Journal of World Business 55 (2020) 101076

Contents lists available at ScienceDirect

Journal of World Business

journal homepage: www.elsevier.com/locate/jwb

Going subnational: A literature review and research agenda

Thomas Hutzschenreuter[a,*], Tanja Matt[a], Ingo Kleindienst[b]

[a] Technical University of Munich, Arcisstr. 21, 80333 Munich, Germany
[b] Department of Management, School of Business and Social Sciences, Aarhus University, Fuglesangs Allé 4, 8210 Aarhus V, Denmark

ARTICLE INFO

Keywords:
International business
Multinational enterprise (MNE)
Subnational
Region
Literature review

ABSTRACT

For a long time most international business researchers assumed homogeneity within national borders. More and more, international strategy is being considered at the subnational level. We review the current state of the literature that adopts this more fine-grained, subnational geographic level of analysis as well as studies combining multiple levels of geographic analysis. We consider the notion of the *subnational region* and provide an overview of regional grouping schemes applied in research. Our integrative framework shows how in the subnational context (1) firm, industry and environmental characteristics, (2) influence strategy, location choice and entry mode, and (3) the eventual consequences of firm decision-making. We synthesize prior work, address unresolved issues, and provide recommendations for future research advancing research on different geographic levels of analysis.

1. Introduction

On which geographic level of analysis do multinational enterprises (MNEs) plan their international strategy? How do MNEs choose and decide on where to invest internationally? Explaining international strategies, the location choices and entry modes of MNEs as well as their consequences are among the fundamental issues and questions that define the field of international business and the contribution it makes to both theory and practice of management. To answer these questions, scholars have examined MNEs' (degree of) international diversification (Lu, Liu, Filatotchev, & Wright, 2014; Ma, Ding, & Yuan, 2016), a variety of location factors ranging from market size to quality of formal institutions to taxes and tariffs (Asmussen & Goerzen, 2013) as well as institutional and cultural variables affecting entry mode choice (Meyer & Nguyen, 2005; Slangen, 2016). We find that most extant literature has adopted country as the primary geographic unit of analysis (Asmussen, Nielsen, Goerzen, & Tegtmeier, 2018; Beugelsdijk, McCann, & Mudambi, 2010; Dai, Eden, & Beamish, 2013). There are many good reasons for taking a country-centric approach, e.g. history, national government involvement in trade, impact of national institutions on business strategy and decision making, and not least of all the availability of country data (Beugelsdijk & Mudambi, 2013). The difficulty is that what we think we know about "country" is built on the untenable assumption of subnational spatial homogeneity. Consider the following: In November 2013 Tesla opened its first wholly-owned showroom in Beijing. Prospective buyers would have to put down a $40,000 deposit to preorder a Model S that, with hefty taxes, would come to between $146,000 and $200,000. In light of China's 2017 country-level GDP per capita at PPP of just $16,700, Tesla's decision to enter the Chinese market seems foolhardy, that is if you look at the national level. The story is different from a subnational perspective. The *Hurun Global Rich List* shows that Beijing is the undisputed billionaire capital of the world (Hurun, 2018), and Knight Frank's (2019) City Wealth Index puts Beijing at Number 3, just behind London and New York.

Obviously, international business (IB) activities do not only occur at the national level. They often take place at the intersection of different locational levels within different geographic units. A number of authors have argued that country is not the lowest relevant level of analysis for location (Chidlow, Holmström-Lind, Holm, & Tallman, 2015), others have reasoned that countries are not homogenous (Beugelsdijk, Slangen, Maseland, & Onrust, 2014; Dow & Karunaratna, 2006; Shenkar, 2001). Some find wide subnational variations within countries, e.g. in terms of culture (Beugelsdijk & Mudambi, 2013; Tse, 2010), institutions (Castellani, Giangaspero, & Zanfei, 2013), natural resource endowments[1] and other geographic characteristics

* Corresponding author.
E-mail addresses: th.sim@tum.de (T. Hutzschenreuter), tanja.matt@tum.de (T. Matt), iklein@mgmt.au.dk (I. Kleindienst).

[1] By natural resource endowments we mean the raw materials and primary inputs of a certain location, i.e. country or subnational region: fuels, minerals, energy, forestry and agriculture. As these natural resources are relatively immobile and expensive to transport, they play an important role in MNE location choice (Jiang et al., 2016; Rugman & Oh, 2008).

https://doi.org/10.1016/j.jwb.2020.101076
Received 28 August 2018; Received in revised form 19 January 2020; Accepted 19 January 2020
Available online 22 February 2020
1090-9516/

(Dellestrand & Kappen, 2012; Goerzen, Asmussen, & Nielsen, 2013; Meyer & Nguyen, 2005; Sun, Peng, Lee, & Tan, 2015), and economics (Beugelsdijk & Mudambi, 2013; Shi, Sun, & Peng, 2012; Shi, Sun, Pinkham, & Peng, 2014). Such differences are especially marked in large countries like the US and China where states or provinces are sometimes as big as a number of whole countries (in terms of surface, population, etc.) (Shaver & Flyer, 2000). The State of California has the fifth largest economy in the world, topping the UK and following closely behind Germany on a nominal exchange rate basis (Economist, 2019). Similarly, as seen by the Tesla example, Chinese provinces are quite heterogeneous. In fact, Shanghai's GDP per capita equals that of Saudi Arabia (at purchasing-power parity), but Guizhou, the poorest province, has an income per head close to that of India. The Global Cities Investment Monitor (2018) lists the top 35 cities attracting international greenfield investments above the level that would be expected based on country GDP. In many cases there are more similarities between regions across national borders than within regions of the same country (Beamish & Lupton, 2016; Castellani et al., 2013). Lenartowicz, Johnson, and White (2003) find greater cultural similarity between Cartagena in Colombia and Caracas in Venezuela than within Colombia itself. The research stream of which all this work is a part adopts a more fine-grained geographic level of analysis, i.e. the subnational level, to investigate the effects of within-country differences (e.g. Chan, Makino, & Isobe, 2010; Ma, Tong, & Fitza, 2013).

Of course MNEs need to consider the national level, but they need as well to take into account the subnational environment. Effects that have been attributed to the national level may in fact arise from a subnational regional variation (Beamish & Lupton, 2016). Indeed, international business outcomes are often the result of a complex combination of responses to influences at different geographic levels of analysis (Mudambi et al., 2018). This thinking is equally reflected in research in Economic Geography (EG), "which suggest[s] that a simple host-home country dichotomy becomes insufficient" (Mudambi et al., 2018; Fujita, Krugman, & Venables, 2001; Iammarino & McCann, 2013).

Given the importance of subnational level analysis both in scholarship and in practice (e.g. Global Cities Investment Monitor by KPMG and Greater Paris Investment Agency (Beaudouin et al., 2018)), it is striking that there has not yet been an in-depth survey of the growing body of research using it. As a result it is unclear where we stand. The contribution of this study is twofold: First, we take stock of what we know about the specifics of the geographic level of analysis. We also provide a review of advances in our understanding of the relevance of subnational characteristics. Second, we address remaining gaps, and provide an agenda for future research.

The remainder of the article is organized as follows. First, we outline how we identified relevant literature, and how we then inductively developed an integrative framework. Next, we review and synthesize past research that uses a subnational level of analysis, and outline its crucial findings, contradictions, and gaps. Finally, based on the intellectual map drawn from our review, we derive an extensive future research agenda.

2. Methodology

2.1. Domain of the review and identification of the literature

The focus of this review is *empirical* and *conceptual international strategy* research using a *subnational level of analysis*. As our chosen unit of analysis is the firm and firm-activity, we do not consider research on the internationalization of geographic regions themselves (i.e. regions as the unit of analysis). We considered for inclusion in this review articles published in top-tier peer-reviewed journals, reasoning that work that appears in such journals can be considered validated knowledge and most likely to have impact (Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005; Tahai & Meyer, 1999). We identified 32 top-tier peer-reviewed academic journals – 26 international business journals and six economic geography journals – from among those listed and described in articles on journal quality and rankings (Clarivate Analytics, 2017; Kalaitzidakis, Mamuneas, & Stengos, 2003; Podsakoff et al., 2005; SCImago, 2007; Tahai & Meyer, 1999), and based on our own reading of the aim and scope of the respective journals.

We did a computerized keyword search of article abstracts and titles using the *Business Source Complete Database*. We did not limit the search to a specific time period. It yielded 1117 hits, originating from 1112 disjoint and potentially relevant articles. In the first round, we read the abstract of each of those articles. This led us to remove from the potential pool 992 articles that did not fall within the above-defined domain. Book reviews, editor notes, and other indirect research material were excluded. Furthermore, we excluded articles dealing with, for instance, national-level issues (e.g. Lai, Lin, & Lin, 2015) or taking a regional instead of a firm unit of analysis (e.g. Burger, van der Knaap, & Wall, 2013; Marcus, Kahraman, Su, & Fritzsche, 2019). In the second round, we examined the theory and method sections of the remaining 120. This resulted in eliminating another 48, leaving 72. In the last round, we looked at articles to which the authors of the clearly relevant work repeatedly referred. This led us to add four articles that had not been identified by the keyword search. The final sample encompasses 76 articles, 71 empirical and five conceptual studies. Of those, 62 focus exclusively on the subnational level, while 14 combine different geographic levels of analysis, i.e. national as well as subnational. Table A1 in the online appendix lists the journals in which the sample articles are published, and indicates the respective number of articles per journal. Fig. A1 in the online appendix provides a time-based overview of the number of studies included in the literature review.

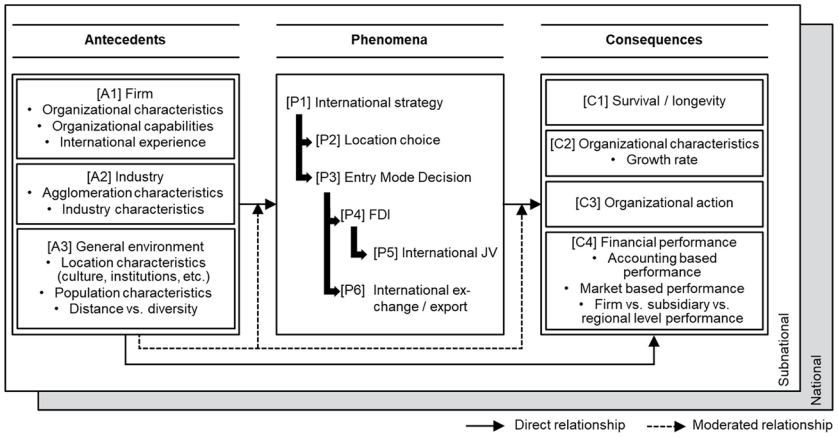

Fig. 1. Review framework.

2.2. Development of the review framework

We inductively developed a review framework (see Fig. 1). Following previous reviews such as those of Hitt, Tihanyi, Miller, and Connelly (2006); Hutzschenreuter and Kleindienst (2006) and Schmeisser (2013), the basic framework consists of three main components: Antecedents [A], Phenomena [P], and Consequences [C].

International strategy unfolds in, and is shaped by, a firm's internal and external environments. It is developed in the context of firm-level antecedents [A1], such as organizational characteristics (e.g. Chadee, Qiu, & Rose, 2003) and prior international experience (e.g. Nielsen, Asmussen, & Weatherall, 2017). The industry context [A2], primarily agglomeration factors (e.g. Chidlow, Salciuviene, & Young, 2009), also has an important influence. Finally, strategy is affected by the general environment [A3], i.e. location characteristics like culture, institutions, geography and the economy. These factors apply to national and subnational geographic units of analysis. Differences in them lead to different international strategies, and they may also act as important moderators of phenomenon-consequence relationships.

