Global cities, ownership structures, and location choice
Foreign subsidiaries as bridgeheads

Christian Geisler Asmussen
Department of Strategic Management and Globalization,
Copenhagen Business School, Frederiksberg, Denmark

Bo Nielsen
Business School, University of Sydney, Sydney, Australia

Anthony Goerzen
Queen’s University, Kingston, Canada, and

Svenja Tegtmeier
Department of Strategic Management and Globalization,
Copenhagen Business School, Frederiksberg, Denmark

Abstract
Purpose – This paper aims to develop a more nuanced view of subnational location choice with a particular focus on global cities. It is argued that multinational firms may use global cities to establish bridgeheadsubsidiaries at intermediate levels of the ownership chain that enable further international as well as subnational expansion.

Design/methodology/approach – Beyond those host country subsidiaries that are directly owned by a foreign multinational, the authors go deeper and focus specifically on the multi-tiered – “subsidiaries of subsidiaries” to examine how the geographic origins and destinations of these investments are associated with micro-location choices in a host country.

Findings – The authors find that there are substantial differences between the types, roles, activities and geographic origins of the firms locating in different areas, and in the ownership structures spanning them. The authors propose that this has managerial and theoretical implications which may be understood based on an organizing framework describing a tradeoff between the pursuit of global connectivity and local density on the one hand and cost control on the other.

Research limitations/implications – Empirical work on foreign location choices should take into account ownership structures and take a more fine-grained view of subnational variation.

Practical implications – Managers need to consider the trade-offs between connectivity, density and costs when making foreign location decisions.

Social implications – Policy makers should think about the unique contributions that various subnational regions such as global and ordinary cities can make to global value chains.

Originality/Value – The authors bridge the hitherto separate literatures pertaining to subsidiary mandates and subnational dimensions of foreign location choice by investigating the fine-grained roles and ownership structures from a supranational as well as subnational perspective.

Keywords Global cities, Location choice, Foreign subsidiaries

Paper type Research paper
Introduction
Where do multinational corporations (MNCs) choose to locate their investments and how do they organize the links between these investments? To answer these questions, scholars have examined a variety of location factors such as market size, entry barriers (e.g. taxes and tariffs), cost of transportation and production, quality of formal institutions, agglomeration economies, currencies and government incentives. However, despite a vast body of research on this topic in the economics, management and geography literatures, a number of important research gaps still exist, making it difficult to develop a comprehensive understanding of the drivers of foreign location choices (Nielsen et al., 2017). First and foremost, the bulk of empirical studies have viewed location from an aggregated perspective, using either the nation state or large subnational areas such as Chinese regions or US states. This is despite the fact that many of the theoretical agglomeration mechanisms operate at the “micro-location” level – for example, face-to-face contact enhancing trust and thereby knowledge transfer (Storper and Venables, 2004).

In recognition of this shortcoming, recent studies have moved further down the geographic level of aggregation to study true “micro-level” variation. For example, Goerzen et al. (2013) applied the theory of global cities to the location of foreign subsidiaries, distinguishing empirically between factors attracting MNCs to the core of global cities, those that attract them to the areas in the immediate proximity of global city centers, and those propelling firms to locate outside global city metropolitan regions. Their study clearly illustrated the importance of developing a more nuanced view of subnational location choice. Yet, whereas cities (global cities, in particular) are becoming increasingly recognized as a critically important unit of analysis (Fox and Goodfellow, 2016; Sassen, 2002), our understanding of other subnational dimensions remains undeveloped.

Furthermore, we know very little about the way in which location choices in one part of the MNC network interact with location choices in other parts of that network. Foreign subsidiaries are not isolated operations but rather are linked together through complex organizational structures. In part, such linkages have been recognized by the literature on subsidiary roles where it has been shown that some subsidiaries may have regional or global “mandates” giving them authority to manage operations in other countries (Birkinshaw, 1996; Roth and Morrison, 1992). However, to our knowledge, no studies have investigated whether foreign subsidiaries also may have subnational mandates, owning and operating other units within the same host country.

This potentially critical omission perhaps can be explained by the cross-border focus of international business (IB) scholars who have based their work on geographic mandates and on foreign location choices, implicitly or explicitly, on the dominant paradigm of internalization theory (Buckley and Casson, 1998; Rugman, 1981; Hennart, 1982). Internalization theory delineates the conditions under which the MNC arises as a vehicle for internalizing interdependent activities located in different countries. Accordingly, when examining the organization of the global value chain, most studies predict interdependencies across national boundaries while largely ignoring the organization of the firm on a subnational level within national boundaries.

Therefore, when extant research has looked at the location of FDI, the unit of analysis has often been the individual subsidiary in a given country owned by a foreign MNC. The subsidiary is implicitly seen – or at least empirically treated – as an endpoint for one of the firm’s international investment paths. However, this is an oversimplification of the real structures of hierarchy and ownership in MNCs where a
given foreign subsidiary often is far from being the end of the ownership chain. Hence, as noted by Dicken and Malmberg (2001, p. 355), “the business-organizational literature has tended to have a naive view of the spatial character of firms”.

As an example of the richness and complexity of foreign ownership structures, consider the case of Schneider Electric SA, a French energy management engineering MNC with operations in more than 100 countries, whose Danish operations are shown in the organizational diagram in Figure 1. Schneider Electric SA has seven subsidiaries in Denmark, and these subsidiaries vary widely both in terms of their subnational location and their position in the MNC network. The central firm in this Danish network is Schneider Nordic Baltic A/S, located in central Copenhagen, which is a global city (currently ranked as 42nd in the world in a list of 128 global cities compiled by AT Kearney). Schneider Nordic Baltic A/S, in turn, owns foreign assets in the Nordic region and the UK, thereby serving as a regional investment platform or a regional “hub” on which operations in other nearby countries (“spokes”) attach (Buckley, 2009; Mudambi and Swift, 2011). However, it also owns operational assets in Denmark, in the form of two firms located in the city of Ballerup, which is located at the outer edge of the Copenhagen metropolitan region, approximately 25 kilometers from the city center. In the same suburb, there are two other firms that are indirectly owned by Schneider Electric SA (i.e. Telvent and CI Technologies). Finally, Schneider Electric SA directly and indirectly owns two firms in smaller cities in Jutland (i.e. in Tønder and Kolding), more than 230 kilometers from Copenhagen.

**Figure 1.**
A taxonomy of units in the MNC network: applied to the case of Schneider electric

**Source:** Authors’ own illustration based on Orbis 2014 data
GUO: Global Ultimate Owner; INF: Independent National Firm;
NSU: National Subunit; FSU: Foreign Subunit
If we just included these foreign-owned firms in a location choice model without taking into account the different positions they occupy in the MNC network, we would effectively be treating Schneider Nordic Baltic as being similar to Schneider Electric Denmark, even though they clearly occupy different positions organizationally (e.g. in terms of mandate). Nevertheless, this has been the approach of most empirical studies to date[1]. As a result, we know very little about the interaction between location characteristics and the organization of MNC subsidiary networks.

