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INVESTMENT AND DEVELOPMENT



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EDITORIAL STATEMENT

*Transnational Corporations*¹ is a longstanding policy-oriented refereed research journal on issues related to investment, multinational enterprises and development. It is an official journal of the United Nations, managed by the United Nations Conference on Trade and Development (UNCTAD). As such it has a global reach, a strong development policy imprint, and high potential for impact beyond the scholarly community.

Objectives and central terrain

The journal aims to advance academically rigorous research to inform policy dialogue among and across the business, civil society and policymaking communities. Its central research question – feeding into policymaking at subnational, national and international levels – is how to make international investment and multinational enterprises contribute to sustainable development. It invites contributions that provide state-of-the-art knowledge and understanding of the activities conducted by, and the impact of multinational enterprises and other international investors, considering economic, legal, institutional, social, environmental or cultural aspects. Only contributions that draw clear policy conclusions from the research findings will be considered.

Grand challenges and the need for multiple lenses

The scale and complexities of the “grand challenges” faced by the international community, such as climate change, poverty, inequality, food security, health crises, and migration – as embodied in the United Nations’ Sustainable Development Goals (SDGs) – are enormous. These challenges, combined with the impact of disruptive technologies on business, rapidly evolving trends in international production and global value chains, new emerging-market players and new types of investors and investment, make it imperative that policymakers tap a wide range of research fields. Therefore, the journal welcomes submissions from a variety of disciplines, including international business, innovation, development studies, international law, economics, political science, international finance, political economy and economic geography. However, submissions should be accessible across disciplines (as a non-specialized journal idiosyncratic research should be avoided); interdisciplinary work is especially welcomed. The journal embraces both quantitative and qualitative research methods, and multiple levels of analyses at macro, industry, firm or individual/group level.

Inclusive: multiple contributors, types of contributions and angles

Transnational Corporations aims to provide a bridge between academia and the policymaking community. It publishes academically rigorous, research-underpinned

¹ Previously: The CTC Reporter. In the past, the Programme on Transnational Corporations was carried out by the United Nations Centre on Transnational Corporations (1975–1992) and by the Transnational Corporations and Management Division of the United Nations Department of Economic and Social Development (1992–1993).

and impactful contributions for evidence-based policymaking, including lessons learned from experiences in different societies and economies, both in developed and developing-country contexts. It welcomes contributions from the academic community, policymakers, research institutes, international organizations, and others. Contributions to the advancement and revision of theories, frameworks and methods are welcomed as long as they are relevant for shedding new light on the investigation of investment for development, such as advancing UNCTAD's *Investment Policy Framework for Sustainable Development*.

The journal publishes original research articles, perspective papers, state-of-the art review articles, point-counterpoint essays, research notes and book reviews. All papers are double blind reviewed and, in line with the aims and mission of the journal, each paper is reviewed by academic experts and experts from the policymaking community to ensure high-quality impactful publications that are both academically rigorous and policy relevant. In addition, the journal features synopses of major UN reports on investment, and periodic reviews of upcoming investment-related issues of interest to the policy and research community.

Unique benefits for authors: direct impact on policymaking processes

Through UNCTAD's wider development community and its global network of investment stakeholders, the journal reaches a large audience of academics, business leaders and, above all, policymakers. UNCTAD's role as the focal point in the United Nations system for investment issues guarantees that its contents gain significant visibility and contribute to debates in global conferences and intergovernmental meetings, including the biennial *World Investment Forum* and the *Investment and Enterprise Commission*. The work published in *Transnational Corporations* feeds directly into UNCTAD's various programmes related to investment for development, including its flagship product, the annual *World Investment Report*, and its technical assistance work (investment policies reviews, investment promotion and facilitation and investment treaty negotiations) in over 160 countries and regional organizations. The journal thus provides a unique venue for authors' academic work to contribute to, and impact on, national and international policymaking.

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Covid-19 and investment – an UNCTAD research round-up of the international pandemic’s effect on FDI flows and policy

James Zhan*

The shuttering of commercial activity in the face of the Corona (Covid-19) pandemic will have a dramatic effect on the global economy. UNCTAD’s Division on Investment and Enterprise has been monitoring the impact on investment, as well as its implications for development.¹ In the face of the unprecedented circumstances, this issue of the *Transnational Corporations* furnishes a brief overview of this work, notably from the perspective of foreign direct investment (FDI) and investment policy. UNCTAD’s *World Investment Report* (forthcoming, June 2020) will provide an expanded and in-depth analysis of FDI trends and investment policy developments that also accounts for the impact of the pandemic.

Economic impact estimates and earnings revisions of the 5,000 largest multinational enterprises (MNEs) as reviewed by UNCTAD, suggest that the downward pressure on FDI could be -30 per cent to -40 per cent in 2020 and 2021. The top 5,000 multinationals now forecast downward revisions of their 2020 earnings estimates of -30 per cent on average with peaks of as much as -200 per cent in the most affected industries (energy -208 per cent, airlines -116 per cent and automotives -47 per cent).

Early expectations were that the economic fallout from the pandemic would be felt through production stoppages and supply chain disruptions. With the rapid worldwide spread of the pandemic and the implementation of mitigation and lockdown measures across much of the world it is clear that a far larger demand shock and supply disruption is inevitable and the consensus is that most, if not all, major economies will experience a deep recession. This could extend the shock for global value chains as well as local suppliers and small businesses that rely on them.

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¹ UNCTAD’s website features a dedicated page with more information and analysis, entitled [Coronavirus \(COVID-19\): News, Analysis and Resources](#). The Division on Investment and Enterprise’s Covid-related research includes the [Global Investment Trends Monitor March 2020 Special Issue: the Investment Policy Monitor, No.23](#); and the [IPA Observer Special Issue 8 on Investment Promotion agencies striving to overcome the COVID-19 challenge](#).

The physical closure of places of business, manufacturing plants and construction sites has causing immediate delays in the implementation of investment projects. Capital expenditures, greenfield investments and expansions are all affected by this. Mergers and acquisitions have similarly been affected and are on course to drop by 50 to 70 per cent globally in the first part of 2020.

In the longer term, the impact of the pandemic would likely also be felt on investment linked to global production networks as it is expected to accelerate an already existing trend among MNEs to loosen global value chain ties and reshore production as they seek to reinforce the resilience of supply chains.

The pandemic has already decisively filtered into policymaking. Many countries have announced measures to prop up local businesses, while policies to protect critical domestic infrastructure and industries have been tightened up, notably FDI screening and prior authorization. Countries are also weighing increased state ownership or the future nationalization of key firms in critical sectors and UNCTAD expects the pandemic to have a lasting impact on future investment policymaking.

On the international policy front, the pandemic may affect the conclusion of international investment agreements, with a number of negotiations rounds cancelled or postponed as a result of the pandemic. In the first three months of 2020 only two agreements were concluded compared to ten in the same period last year. UNCTAD expects the number of IIAs concluded in 2020 to be the lowest since 1985.

In the area of investment promotion, national investment promotion agencies (IPAs) moved quickly to shift resources to support investors, with the introduction of online tools such as Covid-19 platforms, investment facilitation and aftercare. These tools are likely to further evolve after the crisis, with the digitalization of IPA operations expected to accelerate, more attention to be apportioned to investment facilitation and aftercare, and for many a shift in target sectors with more health, agriculture and digital industries to be brought into the mix.

While the production timeline of the *Transnational Corporations* precluded focus on the pandemic beyond this short brief in *Issue 1*, it is our intention to dedicate a special section in the second issue of 2020 – due out end-August.

More of UNCTAD's research into the effect of Covid 19 on investment can be found on its website at unctad.org/diae.

Neighbours with different innovation patterns: the implications of industrial and FDI policy for the openness of local knowledge production

Eunkyung Park and Ahreum Lee*

This article shows evidence that FDI policies during the catch-up process may leave a trace in the openness of innovation activities in latecomer economies, based on a comparative analysis between the Republic of Korea and China. The past industrial policies of the Republic of Korea favoured creating local technological competence based on the transfer of foreign knowledge in codified form, leading to a low level of global connection in local knowledge creation. By contrast, Chinese policies encouraged the entrance of foreign firms in the Chinese market, leading to a higher level of global interaction in innovation activities. Based on the findings, the article presents policy recommendations and suggests avenues for future research.

Keywords: China, FDI policy, innovation, openness, the Republic of Korea, South Korea, technological catch-up

1. Introduction

The role of the state in the catch-up of latecomer economics has been well documented (Öniş 1991; Amsden 1992). Especially in the case of East Asian countries such as the Republic of Korea (henceforth South Korea), Taiwan, Province of China (henceforth Taiwan), Hong Kong (China) (henceforth Hong Kong), Singapore, and more recently, China, government intervention with strategic industrial policy proved effective in achieving rapid economic growth (Chowdhury and Islam 1993). While there are studies looking into the impact of industrial policies on the capability building and economic growth of the latecomer economies (e.g. Kim 1999; Mah 2007; Chu 2011), scant attention is paid to the implication of industrial policies for *how* latecomers innovate. In this study, we draw attention to how industrial policies during catch-up periods may influence the innovation pattern of these economies during and after the catch-up periods.

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We observe an interesting pattern in the patenting activities of China and South Korea, which could partly be attributed to the different industrial policies of the two countries. Based on a comprehensive review of industrial policies and analyses of the patenting activities of the two countries, we postulate that the difference in FDI policies, in particular, may have led to different levels of global connectivity to innovation activities.

Studying innovation patterns of latecomer economies is invaluable since innovation capability constitutes a driving force for continuous economic growth once latecomer economies “catch up” with advanced economies based on imitation (Awate, Larsen and Mudambi 2012). While there are many studies on learning and capability building of latecomers in the imitation process, the consequent innovation activities of latecomers during and after the catch-up period deserve more attention (Lee and Yoon 2010). Besides, the factors affecting the innovation patterns of latecomer economies should be studied from diverse angles, and we intend to do so by reflecting on the industrial policy implications for local knowledge creation.

Within the innovation literature, economic catch-up of latecomer economies is explained mainly by the processes of technology transfer and local technology capability building (Fu, Pietrobelli and Soete 2011). As latecomers lack indigenous knowledge in the early process of catch-up, creating global connections to get access to advanced knowledge abroad is critical for technological capability building. However, being exposed to foreign technology is not sufficient for catch-up and should be accompanied by local innovation capability building for sustained economic development (Lee, Szapiro and Mao 2018). Building knowledge infrastructure and the human resource base are fundamental for enhancing absorptive capacity when it comes to utilising and developing advanced technology from abroad. All in all, the interaction between global technology transfer and local capability building sets out the prospect for the success of technological catch-up, and the industrial policies of latecomer economies tend to focus on facilitating these mechanisms of catch-up.

What is often overlooked in this context is that different technology transfer mechanisms can contribute to shaping diverse patterns of local knowledge creation. Global interaction facilitated through industrial policies will influence the possibility of utilising foreign sources of knowledge in innovation. While China and South Korea had similar sets of policy instruments to facilitate technology transfer and local capability building, one policy area in which these countries diverged markedly was FDI-related policy. As FDI policies directly influence the level of interaction between local and foreign firms in the host and home economy, active FDI policies can create opportunities for cross-border collaboration in innovation. The potential link between FDI policies and the openness to innovation activities

provides insight about the long-lasting impact of FDI on host economies, which has not been discussed extensively in the literature before. This additional insight is relevant for further developing UNCTAD's investment policy framework for sustainable development (UNCTAD 2015).

Our main contribution, therefore, is to show initial evidence that acknowledges the neglected link between trade-related industrial policy and the openness of innovation efforts of latecomer economies. Furthermore, we expand the current discussion about innovation policy in developing economies by raising awareness that trade-related industrial policy during the catch-up process, and not only science and technology-related policy, can also influence the innovation pattern in latecomer economies. As the conditions of catching-up economies for enhancing innovation capacity are dissimilar to advanced economies conditions, more studies on government policy relevant for latecomer economies' innovation capability building are needed.

The paper is structured as follows. We present the theoretical background of the technological capability building of latecomer economies and the government policy for catching up. Building on this understanding, we discuss the role of industrial policies in shaping innovation activities in latecomer economies. Then, we move on to present how various industrial policies, including FDI policy, unfolded in South Korea and China and show the divergent development of the knowledge creation pattern over time in the two countries. We discuss the implications of our findings and conclude with policy recommendations and suggestions for future research.

2. Government policies in support of mechanisms for technological capability building during the catch-up process

For latecomers that aim to catch up economically with advanced economies, narrowing the technological gap that exists between them and developed economies is of utmost importance (Abramovitz 1986). As the initial technological knowledge base is limited in these economies, technological assimilation starts with learning from advanced economies (Nelson 2008). Before entering the innovation phase, during which new knowledge creation takes place, the latecomers will have to imitate technologies developed by forerunners and accumulate technological capabilities (Lee, Jee and Eun 2011). To be able to learn from the advanced economies, getting access to foreign knowledge and local capability building becomes crucial for catching-up economies.

First, latecomers need to utilise various channels for technology transfer from abroad in the process of learning and capability building. Fu, Woo and Hou (2016) specify the channels for technology transfer as i) licensing, ii) movements of goods

through international trade, iii) inward and outward foreign direct investments (FDI), iv) movement of people, v) international research collaboration, vi) diffusion of disembodied knowledge through media and internet, and vii) integration into global value chains (GVCs).

By purchasing foreign capital goods or licensing, firms in the latecomer economies can directly get access to foreign technologies and develop technological competences through reverse engineering or utilising the capital goods in the production processes (Lee and Lim 2001). While this form of technology transfer relies more on learning from codified knowledge than tacit knowledge, other channels provide opportunities to transfer tacit knowledge. Inward FDI may facilitate local firms' interaction with foreign firms in geographical proximity (Luo and Tung 2007). Firms can get technology transferred and enhance their capabilities through the establishment of international joint ventures with foreign firms, as in the case of the Chinese automotive sector (Chu 2011). Besides getting involved in a direct transaction with foreign firms, local firms can also benefit from knowledge spillover from foreign firms (Branstetter 2006).

Similarly, outward FDI by firms from emerging economies allows firms to get access to advanced knowledge abroad (Deng 2007; Paul and Benito 2018). Emerging economy firms can establish research and development (R&D) centres in technology hotspots in advanced economies through greenfield investment and tap into new knowledge by hiring highly-skilled local employees or through collaboration with local universities. When latecomer firms acquire firms abroad, the former do not only get access to codified forms of knowledge such as machinery, plants and patents, but they can also take over employees from the acquired firms which then induces transfer of tacit knowledge. Another way to get access to foreign knowledge in the interactive setting is to be a part of a GVC by supplying to foreign buyers. Upgrading in the GVC suggests that latecomer firms can learn and enhance their technological competences through interaction with foreign buyers (Gereffi 1999). The learning opportunities arise when the latecomer firms are exposed to the advanced practices and processes of buyers and when buyers set specific technological requirements for the products or services.

Industrial policies that open up the economy and support local firms to participate in global markets through the mechanisms mentioned above can, therefore, constitute an essential part of "innovation policy" for latecomers. For example, active FDI policy inducing the entry of foreign multinationals in the domestic market and thereby creating interaction between local and foreign firms has been witnessed in many Asian countries such as Hong Kong, Singapore and China. Local content and import substitution policies that require firms to replace imported components with locally-produced ones have increased local firms' participation in global value chains in many developing economies including South Korea, China, Pakistan,

and South Africa (Amsden 1992; Barnes and Morris 2008; Khan, Lew and Akhtar 2016). The requirement for foreign firms to establish joint ventures with local firms allows latecomer firms to get direct access to critical technological knowledge and induces the effective utilisation and further development of the technologies (Mu and Lee 2005).

While getting access to advanced foreign knowledge is a fundamental pillar in the catch-up process, developing local technological capability in using and developing the knowledge further is found to be another crucial pillar (Abramovitz 1986; Bell and Pavitt 1992). As it was initially suggested by Kim (1980, 1999), the term “technological capability” represents the ability to make effective use of existing technological knowledge and develop new knowledge. For catching-up economies in the early stage of economic development, mastering effective utilisation of existing knowledge is likely to precede the generation of new local knowledge. The active usage of existing knowledge may induce a learning effect and provide the foundation for the development of new knowledge. Similarly, Abramovitz (1986) asserted that “social capability”, which represents the capability to exploit technological opportunities, is vital for catching-up. This capability stretches beyond the mere accumulation of the technological knowledge stock. It is associated with general technical competence (education) level, mobilisation of capital, the organisation of firms, and other social and political institutions.