A firm's international strategy [P1] is basically its plan for operating in multiple locations across national borders, and the basis for deciding where to locate which product(s) and value chain activities. A firm's strategy sets out its international business activity, i.e. doing business across (national) borders in different locations. This includes the process of expanding abroad, i.e. geographic diversification, internationalization, globalization, and multinationality. Thus, the pattern is first, location choice [P2], i.e. where the firm will invest, followed by entry mode decisions [P3], FDI (wholly-owned affiliates, international joint ventures), contracts or exports. The mode of entry hinges on whether the firm determines that it is better to export or to enter contractual agreements, be it by non-equity or equity modes, such as equity joint ventures and wholly owned subsidiaries (Pan & Tse, 2000), depending on the need to provide incentives to local owners of complementary inputs (Hennart, 2009). We include in our framework exporting [P6], FDI [P4], and international joint ventures [P5]. Studies that address FDI in general terms, that is that do not specify joint venture or wholly-owned subsidiary, are listed under [P4], whereas those that specifically consider joint ventures we list under [P5]. One of the bold arrows in the framework indicates that joint ventures are a special case of FDI.

An antecedent and a particular phenomenon influence economic and non-economic consequences or outcomes. We differentiate between non-economic outcomes: survival/longevity [C1], organizational characteristics [C2], organizational action [C3], and economic consequences which we summarize as financial performance [C4]. Survival/longevity is a consequence on its own (e.g. Ma & Delios, 2007). Organizational characteristics include, for example, a company's growth rate, while organizational action summarizes, for example, companies' organizational structures (e.g. Dellestrand & Kappen, 2012). Mostly, consequences are investigated in terms of different performance outcomes, such as accounting based (e.g. Li & Sun, 2017) or market based performance (e.g. Ma, Tong et al., 2013). All of these components and relationships are illustrated in Fig. 1.

The research we review falls into two categories within our framework. The first set of studies address exclusively particular phenomena [P1-6]. As they are concerned only with what we have categorized inside one of the these boxes, we call them box-exploring studies. For example, Jones and Wren (2015) look at FDI and only FDI [P4]. The second set of studies explore one or more linkages between antecedents, phenomena, and consequences, sometimes a direct relationship and sometimes a moderating one. These we call linkage-exploring studies and mostly they have to do with simple bivariate contingency relationships. In sum, there are studies that consider only phenomena and others that look at causes and consequences. Table A2 in the online appendix shows which studies explore which boxes and linkages.

We provide an overview of the studies in tables found in the online appendix. Table A3 gives two or three content bullet-points for each of the four conceptual studies. Table A4 lists the empirical studies. For each we indicate whether the level of analysis is purely subnational or is a subnational-national combination. We list also the regional grouping scheme, i.e. administrative, cultural, economic, sample size and method, industry, firm characteristics, firm home country, and major research questions, i.e. box or linkage. Finally, the key findings are presented.

In the following section we explain what subnational regions are, and why they matter. Thereafter, we review the empirical studies – single box ones, e.g. Wren & Jones, 2012 [P1], and those that fall into different research streams, e.g. Scott (1998) [A3-P2]. Finally, we propose avenues for future research. We outline crucial findings, contradictions, and gaps in the present literature and bring together what we have learned so far from research on the subnational level.

3. Basic questions

3.1. What is a subnational region?

The term "region" is widely used in IB studies that consider a subnational geographic area, despite the ambiguity of the term and the lack of consensus about how to operationalize it (Aguilera, Flores, & Vaaler, 2007; Arregle, Beamish, & Hébert, 2009; Banalieva & Dhanaraj, 2013). There have been a number of attempts to form a definition, usually referring to geographic space, such as a "fairly large area of a country", that shares definable characteristics, but without necessarily giving any fixed boundary or exact limits (Flores, Aguilera, Mahdian, & Vaaler, 2013). In the studies we reviewed, a subnational region typically describes a space within a particular country, and is usually demarcated by an administrative border, such as a federated state or a province, e.g. the Polish province of Mazowieckie (Chidlow et al., 2015). Sometimes the region is determined by policy, such as NUTS[2] in the European Union (EU) or Metropolitan Statistical Areas (MSA) in the US.

In Table 1, we sort the studies in our sample by three of the dimensions of Ghemawat's (2001) CAGE framework: cultural, administrative, and economic (Chidlow et al., 2015; for a review see Aguilera et al. (2007)). We do not include the geographic dimension as we found no geographic regional grouping scheme on the subnational level among the articles in our sample.

3.1.1. Cultural perspective

Following this approach, the world is divided into groups of subnational entities sharing a religion, a language, or more often, personal attitudes, values and beliefs – or any other common socio-cultural traits (Aguilera et al., 2007; Flores et al., 2013). Although cultural regional schemes at the subnational level are rare, Lenartowicz and colleagues (Lenartowicz & Roth, 2001; Lenartowicz, Johnson, & White, 2003) examine the effects on business outcomes of within-country subcultures in Latin America. Others measure subnational cultural heterogeneity, i.e. ethnic, linguistic, and religious fractionalization or segregation (Alesina, Devleeschauwer, Easterly, Kurlat, & Wacziarg, 2003; Alesina & Zhuravskaya, 2011). The approach of Alesina and colleagues in their 2003 study results in national-level values of within-country cultural diversity, but not subnational-level values. In a later study Alesina and Zhuravskaya (2011) build a new dataset on the ethnic, linguistic, and religious composition of subnational administrative regions for about 90 countries, which has been used by Beugelsdijk, Slangen, Maseland, & Onrust, 2014. The World Value Survey (Inglehart, Basanez, & Moreno,

[2] NUTS is an acronym for Nomenclature of Units for Territorial Statistics which indicates a hierarchical classification of administrative areas used by Eurostat. In particular, NUTS0 units correspond to countries, while NUTS1 regions are areas derived from normative criteria grouping together so-called basic areas (NUTS2 regions) (Basile et al., 2009).

Table 1
Key regional grouping schemes by perspective.

Level	Dimension	Source	Scheme / criterion	Regions	Applied/adapted in literature review studies*
Subnational	Cultural[a]	Alesina et al. (2003); Alesina and Zhuravskaya (2011)	Ethno-linguistic diversity		186, 248
	Administrative	European Union (2011)	NUTS regions		138, 701, 892, 932, 399, 83, 624, 587, 333, 563, 124, 118, 809, 1029
		United States Census Bureau (2018)	Metropolitan Statistical Areas		654, 546
		Statistics Canada (2006)	Census metropolitan areas (CMAs), Census agglomerations (CAs)[b]	There are 33 CMAs and 111 CAs in Canada in 2006	613, 1026
		National Bureaus of Statistic	First or second level of administration	e.g. Chinese provinces, prefecture cities	128, 493, 291, 127, 255, 325, 126, 96, 452, 555, 861, 494, 314, 483, 417, 428, 257, 463, 865, 546, 482, 129, 462, 466, 91, 714, 387, 860, 720, 1007, 600, 1009, 1023, 1027, 1032, 1026, 1035, 1021, 1030, 1022, 1031, 1028
		UCDP-PRIO Armed Conflict Dataset (Uppsala, 2011)	Conflict zones	Regions of war, insurrection, or severe lawlessness	1003
	Economic	Shan (1991)	Degree of economic liberalization and marketization	(1) 17 special zones created by Chinese government; (2) 3 large, metropolitan cities; (3) coastal cities; (4) inland locations	193
		–	Level of development	Developed vs. developing regions	135
		–	FDI-openness	FDI-open vs. FDI-restricted areas	5
	Combination	Goerzen et al. (2013)	Global cities	Cities characterized by international connectedness, advanced producer service, cosmopolitan environment	461, 1005
		–	Metropolise	Shanghai, Beijing	72, 330, 1034

* Or adapted from. Some papers are listed more than once, as they apply several regional categorization schemes.
[a] Additional subnational regional grouping schemes: subcultures (Lenartowicz, Johnson, & White, 2003); World Value Survey (Inglehart, Basanez, & Moreno, 1998).
[b] CMAs and CAs represent all urban economic areas in Canada. According to Statistics Canada (2006), these areas are defined by a larger urban core with at least 10,000 people combined with one or more closely related adjacent municipalities that are connected to the urban core through commuter flows.

1998) provides data on culture for administrative subnational regions, but only covers six of them (Andalusia, Basque Country, Communidad Valencia, Galicia, Srpska Republic, Tambov). Researchers agree that there is cultural variation within countries (Beugelsdijk & Mudambi, 2013; Tse, 2010).) and that this variance in turn influences business results (Lenartowicz & Roth, 2001).

Only two of the studies in our sample draw on the cultural perspective to build subnational regions (Beugelsdijk, Slangen, Maseland, & Onrust, 2014; Dow, Cuypers, & Ertug, 2016). Nonetheless, it makes sense to do that when a region is more culturally homogeneous than the country as a whole. Such regional classifications are valuable, however, they are less helpful when the research undertaken focuses on international corporate strategy. As Rugman and Verbeke et al. (2007, p. 203) argue, cultural clusters, i.e. regions, are "an academic artifact, intellectually appealing but relatively far removed from the practice of international corporate strategy and geo-political reality" (Banalieva & Dhanaraj, 2013). Though this was said in the context of supranational regions, it is without doubt true for subnational regional grouping schemes as well.

3.1.2. Economic perspective

Three studies in our sample, Chadee et al. (2003); Lei and Chen (2011), and Lu & Ma, 2008, use economic criteria to build subnational regions. They all investigate how a Chinese region's level of economic development, liberalization, marketization, and openness to FDI affects the amount of FDI it receives. When the focus is on economic characteristics influencing business phenomena, it is reasonable to form the geographic units of analysis accordingly. However, as these economic characteristics may change over time due to ongoing economic, political and financial integration, as well as increased mobility of labor within and across countries (Verbeke, Kano, & Yuan, 2016), the composition of the regions may need to change as well. In comparison, categorizations based on culture are more stable over time (Aguilera et al., 2007).

3.1.3. Administrative perspective

Forty-seven of the 56 empirical studies in our sample adopt an administrative perspective that takes into account the first or second level of administration or specifically designed statistical units in one or more countries. Statistical units (NUTS, MSA, etc.) are used to compile regional statistics. Subnational administrative regions are often described or compared in terms of institutional characteristics. Thus, the administrative boundaries of states or provinces, i.e. subnational regions, coincide with their institutional boundaries (Chan et al., 2010) – each administrative region having its more or less specific or differing institutions. In some countries the institutional environment is heterogeneous (Zhang, Zhao, & Ge, 2016). For example, the World Bank (2006) documents that the time needed by foreign firms to deal with government authorities varies significantly from one Chinese city to another (Li & Sun, 2017). However, there is no institutional perspective towards building subnational regions.

3.1.4. Perspectives beyond individual CAGE dimensions

Four studies use regional schemes that combine two or more perspectives. Goerzen et al. (2013) define global cities based on three key attributes: "high degree of interconnectedness to local and global markets; a cosmopolitan environment; and high levels of advanced producer services" (p. 430). Thus, this regional grouping scheme combines cultural, administrative and economic perspectives (Blevins, Moschieri, Pinkham, & Ragozzino, 2016; Goerzen et al., 2013). Other authors use the more familiar criterion of metropolis to define their subnational regions (Ma & Delios, 2007; Ma, Delios, & Lau, 2013).

3.1.5. Evaluation of findings

Our analysis reveals that there are substantial differences in the grouping scheme(s) applied to build regions and that they can be traced back to research interests, theoretical perspectives, and empirical methods. That said, among the three main grouping schemes, the administrative regional one stands out. Just like nation states, subnational administrative regions are constructs somewhat randomly defined along political lines. Hence, the grouping logic only ensures that the administration is homogeneous within the region. These national and subnational level regions go hand in hand with and mirror different institutions and/or institutional levels. As such, they are suitable to represent institutional differences as well as to compare institutional distances. However, it is crucial to understand that it does not make sense to use subnational administrative regions for anything else than for differences in institutions. Researchers should not make the false assumption (again) to think that the homogeneity within such subnational regions also includes factors such as culture, economy, etc. In order to compare, for example, cultural and economic differences between subnational regions it is imperative to define subnational regions according to the respective criteria. What needs to be ensured is a consistency between the regional grouping scheme and the research question at hand. Many studies do not explain the theoretical reasoning behind the choice of a particular regional scheme, thereby undermining its concept, construct, and measurement validity. In fact, there are studies that do not even explicitly specify the regional scheme chosen (e.g. Ma & Delios, 2010; Zhou, Li, & Tse, 2002). We hold that any subnational region must be defined as a coherent part of a country (or of more than one country) within which differences along a specific characteristic, e.g. language, wealth, education, infrastructure, are smaller than across regions. This definition is specific enough to describe subnational regions within a country as well as subnational regions which combine parts of more than one country, an issue we come back to in our suggestions for future research.