This problem raises a number of important questions: does MNC subsidiaries located in global cities have special positions or mandates within the hierarchy of their network? How do MNCs choose locations for subsidiaries that have elevated organizational positions or mandates in the wider MNC hierarchy? How are different locations in the same country or in different countries linked through MNC networks? In this paper, we examine these questions conceptually as well as through an exploratory analysis of MNC subsidiaries in Denmark. We focus on MNC ownership structures and the way in which they intersect with FDI micro-location choices, thereby responding to the recent call in Cano-Kollmann et al. (2016) for new insights into MNC location choices.

**Background**

The notion that the national boundary is the key lens to understand the decisions and actions of managers and the markets they serve has been extraordinarily resilient in the IB field. This is despite the fact that this approach to the partitioning of socio-cultural and economic units has diminished in other fields such as sociology and anthropology (Breidenbach and Nyíri, 2009) and thus may represent, in IB research, an example of the “streetlight effect” (Freedman, 2010)[2]. As suggested by Beugelsdijk and Mudambi (2013, p. 8), “national borders may appear as qualitative discontinuities in space, that is, points at which spatial heterogeneity changes abruptly”, yet it may be that subnational spatial heterogeneity is a critical factor that drives MNCs to settle in a particular location. Thus, an important challenge for IB scholars is to improve our understanding of the ways in which subnational factors influence organizations and management. Moreover, it is essential to improve our theoretical perspective on the ways in which countries may be subdivided or aggregated into more meaningful units and to use this understanding to improve our understanding of international management decisions (Peterson and Søndergaard, 2014). Improving the precision of the concept of spatial differences will allow for a better understanding of the behavior and performance of MNCs (Beugelsdijk et al., 2010, Zaheer et al., 2012). In this paper, therefore, we build on recent advances in the intersection of IB and economic geography that has focused on the role of cities (Goerzen et al., 2013).

**Global cities, ordinary cities and subnational location choice**

Cities have been examined by researchers from various perspectives by urban planners, economic geographers and, more recently, by IB scholars. Despite the diversity of approaches, the study of cities can be parsed into two different approaches (Goerzen et al., 2013). The “functional” approach focuses on the roles and activities that cities play within their larger socio-economic systems and how these roles relate to the process of economic, technological, social and political globalization. The “demographic” approach, on the other hand, focuses primarily on population size and density. While the two approaches have most often been addressed in separate literature streams, we consider them jointly in this paper.
Within the functional tradition, Beaverstock et al. (1999) identified four different criteria that have been used to analyze world cities. One was to identify cities with respect to their position within local and international politics, trade, communications, finance, education, culture and technology (Hall, 1966). A second approach extended the early work of Hymer (1976) and was focused on corporate decision-making with a particular emphasis on the power of MNCs to create political and social inequality. Cohen (1981) and Friedmann (1986) contributed to this stream by developing the concepts of primary and secondary cities that exist in core and peripheral locations. A third approach in the study of global cities was initiated by Reed (1981) by ranking the relative status of international financial centers, leading to a taxonomy that included “supranational”, “international” and “host international financial centers”. The fourth approach was pioneered by Sassen (1991, 2002), who focused on the centralization of advanced producer services that have emerged to facilitate the international expansion of MNCs.

Despite the various aforementioned approaches, the analysis of global cities has demonstrated a clear consensus on the primary global cities, with cities such as London, New York, Tokyo and Paris invariably appearing at the top of every list compiled by different authors regardless of methodologies (Beaverstock et al., 1999; AT Kearney, 2017). Moreover, the a few key attributes have emerged as being central to global cities, including high levels of advanced producer services, a cosmopolitan environment and a high degree of interconnectedness to local and global markets (Goerzen et al., 2013; Estrin et al., 2016). These characteristics appear to be essential in making global cities distinct from other subnational locations such as mega-cities, which are characterized by population size and density (Beaverstock et al., 1999), and economic clusters which are more industry and technology focused (Porter, 1998).

At the same time, there is increasing recognition of the heterogeneity and division of labor that exists among global cities. To explore these differences, urban scholars have divided the world of cities into, for example, wealthier and poorer, capitalist and socialist, etc., although there is still very little comparative research across these divides (Brosius and Schilbach, 2016). As a result, interest in drawing comparisons among different cities has escalated as economic and social activities as well as governance structures link cities together through extensive flows of various resources through intense networks of communication (Belderbos et al., 2017a, 2017b). In fact, it is this connectivity, with growing assertions of convergence and connections among them that allow globalized cities to engage in formal and informal transnational networks of design, policy, culture and governance (Marcuse and van Kempen, 2000; Smith, 2001; Sassen, 2002; King, 2004; McFarlane, 2006; Huysse, 2008; Estrin et al., 2016). Thus, to be considered part of the elite set of “global cities” has extrinsic value. For this reason, cities compete with each other for “global city” status on the official rankings, the reputational effects providing attractive conditions to global capital (Robinson, 2011).

As only a select few locations can ever hope to join the ranks of true global cities, however, it is important also to consider the various alternative locations that are within the MNC’s location choice decision set. While often ignored in IB research, it is obvious that, in parallel to the global city hierarchy, there exists a very significant population of what we could call “ordinary cities” (Robinson, 2006). These are cities that can be characterized by significant economic activity and population density but that do not possess connectivity characteristics that are crucial to global cities. These ordinary cities may possess unique resources of their own (Robinson, 2006) and could
rival the global cities in important dimensions and, thereby, compete with them for certain types of foreign investment. In fact, some of these cities are anything but ordinary in the popular sense of the word; to put them into perspective, consider the fact that the top ten non-global cities identified by Goerzen et al. (2013) housed around three times the population as compared to the top ten global cities in their ranking. As shown by Estrin and colleagues (2016), urbanization in general attracts international firms and also helps to provide critical services and resources for further internationalization. Hence, ignoring ordinary cities to focus only on global cities clearly comes at a risk of oversimplifying an MNC’s location opportunities. Thus, in the empirical analysis in this paper, we consider global and ordinary cities simultaneously as potential destinations for MNC investments.

Multinational corporation ownership structure

Subsidiaries as “bridgeheads”

With the economic landscape described above in mind, we now turn to the question of MNC subsidiary ownership structure. If we accept that (ceteris paribus) MNC subsidiaries are attracted to global cities and to large markets, it raises the question of how they organize their hierarchical networks within and across these locations, as well as internationally. The revealed complex ownership structures, such as the one shown in Figure 1, are puzzling: why does an MNC create tiered ownership structures in which foreign subsidiaries invest further in a number of subunits and so on as opposed to, for example, the MNC (HQ) investing in and directly managing those subunits?

Internalization theory predicts that cross-border hierarchies arise as an efficient way to exploit a firm’s resources and capabilities across international markets (Buckley and Casson, 1998). Buckley and Strange (2011) argue that it is important to become more sensitive to the nature of these internal transaction costs. The international transfer of resources within the firm, in turn, highlights the costs of connectivity: the costs of information acquisition, transmission, coordination and alignment.