The government intervention can be geared to enhance the technological infrastructure, including the education system and other formal and informal institutions related to local competence building. Establishing and reforming ministries, research institutes and the education system, in particular, are fundamental for building up local technology competence (Lee, Jee and Eun 2011). With regards to local human resource development, governments can provide scholarships for studying abroad and design effective incentives for the diaspora to return to the home country with new knowledge obtained from abroad. Government-funded R&D projects and public-private research consortia have also been found to be effective for building local technological competences and encouraging university-firm collaboration in creating new indigenous knowledge (Lee 2005). Vertical industrial policies picking and supporting a few “winners” within specific industries also help to enhance the technological capability of the chosen firms by providing subsidies and funds for research and development activities.

3. Industrial policy as innovation policy and its implication for the openness of the economy towards foreign sources of knowledge

As discussed above, having an open innovation system towards foreign sources of knowledge and enhancing local technological capability is critical for latecomer economies (Fu, Woo and Hou 2016). Depending on specific policy instruments used in the catch-up process, latecomers will go through different learning processes utilising different channels and mechanisms of knowledge transfer within and across the national economy boundary. The cumulative process of technology-capability building will lead to the development of national innovation systems with diverse patterns of knowledge transfer, creation and diffusion over time (Lundvall 1998). This suggests that the collective sets of industrial policies that shape the industrial structure and the general business environment in the development phase of a developing economy will leave imprints on the way that knowledge is created, shared and utilised in the economy.

Following this line of argument, we can assume that industrial policies do not only induce learning opportunities for latecomer firms in the catch-up process, but they may also leave a lasting effect on *how* local firms innovate in terms of their utilisation of foreign knowledge. In general, industrial policies that are more open towards the global economy will facilitate the opportunities for local firms to innovate in collaboration with global actors. For example, active FDI-related policies increase the presence of foreign firms and their integration into the local business environment. While engaging in business relations with foreign firms, local firms get opportunities to develop new products and/or services and processes in collaboration with foreign firms. Furthermore, local subsidiaries of foreign multinational firms can get into joint development projects with other subsidiaries of the firm (Berry 2014). The possibility for local firms to be integrated in the global innovation system will therefore be higher compared to the chances of firms in more closed economies. Similarly, outward FDI from latecomer economies will also enhance the possibility of local firms to connect to the global innovation system. Foreign subsidiaries of latecomer economy firms can transfer foreign knowledge to headquarters through organisational pipelines.

Studying the implications of industrial policies for the openness of innovation systems expands the current understanding of the impact of the policies on developing economies beyond the domain of catch-up and upgrading. For example, if we take the implications of FDI policies for economic development, most of the studies focus on spillover effects on the performance of local firms in terms of profitability and productivity (Rutkowski 2006; Wei and Liu 2006; Konara and Wei 2017). Similarly, the recent discussion about FDI-induced development and upgrading through “new” industrial policy focuses primarily on

the potential of local firms to enhance their capabilities by moving into higher value-added activities and the associated spillover effect on the local economy (Buzdugan and Tüselmann 2018).

However, some latecomer economies (e.g. Japan, South Korea, and possibly China) managed to make the transition from being imitator to innovator once they had accumulated technological capabilities. It is also observed that the pattern of technology transfer from abroad and the utilisation of foreign sources of knowledge change throughout this development (Lall, Cantwell and Zhang 2009). Following this transition and studying the impact of FDI policy on various aspects of the innovation pattern with a long-term perspective will be of critical value to other developing economies that aim to achieve innovator status. The openness of innovation systems towards foreign sources of knowledge and how economies utilise local and foreign sources of knowledge are critical for the sustainable development of economies, regardless of their development status. While too much dependency towards foreign knowledge sources may interfere with the development of local indigenous knowledge, too little connection to foreign knowledge sources can lead to lock-in because it limits the possibility of diversifying knowledge bases at home. Since managing local and foreign sources of knowledge has critical implications on the development of innovation systems, it is necessary to acknowledge that the formulation of industrial policies may influence the openness of innovation system in the trajectory of technological capability building.

4. Government policies supporting technological capability building in South Korea and China

The analysis of the economic development of East Asian countries has often highlighted the similarities of the development pattern in these countries as shown in the “flying geese model” and the notion of the “developmental state: and “East Asian tigers” (Öniş 1991; Kojima 2000; Mathews and Cho 2000). Except for Japan, whose growth preceded the rest of the countries, the East Asian countries (South Korea, Taiwan, Singapore, and Hong Kong) have gone through rapid economic growth throughout the 1980s and 1990s, based on the opportunities arising from the electronics and information and communication technology (ICT) sectors. As a follower in the region whose development took off around two decades later, China shows a distinctive development path compared to the “East Asian tigers”. Lee, Jee and Eun (2011) highlight how the Chinese catch-up model differs from that of the rest of East Asian countries with the following features: i) parallel learning from FDI, ii) university spin-offs, and ii) acquisition of technology through mergers and acquisitions (M&As). Although there are

similarities between the policies of China and the East Asian tigers, such as policies facilitating export orientation, protection of local firms and strengthening education and science, there is also an apparent deviation, especially in the ones influencing technology transfer from abroad. This suggests that catching-up economies may have different models in developing technological capabilities with varying degrees of dependence on global knowledge sourcing in the catch-up process.

We speculate that the difference in industrial policy during the catch-up process may have influenced the level of global connectivity in knowledge production in South Korea and China. Before showing the evidence of the diverging pattern in the utilisation of foreign knowledge in innovation in the two countries, we compare the relevant government policies for technological catch-up of South Korea and China since the 1960s. We divide the policies into i) those related to creating opportunities for global knowledge transfer and ii) those related to enhancing local capability building. This division roughly falls into the category of industrial policy and science and technology (S&T) policy, respectively. We argue that these policies, in combination, have created an environment for organisations to develop certain patterns in knowledge creation in the historical context of the two countries. Therefore, it is difficult to single out individual policies as an influential factor for the development of the innovation pattern in the two countries. Nevertheless, we aim to point out some factors by highlighting the difference in government intervention of the two countries during the catch-up.

Table 1 summarises the industrial policy that could have influenced opportunities for global knowledge transfer. In the 1960s, the South Korean government aimed at promoting import-substituting industries and used policy tools such as import restrictions, tax incentives, and custom rebates for this purpose (Amsden 1992; Sakakibara and Cho 2002). Later, the focus moved to promoting export-oriented industries and the government took on the role of shaping the industry structure with entry restrictions, export quotas, and allocation of product lines among incumbents. In promoting export industries, the government encouraged the export of final goods, which required massive importation of foreign capital goods. Initial knowledge transfer from abroad mainly occurred through capital goods imports, reverse engineering and turnkey projects as the South Korean government restricted both inward FDI and foreign licensing (Amsden 1992; Ahn 2001). The learning involved in this process was mainly from codified knowledge with limited direct interaction and collaboration with foreign actors.

Since the early catch-up period, the South Korean government has had a targeted industrial policy, picking out strategic industries and providing diverse forms of political support to develop these industries. In the 1970s, the focus moved from light industries (LI) to heavy and chemical industries (HCI) as can be seen from the HCI promotion plan, which declared steel, shipbuilding, machinery,

electronics, non-steel metal, petroleum and chemical industries as strategic industries. These industries received preferential loans, entry regulations, selective protection and corporate tax deductions (Mah 2007). In the 1980s, the government realised the importance of R&D for long term economic development and chose strategic industries where new emphasis was placed on R&D. Semiconductor, automotive, shipbuilding, metal, and small-sized aircraft were the new industries in focus. Later in the 1990s, the focus moved to the high value-added capital goods industry, and the information technology (IT) industry received a large share of governmental R&D expenditure. In the late 1990s, the following six technologies were chosen as key technologies to develop a knowledge-based society: IT, biotechnology, environment technology, culture technology, nano technology, and space technology (Mah 2007).

Table 1. Industrial policy related to global knowledge transfer

South Korea		China	
Policy	Implication	Policy	Implication
The 1960s: Import substitution policy, Inward FDI restriction, Focus on labour intensive industries	<ul style="list-style-type: none"> Knowledge sourcing through importation of foreign capital goods and licensing 	The 1970s-1980s: Allowing inward FDI, Amending JV law, Export processing zones, Industrial high-tech park hosting both foreign and local firms	<ul style="list-style-type: none"> High level of inward FDI & international JV, leading to increased opportunities for collaboration with foreign firms
The 1970s-1980s: Export promotion policy, Transition to heavy and chemical industries, Function-oriented support for R&D, Support for the growth of <i>chaebols</i>	<ul style="list-style-type: none"> Reverse engineering as a learning mechanism Limited knowledge transfer from inward FDI Emergence and growth of large diversified business groups, called <i>chaebol</i> 	The 1990s-2000s: More active FDI policy (opening for more industries)	<ul style="list-style-type: none"> Local firms' integration into GVCs as a production platform for foreign firms
The 1990s-2000s: Focus on selected industries such as IT, green, and biotech industries, Relaxing the restriction on FDI	<ul style="list-style-type: none"> Private-led R&D efforts by <i>chaebols</i> 	The 2000s: High-tech-sector-oriented policy, Local content requirement, Outward FDI with 'Go global' policy	<ul style="list-style-type: none"> Foreign firms' integration to local setting in high-tech Direct access to foreign technology through investment abroad Acquisition of strategic assets through M&A

Source: Authors' creation based on Howell 2018, Li, Li and He 2018, Mah 2007, Sakakibara and Cho 2002.

The strategic industrial focus together with other policy instruments such as import substitution and export promotion facilitated the emergence, diversification and growth of *chaebols*¹ in the selected areas (Amsden 1992). Although direct government investment in R&D was limited to 20 per cent of the total South Korean R&D expenditure in the 1990s (Sakakibara and Cho 2002), *chaebols* that enjoyed monopolistic rent under the government policy restricting new entrants and imports drove the majority of R&D spending. Owing to substantial financial support from the government, the *chaebols* were able to rapidly build and upgrade their competences by conducting internal R&D (Hobday 1995). Moreover, the government funded large-scale research consortia, in which major *chaebols* participated and developed technological knowledge further.

Throughout the catch-up period, the South Korean government had restricted inward FDI while supporting the formation of a few business groups, thus, foreign firms had little presence in the economy (Baek 2005). Even though the South Korean government had revised its FDI policy first in 1996 and again in the early 2000s by removing policy barriers to inward FDI, this movement occurred first after intense catch-up had taken place. There were still barriers against foreign ownership in 26 industries after revisions to the policy (Jones and Yoon 2008).

In contrast to South Korea's industrial policies focusing on local firms' capability building, China's policy directed attention towards opening up the economy. From the 70s, the Chinese government had an economic "open-door" policy and started facilitating technology transfer in the form of the purchase of turnkey plants and equipment, licensing, technical consulting, and co-production. In contrast to South Korea, which had restrictions on inward FDI (Fu, Woo, and Hou 2016), China implemented a package of institutional changes to attract FDI, expecting the beneficial spillover effects of FDI to facilitate the technological progress of domestic firms. The establishment of the first special economic zones (SEZs) in 1980 supported the facilitation of inward FDI. Special Economic Zones and high-tech industrial parks were created to encourage the collocation of foreign firms and local firms. The instruments used for attracting FDI were tax incentives, foreign exchange provision, land use, and licencing procedures (Li, Li and He 2018). The reform of FDI policy in the 1990s increased the pace of foreign capital inflows, and the further amendment of regulations in the 2000s opened up a broader range of industries for FDI. Consequently, China has been the largest recipient of FDI among developing economies since the late 1990s, and more than 80 per cent of FDI in China since 1978 have arrived on the basis of the principle of "trading market for technology" especially in industries such as automotive, chemicals, and electronics (Xie and Wu 2003).

¹ Large family-owned conglomerates.

Furthermore, the government policy also encouraged the establishment of joint ventures between foreign firms and local firms, expecting “low-cost” technology transfer in the local market (Howell 2018), creating linkages between foreign and local firms (Fu, Pietrobelli, and Soete 2011). The collaboration among foreign and local firms induced by the government regulations has been critical for local firms in getting access to foreign knowledge in sectors such as mobile telecommunication and automotive (Mu and Lee 2005; Lee, Cho and Jin 2009). The local firms in the automotive and electronics sectors benefited greatly from a market protection policy with regulated import and entry, equity restrictions on foreign firms in joint ventures (JVs) and local content requirements. Even though China had a targeted policy towards certain strategic industries as South Korea did, the focus was on promoting technology transfer through inward FDI and the establishment of JVs as a mechanism for fostering these industries.

Since the early 2000s, the government relaxed the regulations on outward FDI and encouraged Chinese firms to “Go Global”, which led to a surge in the outflow of FDI and M&As between Chinese and foreign firms (Lee, Jee and Eun 2011). While earlier M&As aimed to get access to natural resources and markets, more recent M&As had the purpose of acquiring managerial know-how, brand recognition and technologies. In addition to joint ventures, the outward FDI also provided opportunities for direct technology transfer from abroad. The government also offered the procurement of development funds and supported firms with self-reliant operations and self-developed products (Lee, Cho and Jin 2009). All this effort allowed China to become a manufacturing hub for the global market, which meant that local firms integrated well into GVCs as a production platform for foreign firms. Compared to South Korea, the mix of these industrial policies facilitated direct interaction and collaboration between local and foreign entities.

While the general industrial policy shaped the channels and mechanisms for foreign knowledge sourcing in the process of catch-up, S&T policy complemented this process by establishing the foundation for local competence building. Table 2 shows how S&T policy has unfolded since the 1960s in the two countries.

South Korea started to create S&T infrastructure, including the establishment of relevant ministries and scientific education in the 1960s in parallel with the strategic promotion of automotive, shipbuilding, mechanical engineering and electronics industry (Chung 2003). The strategic focus on these industries and the import substitution policy necessitated the development of local technological competences. As industrial policy turned toward the promotion of heavy, chemical and export-oriented industries in the 1970s, the government also saw the need to found government-funded research institutes (GRIs). However, the R&D promotion of the government had not started until the 1980s. In the 1980s, significant technological capability building took place through the

National R&D Programmes, supporting joint projects involving both private and public actors in key focus sectors such as the electronics and information industries.

Building on the rapid increase in industrial R&D capabilities in the private sector, the South Korean government tried to increase national R&D expenditure throughout the 1990s. The focus was also on enhancing the capabilities of universities in producing scientific knowledge by initiating the Excellent Research Center programme for universities (Chung 2003). At the turn of the century, the government formulated the Basic Law of Science and Technology to aim for a systematic promotion of science and technology. Vision 2025 as a long-term plan for science and technology development was adopted and provided the basis for the development of the five-year S&T plans.

China actively started formulating S&T-related policies to build local competences from the 1970s. The government held the National Science Conference in 1978, realising the need to restore key S&T organisations and technological capabilities. The most notable policy in the 1980s was the Chinese People's Political Consultative Conference (CPPCC)'s decision to reform China's S&T system. This decision was followed by the initiation of S&T programmes such as the State High-Tech R&D Programme (1986), High Tech Research and Development Plan (known as the 863 programme), and Torch programme (Fu, Woo and Hou 2016).

From the late 1980s to the 1990s, the effort to revitalise the S&T system was accompanied by the enactment of several laws including S&T-related laws such as the Patent Law (1985), the Law on the Progress of Science and Technology (1993), and the Law on Anti-Unfair Competition (1993) and other laws nurturing the business environment in general. The government also initiated projects to enhance the local knowledge base. The "211" project aimed to strengthen research and teaching capability of 100 key universities, and another initiative "Invigorating the Country through Science and Education Strategy" was designed to increase the spending on education (Lee, Jee and Eun 2011). During the same period, the State Council approved setting up national high-tech parks, including the Zhongguancun Science Park, to support high-tech start-ups that spun off from the research institutes and universities. The Ministry of Science and Technology was established in 1998 to ensure that the government receives professional input when formulating S&T policy.

From the 2000s and onwards, certain key technologies and industries have been identified to indicate strategic priorities towards these sectors. It is also evidenced by the number of sectoral policy programmes that have increased significantly during this period. Moreover, direct government expenditure on S&T projects has increased as the government launched 16 megaprojects. In line with this, a noticeable policy direction in this period is shown in the effort made to promote domestic R&D rather than to import technology (Chen and Naughton 2016).