3.2. Why do subnational regions matter?

Of course, IB activities not only occur at the national level but also at the interface of different locational levels and kinds of geographic units. We do not suggest by any means that national-level research be abandoned, but rather that it be complemented by subnational level research.

The 2007 edition of OECD's Regions at a Glance reports that in 2003, 38 % of the GDP of all the member countries put together was concentrated in just 10 % of member country regions. The Global Cities Investment Monitor (2018) found that the top 35 global cities attracted nearly 45 % of the world's total international investment. These statistics tell us that countries are not homogeneous (Beugelsdijk, Slangen, Maseland, & Onrust, 2014; Dow & Karunaratna, 2006; Shenkar, 2001), thus it is an error to overlook the importance of subnational regions (Mataloni, 2011). In other words, the assumption of subnational spatial homogeneity is unrealistic (Castellani et al., 2013) and often too coarse of a geographic level of analysis (Goerzen et al., 2013). A more fine-grained analysis of regional differences requires a more sophisticated conceptualization of space than the country level (Beugelsdijk et al., 2010; Dellestrand & Kappen, 2012; Monaghan, Gunnigle, & Lavelle, 2014; Zhou, Delios, & Yang, 2002). Furthermore, as we have shown, there is often more similarity between regions located in different countries than between regions in the same country (Beamish & Lupton, 2016; Castellani et al., 2013). A further example is that while the average level of education of the labor force in China is much lower than that in Australia, the level is similar when comparing the most highly-educated regions of the two countries. One must conclude that location choice based on national averages, i.e. on the assumption of spatial homogeneity, will systematically result in a biased outcome. A host country may appear to be "unattractive" based on national averages, but there may be highly attractive regions within it. Country is no longer the lowest relevant level of analysis for location (Chidlow et al., 2015).

What we mean to say is that there are considerable subnational

variations between regions within countries. We see in the studies we reviewed differences in terms of culture (Beugelsdijk & Mudambi, 2013; Tse, 2010), institutions (Castellani et al., 2013), natural resource endowments and other geographic characteristics (Dellestrand & Kappen, 2012; Goerzen et al., 2013; Meyer & Nguyen, 2005; Sun et al., 2015), as well as economic development (Beugelsdijk & Mudambi, 2013; Shi et al., 2012, 2014). Such differences create challenges for foreign firms, but also unique opportunities (Chan et al., 2010; Li & Sun, 2017). A local culture may deviate – sometimes substantially – from the 'national average'. Subcultures, reflected in such things as local traditions and even dialects, influence the behavior and business practices of local actors (Beugelsdijk & Mudambi, 2013; Beugelsdijk, Slangen, Maseland, & Onrust, 2014).

Just as institutions are not homogeneous across countries (Kostova, Roth, & Dacin, 2008; Kostova & Zaheer, 1999), institutional conditions vary across administrative regions within a country even though in principle there is a unified political and economic system (Beugelsdijk & Mudambi, 2013; Bu & Wagner, 2016; Chan et al., 2010; Li & Sun, 2017; Ma, Tong et al., 2013; Meyer & Nguyen, 2005). Within-country variation may result from administrative decentralization, as regional authorities set certain laws (e.g. in the USA) or interpret and decide how to implement national-level rules and policies (Chan et al., 2010; Meyer & Nguyen, 2005). There may also be differences in informal institutions across regions because of variations in their normative or cognitive aspects (Meyer & Nguyen, 2005; Nguyen, Le, & Bryant, 2013). There are, for example, differences in taxation, e.g. between US States, even within them: the State of Pennsylvania sales tax is 6 %, except Allegheny County where it is 7 % and Philadelphia 8 % (Pennsylvania Department of Revenue, 2019). Another example are special economic zones within China (Meyer & Nguyen, 2005).

There are also large differences in economic conditions across subnational regions. This has been shown in studies of industrial districts – geographic clusters of firms in closely related industries (Chidlow et al., 2015; Mataloni, 2011; Porter, 1998). In his work on location and strategy, Porter (1990); Porter, 1994; Porter, 1998 suggests that "the relevant economic area is smaller than the nation" and that "the most decisive economic policy influences are often at the state and local level" (Ma, Tong et al., 2013; Porter, 1994, p. 38). Differences in market size and in factors of production are sources of comparative advantage across subnational regions (Chan et al., 2010; Ma, Tong et al., 2013).

MNEs can take advantage of these internal cultural, institutional and economic differences (Beugelsdijk & Mudambi, 2013) by locating in places where there is a good match between potential customers and the firm's product or service offerings. According to the Global Cities Investment Monitor (2018) the top three investment criteria are (1) political stability and juridical security, (2) infrastructure, and (3) availability of skilled human resources.

In large countries, subnational units, such as provinces or states, may be as large in area and population as entire smaller countries, and quite distinct from one another as well (Shaver & Flyer, 2000). In large emerging economies, like the four BRIC ones, the culture, local institutions, and economic conditions can vary significantly across regions (Liu, Lu, & Chizema, 2014; Ma, Tong et al., 2013; Meyer & Nguyen, 2005; Monaghan et al., 2014; Shi et al., 2012; Shi, Sun, Yan, & Zhu, 2017; Zhou, Li et al., 2002). These differences can be the result of uneven economic development and of successive waves of deregulation, privatization, and decentralization. Regional governments play an important role in emerging economies. Although some countries, like China and Korea, are nominally unitary states, they function in many ways like federal states because of decentralization and histories of regional autonomy and self-sufficiency (Li & Sun, 2017; Lu & Ma, 2008; Ma et al., 2016). For example, certain regions might be designated open areas, and within them foreign investors receive favorable treatment (Zhou, Delios et al., 2002), while others may be far less open, with the government maintaining control over local resource allocation and distributing them as they alone see fit (Ma & Delios, 2010). Such within-country variations in economic and political institutions affect the volume and entry modes of FDI inflows and more generally the costs and profitability of doing business there (Chan et al., 2010; Li & Sun, 2017; Meyer & Nguyen, 2005).

3.2.1. Evaluation of findings

Overall, our review of the literature reveals that there is one compelling answer to the question, "Why do subnational regions matter?" They matter because they differ from one another in culture, institutions and level of economic development, especially in large and emerging economies. One consequence is that international investment as well as productivity, innovation and firm creation rates are concentrated in a few subnational regions and global cities (Beaudouin et al., 2018; OECD, 2018).

4. Empirical insights

4.1. Linkage-exploring studies

4.1.1. Antecedents – phenomenon

Most studies at the subnational level investigate how firm, industry, and environmental characteristics impact international strategies.

Subnational.. These studies can be divided into two groups: (1) location choice and (2) institutional environment. Twenty-one of the 28 studies addressing subnational *location choice* consider location within a single host country (e.g. Chidlow et al. (2009), Poland, Wei, Liu, Parker, and Vaidya (1999), China, and (Belderbos, Du, & Slangen, 2020), China). A few consider location across several host countries (e.g. Basile, Castellani, and Zanfei (2009), five EU countries, and Karreman, Burger, and van Oort (2017), 26 European countries). The single-country approach makes the assumption, explicitly or implicitly, that firms choose regions within and not across countries. In other words, that firms first choose a country and only then a region within that country. Conversely, the across-country approach recognizes that subnational regions within a country compete with each other and with those in other countries (Basile et al., 2009).

Most of the studies in this stream consider developed countries, especially European ones (Basile et al., 2009; Cantwell & Piscitello, 2002; Crescenzi, Pietrobelli, & Rabellotti, 2014; Jindra, Hassan, & Cantner, 2016; Karreman, Burger, & van Oort, 2017; Schäffler, Hecht, & Moritz, 2016; Villaverde & Maza, 2015). Europe, more specifically the EU, has traditionally been one of the main recipients of FDI, especially since the launching of the single market, the introduction of the Euro, and the last two enlargements (Villaverde & Maza, 2015). Data is readily available as Eurostat continually updates them. There are also studies focusing on China, another main recipient of FDI (e.g. Chadee et al., 2003; He & Yeung, 2011). Lei and Chen (2011) investigate how Taiwanese firms choose between two broad regions, South China and East China, as well as Vietnam.

The studies to which we refer above deal with the destination of foreign investment (e.g. Bu & Wagner, 2016; Ramos & Ashby, 2013) or establishment of subsidiaries (e.g. Chidlow et al., 2015). Others deal with the location of host country headquarters, i.e. a special type of headquarters and foreign subsidiary (Ma et al., 2013) or of particular value chain stages (Crescenzi et al., 2014). A number of studies include various subnational determinants of location choice (Jindra et al., 2016), such as market attractiveness (e.g. regional GDP per capita), economic infrastructure (e.g. roads and transportation costs), agglomeration effects (e.g. supporting and related industries), labor (e.g. availability, quality and cost), government influence (e.g. autonomy from central government), and trade openness (e.g. exports) (Basile et al., 2009; Blanc-Brude, Cookson, Piesse, & Strange, 2014; Chidlow et al., 2015; Villaverde & Maza, 2012). Other studies focus on one specific determinant: investment promotion agencies (Anderson &

Sutherland, 2015), environmental regulation (Bu & Wagner, 2016), organized crime (Ramos & Ashby, 2013) and Chinese overseas communities (Karreman et al., 2017). Several of them find that economic potential and international trade, labor, government, and agglomeration factors are important in attracting FDI (Cantwell & Piscitello, 2002; Jindra et al., 2016; Villaverde & Maza, 2012; Wei, Liu, Parker, & Vaidya, 1999), while market size and infrastructure quality are not (Villaverde & Maza, 2012; Wei et al., 1999). More than anything, the relevance and significance of a particular determinant depends on the type of investment (Chidlow et al., 2009; Crescenzi et al., 2014).

These studies also find that foreign affiliates in Europe are often concentrated in or around a country's economic core, usually the capital (Basile et al., 2009; Jindra et al., 2016). Basile et al. (2009) find that investors, especially European ones, see the EU as a well-integrated area in which country boundaries do not particularly matter. In China FDI is concentrated in coastal areas. Though FDI has flown into every province, autonomous region or central municipality, relative values in inland areas are still not significant (Wei et al., 1999).

While many of the location choice studies in the subnational stream are rather a-theoretical, more than half of them do frame their research by referring to theories such as institutional theory (Blanc-Brude et al., 2014), the resource-based view (Bu & Wagner, 2016; Lei & Chen, 2011), internationalization theory (e.g. Jindra et al., 2016), OLI (Hong, 2007) and FDI or location theory (Villaverde & Maza, 2015; Wei et al., 1999). Still, they do not integrate the subnational level of analysis within these theories.

A second group of studies focus on the *subnational institutional environment* and its impact on international strategy. While a traditional inquiry in the Economic Geography literature (Coughlin, Terza, & Arromdee, 1991), it has only recently appeared in IB (Chan et al., 2010; Meyer & Nguyen, 2005; Shi et al., 2012), the majority of research on subnational institutions in IB having focused on emerging economies (Monaghan et al., 2014; Shi et al., 2017).