The management challenges of creating connectivity can take many forms, such as the development and coordination of significant strategic and tactical decisions as well as the variety of smaller choices that pertain to policies and practices. In addition, MNCs are increasingly required to develop common responses to emerging global issues such as sustainability and global value chains, to name a few. Although organizing these decisions across corporate and local levels might be achieved through various methods such as face-to-face interaction, telephone, emails and the like (Bouquet et al., 2009), a key limiting factor is the difficulty of transferring tacit knowledge and complex routines (Bresman et al., 1999; Winter and Szulanski, 2001). Moreover, previous authors have suggested that various types of distance (e.g. geographic, social, cognitive, institutional, economic and cultural) increase the liability of foreignness which, in turn, increases knowledge exchange costs between subsidiaries due to the need for coordination and monitoring (Ambos and Häkanson, 2014; Asmussen and Goerzen, 2013; Dellestrand and Kappen, 2012; Slangen, 2011). The exchange costs between subsidiaries are further exacerbated by longer travel times (Boeh and Beamish, 2012) and other hassles (Schotter and Beamish, 2013), thereby incurring managerial opportunity costs (McCann, 2011). Thus, a key issue in the analysis of connectivity of an MNC’s foreign locations has to do with the spatial transaction costs of information and knowledge (Baaïj et al., 2015; Beugelsdijk et al., 2010; Cano-Kollmann et al., 2016).

To address this fundamental management challenge, MNCs establish intermediaries, e.g. regional headquarters (RHQs), to perform the crucial bridging
function between corporate headquarters, regional affiliates and other regional actors (Belderbos et al., 2017a, 2017b). In fact, RHQs are playing an increasingly important intermediary or bridging role between corporate headquarters, national affiliates and other actors across multiple countries in their regions (Hoenen et al., 2014; Ambos and Schlegelmilch, 2010; Enright, 2009). One function of RHQs is to balance integration and responsiveness pressures by ensuring responsiveness to overall regional characteristics and integration across the countries within the region (Verbeke and Asmussen, 2016). This alleviates resource constraints on global HQ managers who then can coordinate directly with RHQ managers and leave further coordination with sub-regional units to them, thereby economizing on transaction costs.

In this sense, RHQs serve as “bridgeheads” by connecting global and regional activities. As this requires connectivity both globally and inter-regionally, MNCs often establish these bridgehead investments in global cities because high levels of international connectedness is a key characteristic of these locations. Belderbos et al. (2017a, 2017b), for example, provided support for this idea by examining how global city connectivity, geographic distance and RHQ roles interact to determine an MNC’s location choice, finding that particular global cities are chosen as a location for MNCs’ RHQ investments. Even though the geographic distance of a location to the MNC’s regional affiliates diminishes the likelihood that a given city is chosen, these same distance effects do not play a role in the location decision if the global city is highly connected. As a result, well-connected global cities attract investment in RHQs by MNCs from more distant countries-of-origin.

International and subnational bridgeheads

Based on internalization theory, extant research on RHQs has focused primarily on international connectivity and control structures, ignoring subnational aspects of the bridgehead role. Furthermore, while the role of global cities and city connectivity has begun to receive attention in the geography and IB literatures (Derudder et al., 2010; Goerzen et al., 2013), prior literature on MNC location decisions has paid scant attention to the role of connectivity among and between other subnational location units; therefore, we introduce a distinction between international and subnational bridgeheads.

Referring again to Figure 1, we see that some subsidiaries of the Danish bridgehead unit (e.g. Schneider Nordic Baltic) are located in Denmark, while others are located in various other countries. As denoted in the bottom of the figure, we refer to the former as national subunits (NSUs) if they do not have any subsidiaries themselves[3], and we refer to the latter as foreign subunits (FSUs). The bridgehead units that own and manage such subsidiaries have distinct and important roles in the MNC network depending on their geographic orientation. We henceforth denote them as subnational bridgeheads if they primarily organize NSUs or other bridgehead units beneath them, and international bridgeheads if they primarily organize FSUs.

International bridgeheads serve as platforms for regional portfolio investment, where MNCs use units in one country to help facilitate further investments in other countries in that region. In the example presented in Figure 1, Schneider Nordic Baltic serves as an international bridgehead for Schneider Electric SA into the Baltic region (i.e. Sweden, Norway, Finland and the UK) as evidenced by its affiliated FSUs. In this way, MNCs use platform investments to establish a regional presence in the market and, from there, minimize spatial transaction costs by testing out various relatively close markets (geographically and culturally) before deciding on further investments.
In terms of mandate, international bridgehead investments typically result in units that are tasked less with administrative duties and efficiency imperatives and perhaps more with exploratory duties to gather regional market intelligence to inform subsequent investment location decisions. In the example in Figure 1, we also note that another Danish subsidiary of Schneider Electric SA (i.e. Schneider Electric IT APS in Kolding) acts as international bridgehead for an FSU in Switzerland. This illustrates how various different value-chain activities and investment motives may drive both location choice and mandate for foreign subsidiaries, while the Baltic subsidiary acts as international bridgehead for exploration of further downstream market opportunities, the IT subsidiary serves as international bridgehead for exploration of upstream R&D activities. It is conceivable that cultural and institutional differences among potential markets are so vast as to justify a “multi-hub organization” (Prahalad and Bhattacharyya, 2008), where firms develop multiple regional and/or national HQs to allow for more transaction cost-efficient coordination (Mudambi and Swift, 2011), leading us to our first assertion:

Assertion 1: International bridgeheads serve as platforms for portfolio investment, where MNCs use units in one country to facilitate further investments in other proximate countries while economizing on the spatial transaction costs related to coordination and integration.

At a fundamental level, the function of subnational bridgeheads is similar to the international ones in terms of economizing on spatial transaction costs. Like international bridgeheads, they economize on spatial transaction costs by bridging global and national units, ensuring integration and coordination within the host country. However, with a subnational rather than an international mandate, the subnational bridgeheads may have a smaller scale and lower need for global connectivity than their international counterparts. Instead, they can serve as a facilitator of further penetration of the local market by institutionalizing differences and thereby lowering the LOF. This may be true of market-driven (downstream) investments in particular. MNCs need to organize critical parts of the global value chain in ways that allow for quick responses to changing market or institutional conditions to improve adaptability to local market needs. Often, this can be achieved by downstream activities, such as warehousing, distribution and local sales/service activities being carried out on a “hub and spoke” principle (Buckley et al., 2003) at a micro-location level where the “hub” is tasked with bridgehead administrative duties including imports and taxes with a clear mandate to organize domestic activities in an effective and cost-efficient manner by reducing transaction costs.

For other types of investments, such as upstream sourcing and/or R&D type of investments, the motive and mandate of the subnational bridgehead may differ. For instance, in the case of local manufacturing, it may be tasked with setting up local supplier–subsidiary networks which may reduce the spatial transactional costs associated with procuring critical supplies – this may include eliminating import duties and taxes and overcoming other barriers to trade of intermediary goods. For R&D motivated investments, in turn, the subnational bridgehead may serve as a center of excellence which helps procure, absorb and redistribute knowledge collected by local R&D subsidiaries and/or local sales and service centers, leading to our second assertion:
Assertion 2: Subnational bridgeheads serve as platforms for local market coordination, where MNCs use units in a country to facilitate a deeper market presence while economizing on the spatial transaction costs related to local coordination and integration.