Table 2. S&T policy related to local technological competence building

South Korea		China	
Policy	Implication	Policy	Implication
The 1960s: Establishment of Korea Advanced Institute of Science and Technology (KAIST) & Ministry of Science and Technology (MOST) established, Beginning of scientific education	<ul style="list-style-type: none"> Establishment of relevant public organisations such as ministries and research institutes 	The late 1970s and 1980s: Revitalisation of S&T programmes, Enacting various laws including patent law (continued in the 1990s)	<ul style="list-style-type: none"> Establishment of relevant public organisations such as ministries and research institutes
The 1970s: Establishment of government research institutes (GRIs) to give firms access to technology	<ul style="list-style-type: none"> Focus on education, mass-production of engineers, scientist, and R&D personnel 	The 1990s: More S&T and R&D programmes to build R&D infrastructure, Establishment of Ministry of Science and Technology (MOST), Increasing investment in higher education, Approval to establish national high-tech parks	<ul style="list-style-type: none"> Establishment of formal institutions relevant for technological capability building
The 1980s: Various R&D consortia formed under Industrial Research Association, Big R&D projects in strategic industries like electronics and information technologies	<ul style="list-style-type: none"> Local level collaboration in research projects, involving both public and private actors. Supported <i>chaebol</i>'s (private) R&D efforts 	The 2000s: Sector-specific policy, Increasing R&D expenditure as the share of GDP, Focus on production of scientific knowledge, Foreign education and training	<ul style="list-style-type: none"> Investment in the local education system as well as sending a large population to study and train abroad Dedicated effort to enhance local technological knowledge
The 1990s: Expanding R&D expenditure and support for academic innovation	<ul style="list-style-type: none"> Systemic coordination of science and technology policy Increasing focus on academic innovation and industry-university collaboration 		
The 2000s: Basic Law of Science and Technology, New focus on green technologies			

Source: Authors' creation based on Chung 2003, Dahlman 2009, Sakakibara and Cho 2002, Karo 2018, Liu et al. 2011, Chen and Naughton 2016.

China has also focused on expanding the tertiary education system since the late 1990s, which is reflected in the gross enrollment ratio² of 51 per cent in the tertiary education in 2018 (The World Bank, 2020). Apart from investment in the domestic education system, China also sends a substantial number of tertiary-level students abroad for education and training (Dahlman 2009).

To sum up, both countries have invested heavily in creating local technological competence through various S&T policy initiatives, including the establishment of formal institutions and the development of the educational system during the last decades. Where we could see the marked difference is the general industrial policy that creates opportunity and incentive for interaction with foreign actors. China has implemented more purposeful policy initiatives to induce technology transfer from foreign actors than South Korea, which focused more on providing support to fostering a selected group of firms and industries through import substitution and export promotion policy.

5. The openness of innovation activities in South Korea and China

As explained above, the industrial policies of South Korea and China during the catch-up period have facilitated diverging mechanisms for technology transfer and led eventually to the development of different industrial structures, the demography of firms and global business relations in the two countries. We postulate that this development, as an outcome of industrial policy, has contributed to the emergence of different innovation patterns in the two countries in terms of how open they are towards foreign sources of knowledge. In this section, we show the difference in the openness of the innovation activities of the two countries, measured by the degree of international collaboration and reliance on local and foreign knowledge in patenting. While presenting the results on the patent analysis, we draw a parallel between the openness of innovation activities and industrial policies in the two countries.

5.1. Data and method

To analyse the degree of international collaboration and reliance on local knowledge in knowledge creation in the two countries, we conducted a patent analysis. Our patent data comes from the patent statistical database, Patstat Global (version 2018b), created and maintained by the European Patent Office (EPO) (EPO 2019).

² Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

This database contains bibliographic information of applications and publications of patents from patent offices in the leading industrialised and developing countries. Despite some criticism for using patents as a measure for innovation, patents are known to represent firms' inventive activity, and thus, are frequently used for the analysis of the process of technological change and development (e.g., Griliches 1998). We see patent documents as formal documentation of technological knowledge creation and take the geography of inventor location to represent the locality of knowledge creation.

Our analysis unit is a unique patent family, which may contain several different applications filed in various national patent offices over time. We include all patent families from all patent offices registered in Patstat as we aim to capture all knowledge creation activities regardless of the quality of patents. We identify South Korean and Chinese patents as patents that have at least one inventor located in the country as we emphasise the actual knowledge generation taking place in the two countries (Lee, Mudambi and Cano-Kollmann 2016). We focus on innovation activities of firms since firms are the primary engines for the economic development of a country (Porter 1990) and the main actors creating knowledge in innovation systems. We constructed our dataset, which consists of patents that were filed by at least one firm applicant in the two countries, for the period between 1975 and 2017. This timeframe captures periods of intense technology catch-up for both South Korea and China. We did patent analysis across all main technology-intensive industries³ such as electronics, chemical, pharmaceutical, machinery, and transportation to show that the knowledge-sourcing pattern is consistent across all industries regardless of the degree of technological complexity of the focal industry. Following this identification strategy, 390,816 Chinese patents and 1,192,597 South Korean patents are included in the data⁴.

5.2. Analysis and results

First, we looked at the level of international collaboration among the inventors of patents in five industries (See Figure 1). To measure this, we calculate the share of local patents created based on international collaboration: the percentage of the patents with at least one inventor located abroad. International collaboration on patenting serves as an important channel for international knowledge transfer and

³ Industry categorisation follows European statistical classification of economic activities, NACE (Nomenclature of Economic Activities) codes by EPO constructed based on the International Patent Classification system (IPC).

⁴ About 19 per cent of Chinese and 21 per cent of South Korean patents are either not in the industries of our interest for the analysis or missing the information on industry. These patents were excluded from the analysis. We also note that sorting out non-firm applicants also reduced the total number of patents included in the analysis.

diffusion through personal interaction (Guan and Chen 2012; Giuliani, Martinelli and Rabellotti 2016). From the perspective of catch-up economies, frequent international collaboration on patenting indicates more reliance on foreign knowledge when creating new knowledge. We found that, on average, the percentage of international collaboration of South Korean patents is 1.52, whereas for Chinese patents it is 16.89. South Korean inventors show much less collaboration with foreign actors than do Chinese inventors, which seems to support our expectation that South Korean patents rely more on local knowledge source than Chinese patents.

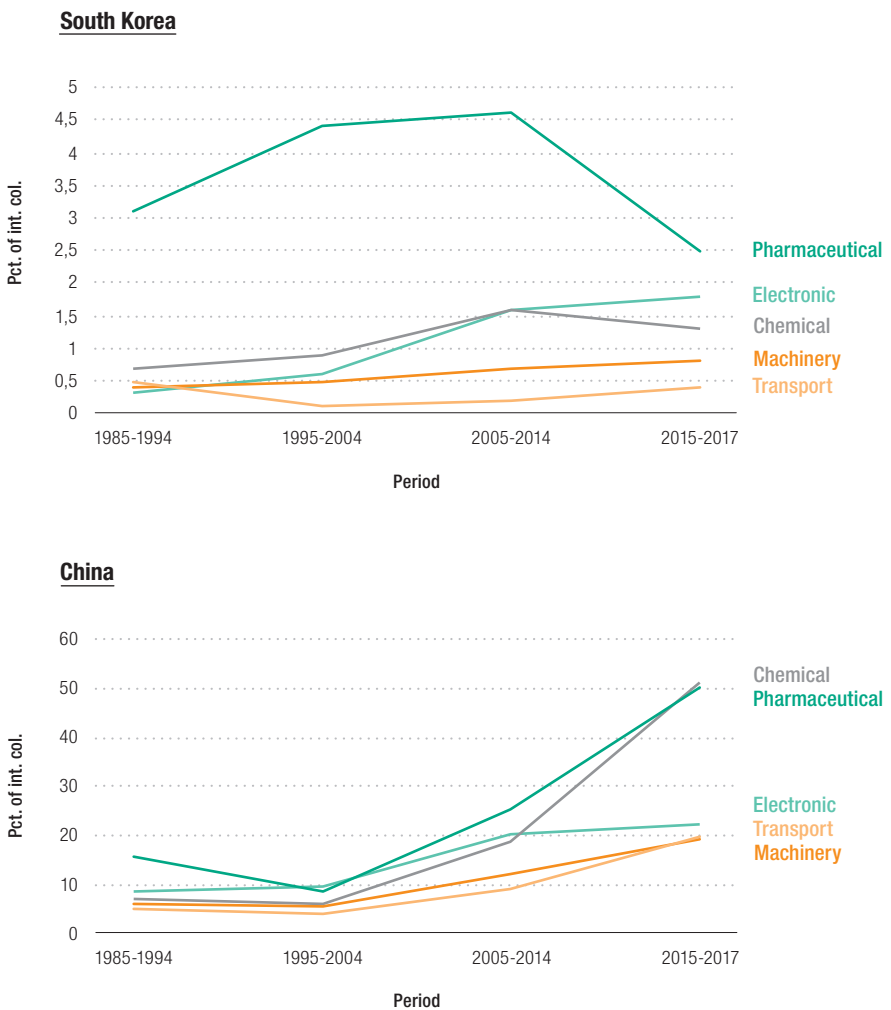
By industry, in the case of South Korean patents, the percentage of international collaboration is 1.3 (electronics), 1.4 (chemical), 4.1 (pharmaceutical), 0.6 (machinery), and 0.2 (transportation), respectively. In the case of Chinese patents, the percentage of international collaboration is 18.2 (electronics), 15.4 (chemical), 20.0 (pharmaceutical), 11.0 (machinery), and 9.4 (transportation), respectively. We find a stark difference in the international collaboration level of the two countries. This tendency is consistent throughout the whole period of investigation (1975-2017). When we break the whole period down into 10-year periods, we notice that the level of international collaboration on South Korean patents increases at a slower rate compared to the Chinese patents, which show a huge increase in the shares in all industries. Even when considering the lag between the catch-up periods of the two countries, we observe a consistent divergence in the level of international connectivity in patenting.

The diverging pattern is most evident in the electronics industry, and this seems to be attributed to more focused government policies in terms of limiting or increasing foreign presence in this industry. In 1972, the South Korean government implemented the third five-year plan (i.e., the Heavy Chemical Industrialisation Plan) and identified the electronics industry as one of the strategic industries deemed important for national security (Moreira 1995; Kojima 2000; Ahn 2001). The primary concern for the South Korean government was to achieve independence from foreign influence and create internationally competitive local companies (Hannigan, Lee and Mudambi 2013). The government encouraged the acquisition of foreign technologies mainly through the import of capital goods, reverse engineering and turnkey projects, while restricting inward FDI (Ahn 2001). Furthermore, the government policy to support a few selected firms through public loans enabled the formation of the large business groups and encouraged their fast expansion through diversification (Ahn 2001; Sakakibara and Cho 2002), in which FDI had little importance (Baek 2005).

Similarly, the Chinese government also identified the electronics industry as a strategic industry, but the Chinese policy is distinguished by the government's emphasis on attracting FDI, making the electronics industry the top recipient of foreign investment since 1999 (Zhao et al. 2007). Furthermore, although the Chinese

government supported the formation of big business groups, Chinese business groups, unlike *chaebols*, are formed and expanded through the horizontal merger of similar firms (Baek 2005). The development path of Chinese business groups, therefore, may not have led to the same level of internal knowledge and technology building but instead has increased reliance on other firms in knowledge creation.

Figure 1. International collaboration on patenting (1985–2017)



To dig more in-depth into the tendency and the degree of international collaboration on knowledge creation in both countries, we looked at global interaction at applicant level⁵, which allows us to capture some cases that may not be captured by looking at the inventor level only. Such cases are: i) Co-filing of the patent by the foreign applicant(s) and the local applicant(s), in which all inventors are located in one country (foreign and local applicants with no international collaboration in Table 3); ii) The international collaboration between local inventors and foreign applicants that could represent innovation activities by a local subsidiary of a foreign multinational firm (foreign applicants only with no international collaboration in Table 3). All of these mentioned above are important cases that should not be missed if one is to capture the degree of international collaboration in the creation of new knowledge in a country because foreign multinationals provide pipelines that give access to foreign knowledge (Kogut and Zander 1993).

As seen in Table 3, on average, the number of patents filed by local applicant(s) only is much higher in South Korean patents (96.09 per cent) than in Chinese patents (79.04 per cent), which is consistent across all industries. By contrast, the number of Chinese patents filed by foreign applicant(s) only, and jointly by foreign and local applicant(s), is much higher than that of South Korean patents, which indicates the significant foreign presence in knowledge creation in China compared to Korea. Specifically, the higher share of patents by co-filing of foreign and local applicants in China could be the result of JV policy.

Aside from the main observation that foreign presence in knowledge creation is much higher in China compared to South Korea, what we found interesting was that the share of patents with international collaboration among the patents filed by foreign applicants only was significantly higher for Chinese patents. This tendency is consistent across all industries. We interpret that as the influence of China's "trading market for technology" policy to attract foreign firms. Unlike the South Korean market, China with its considerable market potential stemming from high growth rate and its vast population must have been considered very attractive from investors' perspective. When China opened up the domestic market, foreign multinationals must have entered China with a clear "home-base-exploiting" purpose (Kuemmerle 1999). It may have induced foreign firms to create new knowledge in close collaboration with both local and foreign actors to develop "localised" products based on existing knowledge within the firm.

Then, to understand where collaborating inventors originate from, we looked at the composition of the country of collaborating inventors (see Appendices). We show the top five country locations of inventors that appear in the investigated

⁵ Due to missing values for location data for applicants, the total number of patents included in this further analysis is reduced to 1,155,554 (South Korea) and 390,195 (China).

patents and calculated the share of inventors from each country out of the total number of inventors. Similar to the results above, South Korean patents showed the tendency to source knowledge locally compared with Chinese patents, as the percentage of inventors originating from the home country is much higher for South Korean patents (95.81-99.74 per cent) than for Chinese patents (68.04-90.99 per cent). Both countries rely highly on inventors in the United States as collaborating partners. Japan also frequently appears as a collaborating partner, but the relative importance of Japanese inventors seems to be higher for South Korea than for China. For China, Taiwan appears to be influential for knowledge creation in the electronics and machinery industry. This can be understood as a result of a unique development process that China went through based on the tie to Taiwan. Our results confirm Saxenian's (2006) explanation that China leveraged the resources of Taiwan and actively utilised the connection Taiwan has with the United States (Silicon Valley) in technological capability building, particularly in the semiconductor and ICT industries. The relative importance of neighbouring countries as collaborators also suggests that the two countries depend on other Asian countries that industrialised earlier than them in innovation activities.

Table 3. International collaboration on patenting at applicant level (1975–2017)
(continued)

Inventor	Applicant							
	South Korea				China			
	Foreign only	Local only	Foreign & local	Total	Foreign only	Local only	Foreign & local	Total
Electronics								
No international collaboration	19,861 (84.63%)	689,387 (99.35%)	1,955 (66.79%)	711,203	23,840 (40.48%)	170,219 (98.66%)	9,682 (54.56%)	203,741
International Collaboration	3,606 (15.37%)	4,446 (0.65%)	972 (49.71%)	9,024	35,051 (59.52%)	2,317 (1.34%)	8,064 (45.44%)	45,432
Total	23,467 (3.38%)	693,833 (96.33%)	2,927 (0.04%)	720,227	58,891 (23.63%)	172,536 (69.24%)	17,746 (7.12%)	249,173
Chemical								
No international collaboration	1,723 (77.16%)	70,562 (99.46%)	136 (59.91%)	72,421	1162 (17.08%)	34563 (99.26%)	256 (29.19%)	35,981
International Collaboration	510 (22.83%)	382 (0.54%)	91 (40.08%)	983	5642 (82.92%)	256 (0.74%)	621 (70.81%)	6,519
Total	2,233 (3.04%)	70,944 (96.64%)	227 (0.32%)	73,404	6,804 (16.0%)	34,819 (81.92%)	877 (2.08%)	42,500

Table 3. International collaboration on patenting at applicant level (1975–2017)
(concluded)

Inventor	Applicant							
	South Korea				China			
	Foreign only	Local only	Foreign & local	Total	Foreign only	Local only	Foreign & local	Total
Pharmaceutical								
No international collaboration	832 (59.89%)	20,346 (98.91%)	104 (57.45%)	21,282	446 (6.93%)	26880 (98.82%)	115 (17.45%)	27,441
International Collaboration	557 (40.11%)	223 (1.09%)	77 (42.55%)	857	5994 (93.07%)	321 (1.18%)	544 (82.55%)	6,859
Total	1,389 (6.27%)	20,569 (92.90%)	181 (0.83%)	22,139	6,440 (18.77%)	27,201 (79.30%)	659 (1.93%)	34,300
Machinery								
No international collaboration	6,062 (90.35%)	238,322 (99.66%)	326 (68.05%)	244,710	3216 (41.82%)	47188 (99.16%)	1631 (51.16%)	52,035
International Collaboration	647 (9.65%)	804 (0.34%)	153 (31.95%)	1,604	4475 (58.18%)	402 (0.84%)	1557 (48.84%)	6,434
Total	6,709 (2.72%)	239,126 (97.08%)	479 (0.20%)	246,314	7,691 (13.15%)	47,590 (81.39%)	3,188 (5.46%)	58,469
Transportation								
No international collaboration	1,515 (94.45%)	91,689 (99.87%)	47 (73.43%)	93,251	398 (50.06%)	4748 (98.96%)	68 (42.5%)	5,214
International Collaboration	89 (5.55%)	113 (0.13)	17 (26.57%)	219	397 (49.94%)	50 (1.04%)	92 (57.5%)	539
Total	1,604 (1.71%)	91,802 (98.22%)	64 (0.07%)	93,470	795 (18.81%)	4,798 (83.39%)	160 (2.80%)	5,753

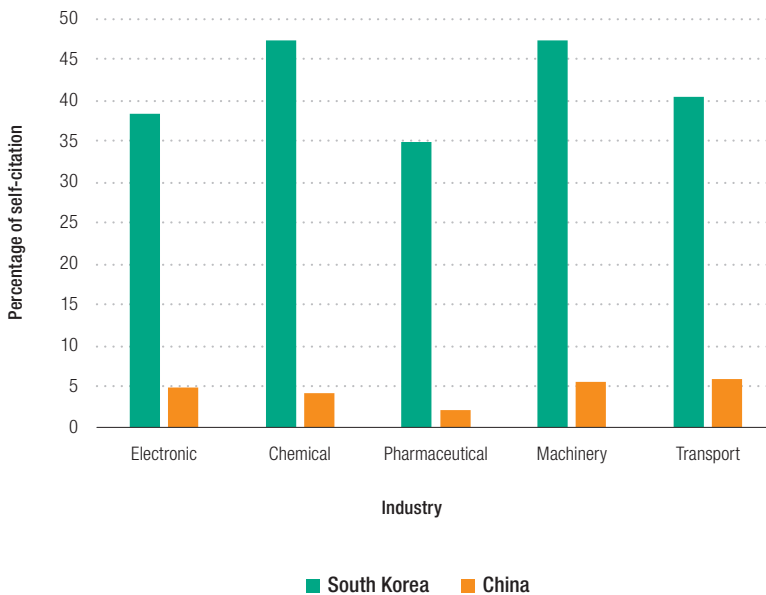
Source: Authors' analysis of PATSTAT Global data.