In contrast to the studies discussed earlier, these are mainly set in a single emerging economy. This is due to large and decentralized emerging economies being characterized by uneven institutional development across subnational regions (Ma et al., 2016). Many studies have focused on China with its large number of subnational units (provinces) with diverse institutions. In addition, China has high levels of both inward and outward FDI (Liu et al., 2014; Ma & Delios, 2010; Shi et al., 2012). Vietnam has also been studied, particularly its subnational institutions (Meyer & Nguyen, 2005). Some researchers have shown that subnational regions in advanced countries also feature differing institutions making them viable research contexts as well (see for example Monaghan et al. (2014) for Ireland, and Santangelo, Meyer, and Jindra (2016) for the Czech Republic, Hungary, Poland and Romania).

Almost all of these studies, whether set in emerging or developed economies, use institutional theory or the institution-based view (North, 1990, 2005; Peng, 2001, 2003). In so doing, they derive or integrate the subnational geographic level of analysis from their theoretical considerations or integrate them respectively. On the other hand Liu et al. (2014) integrate institutional theory with agency theory to examine the impact of top-executive compensation and regional institutions on Chinese outward FDI. Monaghan et al. (2014) build on the revised Uppsala internationalization process model (Johanson & Vahlne, 2009; Vahlne & Johanson, 2013) and look at the impact of endogenous subnational institutions on the internationalization process. The growing integration of Economic Geography with IB research has put emphasis on the subnational unit of analysis as the most proximate local environment for the MNE subsidiary.

Subnational institutions are operationalized in different ways. Studies where China is the home or host country usually measure them by the province-level index of marketization (Deng, Jean, & Sinkovics, 2018; Li, Xia, Shapiro, & Lin, 2018; Liu et al., 2014; Lu, Song, & Shan, 2018; Ma et al., 2016; Shi et al., 2012, 2017; Stallkamp, Pinkham, Schotter, & Buchel, 2018; Sun et al., 2015; Yang, 2018) developed by the National Economic Research Institute (NERI) of China and the China Reform Foundation (Fan, Wang, & Zhu, 2010). This index is an official and comprehensive measure of China's provincial institutional environment.[3] Other studies use accessibility of scarce resources and influence of incumbent SOEs as institutional variables (Meyer & Nguyen, 2005) or an index drawn from QoG EU regional database developed at Sweden's University of Gothenburg to measure the quality of subnational institutions (Santangelo, Meyer, & Jindra, 2016).

These subnational institutional environments are expected to affect firm behavior and strategic choice whether it is a foreign firm in a host country (Ma & Delios, 2010; Meyer & Nguyen, 2005; Santangelo et al., 2016; Shi et al., 2012) or an internationalizing one in its home country (Liu et al., 2014; Ma et al., 2016; Shi et al., 2017; Sun et al., 2015). Foreign firms locate in subnational regions where institutions are most conducive to their type of business operation and where institutional barriers least inhibit their access to local resources (Meyer & Nguyen, 2005), with subnational institutions affecting location choice (Meyer & Nguyen, 2005), entry mode (Meyer & Nguyen, 2005; Shi et al., 2012) and outsourcing of R&D activities (Santangelo et al., 2016). Most studies show that favorable subnational institutions facilitate the foreign direct investments of home country firms (Liu et al., 2014; Ma et al., 2016; Sun et al., 2015) while poor ones hamper it (Sun et al., 2015). This can be summarized in the "fostering" view, which suggests a facilitating role of advanced subnational institutions that promotes firms' outward internationalization (Sun et al., 2015; Wan & Hoskisson, 2003). In contrast, Shi et al. (2017) find that institutional fragility, which arises when different institutional dimensions are not progressing at the same pace thus creating internal friction and conflict, is favorable to outward FDI. This supports the "escape" hypothesis which argues that outward FDI from emerging economies is undertaken in part to escape an adverse home country environment (Sun et al., 2015; Witt & Lewin, 2007).

Multi-level. Multi-level studies combine the subnational and national levels of analysis – with one exception, Blevins et al. (2016), who combine subnational and supranational levels in investigating how the choice firms make between an acquisition and a joint venture (Hennart & Reddy, 1997) depends on subnational (global cities) and supranational location (EU vs. non-EU) and is affected by European institutional integration (supranational). As in the studies on the subnational level, multi-level studies focus on how *location choice* is affected by different antecedents (Jiang, Holburn, & Beamish, 2016; Mataloni, 2011; Nielsen et al., 2017) and how *subnational level* – and here also *supranational institutions* such as the EU – affect the degree of internationalization, location choice and entry mode (Arregle, Miller, Hitt, & Beamish, 2016; Arregle, Miller, Hitt, & Beamish, 2013; Blevins et al., 2016; Zhang et al., 2016). In addition, Dow et al. (2016) discuss how *between-country distance and within- country diversity* impact the equity share taken in acquisitions. These multi-level studies confirm what subnational level studies have found – subnational regions do affect international strategies. In addition, they extend the respective research stream by teasing out the degree to which geographic levels affect phenomena. Furthermore, studies including multiple geographic levels of analysis do also investigate within country diversity (in comparison to between-country distance); an area of research where we could not identify pure subnational-level studies. In the following, we discuss and compare the findings of each sub-research stream.

A few studies attempt to model location choice as a two-stage or

[3] The index of marketization captures five developments: (1) government and market forces, (2) development of non-SOEs, (3) development of commodity markets, (4) development of factor markets, and (5) development of market intermediaries and of a legal environment (Liu et al., 2014; Shi et al., 2012). Liu et al. (2014); Shi et al. (2012).

even a multi-stage process, i.e. some consider the national and the subnational levels (Mataloni, 2011; Villaverde & Maza, 2012), others link the national, subnational and supranational levels (Fallon & Cook, 2010). Mataloni (2011) finds that firms do not attempt to consider multiple countries and regions simultaneously, but make their evaluations sequentially, first selecting a country based on factors such as familiarity, i.e. having previously invested in that country, then in a second step, selecting a region. At the regional level, locational attributes such as a skilled workforce, industrial agglomeration, or extensive transportation infrastructure, will trump factor prices, like access to low-cost labor.[4] The Nielsen et al. (2017) literature review on MNE location choice also found few studies that examined both between-country and within-country variation simultaneously. The drivers vary greatly between the two levels; for instance informal institutions (e.g., cultural distance) may play an important part in choice of country, but at the subnational level the deciding factor may be local formal policies aimed at attracting FDI or infrastructure like seaports or airports. Thus, multi-level location choice studies provide a more comprehensive picture than single-country subnational level ones, but both make the assumption that location choice is a sequential, or hierarchical stage process. On one hand this is consistent with the assumption that firms are reluctant – or incapable – of considering a large number of locations simultaneously; on the other hand it assumes that firms base their choice of country on nation-wide averages. In other words, they assume within-country homogeneity. Nonetheless, in a second step they choose a subnational location based on the differences between locations, thus rejecting the assumption of spatial homogeneity. This said, it would make more sense for firms to consider several subnational regions in parallel, especially where countries are tightly integrated, as is the case in the European Union.

Whereas location choice studies focus on subnational regions and on firm and environmental factors, *institutional environment* studies focus on a single environmental factor: institutions. To determine how they affect business activity, subnational institutional environments are investigated together with national level variables as antecedents of location choice (Nielsen et al., 2017), entry mode (Blevins et al., 2016), or political tactics (Zhang et al., 2016). On the subnational level institutions are again measured with the marketization index. Zhang et al. (2016) combine this subnational institutional measure with the national level measure of cultural distance between host and home countries. Like purely subnational level studies, these multi-level studies are based on institutional theory and the institution-based view. They find that country-level and region-level institutional factors affect corporate political strategies to different degrees and in different ways, thereby highlighting the complex institutional environments in which MNEs operate.

A final group of studies focusing on *distance* and *diversity* at the national and subnational levels investigates the role within-country cultural diversity plays in international management decisions (Beugelsdijk, Slangen, Maseland, & Onrust, 2014; Dow et al., 2016; Slangen, 2016). National distance and subnational diversity measures of culture, language and religion can be broadly grouped together under culture. While Beugelsdijk, Slangen, Maseland, & Onrust, 2014 find evidence that mean-based indices of cultural differences overestimate the limiting effect of home-host cultural differences on foreign operations, Dow et al. (2016) find two distinct within-country cultural diversity effects, one negative and the other positive. Diversity within a target country has a negative impact because it seems to be yet another source of behavioral uncertainty and information asymmetry. Diversity within the acquirer's own country may, on the other hand, lead to a higher awareness of the kinds of challenges to be faced not only because of cultural distance between home and abroad, but also because of diversity in the target country. Slangen (2016) distinguishes between target-country cultural variation (i.e. within-country diversity) and target-region cultural variation (i.e. regional diversity) when investigating foreign entry mode decisions. Using data from Alesina et al. (2003) (like Beugelsdijk, Slangen, Maseland, & Onrust, 2014 and Alesina and Zhuravskaya (2011), Slangen finds that the effects of these two classes of cultural variation differ significantly. Target-region cultural variation has a significantly positive effect on the probability of JV entries, whereas target-country cultural variation has an insignificant one. Together, these articles take research on the impact of culture a step further by highlighting the importance of subnational cultural variation. In so doing, they address the decade-old criticism that the cultural distance concept assumes spatial homogeneity (Shenkar, 2001).

Evaluation of findings. Our review shows the considerable interest in location choice at different geographic levels of analysis and the impact of institutional environments on international strategy. Indeed, most studies that focus on the subnational level fall into these categories. Although we have found no evidence that IB and EG scholars have worked in interdisciplinary teams, their efforts to investigate subnational location decisions and their determinants run in parallel.

While many studies on subnational location decisions look at a single country, those that consider subnational regions across countries are more realistic, particularly in the case of well-integrated areas such as the EU. Multi-level studies give a more complete picture of the location decision making process. Firms not only decide in which subnational region of a country to locate, they either decide between subnational regions across different countries, or decide first on a specific country and then on a certain subnational region within it. In that case, they use different decision making criteria at the country level than at the subnational level (Nielsen et al., 2017). Some studies specifically investigate the impact of the subnational institutional environment, for the most part looking at large, emerging economies like China. Here again multi-level studies add value by considering the complex intermingling of different institutional environments. As of yet there is no major, or even dominating theory. Studies that include a theoretical perspective tend to use it for location choice, but do not attempt to adapt it to a given geographic level of analysis – i.e. the subnational level. Albeit that some subnational studies focus on the institutional environment; they mainly integrate the subnational level of analysis into the institutional-based view or institutional theory.

4.1.2. Antecedents – consequences

Only a few studies investigate the impact of the subnational environment on performance (Beugelsdijk, Slangen, Maseland, & Onrust, 2014; Li & Sun, 2017; Ma, Tong et al., 2013; Yi, Wang, & Kafouros, 2013).

Subnational. Whereas Yi et al. (2013) use subnational effects as a moderating variable, Li and Sun (2017) and Ma, Tong et al. (2013) include these effects among others as antecedents of foreign firm and subsidiary performance. These studies take an institution-based view under which subnational institutional differences provide firms with opportunities and challenges which result in performance differences. As emerging economies have unique institutional characteristics, the institution-based view has become an important perspective in this context and accordingly been used in all the studies in this research stream in combination with the resource-based view (Li & Sun, 2017; Ma, Tong et al., 2013; Yi et al., 2013). The subnational geographic level

[4] An additional interesting finding of Mataloni's (2011) study refers to the national level and grouping of countries. The differences in the results including and excluding China suggest that combinations of countries with highly developed economies and countries with economies in transition may not be plausible choice sets for MNEs. It may be that certain less-quantifiable characteristics of economies in transition (such as government regulation and corruption) are so different from those in highly developed economies that multinationals do not consider investments in these two types of economies to be substitutes (Mataloni, 2011).

of analysis is part of the theoretical argumentation or is derived therefrom. All of these subnational studies are conducted in the Chinese context – either at province (Ma, Tong et al., 2013; Yi et al., 2013) or city level (Li & Sun, 2017; Li, Zhang, & Sun, 2018). Ma, Tong et al. (2013) and Li and Sun (2017) find that the impact of subnational institutions on subsidiary performance is statistically significant (they explain 3.09 % of its variance), and their interactions with industry, corporate parent, and home-country effects are also statistically significant and economically important (Ma, Tong et al., 2013). They do not, however, specify what subnational region effects are or how they are measured. Yi et al. (2013) find that subnational institutional factors, i.e. marketization, positively moderate the impact of innovative capabilities on export performance.

