega, E., and Hammer, I. (Eds.). *Knowledge and networks*. Springer, Berlin, pp. 67–84.
- Li, P. (2018). A tale of two clusters: knowledge and emergence. *Entrep. Reg. Dev.* 30: 822–847.
- Lorenzen, M. and Mudambi, R. (2013). Clusters, connectivity and catch-up: Bollywood and Bangalore in the global economy. *J. Econ. Geogr.* 13: 501–534.
- Lorenzen, M., Mudambi, R., and Schotter, A. (2020). International connectedness and local disconnectedness: MNE strategy, city-regions and disruption. *J. Int. Bus. Stud.* 51: 1199–1222.
- Malecki, E.J. (2009). Geographical environments for entrepreneurship. *Int. J. Entrep. Small Bus.* 7: 175–190.
- Martinez-Vazquez, J. and Vaillancourt, F. (Eds.) (2008). *Public policy for regional development*. Routledge, London.
- Maskell, P., Bathelt, H., and Malmberg, A. (2006). Building global knowledge pipelines: the role of temporary clusters. *Eur. Plan. Stud.* 14: 997–1013.
- Monteiro, F. and Birkinshaw, J. (2017). The external knowledge sourcing process in multinational corporations. *Strateg. Manag. J.* 38: 342–362.
- Murmann, J.P. (2003). *Knowledge and competitive advantage: the coevolution of firms, technology, and national institutions*. Cambridge University Press, Cambridge.
- Murmann, J.P. (2013). The coevolution of industries and important features of their environments. *Organ. Sci.* 24: 58–78.
- Nelson, R.R. (1989). What is private and what is public about technology? *Sci. Technol. Hum. Val.* 14: 229–241.
- Ostrom, E. (1990). *Governing the commons: the evolution of institutions for collective action*. Cambridge University Press, Cambridge.
- Oughton, C., Landabaso, M., and Morgan, K. (2002). The regional innovation paradox: innovation policy and industrial policy. *J. Technol. Tran.* 27: 97–110.
- Owen-Smith, J. and Powell, W.W. (2004). Knowledge networks as channels and conduits: the effects of spillovers in the Boston biotechnology community. *Organ. Sci.* 15: 2–21.
- Pavitt, K.L.R. (1991). What makes basic research economically useful? *Res. Pol.* 20: 109–119.
- Phelps, N.A. and Wood, A.M. (2018). The business of location: site selection consultants and the mobilisation of knowledge in the location decision. *J. Econ. Geogr.* 18: 1023–1044.
- Porter, M.E. (1990). *The competitive advantage of nations*. Free Press, New York.
- Portes, A. and Martinez, B.P. (2020). They are not all the same: immigrant enterprises, transnationalism, and development. *J. Ethnic Migrat. Stud.* 46: 1991–2007.
- Portes, A. and Sensenbrenner, J. (1993). Embeddedness and immigration: notes on the social determinants of economic action. *Am. J. Sociol.* 98: 1320–1350.
- Potts, J. (2019). *Innovation commons: the origin of economic growth*. Oxford University Press, Oxford.
- Rappa, M.A. and Debackere, K. (1992). Technological communities and the diffusion of knowledge. *R D Manag.* 22: 209–220.
- Rauch, J.E. (1999). Networks versus markets in international trade. *J. Int. Econ.* 48: 7–35.
- Roberts, J. (2017). Community, creativity and innovation. In: Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (Eds.). *The Elgar companion to innovation and knowledge creation*. Edward Elgar, Cheltenham, Northampton, MA, pp. 342–359.
- Sandoz, L., Mittmasser, C., Riaño, Y., and Piguet, E. (2022). A review of transnational migrant entrepreneurship: perspectives on unequal spatialities. *ZFW – Adv. Econ. Geogr.* 66: 137–150.
- Sassen, S. (2001). *The global city: New York, London, Tokyo*. 2nd ed. Princeton, NJ: Princeton University Press.
- Saxenian, A. (2006). *The New Argonauts: regional advantage in a global economy*. Harvard University Press, Cambridge, MA.
- Saxenian, A. and Sabel, C. (2008). Roepke lecture in economic geography – Venture capital in the ‘periphery’: the New Argonauts, global search, and local institution building. *Econ. Geogr.* 84: 379–394.
- Shukla, P. and Cantwell, J. (2016). Migrants and the foreign expansion of firms. *Rutgers Bus. Rev.* 1: 44–56.
- Shukla, P. and Cantwell, J. (2018). Migrants and multinational firms: the role of institutional affinity and connectedness in FDI. *J. World Bus.* 53: 835–849.
- Shukla, P. and Cantwell, J. (2023). Skilled migrants: stimulating knowledge creation and flows in firms. In: Mockaitis, A.I. (Ed.). *Palgrave handbook of global migration in international business*. Palgrave Macmillan, London, pp. 355–384.
- Sölvell, Ö. and Birkinshaw, J. (2000). Multinational enterprises and the knowledge economy: leveraging global practices. In: Dunning, J. (Ed.). *Regions, globalization and the knowledge-based economy*. Oxford University Press, Oxford, pp. 82–106.
- Storper, M. (1997). *The regional world: territorial development in a global economy*. Guilford Press, New York.
- Storper, M. and Venable, A.J. (2004). Buzz: face-to-face contact and the urban economy. *J. Econ. Geogr.* 4: 351–370.
- Styhre, A. (2016). *Knowledge sharing in professions: roles and identity in expert communities*. Routledge, London.
- Taylor, P.J. and Derudder, B. (2004). *World city network: a global urban analysis*. Routledge, London.
- Teece, D.J. (1993). The dynamics of industrial capitalism: perspectives on Alfred Chandler’s scale and scope. *J. Econ. Lit.* 31: 199–225.
- Vahlne, J.-E. and Johanson, J. (2013). The Uppsala model on evolution of the multinational business enterprise – from internalization to coordination of networks. *Int. Mark. Rev.* 30: 189–210.

Valler, D. (2011). The evaluation of local and regional development policy. In: Pike, A., Rodríguez-Pose, A., and Tomaney, J. (Eds.). *Handbook of local and regional development*. Routledge, London, pp. 569–580.

Wenger, E.C. (1998). *Communities of practice: learning, meaning, and identity*. Cambridge University Press, Cambridge.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Acad. Manag. J.* 38: 341–363.