As a final step, we conducted a self-citation analysis. We calculated the *share of self-citation based on inventor countries present in backward citation* to show to what extent the previously existing local and foreign knowledge is utilised respectively in new knowledge creation (Lee, Szapiro and Mao 2018). We consider the country locations of inventors of all backward citation of the patents in the study and calculate the share of inventors from the two countries out of the total number of inventors

of backward-citation patents⁶ (results presented in Figure 2). Compared to the first measure that shows the level of direct international collaboration in “contemporary” innovation activities, this measure shows the geographical distribution of “past” knowledge that could have influenced new knowledge creation.

As seen in Figure 2, our self-citation analysis further confirms that South Korean patents show much more reliance on previously existing local knowledge when it comes to creating new knowledge than do Chinese patents. Although both countries have high numbers of patents cited that originate from the US, the share of self-citation is much higher (range between 35 and 48 per cent) for South Korean patents than for Chinese patents (range between 2 and 5 per cent).

Figure 2. Share of self-citations (1975–2017)



Source: Authors' analysis of PATSTAT Global data.

⁶ We did not deduplicate backward citations because each backward citation associated with a focal patent counts for one source of knowledge sourcing. Since our purpose is to show the share of self-citations in the total backward citations in the two countries, we only provide the top five countries where backward citations originate from.

By breaking this down into 10-year periods, we notice that South Korean patents' reliance on local knowledge increased exponentially over time, which was consistent across all the industries we studied⁷. By contrast, the share of self-citation in Chinese patents is much lower than that of South Korea and increased rather slowly over time in all industries. However, the share of self-citation may reflect the level of the technological knowledge stock that exists in the country. Since South Korea's catch-up precedes China's⁸, South Korea had more time to accumulate domestic knowledge stock to utilise in new knowledge creation. Even when we consider a time lag due to the different developmental stages of China and South Korea, the increasing rate of self-citation in China still seems to be very small in the most recent period.

6. Concluding remarks and policy recommendations

This paper presents findings that suggest the possible impact of FDI and industrial policies during the catch-up periods on the openness of local knowledge creation in the two East Asian countries, South Korea and China. Our analysis shows that, compared to Chinese patents, South Korean patents were created based on a lower level of international collaboration, and new knowledge was created through patenting that relied to a greater extent on local sources of knowledge. This divergent pattern of innovation in the two countries continues to exist even after the catch-up periods, which suggests that South Korea's innovation system is more closed compared with the Chinese innovation system. We postulate that this pattern could be attributed to different industrial policies, especially different FDI policies, during the catch-up processes in these two countries.

The openness of innovation activities, which we speculate to be one outcome of industrial policies, may have different implications for the two economies. China can utilise global connections to get access to diverse sets of knowledge, which is critical to increase the chance of generating noble innovation (Bierly and Chakrabarti 1996; Rosenkopf and Almeida 2003). However, for China, having an open innovation system also means a high dependency on foreign knowledge in their innovation activities, which can interfere with building up the indigenous knowledge base (Liu et al. 2017). On the contrary, the independent, but closed innovation system of South Korea may lead to lock-in, where firms have limited opportunities to gain new sources of knowledge to be able to diversify and renew their existing knowledge.

⁷ Further details on self-citation analysis can be provided upon request.

⁸ China is in a different developmental stage compared with South Korea and Taiwan as it was included in the international division of labour within East Asia first in the 1990s (Hobday 1995). One of the ways Lee, Jee and Eun (2011) determine "technological catch-up" is to see whether residents' patenting catches up with non-residents' patenting, and according to this measure, there is approximately a ten-year gap between South Korea (1993) and China (2003).

We show that innovation capability in developing economies can be shaped by a broad range of government policy, not only by innovation (S&T) policy. Developing economies tend to focus less on fostering innovation activities since the immediate economic gain can be obtained through other economic activities. It also takes time for them to develop a certain level of technological capability that is required for conducting innovation activities (Awate, Larsen and Mudambi 2012). Our results seem to suggest that the effort to boost immediate economic growth in the catch-up process can also influence the development of the innovation system. Thus, this research calls for a systematic approach to policymaking for developing innovation systems.

With regards to technological catch-up, we demonstrate that there is no one “best” catch-up model that works for all by comparing the different catch-up processes of South Korea and China. Although there have been development models like the “Flying geese model” and “developmental state” that emphasise similarities in the industrial development of “East Asian tigers” (i.e., Hong Kong, Singapore, South Korea and Taiwan), a more recent discussion in the literature points out that each country has a unique economic and institutional setting and thereby needs nuanced government policies to support the idiosyncratic catch-up process (Mytelka 2006). We provide evidence supporting this view by highlighting the difference in industrial policy that induces different types of technology transfer and different levels of global collaboration on innovation activities. It is worth noting that China, as a “late” follower in the region, has shown a distinctive development path compared to the “East Asian tigers”, especially South Korea and Taiwan (Xie and Wu 2003; Lee, Jee and Eun 2011).

Based on our findings, we propose some recommendations for policymakers. First of all, policymakers need to formulate industrial policies with a long term perspective. The way that firms become connected to the global economy will have a long-lasting effect on the sustainability of economic development. Once firms have formed their connection to the global economy, it may be difficult to change the pattern of interaction afterwards, leading to too much or too little dependency on the foreign actors in their economic activities. As this interaction pattern can influence how latecomer economies innovate in the long run, it is of utmost important not to solely pursue short-term gains that may lead to unfavourable conditions for the development of innovation capabilities.

Second, it is vital to acknowledge the interdependency between trade-related industrial policies or investment policies and knowledge sourcing or the creation activities of local firms. Trade-related policies such as import substitution and FDI policies seem to influence how knowledge is sourced, utilised and generated in the interaction between local and foreign firms. Striking the right balance between the degree and the types of global interaction is critical in developing

technological capabilities as a latecomer and consequently generating local innovation beyond imitation. It also suggests that investment policies need to be considered an important element of industrial policies for sustainable economic development for less-developed economies as highlighted in the UNCTAD's investment policy framework for sustainable development (2015) and the World Investment Report (2018). Policies promoting foreign investment in the local economies may induce a spillover effect for industrial development through the development of a knowledge transfer and knowledge creation pattern. Latecomer economies should, furthermore, design policies that strengthen local capability building alongside adequate industrial and investment policies in order to facilitate sustainable economic development. Regardless of the types of interaction created in the global setting, independent local technological capabilities are critical for creating continuous development. As our review of the S&T policies of South Korea and China shows, both countries have developed local technological capabilities through the establishment of the education system and relevant public institutions, which emphasises the importance of independent local technological capabilities regardless of the direction of the FDI policies in these countries.

One future avenue to explore is to see if this link between trade-related industrial policies and innovation pattern is observed in other countries. While we acknowledge that industrial policies are born in response to a specific economic, institutional, and social context in an economy, which limits the generalisation of our finding, it would be interesting to study if industrial policy has a similar impact on innovation in other economies. To contextualise how industrial policies may influence the degree of international collaboration in innovation systems, one could also analyse the nature of international collaboration in patenting activities and the nature of knowledge generated through such collaboration. While we could detect the degree and the basic composition of international collaboration in patenting activities in our analysis, we do not know the exact nature of such collaborations due to the limitations of our data.

Specifically, incorporating the data on the operations of MNEs in host economies could shed light on the possibility of local firms engaging in international collaboration in innovation activities. For example, the two different types of subsidiary mandates from the headquarters i.e., competence-exploiting vs. competence-creating mandate (Cantwell and Mudambi 2005), can influence the possibility of establishing collaboration between local and foreign firms. Unlike subsidiaries with a competence-exploiting mandate, subsidiaries with a competence-creating mandate may engage in a rather intensive collaboration with local firms since they intend to create new knowledge distinctive from the MNE's existing knowledge repository. By exploring this further, we expect to be able to understand better the impact of industrial policy on shaping different knowledge sourcing patterns in countries.

References

- Abramovitz, Moses. 1986. "Catching Up, Forging Ahead, and Falling Behind." *The Journal of Economic History* 46 (02): 385-406. <http://doi.org/10.1017/S0022050700046209>.
- Ahn, Choong Yong. 2001. "A Search for Robust East Asian Development Models After the Financial Crisis: Mutual Learning from East Asian Experiences." *Journal of Asian Economics* 12 (3): 419-443. [https://doi.org/10.1016/S1049-0078\(01\)00095-1](https://doi.org/10.1016/S1049-0078(01)00095-1).
- Amsden, Alice Hoffenberg. 1992. *Asia's Next Giant: South Korea and Late Industrialization*. Oxford University Press on Demand. <https://doi.org/10.1093/0195076036.001.0001>.
- Awate, Snehal, Marcus M. Larsen and Ram Mudambi. 2012. "EMNE Catch-Up Strategies in the Wind Turbine Industry: Is there a Trade-Off between Output and Innovation Capabilities?" *Global Strategy Journal* 2 (3): 205-223. <http://doi.wiley.com/10.1111/j.2042-5805.2012.01034.x>.
- Baek, Seung-Wook. 2005. "Does China Follow "the East Asian Development Model"?" *Journal of Contemporary Asia* 35 (4): 485-498. <https://doi.org/10.1080/00472330580000281>.
- Barnes, Justin and Mike Morris. 2008. "Staying Alive in the Global Automotive Industry: What can Developing Economies Learn from South Africa about Linking into Global Automotive Value Chains?" *European Journal of Development Research* 20 (1): 31-55. <https://doi.org/10.1080/09578810701853157>.
- Bell, Martin and Keith Pavitt. 1992. "Accumulating Technological Capability in Developing Countries." *The World Bank Economic Review* 6 (suppl 1): 257-281. https://doi.org/10.1093/wber/6.suppl_1.257.
- Berry, Heather. 2014. "Global integration and innovation: multicountry knowledge generation within MNCs." *Strategic Management Journal* 35 (6): 869-890. <https://doi.org/10.1002/smj.2140>.
- Bierly, Paul and Alok Chakrabarti. 1996. "Generic Knowledge Strategies in the U.S. Pharmaceutical Industry." *Strategic Management Journal* 17 (S2): 123-135. doi:10.1002/smj.4250171111. <https://doi.org/10.1002/smj.4250171111>.
- Branstetter, L. 2006. "Is Foreign Direct Investment a Channel of Knowledge Spillovers? Evidence from Japan's FDI in the United States." *Journal of International Economics* 68 (2): 325-344. <https://doi.org/10.1016/j.jinteco.2005.06.006>.
- Buzdugan, Stephen R. and Heinz Tueselmann. 2018. "Making the Most of FDI for Development: New Industrial Policy and FDI Deepening for Industrial Upgrading." *Transnational Corporations* 25 (1): 1-21. <https://doi.org/10.18356/bffcf4a5-en>.
- Cantwell, John and Ram Mudambi. 2005. "MNE competence-creating subsidiary mandates". *Strategic Management Journal* 26 (12): 1109-1128. <https://doi.org/10.2139/ssrn.289695>.
- Chen, Ling and Barry Naughton. 2016. *An Institutionalized Policy-Making Mechanism: China's Return to Techno-Industrial Policy* 45 (10): 2138-2152. <https://doi.org/10.1016/j.respol.2016.09.014>.
- Chowdhury, Anis and Iyanatul Islam. 1993. *The Newly Industrializing Economies of East Asia*. Florence: Routledge. <https://doi.org/10.4324/9780203976388>.

- Chu, Wan-wen. 2011. How the Chinese government promoted a global automobile industry, *Industrial and Corporate Change* 20 (5): 1235–1276. <https://doi.org/10.1093/icc/dtr010>.
- Chung, Woojin. 2003. “Innovation in Korea”, *The International Handbook on Innovation*, edited by Larisa V. Shavinina: Elsevier. <https://doi.org/10.1016/B978-008044198-6/50062-0>.
- Dahlman, Carl. 2009. “Different Innovation Strategies, Different Results: Brazil, Russia, India, China and Korea (the BRICKs).” *Innovation and Growth: Chasing a Moving Frontier*: 131-168. <https://doi.org/10.1787/9789264073975-9-en>.
- Deng, Ping. 2007. “Investing for Strategic Resources and its Rationale: The Case of Outward FDI from Chinese Companies.” *Business Horizons* 50 (1): 71-81. <https://doi.org/10.1016/j.bushor.2006.07.001>.
- European Patent Office. 2019. PATSTAT - Data Catalog 2019 Autumn Edition – version 5.14. From: [http://documents.epo.org/projects/babylon/eponot.nsf/0/11CE75EDDF734288C125848F0048F533/\\$FILE/data_catalog_global_v5.14_autumn_2019_en.pdf](http://documents.epo.org/projects/babylon/eponot.nsf/0/11CE75EDDF734288C125848F0048F533/$FILE/data_catalog_global_v5.14_autumn_2019_en.pdf). Accessed on: 4 November, 2019
- Fu, Xiaolan, Carlo Pietrobelli and Luc Soete. 2011. “The Role of Foreign Technology and Indigenous Innovation in the Emerging Economies: Technological Change and Catching-Up.” *World Development* 39 (7): 1204-1212. <https://doi.org/10.1016/j.worlddev.2010.05.009>.
- Fu, Xiaolan, Wing Thye Woo and Jun Hou. 2016. “Technological Innovation Policy in China: The Lessons, and the Necessary Changes Ahead.” *Economic Change and Restructuring* 49 (2): 139-157. <https://doi.org/10.1007/s10644-016-9186-x>.
- Gereffi, Gary. 1999. “International Trade and Industrial Upgrading in the Apparel Commodity Chain.” *Journal of International Economics* 48 (1): 37-70. [https://doi.org/10.1016/s0022-1996\(98\)00075-0](https://doi.org/10.1016/s0022-1996(98)00075-0).
- Giuliani, Elisa, Arianna Martinelli and Roberta Rabellotti. 2016. “Is Co-Invention Expediting Technological Catch Up? A Study of Collaboration between Emerging Country Firms and EU Inventors.” *World Development* 77: 192-205. <https://doi.org/10.1016/j.worlddev.2015.08.019>.
- Griliches, Zvi. 1998. “Patent Statistics as Economic Indicators: A Survey.” In *R&D and Productivity: The Econometric Evidence*, 287-343: University of Chicago Press. <https://doi.org/10.3386/w3301>.
- Guan, Jiancheng and Zifeng Chen. 2012. “Patent Collaboration and International Knowledge Flow.” *Information Processing & Management* 48 (1): 170-181. <https://doi.org/10.1016/j.ipm.2011.03.001>.
- Hannigan, Thomas J., Ahreum Lee, and Ram Mudambi. 2013. “The Pitfalls of an Inward Oriented Economy: Lessons from the Evolution of Brazil and the Republic of Korea.” *Transnational Corporations* 22 (2): 1-24. <https://doi.org/10.18356/e10f0502-en>.
- Hobday, M. 1995. “East Asian Latecomer Firms: Learning the Technology of Electronics.” *World Development* 23 (7): 1171-1193. [https://doi.org/10.1016/0305-750x\(95\)00035-b](https://doi.org/10.1016/0305-750x(95)00035-b).
- Howell, Sabrina T. 2018. “Joint Ventures and Technology Adoption: A Chinese Industrial Policy that Backfired.” *Research Policy* 47 (8): 1448-1462. <https://doi.org/10.1016/j.respol.2018.04.021>.