Multi-level. Beugelsdijk, Slangen, Maseland, & Onrust, 2014 combine the subnational, here in terms of within country cultural diversity, and the national level. It is the only study in this research stream that follows a multi-level approach. Cultural distance is a considerable source of challenges and costs for foreign subsidiaries and is usually measured by the average difference in national culture between that of the host and that of the home country of the subsidiary's parent. Beugelsdijk, Slangen, Maseland, & Onrust, 2014 challenge this assumption of subnational cultural homogeneity by introducing intra-host country cultural variation. They argue that foreign firms are likely to limit the cultural distance they face by targeting host-country customer segments that are culturally closer to them. As a result, the actual cultural distance experienced by firms is generally not the distance to the host population's mean values, but instead the substantially smaller distance to the targeted segment's mean values. Indeed, the evidence indicates that cultural distance measures yield overestimates of the negative impact of home-host country cultural difference on foreign subsidiary operations. We echo the call of Beugelsdijk, Slangen, Maseland, & Onrust, 2014 for future studies to explore how measuring cultural differences at the country level may distort their real impact.

Evaluation of findings. The very few studies that fall into this research stream confirm the importance of considering subnational regions and consistently show that subnational institutions have a significant impact on performance (subsidiary performance, foreign firm performance, export performance).

4.1.3. Phenomenon – consequences

Studies on the phenomenon-consequences relationship mostly investigate financial performance effects (e.g. Chan et al., 2010; Lu & Ma, 2008; Nguyen et al., 2013). Few studies consider survival/longevity or organizational action as consequences (e.g. Dellestrand & Kappen, 2012; Ma & Delios, 2007).

Subnational. Research on the internationalization-performance relationship tends *not* to invoke a subnational level of analysis (Lu & Ma, 2008). Subnational-level studies have investigated the relationship between performance and international joint ventures (Lu & Ma, 2008), export strategy (Nguyen et al., 2013), and FDI (Ma & Delios, 2007; Zhou, Li et al., 2002), mostly in an emerging economy context.

There is subnational institutional variation within both home and host countries (Chan et al., 2010; Nguyen et al., 2013). This is especially true in emerging economies because the process of economic transition has been more spatially uneven, and regions are more culturally and ethnically diverse than is generally the case in developed countries (Chan et al., 2010; Lu & Ma, 2008; Ma & Delios, 2007). For example, some emerging economies, like China and India, offer different forms of preferential treatment to foreign firms that locate in particular regions (Chan et al., 2010; Lu & Ma, 2008). Zhou, Li et al. (2002) find that domestic firms located in regions that attract more FDI and have a longer history of being host to FDI, tend to have higher productivity. Lu & Ma, 2008 distinguish between Chinese regions open to FDI, i.e. special economic zones, and those where FDI is restricted. They find in the latter case it pays for the local joint venture partner to be affiliated with a regional business group. Thus, within-country regional institutional differences create unique opportunities, as well as challenges, for foreign subsidiaries and these affect their performance (Chan et al., 2010). Most of these studies focus on institutional distance, i.e. the institution-based view and institutional theory (Chan et al., 2010; Lu & Ma, 2008; Nguyen et al., 2013).

Some studies look at survival rates, which are lower in politically-oriented subnational environments as well as in subnational conflict zones, where the exposure to geographically defined threats is greater (Dai et al., 2013; Ma & Delios, 2007). Dai et al. (2013) use a modified version of the OLI framework, where "ownership" and "internalization" are merged into an "organization" component and location is split into "place" and "space" (Beugelsdijk et al., 2010).

Multi-level. Liu, Wang, and Wei's (2009) study is the sole example of phenomenon-consequences research using a multi-level approach. It looks for evidence of productivity spillovers via vertical linkages in Chinese manufacturing at both the national and regional levels. They find evidence of them at both. They also find weak evidence of spillovers via horizontal linkages at the regional level.

Evaluation of findings. Studies in this stream, which have mostly focused on financial performance, show that institutional conditions at the subnational level of emerging economies, affect financial performance and survival (Chan et al., 2010; Lu & Ma, 2008; Ma & Delios, 2007).

4.2. Box-exploring studies

Only four studies focus on the distribution of international business activity across subnational regions.

4.2.1. Subnational

Two studies, Wren & Jones, 2012 and Jones and Wren (2015), investigate the distribution of FDI across British subnational regions. Wren & Jones, 2012 find that manufacturing FDI converges over time on certain locations, in contrast to service FDI. In Jones and Wren (2015) they show that these two types of FDI are driven by different factors and hence take on different location patterns.

4.2.2. Multi-level

Two box-exploring studies take into account multiple geographic levels of analysis by investigating how geographical diversification at one level of analysis impacts that of another.

Lu et al. (2014) examine the impact of domestic diversification by emerging market firms on their international diversification. Using the knowledge-based view, they hypothesize and find that domestic regional and industrial diversification positively impact international diversification (Lu et al., 2014).

4.2.3. Evaluation of findings

There are very few box-exploring studies on the subnational level, and few that bring together multiple geographic levels of analysis. Looking at the interplay of geographic diversification at different geographic levels of analysis helps in getting the bigger picture. The process of internationalization, as well as the geographic distribution of international business activity, takes place on different geographic levels which affect one another.

5. Suggestions for future research

Much to our surprise – and contrary to what various calls for research might imply, we found a substantial body of literature on the subnational level of research. There certainly is no lack of future

research opportunities. We have identified some of these at different geographic levels of analysis – at the subnational and at multiple levels. We first discuss research opportunities across streams and perspectives, and then those within each individual research stream and box.

5.1. Research opportunities across streams

5.1.1. Conceptual/theory-building

Despite what we write above, there are few *conceptual* studies concerned with the subnational level of analysis (Beugelsdijk & Mudambi, 2013; Buckley & Ghauri, 2004; Chabowski, Hult, Kiyak, & Mena, 2010). Primarily they argue for including the subnational level of analysis, adding it to the national one, believing that there is real value in IB-EG cross-fertilization. These papers have been well received and are often cited, but remain at the level of broad commentaries. There is little theory-building on the subnational level of analysis in empirical studies. The studies use various approaches to cover a broad range of IB topics with various approaches. The studies are rather set up / focus on a certain topic, which is transferred to or supplemented by the subnational level. Analyzing these studies with a focus on the geographical level of analysis, it seems there is uncontrolled growth and no structural approach yet addressing this research stream. Overall, it seems that the IB field has moved directly to quantitative empirical studies, not devoting sufficient attention to the conceptual idea of different geographic levels of analysis. Put differently, there is a lack of research on the conceptual advancement of subnational level research and more is needed to advance this important stream of research. Nonetheless, we believe this is a promising avenue for further research.

Combining IB and EG would, we think, contribute to better theory-building. Quite a few of the studies combining these two fields actually concentrate on one or the other. IB and EG have different traditions and strengths. IB scholars have a good understanding of the economic organization of a geographically dispersed enterprise (Cantwell, 2009). They have been focusing on the O (ownership) and I (internalization) dimensions of Dunning's (1998) OLI paradigm. In EG the main interest is on the L (location) dimension of the paradigm. The EG perspective thus can help IB scholars redirect research towards location, i.e. spatial variation within countries. For example, country averages do not describe employees hired by foreign investors, nor customers. Approaching international strategy from this perspective points to a fertile area within which both IB and EG could jointly develop a more holistic understanding of economic activity dispersed across space (Beugelsdijk & Mudambi, 2013; Buckley & Ghauri, 2004).

5.1.2. Region schemes

Despite the many options for subnational region building, researchers have concentrated on administrative regional grouping schemes and thus prolonged their pattern of thinking in administrative boundaries from the national to the subnational level. Just as national borders are manmade and politically determined, subnational administrative units are primary political jurisdictions with often arbitrary boundaries (Blanc-Brude et al., 2014). This way of building regions might be inappropriate and lead to erroneous conclusions when the research question has to do with culture and cultural units. Furthermore, in most studies, the choice of regional grouping scheme is not based on theory, and researchers do not directly discuss the reasoning behind the specific subnational grouping they use (Aguilera et al., 2007). This opens up avenues for future research.

First, researchers should make use of the different possibilities in building regions (see Table 1). For instance, administrative regions are losing relevance with rising technological complexity. Firms and their networks often cross their borders (Beugelsdijk & Mudambi, 2013). Here the "relational turn" literature in EG (Dicken & Malmberg, 2001; Henderson, Dicken, Hess, Coe, & Yeung, 2002), where geographers study the symbiotic relationship between firms and their regional environment, might provide fruitful input.

Second, in addition to applying different regional grouping schemes in different studies, it would be beneficial to use different schemes in a single study and to then compare how different regional categorizations impact results. We see a need for a more systematic use of regions in IB research. Interesting questions in this area have already been posed by Aguilera et al. (2007, p. 210): "Can the same regional categorization be used systematically across research projects? Are different regional categorizations likely to offer different insights and conclusions?"

Third, ideally the introduction of a larger variety of regional grouping schemes in IB would go hand in hand with a more theoretically based application of them. So far, the definition and operationalization of a region in the IB literature has been ambiguous and inconsistent. All regional grouping schemes are constructed and none gives a complete picture of a region. They are based on a particular criterion, be it cultural, administrative, geographic or economic (Arregle et al., 2009; Verbeke et al., 2016). This again underlines the importance of explaining why a particular regional grouping scheme, or schemes, are chosen.

Finally, subnational regions can also be conceived *across* countries. In these cases the term subnational is used in a broader sense referring to regions that are smaller than a country, but encompassing parts of two or more countries with characteristics that diverge from the national average, e.g. Tyrol which spans Austria and Italy, and the Basque region that includes parts of Spain and France. To the best of our knowledge there has been no research on this type of subnational region, we suspect in part because data on them would be difficult to obtain.

5.1.3. Geographic coverage

Most research to date has focused on subnational regions of single large European countries, of the USA, and of China. Future research might consider looking at subnational regions in multiple countries, perhaps comparing two countries within a certain supranational region, or even multiple countries on a global scale. Furthermore, researchers should look at subnational variation in emerging economies other than China, with an eye to substantial within-country variation, e.g. the other BRIC countries of Brazil, India and Russia, as well as in countries like Indonesia and Turkey (Lu et al., 2014; Shi et al., 2012). More studies are needed to investigate the idiosyncrasies of location choice within smaller developed countries, such as the Scandinavian ones and Switzerland, and within smaller developing economies like Malaysia, Vietnam, the Philippines and Morocco. This would increase the validity of findings on the determinants of MNE location choice (Nielsen et al., 2017).

5.1.4. Multi-level analysis

Few studies take a multi-level approach and include both the subnational and the national level. Yet multi-level studies are especially important for research on different geographic levels of analysis. For example, a multiplicity of institutions at multiple levels impact a firm's international strategy. These institutions in part complement each other, but may also exert conflicting pressures. Future research could employ multi-level empirical techniques to further explore the relationships between institutions at the subnational and national level and their interplay (Santangelo et al., 2016).

Multi-level modelling can simultaneously test hypotheses at several levels of analysis, e.g. the subnational and national. It can control for confounding effects at one level, e.g. the national, while testing hypotheses at other levels, e.g. the subnational. This kind of approach allows for increased precision in quantitative IB research (Peterson, Arregle, & Martin, 2012). It helps in seeing the differential impact of different geographic levels on international strategy. We would like to see future research clearly tease out regional from country-level effects. Many studies reviewed here have reported and discussed regional effects without controls for country-level effects. However, it is important to avoid confounding regional effects with effects that operate at other

levels of analysis, such as differences in cultural values, political systems or language (Aguilera et al., 2007).