MNCs using a bridgehead investment strategy may seek to create a truly “glocal” approach which combines elements of both global strategy economies of scale-efficiency imperatives as well as multi-domestic strategic localized adaptation imperatives via clearly differentiated sub-national subsidiary mandates (Svensson, 2001). Hence, when analyzing MNC foreign direct investment motives, mandates and location choice, scholars and managers must recognize the true complexity of MNC networks and subnational systems that give rise to synergistic advantages far beyond what domestic firms may be able to accomplish. While many of the MNC network advantages, both horizontally and vertically, are well documented in the IB literature (Buckley, 2004), we contend that beyond these factors there exists a set of less understood sub- and international network advantages. The subnational bridgehead investment strategy capitalizes on the MNCs ability to be both global and local simultaneously, whereas an international bridgehead strategy uses specific subsidiaries as platforms to provide early tests of market viability and sustainability at a regional level before deeper penetration is decided.

Data and methods
To examine empirically these ideas, we have compiled data on MNC subsidiaries in Denmark and conducted an exploratory analysis of their locations and ownership structures. As we are sampling only one country with one global city (i.e. Copenhagen) – and the primary engine of our analysis is univariate Z test of the comparative ratios of subsidiaries in this sample – our conclusions can be only tentative. The main purpose of our analysis is to derive some formal propositions that can be tested by subsequent studies on multi-country samples using more sophisticated multivariate econometric methods.

Our data were extracted from the Orbis database provided by Bureau Van Dijk. The unique strength of this database is the detail it provides on ownership structures, where it is possible to see both the direct and ultimate owner of each firm as well as all of its subsidiaries. This is important for the purposes of our paper, as we are interested in the ownership structure of subnational and international investment flows and ownership structures can be seen as a paper trail left by such flows (resulting, for example, from earlier M&A activity or establishment of greenfield operations). The data also include various insights into the firms’ and their subsidiaries’ operations, such as industry information, operational characteristics, national registration information, location and date of incorporation.

In the first step, we extracted from Orbis a cross-sectional data set of all firms that were foreign-owned but had operations in Denmark in 2014 which yielded a sample of 4,557 firms. To go one step deeper, we then extracted a list of all the subsidiaries directly owned by these firms. After cleaning all the data and eliminating firms that were missing critical information such as industry information (i.e. NACE codes) or location, the final data set included 3,949 firms who, between them, owned a total of 4,084 subsidiaries of which 1,531 were located in Denmark[4] and 2,553 in other countries. The data also included information about the global ultimate owner (GUO) of each firm, which is the firm in the highest position in the ownership chain. In other words, the GUO owned the focal firm either directly or through a number of intermediate investments (all with more than 50 per cent equity[5]), but did not have an
owner itself. All GUOs in our sample were located outside Denmark, as this was the
initial filter applied to the extraction in Orbis.

Segmentation of location and industries
To organize the data for our analysis, we segmented the firms into a number of
theoretically based geographic areas in terms of both international and subnational
(Danish) locations. First, we segment all locations outside of Denmark into those in the
Rest of Scandinavia, Rest of Europe and the Rest of the World. This distinction
captures the distances between the MNC home country and Denmark with Rest of
Scandinavia being the most proximate, followed by Rest of Europe, and finally with
Rest of World as the most distant category. Geographic distance has been shown to be a
powerful predictor of firms’ international expansion patterns (Asmussen and Goerzen,
2013; Asmussen et al., 2015) and so our segmentation is based on a regional perspective
on distance (Rugman and Verbeke, 2004). However, our treatment is more fine-grained,
as it goes beneath the Triad region level and segments Europe into two areas based
both on the geographic proximity of the other Scandinavian countries to Denmark as
well as on the cultural similarities among these countries (Gupta et al., 2002)[6].
Roughly 30 per cent of the GUOs in our sample were Scandinavian, 40 per cent were
European and 30 per cent from outside of Europe. Most of the European owners came
came from Germany, Great Britain and Luxembourg, whereas the Scandinavian GUOs were
dominated by Swedish companies and US firms lead the ROW category. For the 2,553
FSUs in the sample, about 25 per cent were located in the rest of Scandinavia, 50 per
cent in Europe and 25 per cent in the Rest of the World.

Second, to analyze subnational location choices, we differentiate between four potential
micro-location types in which the MNC could place its investments: the global city center
(G), the global city metropolitan region (M), large population centers other than the global
city (P) and all remaining locations which were predominantly rural (R). This categorization
is based on theoretical distinctions made in the economic geography and urban studies
literature (Friedmann, 1986; Gordon and McCann, 2000; Sassen, 1991, 2001, 2010; Scott,
2001).

Although the relevance of global cities to MNC location choices are well established
as discussed earlier in this paper, research also indicates that there are important
differences between the different parts of the global city, in particular between the city
center and the surrounding metropolitan region. For example, Goerzen et al. (2013)
show that manufacturing-oriented subsidiaries and firms from high-tech industries
tend to cluster in the metropolitan regions, whereas firms with information collection
motives and those using joint ventures prefer the global city center. Furthermore, while
Goerzen et al. (2013) collapse all areas outside of the global city into one category (called
the “periphery”), we argue that this may be an oversimplification, as these areas may
contain both scarcely populated land as well as cities that are characterized by high
population density but do not qualify for global city status due to a lack of global
connectivity – what we have termed “ordinary cities” in the discussion above. While
MNCs may not go to these cities in search of global infrastructure and cosmopolitanism, they may still go there in search of large markets.

This reasoning led to our four-way classification of subnational locations, based on
the 98 municipalities in Denmark as illustrated in Figure 2. We thus define the global
city center as being the municipalities of Copenhagen and Frederiksberg, and the
metropolitan region as the surrounding municipalities (often called the “Greater
Copenhagen Area”). In total, 36 per cent of the Danish population, about two million
people, live in this combined metropolitan area (Table V). As major population centers, we use the three largest cities in Denmark after Copenhagen: Aarhus (with 269,000 inhabitants), Odense (177,000) and Aalborg (113,000). Beyond these cities, there is somewhat of a gap to the fifth largest city in Denmark (Esbjerg at 72,000 inhabitants). Hence, the remaining municipalities we classify as rural. By these definitions, 31 per cent of the 3,949 foreign firms in our sample are located in the global city center, 29 per cent in the global city metropolitan region, 13 per cent in the population centers and 30 per cent in the rural areas.

Finally, we also split the sample into a number of industry groups: 40 per cent of the firms are characterized as producer services, 20 per cent operate within manufacturing and 20 per cent in wholesale. The remaining 20 per cent is split between telecommunications, transportation, retail and other services.

Findings
With our data set, we are able to answer a number of questions about ownership structure and location choice. First, how common are international and subnational bridgehead investments, both in absolute terms and in comparison to one another? With 3,949 foreign firms in Denmark who, between them, own a total of 4,084 subsidiaries, each firm had an average of 1.03 subsidiaries, suggesting that these types of bridgehead investments are quite common. Yet, the heterogeneity is substantial, with 71 per cent of the foreign firms owning zero subsidiaries, another 14 per cent owning only one subsidiary and the remaining 15 per cent owning more than one subsidiary, with a maximum of 289 subsidiaries owned by one single foreign firm.

Table I displays the ownership structures by further classifying firms according to their position in the hierarchical network (as illustrated in Figure 1), based on:


Figure 2.
Classification of Danish municipalities into global city center (G), global city metropolitan region (M), major population center (P) and the rest of the country (R)

Source: Authors’ own illustration
the number of subsidiaries that they own (none, 1, or many);  
the extent to which these subsidiaries are primarily in Denmark or abroad (based on a 50 per cent cutoff); and  
whether the firm itself is directly owned by a foreign firm or has a Danish direct parent.