- Jones, Randall S. and Taesik Yoon. 2008. "Enhancing the Globalisation of Korea." *OECD Economics Department Working Papers* 614. <https://doi.org/10.1787/241606341724>.
- Khan, Zaheer, Yong Kyu Lew and Pervaiz Akhtar. 2016. "The Influence of Industrial Policy and National Systems of Innovation on Emerging Economy Suppliers' Learning Capability." *Industry and Innovation* 23 (6): 512-530. <https://doi.org/10.1080/13662716.2016.1189811>.
- Kim, Linsu. 1980. "Stages of Development of Industrial Technology in a Developing Country: A Model." *Research Policy* 9 (3): 254-277. [https://doi.org/10.1016/0048-7333\(80\)90003-7](https://doi.org/10.1016/0048-7333(80)90003-7).
- Kim, Linsu 1999. "Building Technological Capability for Industrialization: Analytical Frameworks and Korea's Experience." *Industrial and Corporate Change* 8 (1): 111-136. <https://doi.org/10.1093/icc/8.1.111>
- Kogut, Bruce and Udo Zander. 1993. "Knowledge of the Firm and the Evolutionary Theory of the Multinational Corporation." *Journal of International Business Studies* 24 (4): 625-645. <https://doi.org/10.1057/palgrave.jibs.8490248>.
- Kojima, Kiyoshi. 2000. "The 'flying Geese' Model of Asian Economic Development: Origin, Theoretical Extensions, and Regional Policy Implications." *Journal of Asian Economics* 11 (4): 375-401. [https://doi.org/10.1016/S1049-0078\(00\)00067-1](https://doi.org/10.1016/S1049-0078(00)00067-1).
- Konara, Palitha and Yingqi Wei. 2017. "Foreign direct investment as a catalyst for domestic firm development: The case of Sri Lanka." *Transnational Corporations* 23 (3): 1-32. <https://doi.org/10.18356/a4a49e57-en>.
- Kuemmerle, Walter. 1999. "The Drivers of Foreign Direct Investment into Research and Development: An Empirical Investigation." *Journal of International Business Studies* 30 (1): 1-24. <https://doi.org/10.1057/palgrave.jibs.8490058>.
- Lall, Sanjaya, John Cantwell and Yanli Zhang. 2009. "The co-evolution of international business connections and domestic technological capabilities: lessons from the Japanese catch-up experience." *Transnational Corporations* 18 (2): 37-68. <https://doi.org/10.18356/1be60b89-en>.
- Lee, Ahreum, Ram Mudambi and Marcelo Cano-Kollmann. 2016. "An Analysis of Japan's Connectivity to the Global Innovation System." *Multinational Business Review* 24 (4): 399-423. <https://doi.org/10.1108/mbr-06-2016-0020>
- Lee, Keun. 2005. "Making a Technological Catch-Up: Barriers and Opportunities." *Asian Journal of Technology Innovation* 13 (2): 97-131. <https://doi.org/10.1080/19761597.2005.9668610>.
- Lee, Keun, Seong-Jae Cho and Jia Jin. 2009. "Dynamics of Catch-Up in Mobile Phones and Automobiles in China: Sectoral Systems of Innovation Perspective." *China Economic Journal* 2 (1): 25-53. <https://doi.org/10.1080/17538960902860063>.
- Lee, Keun, Mansoo Jee and Jong-Hak Eun. 2011. "Assessing China's Economic Catch-Up at the Firm Level and Beyond: Washington Consensus, East Asian Consensus and the Beijing Model." *Industry and Innovation* 18 (5): 487-507. <https://doi.org/10.1080/13662716.2011.583463>.
- Lee, Keun and Chaisung Lim. 2001. "Technological Regimes, Catching-Up and Leapfrogging: Findings from the Korean Industries." *Research Policy* 30 (3): 459-483. [https://doi.org/10.1016/S0048-7333\(00\)00088-3](https://doi.org/10.1016/S0048-7333(00)00088-3).

- Lee, Keun, Marina Szapiro and Zhuqing Mao. 2018. "From Global Value Chains (GVC) to Innovation Systems for Local Value Chains and Knowledge Creation." *The European Journal of Development Research* 30 (3): 424-441. <https://doi.org/10.1057/s41287-017-01111-6>.
- Lee, Keun and Minho Yoon. 2010. "International, Intra-National and Inter-Firm Knowledge Diffusion and Technological Catch-Up: The USA, Japan, Korea and Taiwan in the Memory Chip Industry." *Technology Analysis & Strategic Management* 22 (5): 553-570. <https://doi.org/10.1080/09537325.2010.488059>.
- Li, Zheng, Jun Li and Bin He. 2018. "Does Foreign Direct Investment Enhance Or Inhibit Regional Innovation Efficiency?" *Chinese Management Studies* 12 (1): 35-55. <https://doi.org/10.1108/cms-02-2017-0034>.
- Liu, Feng-chao, Denis Fred Simon, Yu-tao Sun and Cong Cao. 2011. "China's Innovation Policies: Evolution, Institutional Structure, and Trajectory." *Research Policy* 40 (7): 917-931. <https://doi.org/10.1016/j.respol.2011.05.005>.
- Liu, Xielin, Sylvia Schwaag Serger, Ulrike Tagscherer and Amber Y. Chang. 2017. "Beyond Catch-Up—can a New Innovation Policy Help China Overcome the Middle Income Trap?" *Science and Public Policy* 44 (5): 656-669. <https://doi.org/10.1093/scipol/scw092>.
- Lundvall, Bengt-Åke. 1998. "Why Study National Systems and National Styles of Innovation?" *Technology Analysis & Strategic Management* 10 (4): 403-422. <https://doi.org/10.1080/09537329808524324>.
- Luo, Yadong and Rosalie L. Tung. 2007. "International Expansion of Emerging Market Enterprises: A Springboard Perspective." *Journal of International Business Studies* 38 (4): 481-498. <https://doi.org/10.1057/palgrave.jibs.8400275>.
- Mah, Jai S. 2007. "Industrial Policy and Economic Development: Korea's Experience." *Journal of Economic Issues* 41 (1): 77-92. <https://doi.org/10.1080/00213624.2007.11506996>.
- Mathews, John A. and Dong-Sung Cho. 2000. *Tiger Technology: The Creation of a Semiconductor Industry in East Asia* Cambridge University Press. <https://doi.org/10.1017/CBO9780511552229>.
- Moreira, Mauricio Mesquita. 1995. *Industrialization, Trade and Market Failures: The Role of Government Intervention in Brazil and South Korea* Springer. <https://doi.org/10.1007/978-1-349-23698-5>.
- Mu, Qing and Keun Lee. 2005. "Knowledge Diffusion, Market Segmentation and Technological Catch-Up: The Case of the Telecommunication Industry in China." *Research Policy* 34 (6): 759-783. <https://doi.org/10.1016/j.respol.2005.02.007>.
- Mytelka, Lynn K. 2006. "Pathways and Policies to (Bio) Pharmaceutical Innovation Systems in Developing Countries." *Industry and Innovation* 13 (4): 415-435. <https://doi.org/10.1080/13662710601032770>.
- Nelson, Richard R. 2008. "Economic Development from the Perspective of Evolutionary Economic Theory." *Oxford Development Studies* 36 (1): 9-21. <https://doi.org/10.1080/13600810701848037>.
- Öniş, Ziya. 1991. "The Logic of the Developmental State." *Comparative Politics* 24 (1): 109-126. <https://doi.org/10.2307/422204>.

- Paul, Justin and Gabriel R. G. Benito. 2018. "A Review of Research on Outward Foreign Direct Investment from Emerging Countries, Including China: What do we Know, how do we Know and Where should we be Heading?" *Asia Pacific Business Review* 24 (1): 90-115. <https://doi.org/10.1080/13602381.2017.1357316>.
- Porter, Michael. 1990. *The Competitive Advantage of Nations*. New York: The Free Press.
- Rosenkopf, Lori and Paul Almeida. 2003. "Overcoming Local Search through Alliances and Mobility." *Management Science* 49 (6): 751-766. <https://doi.org/10.1287/mnsc.49.6.751.16026>.
- Rutkowski, Aleksander. 2006. "Inward FDI, concentration, and profitability in the CEECs: Were the domestic firms crowded out or strengthened?" *Transnational Corporations* 15 (3): 105-139. https://unctad.org/en/Docs/iteit20063a4_en.pdf.
- Sakakibara, Mariko and Dong-Sung Cho. 2002. "Cooperative R&D in Japan and Korea: A Comparison of Industrial Policy." *Research Policy* 31 (5): 673-692. [https://doi.org/10.1016/s0048-7333\(01\)00150-0](https://doi.org/10.1016/s0048-7333(01)00150-0).
- Saxenian, AnnaLee. 2006. *International Mobility of Engineers and the Rise of Entrepreneurship in the Periphery*. No. 2006/142. WIDER Research Paper. The United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki
- The World Bank. 2020. *School enrollment, tertiary (% gross)* [Data File]. Retrieved from <https://data.worldbank.org/indicator/se.ter.enrr>
- Xie, Wei and Guisheng Wu. 2003. "Differences between Learning Processes in Small Tigers and Large Dragons: Learning Processes of Two Color TV (CTV) Firms within China." *Research Policy* 32 (8): 1463-1479. [https://doi.org/10.1016/S0048-7333\(02\)00140-3](https://doi.org/10.1016/S0048-7333(02)00140-3).
- United Nations Conference on Trade and Development (UNCTAD). 2015. *Investment policy framework for sustainable development*. United Nations, Geneva.
- United Nations Conference on Trade and Development (UNCTAD). 2018. *World Investment Report 2018: Investment and New Industrial Policies*. United Nations, Geneva.
- Wei, Yingqi and Xiaming Liu. 2006. "Productivity spillovers from R&D, exports and FDI in China's manufacturing sector." *Journal of International Business Studies* 37 (4): 544-557. <https://doi.org/10.1057/palgrave.jibs.8400209>.
- Zhao, Zhongxiu, Xiaoling Huang, Dongya Ye and Paul Gentle. 2007. "China's Industrial Policy in Relation to Electronics Manufacturing." *China & World Economy* 15 (3): 33-51. <https://doi.org/10.1111/j.1749-124X.2007.00067.x>.

Appendix

Table A. International collaboration on patenting (1975–2017)

	Electronic		Chemical		Pharmaceutical		Machinery		Transport	
	# of patents	% of int. col.	# of patents	% of int. col.	# of patents	% of int. col.	# of patents	% of int. col.	# of patents	% of int. col.
1975–1984	335	0.50	170	1.10	109	4.50	271	1.10	18	0
1985–1994	30,174	0.30	4,130	0.70	1,535	3.10	11,108	0.40	1,909	0.50
1995–2004	218,788	0.60	16,989	0.90	6,032	4.40	71,352	0.50	30,119	0.10
2005–2014	411,872	1.60	44,395	1.60	12,444	4.60	142,311	0.70	54,652	0.20
2015–2017	74,557	1.80	12,259	1.30	3,068	2.50	31,887	0.80	12,112	0.40
Total	735,726	1.30	77,943	1.40	23,188	4.10	256,930	0.60	98,810	0.20
1975–1984	9	4.44	17	17.60	2	100	6	0	0	0
1985–1994	1,677	8.40	2,439	6.80	607	15.5	1,628	6.0	186	4.80
1995–2004	48,899	9.80	13,994	6.20	13,030	8.50	13,672	5.30	992	3.80
2005–2014	166,967	20.10	24,185	18.70	18,970	25.40	38,193	12.20	3,821	9.00
2015–2017	32,074	22.20	1,895	51.30	1,733	50.00	5,059	19.10	761	19.80
Total	249,626	18.20	42,530	15.40	34,342	20.00	58,558	11.00	5,760	9.40

South
Korea

China

Table B. Composition of country of collaborating inventors (South Korea) (1975–2017)

	Electronic		Chemical		Pharmaceutical		Machinery		Transportation				
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)			
South Korea	726,056	(98.69%)	76,830	(98.57%)	South Korea	22,216	(95.81%)	South Korea	255,141	(99.30%)	South Korea	98,553	(99.74%)
USA	3,528	(0.48%)	341	(0.44%)	USA	470	(2.03%)	Japan	576	(0.22%)	Japan	60	(0.06%)
Japan	1,633	(0.22%)	322	(0.41%)	China	102	(0.44%)	USA	528	(0.21%)	Germany	54	(0.05%)
China	1,089	(0.15%)	102	(0.13%)	Japan	100	(0.43%)	China	152	(0.06%)	USA	51	(0.05%)
India	608	(0.08%)	78	(0.11%)	Germany	67	(0.30%)	Russia	96	(0.04%)	India	15	(0.02%)

Table C. Composition of country of collaborating inventors (China) (1975–2017)

	Electronic		Chemical		Pharmaceutical		Machinery		Transportation				
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)			
China	521,408	(83.52%)	107,972	(83.75%)	China	76,847	(68.04%)	China	130,914	(89.41%)	China	13,322	(90.99%)
USA	44,724	(7.16%)	9,910	(7.69%)	USA	23,704	(20.99%)	USA	6,704	(4.58%)	USA	508	(3.47%)
Taiwan	19,602	(3.14%)	3,378	(2.62%)	Germany	1,726	(1.53%)	Taiwan	3,037	(2.07%)	Germany	253	(1.73%)
South Korea	8,985	(1.44%)	1,836	(1.42%)	Canada	1,465	(1.30%)	Japan	1,548	(1.06%)	Japan	115	(0.79%)
Japan	5,228	(0.84%)	1,184	(0.92%)	UK	1,434	(1.27%)	Germany	824	(0.56%)	South Korea	85	(0.58%)

How TNC subsidiaries shine in world cities: policy implications of autonomy and network connections

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Heinz Tüselmann and Christoph Dörrenbächer*

The study examines the relationship between performance and patterns of autonomy and the network relationships used by the foreign subsidiaries of transnational corporations (TNCs) in world cities compared to those subsidiaries outside these locations. This is done by exploring if these patterns differ in foreign subsidiaries in Greater Copenhagen compared to elsewhere in Denmark. The findings reveal that there are important differences in the relationships between performance and the autonomy and network structures in foreign subsidiaries. These findings are discussed and policy implications distilled. The study finds that the scope of inward foreign direct investment (FDI) policy could be usefully extended to encompass urban development thereby helping cities develop assets, institutional support and infrastructure that can enhance agglomeration benefits and global connectivity. The findings indicate policies, aimed at helping subsidiaries embed in host location networks and incorporate these networks into other parts of the parent company, could be beneficial. The paper also discusses economic and social inequality that can stem from network patterns and the inclination of subsidiaries to operate autonomously in world cities. It proposes policy options that can lead subsidiaries to undertake high-value activities and innovation in world cities.

Keywords: autonomy, competitive advantages, network relationships, policy, world cities

1. Introduction

The competitive advantages for transnational corporations (TNCs) of locating in world cities stem from agglomeration benefits arising from pools of high quality and heterogeneous resource pools combined with institutional characteristics that are supportive of high value-added activities (Derudder and Witlok, 2010; Duranton and Puga, 2004; Goerzen et al., 2013; Nachum and Wymbs, 2007; Sassen, 2013; Storper, 2013). These cities also have good global connectivity with infrastructure

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that provide effective transportation of goods and people, and information technology (IT) infrastructure conducive to effective data transmission (Derudder et al., 2010; Lee and Rodríguez-Pose, 2014; Mans, 2013). Cities that provide TNCs with such competitive advantages offer attractive features that influence their location decisions (Iammarino et al., 2018; Kilroy et al., 2015; OECD, 2006). There are a wide variety of classifications of world or global cities depending on the factors considered to be important in ranking such cities (A.T Kearney, 2019; Beverstock et al., 2000; Cook and Pandit, 2018; Leff. and Petersen, 2015; Trujillo and Parilla, 2016). In most ranking systems Greater Copenhagen (the city examined in this study) is normally classified as a middle-ranking world city. It is ranked 46/500 globally and 16/156 in Europe as an innovative city (Innovation Cities Index, 2019) and as a Beta + city in the GaWC ranking (GaWC, 2018). Greater Copenhagen is not a top-ranked world city but is located in the top range of the middle-ranking world cities. Most studies on TNCs in world cities are based on the top 10 or 20 world cities or on Chinese cities that attract significant levels of foreign direct investment (FDI). Such studies often examine these locations for various types of head quarters (HQs) or for core operations of TNCs (Cook and Pandit, 2018; Derudder et al., 2018; Nachum and Wymbs, 2007; Wang et al., 2011; Zhao et al., 2005). A few studies consider cities that are not in the top range of world cities but focus on the agglomeration benefits of cities in emerging economies (Ning et al., 2016; Sridhar and Wan, 2010). This study adds to the literature by considering the organizational systems in TNCs in a type of world city that is not often examined. The implications for policy making for different types of world cities are considered in the discussion section of the paper.