Using multi-level models holds the promise of significantly improving the specification of IB models and empirical estimates (Arregle et al., 2009). It is possible that several effects currently ascribed to country factors may in fact be due to local ones. Further, different levels may evolve differently and at different rates (Cantwell, Dunning, & Lundan, 2010). Since MNEs co-evolve with local environments, such multi-level analysis has important dynamic aspects as well.

5.1.5. Data availability

One limitation of current studies is the paucity of comparable data on subnational regions over a sufficiently long time span (Crescenzi et al., 2014). This has led researchers to concentrate on subnational regions of just a single country, or in a few cases a limited number of countries. This single country, or narrow regional focus relies on a small number of data sources, like those produced by national statistics offices, and this means data not usually comparable across countries. Only Eurostat and the OECD database Regions at a Glance offer subnational data on multiple countries. We second the suggestion of Nielsen et al. (2017, p. 76) and "encourage future researchers to team up with local scholars (and organizations) in the home and host countries they study in order to help collect and validate local data".

5.2. Research opportunities within each stream

5.2.1. Antecedents-phenomenon

The antecedents-phenomenon stream has so far concentrated on location choice and the institutional environment impacting international strategy. We believe that researchers looking at the location choice of firms should do away with the simplifying assumption of a generic multiple, usually two-stage, sequential choice process, and examine instead the entire decision process. The key question is "How do firms choose regions?" The choice needs to be seen in a bigger context than at present. Most research has made the implicit assumption that firms choose regions within and not across countries. Although in reality, subnational regions, even cities, compete with each other to attract FDI – within *and* across national boundaries, especially in highly-integrated areas such as the EU. In addition, it makes sense to bring together different geographic levels of analysis in a multi-level study in order to get a more complete picture of a firm's location decision process. The results of more realistic research of this kind is likely to be more helpful to practitioners.

We would also like to see longitudinal studies, given that the institutional environments of countries as well as those of subnational regions change over time, and this impacts the international activities of firms as well as their performance.

5.2.2. Antecedents-consequences

This research stream has so far attracted the least attention. We need more research on the effect of subnational location on organizational outcomes such as organizational structure and growth rates, and learning and operating efficiency. Just as it makes a difference if a firm has already gained experience in other countries when further internationalizing, we suspect that it makes a difference whether it has gained experience from diversifying within its home country. The assumption is that a firm that is active in different subnational regions of its home country can learn from experience with domestic subnational heterogeneity and apply that when going abroad. For example, the effect on survival may be different between firms active in a single subnational region and those that have already expanded domestically across subnational regions. This is an interesting area for future research, as IB scholars typically study firms that operate multiple units within the same country (Beugelsdijk & Mudambi, 2013).

5.2.3. Phenomenon-consequences

Given that there is spatial heterogeneity within countries, one might inquire about the impact of locating in a certain subnational region on firm performance, or on firm survival. Does the breadth and depth of within country-diversification matter? We believe that it would be interesting to investigate how MNEs grow across different subnational regions within a country. How do firms launch their products and services? The assumption, which still needs to be tested, is that this is dependent on which subnational region they start from.

6. Conclusion

We began with the observation that for a long time in IB research geographic location effects have, for all intents and purposes, been synonymous with "country" ones. Nevertheless, there is a surprisingly large body of literature that either explicitly or implicitly adopts a subnational perspective. We review 62 articles, published for the most part in IB journals, some in EG journals. These articles provide an overview of the state of the literature that uses a finer-grained geographic level of analysis. While we have focused on IB publications, we are nonetheless confident that our analysis will be of value not only to IB scholars, but to regional science and international trade theory scholars as well (Beugelsdijk et al., 2010).

The subnational-effect research stream is rather young. The first article we were able to identify appeared in 1997, and thereafter there were just one or two a year – if any at all – until 2009. Since then the number has been slowly growing. There are reasons for this. As we have said, country-level data is more readily available than regional. On top of that, having to take into account multiple geographic levels undoubtedly increases analytical complexity. Nonetheless, subnational-level and combined national and subnational-level analysis can ensure a more realistic picture and provide a deeper understanding of international strategy than national-level analysis alone could ever provide.

For these reasons, we call for more research taking a multi-level approach, believing that there is real promise in teasing apart regional and country effects, and call also for future research that investigates the subnational level separately. Reviews such as the one we have conducted, and suggestions for research based on the progress already made enable researchers to build further. We look forward to an even better understanding of international strategy on the different geographic levels of analysis and their interplay.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of Competing Interest

None.

Acknowledgements

The authors are grateful to the three anonymous reviewers for their valuable comments and suggestions. In particular, the authors would like to thank Handling Editor Stav Fainshmidt as well as JWB Editor-in-Chief Ajai S. Gaur for their extremely constructive and very developmental guidance throughout this article's review process which led to significantly improving this article.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.jwb.2020.101076.

References

Aguilera, R. V., Flores, R., & Vaaler, P. M. (2007). Is it all a matter of grouping? Examining the regional effect in global strategy research. In S. Tallman (Ed.). *International strategic management: A New generation* (pp. 209–228). Northampton, MA: Edward Elgar Publishers.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Factionalization. *Journal of Economic Growth, 8*(2), 155–194.

Alesina, A., & Zhuravskaya, E. (2011). Segregation and the quality of government in a cross section of countries. *American Economic Review, 101*(5), 1872–1911. https://doi.org/10.1257/aer.101.5.1872.

Anderson, J., & Sutherland, D. (2015). Developed economy investment promotion agencies and emerging market foreign direct investment: The case of Chinese FDI in Canada. *Journal of World Business, 50*(4), 815–825. https://doi.org/10.1016/j.jwb.2015.04.005.

Arregle, J.-L., Beamish, P. W., & Hébert, L. (2009). The regional dimension of MNEs' foreign subsidiary localization. *Journal of International Business Studies, 40*(1), 86–107. https://doi.org/10.1057/jibs.2008.67.

Arregle, J.-L., Miller, T., Hitt, M. A., & Beamish, P. W. (2013). Do regions matter?: An integrated institutional and semiglobalization perspective on the internationalization of MNEs. *Strategic Management Journal, 34*(8), 910–934. https://doi.org/10.1002/smj.2051.

Arregle, J.-L., Miller, T., Hitt, M. A., & Beamish, P. W. (2016). How does regional institutional complexity affect MNE internationalization? *Journal of International Business Studies, 47*(6), 697–722. https://doi.org/10.1057/jibs.2016.20.

Asmussen, C. G., & Goerzen, A. (2013). Unpacking dimensions of foreignness: Firm-specific capabilities and international dispersion in regional, cultural, and institutional space. *Global Strategy Journal, 3*(2), 127–149. https://doi.org/10.1111/j.2042-5805.2013.01055.x.

Asmussen, C. G., Nielsen, B., Goerzen, A., & Tegtmeier, S. (2018). Global cities, ownership structures, and location choice. *Competitiveness Review, 28*(3), 252–276.

Banalieva, E. R., & Dhanaraj, C. (2013). Home-region orientation in international expansion strategies. *Journal of International Business Studies, 44*(2), 89–116. https://doi.org/10.1057/jibs.2012.33.

Basile, R., Castellani, D., & Zanfei, A. (2009). National boundaries and the location of multinational firms in Europe. *Papers in Regional Science, 88*(4), 733–748. https://doi.org/10.1111/j.1435-5957.2009.00238.x.

Beamish, P. W., & Lupton, N. C. (2016). Cooperative strategies in international business and management: Reflections on the past 50 years and future directions. *Journal of World Business, 51*(1), 163–175. https://doi.org/10.1016/j.jwb.2015.08.013.

Beaudouin, N., Missoffe, A., & Scheidhauer, C. (2018). *Global cities investment monitor: New rankings, trends and criteria.* Retrieved from https://gp-investment-agency.com/wp-content/uploads/2018/07/Global-Cities-Investment-Monitor-2018-web.pdfhttps://gp-investment-agency.com/wp-content/uploads/2018/07/Global-Cities-Investment-Monitor-2018-web.pdf Accessed 19 January 2020.

Beugelsdijk, S., & Mudambi, R. (2013). MNEs as border-crossing multi-location enterprises: The role of discontinuities in geographic space. *Journal of International Business Studies, 44*(5), 413–426. https://doi.org/10.1057/jibs.2013.23.

Belderbos, R., Du, H. S., & Slangen, A. (2020). When do firms choose global cities as foreign investment locations within countries? The roles of contextual distance, knowledge intensity, and target-country experience. *Journal of World Business, 55*(1), 1–13. https://doi.org/10.1016/j.jwb.2019.101022.

Beugelsdijk, S., McCann, P., & Mudambi, R. (2010). Introduction: Place, space and organization—Economic geography and the multinational enterprise. *Journal of Economic Geography, 10*(4), 485–493. https://doi.org/10.1093/jeg/lbq018.

Beugelsdijk, S., Slangen, A. H. L., Maseland, R., & Onrust, M. (2014). The impact of home–host cultural distance on foreign affiliate sales: The moderating role of cultural variation within host countries. *Journal of Business Research, 67*(8), 1638–1646. https://doi.org/10.1016/j.jbusres.2013.09.004.

Blanc-Brude, F., Cookson, G., Piesse, J., & Strange, R. (2014). The FDI location decision: Distance and the effects of spatial dependence. *International Business Review, 23*(4), 797–810. https://doi.org/10.1016/j.ibusrev.2013.12.002.

Blevins, D. P., Moschieri, C., Pinkham, B. C., & Ragozzino, R. (2016). Institutional changes within the European Union: How global cities and regional integration affect MNE entry decisions. *Journal of World Business, 51*(2), 319–330. https://doi.org/10.1016/j.jwb.2015.11.007.

Bu, M., & Wagner, M. (2016). Racing to the bottom and racing to the top: The crucial role of firm characteristics in foreign direct investment choices. *Journal of International Business Studies, 47*(9), 1032–1057. https://doi.org/10.1057/s41267-016-0013-4.

Buckley, P. J., & Ghauri, P. N. (2004). Globalisation, economic geography and the strategy of multinational enterprises. *Journal of International Business Studies, 35*(2), 81–98. https://doi.org/10.1057/palgrave.jibs.8400076.

Burger, M. J., van der Knaap, B., & Wall, R. S. (2013). Revealed competition for greenfield investments between European regions. *Journal of Economic Geography, 13*(4), 619–648. https://doi.org/10.1093/jeg/lbs024.

Cantwell, J. (2009). Location and the multinational enterprise. *Journal of International Business Studies, 40*(1) 35–41.

Cantwell, J., & Piscitello, L. (2002). The location of technological activities of MNCs in European regions: The role of spillovers and local competencies. *Journal of International Management, 8*(1), 69–96.

Cantwell, J., Dunning, J. H., & Lundan, S. M. (2010). An evolutionary approach to understanding international business activity: The co-evolution of MNEs and the institutional environment. *Journal of International Business Studies, 41*(4), 567–586. https://doi.org/10.1057/jibs.2009.95.

Castellani, D., Giangaspero, G., & Zanfei, A. (2013). *Heterogeneity and distance. Some propositions on how differences across regions, firms and functions affect the role of distance in FDI location decisions (No. 1308)*.

Chabowski, B. R., Hult, G. T. M., Kiyak, T., & Mena, J. A. (2010). The structure of JIBS's social network and the relevance of intra-country variation: A typology for future research. *Journal of International Business Studies, 41*(5), 925–934. https://doi.org/10.1057/jibs.2009.83.

Chadee, D. D., Qiu, F., & Rose, E. L. (2003). FDI location at the subnational level: A study of EJVs in China. *Journal of Business Research, 56*(10), 835–845. https://doi.org/10.1016/S0148-2963(02)00471-X.