Among the firms with no subsidiaries, some are directly owned by a foreign firm, and we refer to them as Independent National Firms (INFs), constituting 52 per cent of the sample. The subunits of Danish firms that do not have any subsidiaries themselves are the aforementioned NSUs (18 per cent).

The remaining firms are segmented according to the size of their mandate (i.e. one or more than one subsidiary) as well as whether their mandate is oriented primarily toward the domestic market (i.e. subnational bridgeheads) or foreign markets (i.e. international bridgeheads). As Table I shows, the most common type of mandate is the subnational bridgehead role [i.e. Small Subnational Bridgehead (SSBs) and Large Subnational Bridgehead (LSBs) constituting in total 21 per cent of the sample], whereas the international bridgehead role is more unusual (i.e. SIBs and LIBs, 8 per cent of the sample). However, the subnational bridgehead firms tend to be small while the international bridgeheads are somewhat larger in terms of the number of units they control. Hence, 56 per cent of the international bridgeheads are LIBs that own more than one subsidiary, whereas only 27 per cent of the subnational bridgeheads are LSBs owning more than one. On average, furthermore, the LIBs have 8.9 subsidiaries, while the LSBs have only 4.6. This indicates that relative to subnational bridgeheads, international bridgehead investment units are relative rare but those that exist have a wider mandate. This makes sense inasmuch as the subnational market is limited (in a small country like Denmark, in particular) and the MNC will reach saturation in this market relatively quickly, while the outside international market opportunities are effectively unlimited. Once an international platform has been set up with the routines and infrastructure required to run foreign operations, adding new spokes to the hub is less demanding and additional countries can be, therefore, both attractive and relatively inexpensive.

The subsidiaries of the subsidiaries
We now turn to a more nuanced analysis of the 4,084 subsidiaries owned by the foreign firms in Denmark. Following the earlier established distinction between subnational and international bridgeheads, we split these subsidiaries into those that are located in Denmark

<table>
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<tr>
<th>Category</th>
<th>Abbreviation</th>
<th>No. of subs</th>
<th>(%) Foreign subsidiaries</th>
<th>Direct owner</th>
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<td>Independent national firm</td>
<td>INF</td>
<td>0</td>
<td>n/a</td>
<td>Foreign</td>
<td>2,068</td>
<td>52</td>
</tr>
<tr>
<td>National subunit</td>
<td>NSU</td>
<td>0</td>
<td>n/a</td>
<td>Domestic</td>
<td>725</td>
<td>18</td>
</tr>
<tr>
<td>Small international bridgehead</td>
<td>SIB</td>
<td>1</td>
<td>100%</td>
<td>F/D</td>
<td>89</td>
<td>2</td>
</tr>
<tr>
<td>Small subnational bridgehead</td>
<td>SSB</td>
<td>1</td>
<td>0%</td>
<td>F/D</td>
<td>470</td>
<td>12</td>
</tr>
<tr>
<td>Large international bridgehead</td>
<td>LIB</td>
<td>&gt;1</td>
<td>&gt;50%</td>
<td>F/D</td>
<td>231</td>
<td>6</td>
</tr>
<tr>
<td>Large subnational bridgehead</td>
<td>LSB</td>
<td>&gt;1</td>
<td>&lt;=50%</td>
<td>F/D</td>
<td>360</td>
<td>9</td>
</tr>
<tr>
<td>Total sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3,943</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on Orbis 2014 data
(consisting of NSUs and other, lower level bridgehead units) and those that are located in other countries (FSUs), for the whole sample as well as for subsamples of firms belonging to MNCs from different home countries, the latter based on the GUO of the firm as shown in Table II.

As seen in the Table II, 62 per cent of the subsidiaries of the foreign-owned Danish firms in our sample are located outside Denmark, consistent with the higher number of subsidiaries controlled by each international bridgehead. It is possible that the characteristics of Denmark, being a very small and open economy positioned centrally and strategically in Northern Europe, causes this number to be higher than it may be in other countries. What is more interesting, however, is that a substantial heterogeneity exists across the three categories of GUO origin: Scandinavian MNCs are more likely to use their Danish subsidiaries as bridgeheads into the Danish market (58 per cent national units versus the average of 38 per cent), whereas MNCs from outside Europe are more likely to use them as bridgeheads for further international expansion (they have 74 per cent FSUs versus the average of 61 per cent, statistically significant with \( Z = 8.5, p < 0.01 \)), with European MNCs in between. These findings lead us to the following proposition:

**P1.** The closer the home country of the MNC is to the host country geographically, institutionally, and culturally, the more likely that it will use its subsidiary as a subnational bridgehead and the less likely that it will use it as an international bridgehead.

Perhaps given the proximity of a Scandinavian MNC’s global HQ, it might be more efficient for such an MNC to go directly to the surrounding countries rather than through Denmark. More distant firms, on the other hand, may find it meaningful to use their Danish subsidiaries as hubs for exploration of the Scandinavian and European markets. For such a purpose, the central location of Denmark in Northern Europe, the connectivity to regional markets and the highly skilled workforce may be an additional advantage that reduces the LOF associated with further regional expansion.

In the next step, we examine the geographic investment patterns underlying the international bridgehead investments. To do that, we restrict the sample to those subsidiaries that are located outside of Denmark, i.e. the 2,503 FSUs in the sample. Table III shows in which regions these FSUs are located and the regions from which the ultimate MNCs owners originate.

As shown in the table, 22 per cent of the FSUs are located in the rest of Scandinavia, 48 per cent in the rest of Europe and 30 per cent outside of Europe. Comparing this distribution to the distribution of GUO origins (16 per cent, 43 per cent and 41 per cent, respectively) tells us something about the direction of these bridgehead investments. Hence, Denmark serves

<table>
<thead>
<tr>
<th>GUO</th>
<th>Denmark (NSUs)</th>
<th>Other countries (FSUs)</th>
<th>Total</th>
<th>Foreign (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest of Scandinavia</td>
<td>583</td>
<td>413</td>
<td>996</td>
<td>41</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>628</td>
<td>1,046</td>
<td>1,674</td>
<td>62</td>
</tr>
<tr>
<td>Rest of World</td>
<td>370</td>
<td>1,044</td>
<td>1,414</td>
<td>74</td>
</tr>
<tr>
<td>Total</td>
<td>1,581</td>
<td>2,503</td>
<td>4,084</td>
<td>61</td>
</tr>
</tbody>
</table>

**Table II.** International bridgehead investments through Denmark  

**Source:** Authors’ calculations based on Orbis 2014 data
primarily as a platform for non-European MNCs to invest in Europe (42 per cent of GUO origins are non-European versus only 30 per cent of FSU destinations), particularly not only in Scandinavia (22 per cent of FSU destinations are Scandinavian versus 17 per cent of GUO origins, significant with $Z = 4.9$, $p < 0.01$) but also in the rest of Europe (48 per cent of FSU destinations vs 43 per cent of GUO origins, significant with $Z = 4.6$, $p < 0.01$). This is consistent with Denmark playing a key role as regional hub for non-European firms wishing to expand within Europe, in general, and within Scandinavia in particular due to the geographic and cultural proximity of Denmark to these markets, as well as strong physical and intellectual infrastructure (Kottaridi and Nielsen, 2003). In contrast, European firms can go directly to those Scandinavian countries or to other European countries without the need to use Denmark as a bridgehead location. These findings lead us to the following proposition:

$P2$: The more geographically, institutionally, and culturally distant is the origin of the MNC from the host country in which it has a bridgehead investment, the more likely it is to use this bridgehead to access the most proximate markets.