Most of the literature on cities and FDI focuses on the locational factors that are attractive for TNCs (Araya, 2008; Groezen et al., 2013; Ma et al., 2013; Wang et al., 2011). The importance of the organizational systems used by TNCs to secure the benefits of these locational factors is not, however, adequately addressed in the literature. An important organizational factor permitting TNCs to secure the competitive advantages available in host locations is the configuration of autonomy and network relationships (CANR) used in their subsidiaries. The concept of CANR relates to organizational structures composed of inter-organizational network relationships (external to TNC relationships; network connections in the host location) and intra-organizational network relationships (internal to TNC relationships; within the TNC network). These network relationships exercise significant influence on the performance of subsidiaries (Andersson et al., 2001 and 2007). The coordination and control procedures for managing these external and internal relationships are set by parent companies according to the autonomy granted to subsidiaries. Autonomy refers to the degree of independence a subsidiary has to make decisions in various strategic and operational matters (Young and Tavares, 2004), that in comparable organization typically are made at a higher

hierarchical level. In this paper we analyse how autonomy relates to the operation of inter and intra-organizational networks (Ambos et al., 2011; Andersson et al., 2005). The importance of CANR for firm performance has been investigated at national level (Andersson et al., 2005 and 2007; Birkinshaw and Hood, 2000; Birkinshaw et al., 2005; Gammelgaard et al., 2012; Kawai and Strange, 2014; McDonald et al., 2008) but not at city level. This study examines this issue by considering the links between CANR and performance in subsidiaries in a world city (Greater Copenhagen) and in subsidiaries located elsewhere in Denmark.

Knowledge on the relationship between CANR and performance (e.g. sales, productivity, market share and customer satisfaction) would help strategic and operational planners in TNCs to better understand some key organizational system requirements to find, access and absorb the competitive benefits available in world cities. Public policy makers and advisers would also gain insights into the role of CANR for helping foreign firms to embed in world city locations. This has implications for the provision of and, especially, the access by subsidiaries to resource pools, supporting institutional systems and appropriate physical and IT infrastructure. Lower levels of autonomy and the organizational network linkages of subsidiaries not located in world cities are likely to have implications for regional development policy. Subsidiaries with high levels of inter and, especially, intra-organizational links are more likely to be involved in innovation and the development of technologies (Andersson et al., 2005; Bartsch and Ebers, 2011; Partuchuri, 2010). Subsidiaries not located in world cities may not have the CANR characteristics that encourage innovation and the development of technologies. This may have implications for the role of FDI to help achieve regional policy objectives such as seeking to unlock innovation and the enhancement of productivity in underdeveloped regions of a country.

To explore these issues this study examines the relationship between the performance of foreign firms and CANR and performance in subsidiaries in Greater Copenhagen compared to other locations in Denmark. As the study is based on one country there are no distortion effects introduced by the possible influence of distinctive national economic and institutional features that affect the potential for world cities to deliver good performance (McCann and Acs, 2011; Therborn, 2011). This study provides findings that shed light on how key characteristics of CANR in subsidiaries in a middle-ranked world city are related to performance. This permits informed discussion on major public policy implications for such cities and also offers some generic views about CANR in different types of world cities.

2. Competitive advantages in world city locations

Converting assets available in host locations to firm level competencies to create and develop competitive advantages requires interconnections between agents in the various locations of the different parts of TNCs (Cohen and Levinthal, 1990; Teece, 1998 and 2000; Zahra and George, 2002). Developing competitive advantage requires the acquisition of assets and knowledge and the ability of firms to transform them into products and processes to create and sustain firm specific advantages (FSA) that lead to competitive advantages (Pitelis and Teece, 2010). Often firms need to cross space within the global value chains (GVC) of the industries they are situated in to obtain and absorb assets and knowledge to develop competitive advantages (Derruder et al., 2010; Dickens et al., 2001). The more heterogeneous and complex the environments in which TNCs operate, the greater is the need to develop interlinking social and business networks in the various locations in which they locate subsidiaries (Gammelgaard and McDonald, 2018; Liebeskind et al., 1996). Subsidiaries in world cities need therefore to create and sustain CANR that embed them into complex interconnected networks in host locations and to link effectively to the other locations in which TNCs operate in a GVC. Failure to create and sustain such CANR will lead to a failure to secure the potential competitive advantages available in host locations. The subsidiary strategy of TNCs therefore face the need to design, implement and operate inter and intra-organizational networks that enable them to achieve a fine balance between embeddedness in host locations and with the rest of the TNC. There is also a need to maintain control over subsidiaries through appropriate allocation of autonomy that enables TNCs to secure their GVC objectives, and simultaneously ensure that the subsidiary does not become peripheral to the strategic priorities of the parent company. Subsidiaries require appropriate autonomy to enable them to have sufficient authority to unlock the potential competitive advantages available via inter and intra-organizational networks in host locations that are woven into an effective means to provide the resources, know-how and other factors necessary to achieve the GVC objectives of the TNC (Gammelgaard et al, 2012; Kawai and Strange, 2014).

In world cities, a rich set of assets and wide array of infrastructure that provide good connectivity backed by effective institutional structures generates large potential competitive advantages for firms (Immarino et al., 2017; Sassen 2103; Storper, 2013). These potential competitive advantages are underpinned by complex networks and connectivity that leads to multifaceted and complicated business environments that make extracting and exploiting these assets a difficult task (Dicken et al., 2001; Henderson et al., 2002). Foreign firms in world cities therefore require CANR that enables them to navigate the complex economic, social and business environments of such cities to facilitate the acquisition and integration of the benefits into their GVC objectives. In locations with fewer scarce and heterogeneous resources and less developed infrastructure bundles with lower

global connectivity, the likelihood is that less complex CANR is required to secure the potential competitive advantages available in these places. This is likely to lead to CANR in such locations having simpler interconnections compared to those in world cities.

3. Network and autonomy relationships

Network and knowledge-based theory indicates that the use of intra and inter-organizational networks to embed in host locations and to link to the rest of the TNC is core to subsidiary strategy that seeks to secure the competitive advantages of host locations (Andersson et al., 2001; Birkinshaw et al., 2005; Frost et al., 2002). These theoretical approaches also highlight the importance of a level of autonomy that permits subsidiaries to exploit the potential benefits of location while fulfilling the GVC objectives of parent companies (Andersson et al., 2007; Chiao and Ying, 2013; Gammelgaard et al., 2012; Mudambi and Swift, 2011; Young and Tavares, 2004). Using this theoretical foundation that emphasise the importance of networks and autonomy combined with the theory of competitive advantage in world cities, a set of hypotheses are developed on CANR in subsidiaries located in world cities and those in other locations.

3.1. Inter and intra-organizational networks

Embedment in inter-organizational networks helps to secure scarce and valuable resource bundles (Andersson et al., 2002 and 2005; Gammelgaard et al., 2012; McDonald et al., 2008). The acquisition of such resources enables the development of innovation that deliver FSA leading to competitive advantages (Pitelis and Teece, 2010; Zahra and George, 2002). The concentration of rich asset bases with supporting institutional and well-connected infrastructure systems in world cities lead to dynamic environments that are underpinned by complex network connections (Beaverstock, 2004; Cook and Pandit, 2018; Iammarino et al., 2018; Turok, 2004). Developing inter-organizational networks enable firms to embed into the “economic buzz” and effective “face to face” communication available in world cities (Jones, 2007; Storper and Venables, 2004). The pool of assets and access to well-developed networks induce subsidiaries to develop extensive inter-organizational network relationships to acquire and absorb the potential benefits for world city locations. Increasing embeddness in inter-organizational networks also helps to mitigate liabilities of foreignness and outsidership (Elango, 2009). The lesser pools of resources (normally in terms of both size and diversity) and lower levels of infrastructure and connectivity of non-world city locations are likely to lead to less intensive embedment in inter-organizational networks.

Intra-organizational relationships are also necessary to facilitate the effectual transfer of resources and knowledge across the various activities of TNCs to help embed subsidiaries into the GVCs of the industries in which they operate (Andersson et al., 2005; Frost et al., 2002; Holm, et al., 2003). Location in world cities provides good global connectivity that enhances the use of networks in world cities to link to useful agents in other locations in the world that are part of the GVCs of particular industries (Neal, 2016; Sigler and Martinus, 2016). Discovering, assessing and absorbing knowledge-intensive assets from the geographically dispersed activities of TNCs to develop effective GVCs require the development of intra-organizational networks. The more the host location provides scarce and valuable resources that can be embedded in the GVC the more likely it is that relevant subsidiaries will be strongly linked by enhancing intra-organizational networks to parent companies and other subsidiaries in the TNC (Mudambi and Swift, 2011; Reilly and Scott, 2014). This is because subsidiaries located in world cities are able to absorb knowledge from these cities but need good intra-organizational networks to transfer this knowledge to other units in the TNC. Locations that are not world cities and that have lower concentrations of scarce and valuable resources and poorer global connectivity present foreign firms with a simpler and less diverse milieu. These types of locations are therefore likely to require lower level development of intra-organizational networks to enable foreign firms to find and exploit the potential benefits available in these locations. A stronger relationship is therefore likely to exist between inter and intra-organizational network relationships and performance in world city locations compared to other regions. This reasoning leads to the first hypothesis:

Hypothesis 1: *The development of network relationships exert a stronger effect on the performance of subsidiaries in Greater Copenhagen compared to other locations in Denmark.*

3.2. Autonomy

Autonomy helps subsidiaries to effectively utilize the competitive advantages in host locations by reducing the time and transaction costs expended in negotiating with headquarters for permission to develop policies and routines (Birkinshaw et al. 2005; Chiao et al., 2013; Kawai and Strange, 2014; Young and Tavares, 2004). Subsidiaries with autonomy are often better able to attract headquarters' attention and have more influence to promote initiatives to headquarters (Ambos et al., 2010; Dörrenbächer and Gammelgaard, 2016). Subsidiaries that develop high levels of autonomy can better engage in entrepreneurial activities as local managers often have a better understanding of important factors in negotiations in host locations. This enhances the potential to achieve good and/or innovative deals at lower cost and risk than if the decisions require approval from some distant headquarters.

Studies also find that marketing innovations and subsidiary growth connects to evolving autonomy (Johnson and Medcof, 2007; Vernaik et al., 2005). Given the lower concentrations of scarce and valuable assets, lower levels of “economic buzz” and global connectivity in locations that are not world cities there is a reduced likelihood that making important deals will be a regular feature in such locations. This implies less need for quick and low-cost decision taking at local level and consequently a lower requirement for developing high levels of autonomy. These arguments suggest it is likely that there is a stronger relationship between developing autonomy and performance in world cities compared to firms in other locations. The second hypothesis is therefore:

Hypothesis 2: *The development of autonomy exerts a stronger effect on the performance of subsidiaries in Greater Copenhagen compared to other locations in Denmark.*

3.3. Interconnections between networks and autonomy

The ability of TNCs to secure and exploit potential competitive advantages available in host locations depends in large part on the use of the many possible interconnections within their CANR (Birkinshaw et al., 2005; Chiao et al., 2013). Evidence exists, at the national level, that effective connections between autonomy and the various inter and intra-organizational network relationships of foreign firms affect performance (Gammelgaard et al., 2012). The capacity of firms to accurately assess and transform into competitive advantages the potential benefits available in world city locations depends on careful balancing and control of internal and external relationships to achieve the strategic objectives (Cohen and Levinthal, 1990; Elango, 2009; Pitelis and Teece, 2010; Zahra and George, 2002). The processes involved in managing GVCs to create and sustain competitive advantages therefore require effective development of connections between the various components of CANR. Enhancing the autonomy of subsidiaries enables them to construct and operate systems amenable to effective management of the complex interconnections between a variety of internal and external networks used by subsidiaries (Gammelgaard and McDonald, 2018; Mudambi, 2011; Mudambi and Swift, 2011).

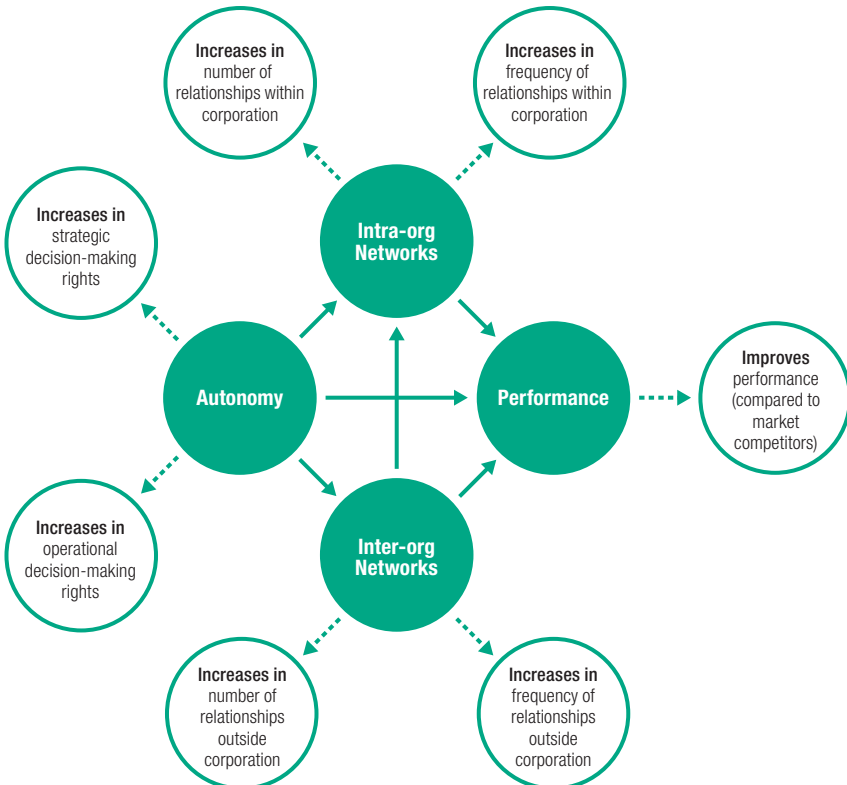
The scarce and valuable nature of the resource pools and global connectivity in world cities provide potential benefits requiring foreign firms to develop sophisticated CANR capable of securing these advantages. This requires complex communications between the various parts of CANR to negotiate and implement the many deals that enable the acquisition and transformation of the potential benefits into competitive advantages. Locations that are not world cities do not have the same scarce and heterogeneous pools of knowledge-based assets and connectivity as world cities and therefore do not require the same level of

sophisticated interconnections in CANR to obtain the desired benefits from these locations. The final hypothesis is therefore:

Hypothesis 3: *The development of interconnections within CANR in Greater Copenhagen exerts a stronger effect on the performance of subsidiaries firms compared to other locations in Denmark.*

The model for the pathways from CANR to performance used in this study follows the approach commonly employed in studies on this phenomenon (Gammelgaard et al., 2012). This model considers both direct and indirect effects to examine not only how autonomy and networks exercise a direct influence on performance but also how interaction between these factors influence performance outcomes (see Figure 1).

Figure 1. Conceptual Model



4. Greater Copenhagen as a world city

Greater Copenhagen (the City of Copenhagen and the North-Eastern part of Zealand) is a city region with a large and growing pool of high knowledge-intensity firms (Hansen et al., 2014; Winther and Hansen, 2006). Greater Copenhagen was a centre of manufacturing activities in the early post-war years, which evolved into a city region largely based on services and knowledge-based industries (Maskell, 1986). The evolution of Greater Copenhagen as a knowledge-based city region followed from developments such as an electro-medical instruments cluster (Lotz, 1993). The knowledge base of the city grew with the integration of research skills in Danish universities leading to the creation of the Medicon Valley cluster, which is the third most successful biotechnology cluster in Europe (Drejer et al., 1999; Steinfield and Scupola, 2008). Professional services and knowledge-based industries cluster more strongly in Greater Copenhagen compared to the rest of Denmark, as is reflected in employment patterns, which is also evident in foreign-owned companies located in Denmark (Nielson et al., 2009). Greater Copenhagen is a centre of creative and design services with institutional systems that support the evolution of professional services (Vinodrei, 2015). Although there are pockets of knowledge-based industries outside of Greater Copenhagen, the largest concentration of knowledge-based industries is in Greater Copenhagen (Drejer et al., 1999). Labour productivity is considerably higher in the Greater Copenhagen labour market areas compared to the rest of Denmark (Timmermans and Boschma, 2014).