Chan, C. M., Makino, S., & Isobe, T. (2010). Does subnational region matter?: Foreign affiliate performance in the United states and China. *Strategic Management Journal, 31*(11), 1226–1243. https://doi.org/10.1002/smj.854.

Chidlow, A., Holmström-Lind, C., Holm, U., & Tallman, S. (2015). Do I stay or do I go?: Sub-national drivers for post-entry subsidiary development. *International Business Review, 24*(2), 266–275. https://doi.org/10.1016/j.ibusrev.2014.07.011.

Chidlow, A., Salciuviene, L., & Young, S. (2009). Regional determinants of inward FDI distribution in Poland. *International Business Review, 18*(2), 119–133. https://doi.org/10.1016/j.ibusrev.2009.02.004.

Clarivate Analytics (2017). *2016 Journal citation reports*.

Coughlin, C. C., Terza, J. V., & Arromdee, V. (1991). State characteristics and the location of foreign direct investment within the United States. *The Review of Economics and Statistics, 73*(4), 675. https://doi.org/10.2307/2109406.

Crescenzi, R., Pietrobelli, C., & Rabellotti, R. (2014). Innovation drivers, value chains and the geography of multinational corporations in Europe. *Journal of Economic Geography, 14*(6), 1053–1086. https://doi.org/10.1093/jeg/lbt018.

Dai, L., Eden, L., & Beamish, P. W. (2013). Place, space, and geographical exposure: Foreign subsidiary survival in conflict zones. *Journal of International Business Studies, 44*(6), 554–578. https://doi.org/10.1057/jibs.2013.12.

Dellestrand, H., & Kappen, P. (2012). The effects of spatial and contextual factors on headquarters resource allocation to MNE subsidiaries. *Journal of International Business Studies, 43*(3), 219–243. https://doi.org/10.1057/jibs.2011.57.

Deng, Z., Jean, R.-J. "B.", & Sinkovics, R. R. (2018). Rapid expansion of international new ventures across institutional distance. *Journal of International Business Studies, 49*(8), 1010–1032. https://doi.org/10.1057/s41267-017-0108-6.

Dicken, P., & Malmberg, A. (2001). Firms in territories: A relational perspective. *Economic Geography, 77*(4), 345–363. https://doi.org/10.1111/j.1944-8287.2001.tb00169.x.

Dow, D., & Karunaratna, A. (2006). Developing a multidimensional instrument to measure psychic distance stimuli. *Journal of International Business Studies, 37*(5), 578–602. https://doi.org/10.1057/palgrave.jibs.8400221.

Dow, D., Cuypers, I. R. P., & Ertug, G. (2016). The effects of within-country linguistic and religious diversity on foreign acquisitions. *Journal of International Business Studies, 47*(3), 319–346. https://doi.org/10.1057/jibs.2016.7.

Dunning, J. H. (1998). Location and the multinational enterprise: A neglected factor? *Journal of International Business Studies, 29*(1), 45–66. https://doi.org/10.1057/palgrave.jibs.8490024.

Economist (2019). *California and Texas have different visions for America's future*.

European Union (2011). *Regions in the European Union: Nomenclature of territorial units for statistics: Nuts 2010/EU27; Ausgabe 2011. Theme: Reihe: Methodologies and Working Papers*. Luxemburg: Publications Office of the European Union.

Fallon, G., & Cook, M. (2010). Exploring the regional distribution of inbound foreign direct investment in the UK in theory and practice: Evidence from a five-region study. *Regional Studies, 44*(3), 337–353. https://doi.org/10.1080/00343400802378735.

Fan, G., Wang, X. L., & Zhu, H. P. (2010). *NERI INDEX of marketization of China's Provinces 2009*. Beijing: Economic Science Press.

Flores, R., Aguilera, R. V., Mahdian, A., & Vaaler, P. M. (2013). How well do supranational regional grouping schemes fit international business research models? *Journal of International Business Studies, 44*(5), 451–474. https://doi.org/10.1057/jibs.2013.16.

Fujita, M., Krugman, P. R., & Venables, A. (2001). *The spatial economy: Cities, regions, and international trade (1. Paperback ed.)*. Cambridge, Mass: MIT Press.

Ghemawat, P. (2001). Distance still Matters: The hard reality of global expansioin. *Harvard Business Review, 79*(8), 137–147.

Goerzen, A., Asmussen, C. G., & Nielsen, B. B. (2013). Global cities and multinational enterprise location strategy. *Journal of International Business Studies, 44*(5), 427–450. https://doi.org/10.1057/jibs.2013.11.

He, C., & Yeung, G. (2011). The locational distribution of foreign banks in China: A disaggregated analysis. *Regional Studies, 45*(6), 733–754. https://doi.org/10.1080/00343401003614282.

Henderson, J., Dicken, P., Hess, M., Coe, N., & Yeung, H. W.-C. (2002). Global production networks and the analysis of economic development. *Review of International Political Economy, 9*(3), 436–464. https://doi.org/10.1080/09692290210150842.

Hennart, J.-F. (2009). Down with MNE-centric theories! Market entry and expansion as the bundling of MNE and local assets. *Journal of International Business Studies, 40*(9), 1432–1454. https://doi.org/10.1057/jibs.2009.42.

Hennart, J.-F., & Reddy, S. (1997). The choice between mergers/acquisitions and joint ventures: The case of Japanese investors in the United States. *Strategic Management Journal, 18*(1), 1–12.

Hitt, M. A., Tihanyi, L., Miller, T., & Connelly, B. (2006). International diversification: Antecedents, outcomes, and moderators. *Journal of Management, 32*(6), 831–867. https://doi.org/10.1177/0149206306293575.

Hong, J. (2007). Firm-specific effects on location decisions of foreign direct investment in China's logistics industry. *Regional Studies, 41*(5), 673–683. https://doi.org/10.1080/00343400601120304.

Hurun (2018). *Hurun global rich list 2018.* Retrieved from http://www.hurun.net/EN/Article/Details?num=2B1B8F33F9C0&mod=article_inline Accessed 19 January 2020.