Looking at the investment destination distribution for three GUO origins separately (note the percentages at the bottom of Table III), we observe that the Scandinavian MNCs have a higher propensity to direct their Danish bridgeheads toward Europe (57 per cent of their FSUs vs 48 per cent for the whole sample) and in a similar way European MNCs direct their bridgeheads toward Scandinavia (26 vs 22 per cent). This suggests that Denmark also serves as a type of connecting platform between Scandinavia and the rest of Europe. However, the position of Denmark in Scandinavia may be significant here, i.e. being landlocked with continental Europe and member of the European Union, among other things.

**Subnational location choices**

Our analysis above provides some basic yet important information about the structure of the bridgehead investments in our sample. In this section, we will examine how these dimensions correlate with the subnational location choices made by the MNC. Table IV shows how the different categories of firms are distributed over these four types of locations. First, we can see that the NSUs, more than other types of firms, are located in...
the population centers, where 18 per cent of these subsidiaries are located compared to 9 per cent of the total sample. This is consistent with the idea of these units being more oriented toward local labor or product markets which are abundant in these cities. On the other hand, the units that own and operate these NSUs – the subnational bridgehead units – are primarily in other locations. The large subnational bridgeheads cluster in the global city center (35 vs 31 per cent sample average) and the smaller ones in the rural areas (36 vs 32 per cent sample average). While the latter is surprising, perhaps it is because the larger subnational bridgehead units need the producer services of the global city to effectively control a larger number of NSUs simultaneously, while smaller rural bridgehead units can control a local unit more informally. Finally, we can see that the small international bridgeheads cluster in the global city metropolitan region (40 vs 28 per cent sample average).

To assess the location of bridgehead units while also accounting for the size of their national networks, we segment the data on the 1,531 Danish subsidiaries according to the location of their direct (Danish) owner as well as their ultimate (foreign) owner (GUO) as shown in Table V. First, we can see that for the total sample, the subnational distribution of the bridgehead units roughly correspond to what we found above, with a bit more than half of these units (57 per cent) being located in the global city (G or M) and a bit less (43 per cent) outside it (R or P), a distribution that is roughly in line with our expectations. The attraction of the global city is thus a bit lower than the estimate

<table>
<thead>
<tr>
<th>Origin of GUO</th>
<th>G (%)</th>
<th>M (%)</th>
<th>P (%)</th>
<th>R (%)</th>
<th>Total (%)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest of Scandinavia</td>
<td>26</td>
<td>32</td>
<td>10</td>
<td>32</td>
<td>100</td>
<td>564</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>32</td>
<td>20</td>
<td>18</td>
<td>31</td>
<td>100</td>
<td>615</td>
</tr>
<tr>
<td>Rest of World</td>
<td>38</td>
<td>26</td>
<td>3</td>
<td>32</td>
<td>100</td>
<td>352</td>
</tr>
<tr>
<td>Total sample</td>
<td>31</td>
<td>26</td>
<td>11</td>
<td>32</td>
<td>100</td>
<td>1,531</td>
</tr>
<tr>
<td>Population</td>
<td>11</td>
<td>25</td>
<td>10</td>
<td>55</td>
<td>100</td>
<td>5.7m</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on Orbis 2014 data
of Goerzen et al. (2013), about two-thirds of whose global sample of MNC subsidiaries was attracted to global city regions. On the other hand, if we use the relative size of these different areas in Denmark (proxied by population in the table) as a benchmark, we can see that the global city center is clearly overrepresented (31 per cent of bridgehead locations vs 11 per cent of the total population) and the rural areas underrepresented (32 per cent of bridgehead locations vs 55 per cent of population), as we would expect.

An interesting pattern emerges when we look at these distributions for the subsamples of firms originating in different regions. First, 38 per cent of the subsidiaries of GUOs from outside Europe have bridgehead units in the global city center as opposed to only 32 per cent for European firms (marginally significant with $Z = 1.9, p < 0.10$) and 26 per cent for Scandinavian firms (highly significant with $Z = 3.8, p < 0.01$). Perhaps MNCs from distant origins have a larger need for the connectivity and the economic infrastructure of the global city (e.g. producer services) to provide coordination and control of their bridgehead units. Second, the high propensity of distant firms to go through the global city comes at the expense of the population centers, where only 3 per cent of their bridgehead units are located compared to 11 per cent of the total sample. This indicates that these MNCs have a preference over global connectivity characteristics over market size, which is also consistent with their suffering a stronger liability of foreignness. Finally, the low propensity of the Scandinavian firms to locate in the global city center is outweighed by a higher propensity to go to the metropolitan region (i.e. 32 per cent vs a sample average of 26 per cent). Based on this analysis, we derive the following proposition:

**P3.** The more geographically, institutionally and culturally distant an MNC origin is from the host country, the more likely it is to use a global city center as its bridgehead to the national market.

**Subnational ownership structures across locations and industries**

Having analyzed the location of the bridgehead units themselves as well as of the domestic units that they control, we now turn to the geography of the actual ownership link between these two types of firms. In other words, do subnational bridgehead units own subsidiaries primarily in their own vicinity or further away? When they own more distant subsidiaries, where are they located? To address these questions, Table VI shows the location of the 1,531

<table>
<thead>
<tr>
<th>Bridgehead Location</th>
<th>G</th>
<th>M</th>
<th>P</th>
<th>R</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>384</td>
<td>40</td>
<td>18</td>
<td>31</td>
<td>473</td>
</tr>
<tr>
<td>M</td>
<td>23</td>
<td>322</td>
<td>14</td>
<td>37</td>
<td>396</td>
</tr>
<tr>
<td>P</td>
<td>10</td>
<td>7</td>
<td>147</td>
<td>12</td>
<td>176</td>
</tr>
<tr>
<td>R</td>
<td>11</td>
<td>67</td>
<td>27</td>
<td>381</td>
<td>486</td>
</tr>
<tr>
<td>Total</td>
<td>428</td>
<td>436</td>
<td>206</td>
<td>461</td>
<td>1,531</td>
</tr>
<tr>
<td>Local “Stickiness”(%)</td>
<td>90</td>
<td>74</td>
<td>71</td>
<td>83</td>
<td>81</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations based on Orbis 2014 data
subnational “subsidiaries of the subsidiaries” in our sample and the locations of the bridgehead units that own them.

First, we can observe a strong tendency for ownership links to stay within a certain location type. This tendency is summarized by the number denoted “local stickiness”, which is the share of the subsidiaries in a given type of location that have a bridgehead parent in the same type of location. Hence, out of the 428 subsidiaries located in the global city center, for example, 384 (i.e. ninety percent) have a parent firm that is located also in the global city center. The average stickiness of the whole sample is 85 per cent, which is surprisingly high and indicates a large number of co-located parents and subsidiaries. Hence, even at the subnational level in a small country like Denmark, there seem to be forces limiting geographic dispersion that are perhaps strong agglomeration processes or geographic barriers to coordination. Comparing the different location types, we can also see that the global city center is the most difficult location for outside firms to penetrate, whereas the other location categories have lower stickiness.