Greater Copenhagen has approximately 20 per cent of the population of Denmark but has larger concentrations of knowledge-based industries than is suggested by the proportion of the population. The high density of population in Greater Copenhagen relative to the rest of Denmark and the concentration of firms, governmental and non-governmental institutions appear to give advantages that make it the leading city region in Denmark. Greater Copenhagen together with Stockholm, moreover, provides major centres in the Nordic area with knowledge-based assets and institutions supportive of high value-added activities. Greater Copenhagen is therefore likely to confer potential competitive advantages in Denmark and the Nordic countries and may possess niche advantages in knowledge-based industries in the global economy. The potential competitive advantages of Greater Copenhagen make it a suitable city to assess whether a world city has characteristics that can lead to different CANR compared to other locations in the same country. As Denmark is culturally and institutionally quite homogenous across regions, comparison of the CANR of subsidiaries is unlikely to be affected by significant divergences as a result of heterogeneous cultural and institutional distinctions between world city regions and other regions.

5. Data gathering and analysis

The data for the study comes from a survey of foreign-owned subsidiaries located in Denmark. The design and administration of the survey follows the procedures recommended by Dillman (1991) supplemented by suggestions from Harzing (2000) and Harzing and Noorderhaven (2006) to improve the rigour of survey-based data gathering. The respondents were CEOs of subsidiaries in Denmark. The sampling frame came from the Experian database and yielded 2,996 firms covering all foreign-owned firms in Denmark. The survey achieved a response rate of 15 per cent. Tests for representativeness using industry characteristics indicate no significant differences. Non-response bias was tested using wave analysis, based on the observation that late respondents to mail surveys tend to be similar to non-respondents. The comparison of early and late respondents using variables on industry, age, entry mode, and nationality of CEO revealed no significant differences in response.

The partial least square (PLS) modeling approach is used (Asmussen et al., 2013; Ciabuschi et al., 2011; Vernaik et al., 2005) because this technique has advantages over Lisrel and AMOS (Hair et al., 2011). The PLS model operates with two sets of linear equations: an inner model that specifies relationships between latent variables and an outer model analyzing relationships between the latent variables and associated manifest variables. This permits the simultaneous analysis of path coefficients between latent variables and path coefficients between these variables and their constructs (Fey et al., 2009). This allows for an assessment of the reliability and validity of the measurement model, as well as an assessment of the structural model (Hulland, 1999). The PLS method is also effective in guarding against skewed distributions of manifest variables, multi-collinearity within blocks of manifest variables and between latent variables. The method also effectually deals with issues with omitted data (Cassel, Hackl and Westlund, 1999). The *t*-statistics emerging from bootstrapping procedures makes the results more reliable, as it uses repeated random samples (Vernaik et al., 2005) and the total effects include both direct and indirect effects (Albers, 2010).

Variables

The model has four main constructs: “autonomy”, “inter-organizational network relationships”, “intra-organizational network relationships”, and “performance”. Data for these constructs involved the current period and five years before. Using change over five years alleviates problems of capturing special conditions that prevail in the current time period when the respondents complete the questionnaire. This is not therefore a cross-section study. Extending the period would in principle provide an even better guide to the underlying use of networks and autonomy of

subsidiaries but previous work involving performance data reveals that a five-year time span provides more accurate information than longer periods (Peng and York, 2001). This approach also provides an explicit relationship in real time between observed scores (or manifest variables) and the latent variables (Borsboom et al., 2003).

To capture rich data, the constructs used multiple questionnaire items using five-point Likert scales, for example, respondents provided data on the number and frequency of network relationships, using a five-point Likert scale for the current situation and five years before. The latent variable then becomes an amalgamation of the changes in the number and frequency of the various organizational network relationships. In PLS, each variable has a weight (a coefficient) that reflects the importance of the manifest variable for the latent variable. The *t*-tests for the outer relations (manifest variables) indicate whether those coefficients (weights) are significant. The coefficients for the manifest variables are determined and the R-square for the inner relation maximizes the structural model.

All constructs are self-reported information and are subjective measures. This method is widely used in the literature and there is evidence that this provides reliable and valid results (Venkatraman and Ramanujam, 1986). There are difficulties in measuring the performance of TNC operations because of problems of collecting accurate, valid performance measures using questionnaires (Miller et al., 2009; Luo, 2003). Management decisions, however, are not guided solely by objective performance indicators but are likely to be influenced by the perceptions and values of managers (Thompson, 2003). Many objective financial performance indicators are, moreover, suspect because of corporate governance systems, transfer pricing and tax avoidance issues connected to company reporting procedures (Demirbag et al., 2007; Guest et al., 2003). Furthermore, using subjective measures based on an assessment of performance in relation to their competitors permits comparison of establishments across size categories and industries (Ellis, 2007). Given these reservations about objective measures, this study used subjective measures of performance.

The performance variable uses a five-item measurement frequently used in other studies (Birkinshaw et al., 2005; Gamelgaard et al., 2012): Sales Growth by Volume, Sales Growth by Value, Productivity, Customer Satisfaction, and Market Share. Respondents assessed each of these performance items relative to their market competitors on a scale of one (much better) to five (much worse). The constructs intra- and inter-organizational networks followed Holm and Pedersen (2000). These items measure the number and frequency of a subsidiary's relationships with a range of partners. Intra-organizational partners included: Buyers, Suppliers, R&D and Innovation Centers and Other Units within the TNC. Inter-organizational partners included Customers, Suppliers, Competitors, Governmental Institutions, Universities and Science Centers. Both inter and intra-organizational relationships

were measured as the number of relationships on a scale ranging from one (none) to five (many), and as the frequency of contact with networks on a scale of one (low) to five (high). Measurement of autonomy followed Young and Tavares (2004), using strategic decision-making (policy decisions) and operational decision making (tactical decisions). The measurement of strategic and operational decision-making autonomy uses approaches and measurement scales adapted from Birkinshaw and Hood (2000). The items related to strategic decision-making authority were policies on: Market Areas Supplied, Product Range, R&D and New Product Development, Production of Goods or Services, Financial Control and Human Resource Management. Areas of operational decision-making were: Marketing Activities, R&D and New Product-Development Activities; Activities related to Producing Goods or Services, Financial Management Practices and Human Resource Management Practices. For the strategic and operational decision-making items, respondents assessed the extent of their decision-making autonomy on a scale from one (exclusively by headquarters) to five (exclusively by the subsidiary). Table 1 provides the composite variables reliabilities, Cronbach's alpha values and the R², which indicate that the composite variables used in the PLS are robust.

Table 1. Composite Reliabilities, Cronbach's Alphas, and R²

	Within Greater Copenhagen/outside Greater Copenhagen*		
	Composite Reliability	Cronbach's Alphas	R ²
Autonomy	0.94/0.94*	0.93/0.93*	-
Inter-organizational networks	0.89/0.84*	0.85/0.80*	0.18/0.00*
Intra-organizational networks	0.88/0.84*	0.85/0.81*	0.56/0.41*
Performance	0.86/0.89*	0.79/0.84*	0.37/0.20*

Note: Composite above 0.70 for each construct (Fornell & Larcker, 1981). Cronbach's alpha values above 0.70 (Hulland, 1989). When using the PLS technique, one variable (in this case Autonomy) is 'locked' and R² are reported in relation to this variable.

The control variables included in the model were: host country, size (number of employees), type of industry, entry mode (greenfield, acquisition) and if the firm was some kind of headquarters. These types of control variables have been used in other PLS tests (Fey et al., 2009).

The Harmon single factor test revealed no evidence of common methods variance (Podsakoff and Organ, 1986). In response to the view that this test is not sufficient (Chang et al., 2010) and following Podsakoff et al. (2003) and Conger et al. (2000) a single common methods factor approach using a latent common method variable was created and compared with our mode. The results of this test indicated no statistically significant likelihood of common methods variance. Following the

advice of Podsakoff and Organ (1986) the questionnaire separated questions that respondents might link. Therefore, questions about performance came before questions about autonomy and networks. The construction of change variables (current and five years ago) and the use of the complex data formulations used by the techniques of PLS also help to mitigate possible problems with common methods variation (Hair et al., 2011; Siemsen et al., 2010). Based on the test results, method of constructing the questionnaire and use of PLS the results are unlikely to be subject to common methods variance.

6. Results

Examination of the general profile of subsidiaries in Denmark (Table 2) reveals no significant differences in the characteristics of subsidiaries in Greater Copenhagen with those located elsewhere in Denmark. There are also no statistically significant differences in the use of autonomy and inter and intra-organizational network relationships (Table 3). Subsidiaries in Greater Copenhagen are not in substance significantly different from those in other parts of Denmark, including the use of autonomy and network relationships. In the context of Denmark and perhaps other

Table 2. Profile of Foreign Firms (%)

		Greater Copenhagen	Outside Greater Copenhagen
Sector (Parent Company)	Manufacturing	70.0	70.2
	Service	17.8	21.0
	Others	12.2	8.8
Size (Employment)	1 – 10	39.8	39.4
	11 – 100	50.2	49.4
	>100	10.0	11.2
Activity¹	Production of Goods or Services	20.0	20.0
	Sales/Distribution	47.5	49.0
	Ancillary Service Functions	17.5	14.3
	R&D/New Product Development	2.4	2.8
	Others	12.6	13.9
Entry Mode	Greenfield Investment	72.5	71.0
	Acquisition	27.5	29.0

¹ By employment according to activity.

Chi-square tests and pair-wise T-tests reveal no significant differences in characteristics of foreign firms located in Greater Copenhagen compared to those outside.

Table 3. Networks and Autonomy¹

	Greater Copenhagen	Outside Greater Copenhagen
Inter-Organizational Relationships	3.11	2.98
Intra-Organizational Relationships	3.03	3.12
Strategic Autonomy	2.87	2.80
Operational Autonomy	3.28	3.18

¹ Based on average scores of construct items at current level.

Chi-square tests and pair-wise T-tests reveal no significant differences in characteristics of foreign firms located in Greater Copenhagen compared to those outside.

similar countries the general characteristics of subsidiaries appear to be unaffected by geographical location. Examination of how CANR relates to performance, however, reveals differences between subsidiaries located in Greater Copenhagen compared to elsewhere in Denmark.

The PLS tests of the pathways (see Figure 1) provide evidence on the three hypotheses. The findings provided support H1 for intra-organizational networks (Table 4). Intra-organizational network relationships significantly influence performance in Greater Copenhagen, but not in other locations in Denmark. Inter-organizational network relationships have, however, no significant direct effect on performance in or outside of Greater Copenhagen. There is no support for H2, as autonomy has no significant direct effects on performance in Greater Copenhagen, or in other locations (Table 4). The results therefore indicate that the direct effects of autonomy and networks on performance do not significantly differ (other than for intra-organizational network relationships) in locations in Greater Copenhagen compared to other locations in Denmark.

The results of the indirect effects (interconnections) between autonomy and network relationships and performance highlight, however, that the effect of these interconnections is in general stronger in Greater Copenhagen. This provides support for H3 (Table 4). Autonomy has significant positive effects on intra-organizational network relationships both within and outside of Greater Copenhagen. The relationship between autonomy and inter-organizational network relationships is, however, only significant in Greater Copenhagen. The link from inter to intra-organizational network relationships to performance is significant only in Greater Copenhagen. The paths from autonomy via intra and inter-organizational networks to performance are positive within and outside of Greater Copenhagen but are positive at the 1 per cent level in Greater Copenhagen and 10 per cent outside of Greater Copenhagen. The results highlight that outside of Greater Copenhagen, fewer of the interconnections between the factors in CANR are significant.

Table 4: PLS Tests

	Greater Copenhagen			Outside Greater Copenhagen		
	Original Sample	Sample Mean	t-Statistics ¹	Original Sample	Sample Mean	t-Statistics ¹
Path Coefficients						
Intra-organizational network relationships → performance	0.54	0.52	3.99***	0.25	0.24	1.13
Inter-organizational network relationships → performance	-0.00	-0.00	0.02	0.11	0.13	0.50
Autonomy → performance	0.12	0.15	0.76	0.22	0.22	1.16
Autonomy → Intra-organizational network relationships	0.29	0.30	2.47***	0.42	0.41	2.70***
Autonomy → Inter-organizational network relationships	0.42	0.42	2.85***	0.04	0.08	0.12
Total Effects						
Inter-organizational network relationships AND intra-organizational network relationships → performance	0.31	0.29	2.40***	0.23	0.25	1.26
Autonomy VIA Intra AND inter-organizational network relationships → performance	0.41	0.44	3.25***	0.34	0.33	1.89*
Inner Model t-Statistics						
	Greater Copenhagen			Outside Greater Copenhagen		
Autonomy	Intra	Inter	Performance	Autonomy	Intra	Performance
-	2.47	2.85	0.76	-	2.70	1.57
-	6.16	-	0.02	-	3.15	0.50
-	-	-	3.39	-	-	1.13

Note: ¹ = t-Statistics: Original Sample divided by Standard Error; *p<0.10, **p<0.05, ***p<0.001.

The picture that emerges from the results is that the interconnections within CANR in Greater Copenhagen are more related to performance than is the case for other locations in Denmark. The interconnection with CANR appears to help subsidiaries to find, assess, acquire and transform the potential competitive benefits available in Greater Copenhagen and this contributes to the performance of subsidiaries. These interconnections effects are at work in the CANR of foreign firms outside of Greater Copenhagen, but there are fewer significant interconnections and they tend to have less strong effects on performance. The findings indicate that the performance of subsidiaries in Greater Copenhagen are more associated with intra-organizational networks and more interactions between autonomy and networks compared to subsidiaries not located in Greater Copenhagen. This suggests that to secure and absorb the agglomeration and connectivity benefits available in Greater Copenhagen subsidiaries develop different CANR compared to those outside of this city.

7. Policy implications

The emphasis in this study on a world city (Copenhagen), which is a middle-ranking world city with good regional connectivity to Nordic countries as well other world cities, provides insights useful for a wider audience of policy makers and investment stakeholders in both developed and emerging countries. A main take-away from this investigation is that policy makers need a good understanding of the organizational systems used in internationalization processes within TNCs. These systems enable them to deliver good performance and to contribute to overall TNC objectives, competitiveness and performance (Gilmore, Andersson and Nemar, 2008; Buzdugan and Tüselmann, 2018). Good performance by subsidiaries encourages TNCs to expand and develop in host locations and good intra-organizational network relationships enhance the innovation activities of TNCs in host locations. This has implications for policies that are conducive to safeguard and/or further progress world city regions, as well as for the development of nascent or emerging world city regions.

Existing FDI policy is centred on developing the key components of agglomeration benefits of city regions and promoting these to attract TNCs (Taube and Mehmet, 2012). The findings of this study support the view that FDI policy could usefully be extended to innovations in developing business networks in host locations that encouraged subsidiaries to become active and important players in these networks (Fu et al., 2013; Ning et al., 2016). The development of appropriate inter-organizational networks by subsidiaries in their host locations could encourage spillovers of knowledge and access to assets from subsidiaries to domestic firms. The importance of intra-organizational networks for subsidiaries in world cities also suggests useful policy innovations. Subsidiaries with good inter and

intra-organizational network connections can find, access and absorb agglomeration benefits available in host locations and can effectively incorporate these benefits into the GVC objectives of TNCs. This would help domestic firms in world city locations to gain access to GVCs that could help them acquire knowledge assets from other parts of the world. The results indicate that subsidiaries in world cities with appropriate autonomy are more likely to be able to effectively manage inter and intra-organizational networks to achieve high performance. This suggests that the CANR of subsidiaries in world cities are an important factor for foreign firms to make good contributions to the development of their host locations. The findings indicate that policy could usefully be developed to encourage subsidiaries in world cities to embed in local business and to have the autonomy to be able to effectively use inter and intra-organizational networks to enhance their performance thereby encouraging further investments in the host location. Such policy is also likely to enhance the spillover of knowledge and access to GVCs to domestic firms based in world cities.

Developing world cities in underdeveloped regions to help spread the benefits of globalization across countries is evident in many countries, notably in China (Zünd and Bettencourt, 2019). World cities can also exert centripetal forces that attract the best assets, infrastructure and global connectivity (Goerzen et al., 2013). These centripetal forces may mean that policies to create world cities in poorer regions and to attract FDI to such cities could weaken the economic potential of towns and rural areas in these regions (Tomaney and Pike, 2019). The findings of this study indicate that policies to encourage subsidiaries in world cities to develop effective CANR are likely to enhance their performance. This encourages further investment and innovative activities by such subsidiaries that can enhance agglomeration benefits thereby increasing the centripetal forces of world cities. Policy that develops CANR that enhances performance could therefore encourage an upward spiral of development in world cities but with an accompanying downward spiral in towns and rural areas. This problem is evident in many countries and contributes to the development of strong anti-globalization movements that adversely affect trade and FDI (Meyer, 2017). This suggests that policy connected to developing CANR needs to take account of regional policy issues.