Hutzschenreuter, T., & Kleindienst, I. (2006). Strategy-process research: What have we learned and what is still to be explored. *Journal of Management, 32*(5), 673–720. https://doi.org/10.1177/0149206306291485.
Iammarino, S., & McCann, P. (2013). *Multinationals and economic geography: Location, technology and innovation.* Cheltenham: Edward Elgar Publ.
Inglehart, R., Basanez, M., & Moreno, A. (1998). *Human values and beliefs: A cross-cultural sourcebook.* Ann Arbor: University of Michigan Press.
Jiang, G. F., Holburn, G. L. F., & Beamish, P. W. (2016). The spatial structure of foreign subsidiaries and MNE expansion strategy. *Journal of World Business, 51*(3), 438–450. https://doi.org/10.1016/j.jwb.2015.12.001.
Jindra, B., Hassan, S. S., & Cantner, U. (2016). What does location choice reveal about knowledge-seeking strategies of emerging market multinationals in the EU? *International Business Review, 25*(1), 204–220. https://doi.org/10.1016/j.ibusrev.2014.11.008.
Johanson, J., & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies, 40*(9), 1411–1431. https://doi.org/10.1057/jibs.2009.24.
Jones, J., & Wren, C. (2015). Does service FDI locate differently to manufacturing FDI?: A regional analysis for Great Britain. *Regional Studies, 50*(12), 1980–1994. https://doi.org/10.1080/00343404.2015.1009434.
Kalaitzidakis, P., Mamuneas, T. P., & Stengos, T. (2003). Rankings of academic journals and institutions in economics. *Journal of the European Economic Association, 1*(6), 1346–1366. https://doi.org/10.1162/154247603322752566.
Karreman, B., Burger, M. J., & van Oort, F. G. (2017). Location choices of Chinese multinationals in Europe: The role of overseas communities. *Economic Geography, 93*(2), 131–161. https://doi.org/10.1080/00130095.2016.1248939.
Knight Frank (2019). *The Wealth Report 2019: The global perspective on prime property and investment*.
Kostova, T., Roth, K., & Dacin, M. T. (2008). Institutional theory in the study of multinational corporations: A critique and new directions. *Academy of Management Review, 33*(4), 994–1006. https://doi.org/10.5465/amr.2008.34422026.
Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *The Academy of Management Review, 24*(1), 64. https://doi.org/10.2307/259037.
Lai, Y.-L., Lin, F.-J., & Lin, Y.-H. (2015). Factors affecting firm's R&D investment decisions. *Journal of Business Research, 68*(4), 840–844. https://doi.org/10.1016/j.jbusres.2014.11.038.
Lei, H.-S., & Chen, Y.-S. (2011). The right tree for the right bird: Location choice decision of Taiwanese firms' FDI in China and Vietnam. *International Business Review, 20*(3), 338–352. https://doi.org/10.1016/j.ibusrev.2010.10.002.
Lenartowicz, T., & Roth, K. (2001). Does subculture within a country matter?: A cross-cultural study of motivational domains and business performance in Brazil. *Journal of International Business Studies, 32*(2), 305–325. https://doi.org/10.1057/palgrave.jibs.8490954.
Lenartowicz, T., Johnson, J. P., & White, C. T. (2003). The neglect of intracountry cultural variation in international management research. *Journal of Business Research, 56*(12), 999–1008. https://doi.org/10.1016/S0148-2963(01)00314-9.
Li, X., & Sun, L. (2017). How do sub-national institutional constraints impact foreign firm performance? *International Business Review, 26*(3), 555–565. https://doi.org/10.1016/j.ibusrev.2016.11.004.
Li, J., Xia, J., Shapiro, D., & Lin, Z. (2018). Institutional compatibility and the internationalization of Chinese SOEs: The moderating role of home subnational institutions. *Journal of World Business, 53*(5), 641–652. https://doi.org/10.1016/j.jwb.2018.02.002.
Li, X., Zhang, Y.-F., & Sun, L. (2018). Industry agglomeration, sub-national institutions and the profitability of foreign subsidiaries. *Management International Review, 58*(6), 969–993. https://doi.org/10.1007/s11575-018-0361-3.
Liu, X., Wang, C., & Wei, Y. (2009). Do local manufacturing firms benefit from transactional linkages with multinational enterprises in China? *Journal of International Business Studies, 40*(7), 1113–1130. https://doi.org/10.1057/jibs.2008.97.
Liu, X., Lu, J., & Chizema, A. (2014). Top executive compensation, regional institutions and Chinese OFDI. *Journal of World Business, 49*(1), 143–155. https://doi.org/10.1016/j.jwb.2013.04.004.
Lu, J. W., & Ma, X. (2008). The contingent value of local partners' business group affiliations. *Academy of Management Journal, 51*(2), 295–314. https://doi.org/10.5465/amj.2008.31767261.
Lu, J. W., Song, Y., & Shan, M. (2018). Social trust in subnational regions and foreign subsidiary performance: Evidence from foreign investments in China. *Journal of International Business Studies, 49*(6), 761–773. https://doi.org/10.1057/s41267-018-0148-6.
Lu, J., Liu, X., Filatotchev, I., & Wright, M. (2014). The impact of domestic diversification and top management teams on the international diversification of Chinese firms. *International Business Review, 23*(2), 455–467. https://doi.org/10.1016/j.ibusrev.2013.07.002.
Ma, X., & Delios, A. (2007). A new tale of two cities: Japanese FDIs in Shanghai and Beijing, 1979–2003. *International Business Review, 16*(2), 207–228. https://doi.org/10.1016/j.ibusrev.2007.01.009.
Ma, X., & Delios, A. (2010). Host-country headquarters and an MNE's subsequent within-country diversifications. *Journal of International Business Studies, 41*(3), 517–525. https://doi.org/10.1057/jibs.2009.51.
Ma, X., Ding, Z., & Yuan, L. (2016). Subnational institutions, political capital, and the internationalization of entrepreneurial firms in emerging economies. *Journal of World Business, 51*(5), 843–854. https://doi.org/10.1016/j.jwb.2016.07.004.
Ma, X., Delios, A., & Lau, C.-M. (2013). Beijing or Shanghai?: The strategic location choice of large MNEs' host-country headquarters in China. *Journal of International Business Studies, 44*(9), 953–961. https://doi.org/10.1057/jibs.2013.49.
Ma, X., Tong, T. W., & Fitza, M. (2013). How much does subnational region matter to foreign subsidiary performance?: Evidence from Fortune Global 500 Corporations' investment in China. *Journal of International Business Studies, 44*(1), 66–87. https://doi.org/10.1057/jibs.2012.32.
Marcus, J., Kahraman, F., Su, S., & Fritzsche, B. A. (2019). Capturing intranational cultural variation in international business research: Microsocietal differences in collectivism across Turkey. *Journal of World Business, 54*(6), 101020. https://doi.org/10.1016/j.jwb.2019.101020.
Mataloni, R. J. (2011). The structure of location choice for new U.S. manufacturing investments in Asia-Pacific. *Journal of World Business, 46*(2), 154–165. https://doi.org/10.1016/j.jwb.2010.05.004.
Meyer, K. E., & Nguyen, H. V. (2005). Foreign investment strategies and sub-national institutions in emerging markets: Evidence from Vietnam. *Journal of Management Studies, 42*(1), 63–93. https://doi.org/10.1111/j.1467-6486.2005.00489.x.
Monaghan, S., Gunnigle, P., & Lavelle, J. (2014). "Courting the multinational": Subnational institutional capacity and foreign market insidership. *Journal of International Business Studies, 45*(2), 131–150. https://doi.org/10.1057/jibs.2013.47.
Mudambi, R., Li, L., Ma, X., Makino, S., Qian, G., & Boschma, R. (2018). Zoom in, zoom out: Geographic scale and multinational activity. *Journal of International Business Studies, 49*, 929–941. https://doi.org/10.1057/s41267-018-0158-4.
Nguyen, T. V., Le, N. T. B., & Bryant, S. E. (2013). Sub-national institutions, firm strategies, and firm performance: A multilevel study of private manufacturing firms in Vietnam. *Journal of World Business, 48*(1), 68–76. https://doi.org/10.1016/j.jwb.2012.06.008.
Nielsen, B. B., Asmussen, C. G., & Weatherall, C. D. (2017). The location choice of foreign direct investments: Empirical evidence and methodological challenges. *Journal of World Business, 52*(1), 62–82. https://doi.org/10.1016/j.jwb.2016.10.006.
North, D. C. (1990). *Institutions, institutional change and economic performance.* New York: Cambridge University Press.
North, D. C. (2005). *Understanding the process of economic change.* Princeton, NJ: Princeton University Press.
OECD (2018). *OECD regions and cities at a glance 2018.* OECD.
Organisation for Economic Co-Operation and Development (2007). *OECD regions at a glance.* Paris: OECD.
Pan, Y., & Tse, D. K. (2000). The hierarchical model of market entry modes. *Journal of International Business Studies, 31*(4), 535–554.
Peng, M. W. (2001). Cultures, institutions, and strategic choices: Toward an institutional perspective on business strategy. In M. J. Gannon, & K. L. Newman (Eds.). *The blackwell handbook of Cross-cultural management* (pp. 52–66). Oxford: Blackwell. https://doi.org/10.1002/9781405164030.ch3.
Peng, M. W. (2003). Institutional transitions and strategic choices. *Academy of Management Review, 28*(2), 275. https://doi.org/10.2307/30040713.
Pennsylvania Department of Revenue (2019). *Sales, use and hotel occupancy tax.* Retrieved from https://www.revenue.pa.gov/GeneralTaxInformation/Tax%20Types%20and%20Information/SUT/Pages/default.aspx Accessed 19 January 2020.
Peterson, M. F., Arregle, J.-L., & Martin, X. (2012). Multilevel models in international business research. *Journal of International Business Studies, 43*(5), 451–457. https://doi.org/10.1057/jibs.2011.59.
Podsakoff, P. M., MacKenzie, S. B., Bachrach, D. G., & Podsakoff, N. P. (2005). The influence of management journals in the 1980s and 1990s. *Strategic Management Journal, 26*(5), 473–488. https://doi.org/10.1002/smj.454.
Porter, M. E. (1990). *The competitive advantage of nations.* New York: Free Press.
Porter, M. E. (1994). The role of location in competition. *International Journal of the Economics of Business, 1*(1), 35–40.
Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review, 76*(6), 77–90.
Ramos, M. A., & Ashby, N. J. (2013). Heterogeneous firm response to organized crime: Evidence from FDI in Mexico. *Journal of International Management, 19*(2), 176–194. https://doi.org/10.1016/j.intman.2013.01.002.
Rugman, A. M., & Oh, C. H. (2008). Korea's multinationals in a regional world. *Journal of World Business, 43*(1), 5–15. https://doi.org/10.1016/j.jwb.2007.10.003.
Rugman, A. M., & Verbeke, A. (2007). Liabilities of regional foreignness and the use of firm-level versus country-level data: A response to Dunning et al. (2007). *Journal of International Business Studies, 38*(1), 200–205. https://doi.org/10.1057/palgrave.jibs.8400242.
Santangelo, G. D., Meyer, K. E., & Jindra, B. (2016). MNE subsidiaries' outsourcing and in sourcing of R&D: The role of local institutions. *Global Strategy Journal, 6*(4), 247–268. https://doi.org/10.1002/gsj.1137.
Schäffler, J., Hecht, V., & Moritz, M. (2016). Regional determinants of German FDI in the Czech Republic: New evidence on the role of border regions. *Regional Studies, 51*(9), 1399–1411. https://doi.org/10.1080/00343404.2016.1185516.
Schmeisser, B. (2013). A systematic review of literature on offshoring of value chain activities. *Journal of International Management, 19*(4), 390–406. https://doi.org/10.1016/j.intman.2013.03.011.
SCImago (2007). *SJR - SCImago journal & country rank.* Retrieved from http://www.scimagojr.com Accessed 19 January 2020.
Scott, P. (1998). The location of early overseas multinationals in Britain, 1900–1939: Patterns and determinants. *Regional Studies, 32*(6), 489–501.
Shan, W. (1991). Environmental risks and joint venture sharing arrangements. *Journal of International Business Studies, 22*(4), 555–578. https://doi.org/10.1057/palgrave.jibs.8490314.
Shaver, J. M., & Flyer, F. (2000). Agglomeration economies, firm heterogeneity, and foreign direct investment in the United States. *Strategic Management Journal, 21*(12), 1175–1193.
Shenkar, O. (2001). Cultural distance revisited: Towards a more rigorous

conceptualization and measurement of cultural differences. *Journal of International Business Studies, 32*(3), 519–535. https://doi.org/10.1057/palgrave.jibs.8490982.
Shi, W., Sun, S. L., & Peng, M. W. (2012). Sub-national institutional contingencies, network positions, and IJV partner selection. *Journal of Management Studies, 49*(7), 1221–1245. https://doi.org/10.1111/j.1467-6486.2012.01058.x.
Shi, W., Sun, S. L., Pinkham, B. C., & Peng, M. W. (2014). Domestic alliance network to attract foreign partners: Evidence from international joint ventures in China. *Journal of International Business Studies, 45*(3), 338–362. https://doi.org/10.1057/jibs.2013.71.
Shi, W., Sun, S. L., Yan, D., & Zhu, Z. (2017). Institutional fragility and outward foreign direct investment from China. *Journal of International Business Studies, 48*(4), 452–476. https://doi.org/10.1057/s41267-016-0050-z.
Slangen, A. H. L. (2016). The comparative effect of subnational and nationwide cultural variation on subsidiary ownership choices: The role of spatial coordination challenges and penrosean growth constraints. *Economic Geography, 92*(2), 145–171. https://doi.org/10.1080/00130095.2015.1096196.
Stallkamp, M., Pinkham, B. C., Schotter, A. P. J., & Buchel, O. (2018). Core or periphery? The effects of country-of-origin agglomerations on the within-country expansion of MNEs. *Journal of International Business Studies, 49*(8), 942–966. https://doi.org/10.1057/s41267-016-0060-x.
Statistics Canada (2006). *Canadian business patterns 2006.* Ottawa: Statistics Canada.
Sun, S. L., Peng, M. W., Lee, R. P., & Tan, W. (2015). Institutional open access at home and outward internationalization. *Journal of World Business, 50*(1), 234–246. https://doi.org/10.1016/j.jwb.2014.04.003.
Tahai, A., & Meyer, M. J. (1999). A revealed preference study of management journals' direct influences. *Strategic Management Journal, 20*(3), 279–296.
Tse, E. (2010). *The China Strategy: Harnessing the power of the world's fastest-growing economy.* New York: Basic Books.
United States Census Bureau (2018). *Metropolitan and micropolitan.* Retrieved from https://www.census.gov/programs-surveys/metro-micro.html Accessed 19 January 2020.
Uppsala (2011). *Conflict data program.* Retrieved from http://www.pcr.uu.se/data/ Accessed 19 January 2020.
Vahlne, J.-E., & Johanson, J. (2013). The Uppsala model on evolution of the multinational business enterprise – From internalization to coordination of networks. *International Marketing Review, 30*(3), 189–210. https://doi.org/10.1108/02651331311321963.
Verbeke, A., Kano, L., & Yuan, W. (2016). Inside the regional multinationals: A new value chain perspective on subsidiary capabilities. *International Business Review, 25*(3), 785–793. https://doi.org/10.1016/j.ibusrev.2016.01.019.
Villaverde, J., & Maza, A. (2012). Foreign direct investment in Spain: Regional distribution and determinants. *International Business Review, 21*(4), 722–733. https://doi.org/10.1016/j.ibusrev.2011.08.004.
Villaverde, J., & Maza, A. (2015). The determinants of inward foreign direct investment: Evidence from the European regions. *International Business Review, 24*(2), 209–223. https://doi.org/10.1016/j.ibusrev.2014.07.008.
Wan, W. P., & Hoskisson, R. E. (2003). Home country environments, corporate diversification strategies, and firm performance. *Academy of Management Journal, 46*(1), 27–45. https://doi.org/10.5465/30040674.
Wei, Y., Liu, X., Parker, D., & Vaidya, K. (1999). The regional distribution of foreign direct investment in China. *Regional Studies, 33*(9), 857–867. https://doi.org/10.1080/00343409950075498.
Witt, M. A., & Lewin, A. Y. (2007). Outword foreign direct investment as escape response to home country institutional constraints. *Journal of International Business Studies, 38*(4), 579–594.
World Bank (2006). *Governance, investment climate, and harmonious society: Competitiveness enhancements for 120 cities in China.* Washington, D.C: World Bank.
Wren, C., & Jones, J. (2012). FDI location across British regions and agglomerative forces: A Markov analysis. *Spatial Economic Analysis, 7*(2), 265–286. https://doi.org/10.1080/17421772.2012.669492.
Yang, J. (2018). Subnational institutions and location choice of emerging market firms. *Journal of International Management, 24*(4), 317–332. https://doi.org/10.1016/j.intman.2018.04.002.
Yi, J., Wang, C., & Kafouros, M. (2013). The effects of innovative capabilities on exporting: Do institutional forces matter? *International Business Review, 22*(2), 392–406. https://doi.org/10.1016/j.ibusrev.2012.05.006.
Zhang, Y., Zhao, W., & Ge, J. (2016). Institutional duality and political strategies of foreign-invested firms in an emerging economy. *Journal of World Business, 51*(3), 451–462. https://doi.org/10.1016/j.jwb.2015.12.004.
Zhou, C., Delios, A., & Yang, J. Y. (2002). Locational determinants of Japanese foreign direct investment in China. *Asia Pacific Journal of Management, 19*(1), 63–86.
Zhou, D., Li, S., & Tse, D. K. (2002). The impact of FDI on the productivity of domestic firms: The case of China. *International Business Review, 11*(4), 465–484.