Stickiness notwithstanding, investments across the different location types do occur, and there is a systematic pattern in the direction of these flows. Building on the numbers in Table VI, Figure 3 shows what we could call geographically “footloose” investment flows, represented by ownership links that cut across the four geographic location types.

The number on each arrow (corresponding to its thickness) is the ratio of ownership links going in the direction of the arrow to the links going in the other direction. For example, when the flow from the global city metropolitan region (M) to outside population centers (P) has a value of 2, this means that there are twice as many subsidiaries in the population centers with parents in the global city metro area as there are subsidiaries in the global city metro area with parents in the population centers. Hence, the prevalent direction of investment between the two locations is to use the global city metropolitan area unit as a subnational bridgehead oriented toward the more remote population centers. Our findings lead us to the following proposition:

**P4.** Geographically “footloose” investment flows tend to arrive initially in the global city center, go through the global metropolitan and rural areas, and end up in the major population centers.

This proposition is consistent with extant theory that the global city is a command and control center and of the population centers being primarily attractive as markets. A potential explanation for these cross-location investment flows is that expansion into other

![Figure 3. Net investment flows across location types](image)
geographic markets would be more difficult to serve directly otherwise due to a lack of global connectivity.

Slightly more puzzling are the many investments that originate and end in the same type of location. A possibility is that the subsidiaries of these bridgeheads are performing different activities in a similar location. To shed more light on this idea, we focused our analysis on ownership links across industries instead of across locations. It turned out that out of the 1,531 national subsidiaries of the foreign firms in Denmark, only 1,462 had industry information, so we had to make this particular analysis for a slightly smaller subsample. As shown in Table VII, we cross the industry classification of each of these 1,462 subsidiaries with the industry of their Danish parent (bridgehead) firm.

As seen in Table VII, the stickiness across industries is much lower than across locations (at 34 per cent on average for the whole sample), supporting the conjecture above that there is a difference in activity between bridgehead firms and the subunits they control. It therefore becomes interesting to look at the directionality of these inter-industry ownership links, which we show for a selection of the industries in Figure 4.

As Figure 4 indicates, there is clearly a downstream directionality in subnational ownership structures. Hence, foreign holding companies tend to own manufacturing

<table>
<thead>
<tr>
<th>Subsidiary industry</th>
<th>H&amp;F</th>
<th>Man.</th>
<th>OPS</th>
<th>OS</th>
<th>Ret.</th>
<th>Tel.</th>
<th>TSC</th>
<th>Who</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holding and financial</td>
<td>84</td>
<td>90</td>
<td>82</td>
<td>58</td>
<td>4</td>
<td>38</td>
<td>39</td>
<td>76</td>
<td>471</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>18</td>
<td>53</td>
<td>23</td>
<td>12</td>
<td>3</td>
<td>15</td>
<td>31</td>
<td>157</td>
<td></td>
</tr>
<tr>
<td>Other producer serv.</td>
<td>52</td>
<td>26</td>
<td>116</td>
<td>43</td>
<td>9</td>
<td>20</td>
<td>22</td>
<td>14</td>
<td>302</td>
</tr>
<tr>
<td>Other services</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>51</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>77</td>
</tr>
<tr>
<td>Retail trade</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>20</td>
<td>1</td>
<td>5</td>
<td></td>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>38</td>
<td>4</td>
<td>2</td>
<td>59</td>
</tr>
<tr>
<td>Transp., Stor., &amp; Con.</td>
<td>11</td>
<td>2</td>
<td>21</td>
<td>15</td>
<td>1</td>
<td>3</td>
<td>94</td>
<td>1</td>
<td>148</td>
</tr>
<tr>
<td>Wholesale</td>
<td>7</td>
<td>14</td>
<td>20</td>
<td>11</td>
<td>93</td>
<td>10</td>
<td>13</td>
<td>47</td>
<td>215</td>
</tr>
<tr>
<td>Total</td>
<td>185</td>
<td>192</td>
<td>272</td>
<td>197</td>
<td>132</td>
<td>113</td>
<td>192</td>
<td>179</td>
<td>1,462</td>
</tr>
<tr>
<td>Industry “Stickiness”(%)</td>
<td>45</td>
<td>28</td>
<td>43</td>
<td>26</td>
<td>15</td>
<td>34</td>
<td>49</td>
<td>26</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on Orbis 2014 data
operations, which tend to own wholesale firms which, in turn, own retailers. At the same time, the foreign holding companies seem to occasionally “skip” parts of this value chain by integrating even further forward, having direct ownership of both wholesale and retail operations. This can be explained perhaps by the high wage costs in Denmark and the difficulty of maintaining cost-effective manufacturing operations in the country, leading many foreign firms to enter only at the wholesale or retail stage while keeping the manufacturing piece of their global value chain in low-wage countries in Eastern Europe or Asia. In any case, the overall picture is one in which a key function of subnational bridgeheads appear to be to establish internalized local value chains, resulting in our final empirical prediction:

\[ P5. \] Geographically “sticky” investment flows are used to establish local value chains, moving from upstream to downstream activities.

Discussion
One of the main findings of our study is that MNCs assign different roles or mandates, in relation to further multi-tiered investment chains, to different types of foreign direct investments both sub-nationally and internationally. Our results clearly illustrate a tendency of MNCs in Denmark using (at least) two different investment strategies; one in which a “national headquarter” serves as a bridgehead for further subnational investments via a network of local subsidiaries and one in which a “regional headquarters” serves as a bridgehead for further international expansion within the proximate regions of Scandinavia and Europe[7]. These two different investment patterns suggest a spatial division of labor with varying mandates of the bridgehead. The subnational bridgehead mandate revolves around integration and global efficiency (Bartlett and Ghoshal, 1989), where focus is on economies of scale, standardization and uniformity of products and processes. Our empirical results of the specific investment patterns of MNCs in Denmark reveal that subnational bridgehead units have even more of a tendency to agglomerate in the global city center than other foreign firms do and that this tendency is higher the further away the origin of the MNC. This may indicate that the management of uncertainty in the host market is a key function of these bridgehead units. The “spokes”, on the other hand, are located close(r) to the final customer, in particular in large population centers, providing critical market intelligence as well as being tasked with logistic, sales and after-sales service activities. These subunits tend to move downstream from holding companies through manufacturing and to wholesale and retail, with a mandate that is presumably more focused on localization via adaptation, differentiation and close liaison with distributors and customers. This suggests that MNCs’ subnational ownership structures can be explained in part by a local division of labor along the global value chain.

In contrast, the international bridgehead investment pattern suggests a portfolio approach where the unit serves as platform for further investments into the surrounding geographic region(s). As evidenced by our findings, Denmark is often chosen as a preferred location for, in particular, non-European firms as they seek to further expand in Scandinavia and Europe at large. These international bridgehead units tend to locate in the metropolitan region surrounding the global city. Perhaps because they are not as interested in the local market and hence do not need the visibility of the global city center, they can get the same access to global infrastructure in the metropolitan region without incurring the high costs of the city center.
Conclusion and future research directions
Our research was designed to examine the propensity of an MNC to invest in various alternative types of subnational locations including global cities, global city metropolitan areas, major population centers and rural areas. Drawing on a sample of foreign firm’s location in Denmark, we have shown that there are substantial differences between the types of firms locating in these different areas and in the ownership structures spanning them. In particular, we found MNCs from more distant home countries tend to establish international bridgehead investments to access regional markets, while proximate MNCs are more likely to establish subnational bridgehead investments aimed at the markets in the same host country. However, when subnational bridgeheads are in fact owned by MNCs of more distant origins, they are more likely to be located in a global city than those owned by proximate MNCs. Finally, we introduce in this paper a subtle but important distinction between global cities and ordinary cities, and provide novel insights into the way in which these types of locations attract foreign investments. In particular, the geographic patterns of subnational ownership structures indicates a directionality where the bridgehead units are set up to take advantage of the connectivity of the global city, and from there direct investment flows toward rural areas and, ultimately, the attractive but less accessible markets in the major population centers.

To move toward a conceptual understanding of these differences, we extend the ideas of Belderbos et al. (2017a, 2017b), who examined the effect of global city connectivity on the likelihood that particular cities are chosen as in investment location by MNCs. Hence, we propose that MNCs manage a tradeoff between the pursuit of global connectivity and local density, on the one hand, and cost control, on the other, as shown in Figure 5.

First, when investing in particular locations, MNCs may have low or high need for global connectivity allowing them to facilitate cross-border coordination and control. Second, certain investments may have a high need for high density of population and economic activity, facilitating visibility and the access to local markets for products and labor, while others have a low need. Global cities are characterized by both of these qualities, but they come at a cost, with prices of real estate and wages being driven up and agglomeration diseconomies, such as congestion, setting in. Hence, only an MNC that has a strong need for both connectivity and density, overwhelming the need for cost control, would choose to locate their subsidiary in a global city center. Similarly, an MNC with a high need for connectivity but with less focus on density would likely locate outside the global city but within the metropolitan area where the costs of labor,

<table>
<thead>
<tr>
<th>Need for Local Density</th>
<th>Need for Global Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low Rural Area (low cost)</td>
</tr>
<tr>
<td></td>
<td>Global City Metropolitan Area (medium cost)</td>
</tr>
<tr>
<td>High</td>
<td>Major Population Center (medium cost)</td>
</tr>
</tbody>
</table>

Source: Authors’ own illustration
rent and transportation would be lower. On the other hand, an MNC with a lower requirement for connectivity, but a stronger interest in density may choose a major population center that has some of the benefits of density but a far lower price to pay for it. Finally, an MNC with a high need to maintain cost control but with only limited needs for connectivity and density would choose to locate their investment in less densely populated rural areas where the lowest costs can be achieved.

We expect that the particular role played by a given foreign subsidiary changes the requirement for global connectivity, local density and cost control and thus has an important impact on MNC location choice that influences spatial transaction costs. Thus, an MNC could have a strong need for connectivity to the regional and/or national markets, but this need could be satisfied by a single investment in, e.g. a global city. Subsequently, as other operations within the MNC’s portfolio may need to focus more heavily on cost control, the burden of connectivity to achieve coordination and control may be placed on the RHQ. As a result, we would expect to see that the subsidiary located in the location of greatest connectivity would be placed in a superior level in the corporate hierarchy. Taken together, this allows the other given subsidiaries to be located in transaction cost minimizing locations such as rural settings, as well as in high-density locations such as major population centers.

While our study made important first strides toward a deeper understanding of the complexity of foreign subsidiary networks with regards to subnational and international location choices, more research is needed to determine exactly how and when such decisions are made. Based on our exploratory analysis, future research may move toward more confirmatory approaches to test the ideas we derive here in larger samples, spanning multiple host countries and global cities. As a “low-hanging fruit” for empirical researchers, subnational location choice models need to take into account both the position and role of the focal foreign subsidiary in the larger MNC network as well as the way in which this subsidiary is linked to other units both upwards and downwards in the hierarchy. This will require the development of new subsidiary-level independent variables and hypothesizing about the individual and joint impact of these variables, as well as estimation of location drivers for specific subsamples and using multi-level approaches.

Our findings clearly point to two different types of bridgehead investment patterns; one with a distinct subnational focus on exploitation within a focal country and one with an international bridgehead focus on serving as platform for further regional exploration and expansion. Yet, to further study the temporal aspects of such location decisions and investment strategies, longitudinal data are needed. While it is entirely possible (and indeed likely) that the patterns we observe in our cross-sectional data provide evidence of such patterns, details related to motives, investment types and temporal patterns behind specific investment decisions may reveal more nuances to the patterns observed here. For instance, it is possible that the international bridgehead units in Denmark serving as international bridgeheads are indeed themselves subunits of other bridgehead units (perhaps regional ones) located in other countries; we neither do know the “directionality” or temporality of the ties between specific subsidiaries nor, in fact, do we know the underlying motives or reasoning behind specific MNC network outcomes. Moreover, Denmark is a particularly open and developed economy with an idiosyncratic makeup of economic, cultural and political institutions, which together with its unique labor market and geographic location may render generalizability difficult. Hence, we strongly encourage empirical verification by studies in other countries and contexts.
Notes

1. For example, while Goerzen et al. (2013) take a multi-level approach by including explanatory variables on the parent firm as well as subsidiary level, they do not observe the mutual ownership structures of the subsidiaries. Hence, each subsidiary is entered into the location choice model in the same way, regardless of whether it is the only subsidiary of its parent firm in the host country, only one among many subsidiaries owned by the same parent in that country, a subsidiary that owns other subsidiaries in the same country, or a subsidiary owned by one or more subsidiaries in that country.

2. A streetlight effect is an observational bias that occurs when people, searching for something, look only where it is easiest or more convenient, i.e. in the streetlight.

3. If they do have subsidiaries themselves, they are by definition bridgehead units, even if organized by other bridgehead units.

4. Note that these 1,531 subsidiaries by definition constituted a subsample of the 3,949 Danish firms that had foreign ultimate owners. This implies that another subsample of 3,949 − 1,531 = 2,418 Danish firms were directly owned by a foreign firm (which may be the ultimate owner itself or another foreign firm owned by the ultimate owner).

5. This requirement is imposed by Orbis in the determination of the GUO. On the other hand, it was not applied to the subsidiaries of the foreign firms in our sample. However, virtually all of these subsidiaries were 100 per cent owned, and we could find no clear difference between those that were 100 per cent owned and those that were partly owned.

6. We also tested a distinction between developed and emerging markets, but the variation was too small, with 90 per cent of our observations being in developed markets. The only conclusion we could draw from this analysis was that developed markets were, not surprisingly even more strongly represented among GUO origins than among the target markets for the subsidiaries.

7. Interestingly, it seems that the national and international bridgehead roles are substitutes rather than complements: most bridgehead units tend to specialize in one or the other. Hence, capturing the scope of these roles by the logarithm of the number of national and foreign subsidiaries, respectively, there is a negative correlation of −0.21 between the national and international scope of the bridgehead units.

References


**Further reading**


**Corresponding author**

Christian Geisler Asmussen can be contacted at: cga.smg@cbs.dk

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