The findings indicate that subsidiaries not located in middle-ranked world cities are not substantially different in the activities they undertake from foreign firms in world cities. Their CANR is also similar to that of those located in such cities. The CANR of subsidiaries in non-world city locations is, however, less sophisticated. This is probably because incentive to have highly developed CANR in non-world city locations is reduced because the benefits in terms of securing high-value knowledge and assets to enhance the objectives of the TNCs are lower in these locations. This suggests that the CANR of subsidiaries in world city locations are more likely to firmly embed them in host locations, making them more location bound than subsidiaries

in non-world cities. High-level autonomy and network connections, particularly intra-organizational network connections, are important for subsidiaries to be strongly involved in innovation and the transfer of new technologies (Andersson et al., 2005; Paruchuri, 2010). The CANR of subsidiaries in world cities are more likely therefore to facilitate innovation activities. Promoting location bound activities and innovation associated with TNCs in underdeveloped regions is likely therefore to be enhanced by the development of some type of new world city in such regions. To enhance the ability of TNCs to contribute to development of new world cities in underdeveloped regions requires not only development of the conditions for agglomeration benefits and global connectivity but also to nurture CANR developments that are conducive to developing new world cities.

UNCTAD's Investment Policy Framework for Sustainable Development (UNCTAD, 2015) calls for FDI policies that are in harmony with the development goals of host countries. This implies that FDI policies should be developed that encourage the attainment of regional development goals. In the context of policies that embrace CANR, the findings of this study imply that subsidiaries located in world cities should be encouraged to link with networks in towns and rural areas near their locations. This would help to link these areas into the more dynamic activities taking place in world cities. Those subsidiaries located in towns and rural areas should be supported to develop CANR that link to domestic firms in more dynamic locations and with other parts of the parent company of the subsidiaries. Perhaps the most useful policy would be to encourage the development of CANR that helps subsidiaries in world cities to find, access and develop potential competitive advantages available in these towns and rural areas. The attraction of towns and rural areas can include: less congestion, lower costs and cheaper property prices. These locations may also offer attractive labour market conditions if unit labour costs are lower than in world cities. This is likely to be the case in lower value activities. Moving lower valued-added activities to towns and rural areas is likely to boost employment and income and could, with appropriate accompanying policies, help kick start development in such areas. Towns and rural areas also often have higher quality living conditions compared to busier and congested cities and can therefore be more attractive locations for high-valued activities that do not depend on physical proximity to secure agglomeration benefits available in world cities. Encouraging subsidiaries to develop CANR that seek to improve performance by linking to locations not in world cities may therefore help to achieve regional policy developments.

The increasing use of digital technologies also offer prospects to mitigate many of the obstacles arising from geographical location through the use of digital platforms that can organize trade, investment and services across space (Baldwin, 2011, UNCTAD, 2019). Digital business models can facilitate effective linkages over geographical space to enable meaningful participation in dynamic business environments in world cities. The ability of TNCs to contribute to these kinds of

regional policy developments is at least partially dependent of subsidiaries in dynamic places such as world cities having CANR characteristics that enable them to reach beyond their world city milieu. Developing policy aimed at encouraging CANR that embrace regional development objectives may therefore be a useful addition to policy.

Development of policy in world cities needs to take into account the wide variety of world city types (Beaverstock et al., 1999 and 2000, Taylor, 1997). Industries have diverse characteristics that require different types of locations (Beaverstock et al., 2002; Dicken et al., 2001; Jones, 2007). These factors imply that a variety of types of world city exist that have different focuses with a wide range of clustering of sectors, industries and sub-industries and an increasing variety of business services and support activities. This highlights the possibility that subsidiaries in the different types of world cities may require CANR to be tailored to the conditions that prevail in the wide variety of economic conditions in such cities. Several types of economic conditions in a variety of world cities have been identified (Trujillo and Parilla, 2016). This suggests that it is possible that there are different characteristics of CANR associated with good performance in various types of city. The development of digital technologies is also encouraging the expansion of specialization in world cities leading to increasing diversity in the types of such cities (Eden, 2016; UNCTAD, 2019). The results of this study suggest that policy needs to address not only the asset, infrastructure and global connectivity in a wide variety of world city types, but that policies are also required that foster appropriate CANR in the subsidiaries located in these diverse types of world cities.

An important development requiring examination is to assess the ability of emerging economy TNCs to develop CANR that can secure the potential advantages available in world cities. These TNCs are normally in the early stages of development and are often seeking to acquire know-how to enable them to operate effectively at the high-value end of GVC (Guillén and García-Canal, 2009; Luo and Rui, 2009). They also frequently lack experience of dealing with economic and institutional distance and commonly have different FSA and country-specific advantages compared to TNCs from advanced economies (Luo and Tung, 2007). These factors lead to latecomer disadvantages that the TNCs seek to reduce by internationalizing (Mathews, 2012). Emerging economy TNCs may, however, have some latecomer advantages arising from the development of innovative approaches used to overcome the liabilities of “emergingness” that they face (Madhok and Keyhani, 2012; Wu et al., 2010). Emerging economy TNCs are likely to have strategic and operational objectives that are different from advanced economy TNCs’. In these circumstances, they may have a different approach to creating and developing CANR that can fulfil their objectives. This poses a policy challenge to help develop CANR in such subsidiaries that allows them to embed and contribute to the development of world cities and to secure the strategic and operational objectives of their parent companies.

7. Conclusion

The findings of this study provide some key take-aways for policy. The characteristics of CANR in subsidiaries in world cities are important for their performance and therefore affect the likelihood that they will expand and deepen their activities in such cities. Policy that helps to develop appropriate CANR is therefore likely to be helpful for the effective creation and evolution of world cities. World cities face challenges from changes in economic, technological, social and political environments that require firms to adapt to these changes. The results of this study underscore the need to include policy to help the development of CANR in subsidiaries to the extent that they contribute effectively to key issues related to how firms influence the creation and development of world cities and their adjustment to fast changing environments. Failure to adopt and develop policy to secure the appropriate evolution of CANR may undermine the performance of subsidiaries thereby putting at risk the development or even the continuing presence of TNCs in world cities. Policy innovations that encourage the development of appropriate CANR in subsidiaries in world cities that can help to achieve key economic and social objectives, such as regional development objectives, are also likely to be helpful to achieve such objectives. This would also help to address concerns about TNCs contributing to economic inequality that can hinder the ability of TNCs to embed in the social and political milieu in host locations and come to be regarded as valuable partners in the process of spreading the benefits of economic activity in world cities.

The findings of this study, based on only one type of city in one country, need to be extended by research to discover the key characteristics of CANR that delivers good performance in different types of world cities and in the wide variety of countries in which TNCs locate. This would help to inform appropriate policy development for CANR in the diverse milieus in which world cities exist, or are being developed. This study indicates the need for the development of a CANR aspect in policy concerning FDI in world cities. It does not, however, provide any indication on the ways that policy makers could encourage the development of effective policy in this area. Conducting case studies and experiments on how policy can affect TNCs to embed in their host locations in world cities would be helpful to provide knowledge on how to develop effective policy in this area. This would enable policy to emerge that can encourage TNCs to become important and effective agents in creating and sustaining world cities. This should include how subsidiaries can help to address a variety of social and political objectives that could alleviate perceptions that TNCs contribute to economic inequality and other social and political problems associated with globalization.

References

- Albers, S. (2010). PLS and success factor studies in marketing. *Handbook of partial least squares*, 409-425.
- Ambos, B., Asakawa, K., & Ambos, T. 2011, "A dynamic perspective on subsidiary autonomy", *Global Strategy Journal*, 1, 301-316.
- Andersson U, Björkman I, & Forsgren M, (2005). "Managing subsidiary knowledge creation: the effect of control mechanisms on subsidiary local embeddedness" *International Business Review*, 14, 521-538.
- Andersson,U., Forsgren, M., & Holm, U., (2001). "Subsidiary Embeddedness and Competence Development in MNCs A Multi-Level Analysis", *Organization Studies*, 22, 1013-1034.
- Andersson, U., Bjorkman, I., & Forgren, M. (2005). "Managing subsidiary knowledge creation: The effect of control mechanisms on subsidiary local embeddedness", *International Business Review*, 14(5), 521-538.
- Andersson,U., Forsgren, M., & Holm, U. (2007). "Balancing subsidiary influence in the federative MNC: a business network view", *Journal of International Business Studies*, 38, 802–818.
- Aranya, R. (2008). "Location theory in reverse? Location for global production in the IT industry of Bangalore", *Environment and Planning A*, 40, 446-463.
- 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.
- A.T Kearney (2019). World Cities Report. <https://www.kearney.com/global-cities/2019>
- Baldwin, R. (2011). "21st Century Regionalism: Filling the Gap between 21st Century Trade and 20th Century Trade Rules", CEPR Policy Insight No. 56. London: Centre for Economic Policy Research.
- Bartsch, V., & Ebers, M. (2011). "The Value of Intra-organizational Social Capital: How it Fosters Knowledge Transfer, Innovation Performance, and Growth", *Organization Studies* 32(2) 157–185.
- Beaverstock, J. V. (2004). "'Managing across borders': knowledge management and expatriation in professional service legal firms", *Journal of Economic Geography*, 4(2), 157-179.
- Beaverstock, J. V., Smith, R.G., & Taylor, P.J. (1999). A roster of world cities. *Cities*, 16, 445-458.
- Beaverstock, J. V., Smith R. G. & Taylor, P. J. (2000). "World-city network: a new metageography?", *Annals of the Association of American Geographers*, 90, 123–134.
- Beaverstock, J.V., Doel, M.A., Hubbard, P.J. & Taylor, P.J. (2002). "Attending to the world: competition, cooperation and connectivity in the world city network", *Global Networks*, 2, 111-132.
- Birkinshaw J, & Hood N. (2000). "Characteristics of foreign subsidiaries in industry clusters", *Journal of International Business Studies*, 31, 141-154

- Birkinshaw J, Hood N, & Young S. (2005). "Subsidiary entrepreneurship, internal and external competitive forces, and subsidiary performance" *International Business Review* 14, 227-248.
- Borsboom, D., Mellenbergh, G. J., & Van Heerden, J. (2003). The theoretical status of latent variables. *Psychological Review*, 110(2), 203.
- Buzdugan, S.R. & Tüselmann, H. (2018). "Making the most of FDI for development: 'new' industrial policy and FDI deepening and upgrading", *Transnational Corporations*, 25(1), 1-22.
- Cassel, C., Hackl, P., & Westlund, A. H. (1999). "Robustness of partial least-squares method for estimating latent variable quality structures", *Journal of Applied Statistics*, 26(4), 435-446.
- Chang S, van Witteloostuijn A, & Eden, L. (2010). "From the Editors: Common Method Variance in International Business Research", *Journal of International Business Studies*, 41, 178-184.
- Chiao, Y. C., & Ying, K. P. (2013). "Network effect and subsidiary autonomy in multinational corporations: An investigation of Taiwanese subsidiaries", *International Business Review*, 22, 652-662.
- Ciabuschi, F., Dellestrand, H., & Martín, O. M. (2011). "Internal embeddedness, headquarters involvement, and innovation importance in multinational enterprises", *Journal of Management Studies*, 48(7), 1612-1639.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 128-152.
- Cook, G. & Pandit, N. (2018). Cities and International Business, 227-241, in *The Routledge Companion to the Geography of International Business* (Ed by Cook, G., Johns, J., McDonald, F., Beaverstock, J & Pandit, N.). Routledge, London.
- Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior*, 747-767.
- Demirbag M, Tatoglu E, & Glaiser K, (2007). "Factors influencing the perceptive performance: The case of Western FDI in an emerging market" *International Business Review* 16, 310-36.
- Derudder, B., & Witlox, F. (2010). World cities and global commodity chains: an introduction. *Global Networks*, 10, 1-11.
- Derudder, B., Taylor, P.J., Faulconbridge, J., Hoyer, M., & Pengfei, N. (2018). "Strategic cities within global urban networks", 242-257 in *The Routledge Companion to the Geography of International Business* (Edited by Cook, G., Johns, J., McDonald, F., Beaverstock, J & Pandit, N.). Routledge, London.
- Diez J, & Bergerô M. (2005). "The role of multinational corporations in metropolitan innovation systems: empirical evidence from Europe and Southeast Asia", *Environment and Planning A*, 37, 1813-1835.
- Dicken, P., Kelly, P. F., Olds, K., & Yeung, H. (2001). "Chains and networks, territories and scales: Towards a relational framework for analyzing the global economy", *Global Networks*, 1, 89-112.

- Dillman, D. A. (1991). "The design and administration of mail surveys", *Annual Review of Sociology*, 17(1), 225-249.
- Dörrenbächer, C., & Gammelgaard, J. (2016). "Subsidiary initiative taking in multinational corporations: the relationship between power and issue selling", *Organization Studies*, 37(9), 1249-1270.
- Drejer I, Kristensen F, & Laursen K. (1999). "Cluster studies as a basis for industrial policy: the case of Denmark", *Industry and Innovation*, 6, 171-190.
- Duranton, G., & Puga, D. (2004). Micro-foundations of urban agglomeration economies. *Handbook of Regional and Urban Economics*, 4, 2063-2117.
- Elango, B. (2009). "Minimizing effects of 'liability of foreignness': Response strategies of foreign firms in the United States", *Journal of World Business*, 44(1), 51-62.
- Ellis, P. D. (2007). "Distance, dependence and diversity of markets: Effects on market orientation", *Journal of International Business Studies*, 38, 374-386.
- Eden, L. (2016). *Multinationals and Foreign Investment Policies in a Digital World*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2016. www.e15initiative.org/
- Fey, C. F., Morgulis-Yakushev, S., Park, H. J., & Björkman, I. (2009). "Opening the black box of the relationship between HRM practices and firm performance: A comparison of MNE subsidiaries in the USA, Finland, and Russia", *Journal of International Business Studies*, 40(4), 690-712.
- Frost T, Birkinshaw J., & Ensign P. (2002). "Centers of excellence in multinational corporations", *Strategic Management Journal*, 23, 997-1018.
- Fu, W., Diez, J.R., Schiller, D. (2013). "Interactive learning, informal networks and innovation: Evidence from electronics firm survey in the Pearl River Delta, China", *Research Policy* 42(4), 635-646.
- GaWC (2018). <https://www.lboro.ac.uk/gawc/world2018t.html>
- Gammelgaard, J., McDonald, F., Tüselmann, H.J., Dörrenbächer, C. & Stephan, A. (2012). "The impact of changes in subsidiary autonomy and network relationships on performance", *International Business Review*, 20, 1158-1172.
- Gammelgaard, J., & McDonald, F. (2018). The firm as a differentiated network and economic geography, 297-313 in *The Routledge Companion to the Geography of International Business* (Ed by Cook, G., Johns, J., McDonald, F., Beaverstock, J & Pandit, N.). Routledge, London.
- Gilmore, E. Andersson, U. & Nemar, N. (2018). "How subsidiaries influence innovation in the MNE value chain", *Transnational Corporations*, 25(1), 73-100.
- Goerzen, A., Asmussen, C.G., & Nielsen, B.B. (2013). "Global cities and multinational enterprise location strategy", *Journal of International Business Studies*, 44, 427-450.
- Guest, D. E., Michie, J., Conway, N., & Sheehan, M. (2003). "Human resource management and corporate performance in the UK", *British Journal of Industrial Relations*, 41(2), 291-314.
- Guillén, M. F., & García-Canal, E. (2009). "The American model of the multinational firm and the 'new' multinationals from emerging economies", *The Academy of Management Perspectives*, 23(2), 23-35.

- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
- Hansen, T., Winther, L., & Hansen, R. F. (2014). "Human capital in low-tech manufacturing: The geography of the knowledge economy in Denmark", *European Planning Studies*, 22(8), 1693-1710.
- Harzing, A. W. (2000). "Cross-national industrial mail surveys: why do response rates differ between countries?", *Industrial Marketing Management*, 29(3), 243-254.
- Harzing, A. W., & Noorderhaven, N. (2006). "Knowledge flows in MNCs: An empirical test and extension of Gupta and Govindarajan's typology of subsidiary roles", *International Business Review*, 15(3), 195-214.
- Henderson, J., Dicken, P., Hess, M., Coe, N., & Yeung, H. (2002). "Global production networks and the analysis of economic development", *Review of International Political Economy*, 9, 436-464.
- Holm U. & Pedersen T. (2000), *The Emergence and Impact of MNC Centres of Excellence – A Subsidiary Perspective*, MacMillan Press, Basingstoke
- Holm U, Malmberg A., & Sölvell Ö. (2003). "Subsidiary impact on host-country economies – the case of foreign-owned subsidiaries attracting investment into Sweden", *Journal of Economic Geography*, 3, 389-408.
- Hospers G. (2003). "Creative cities-breeding places in the knowledge economy", *Knowledge, Technology and Policy*, 16, 143-162.
- Hulland, J. (1999). "Use of partial least squares (PLS) in strategic management research: A review of four recent studies", *Strategic Management Journal*, 195-204.
- Iammarino, S., McCann, P., & Ortega-Argilés, R. (2018). "International business, cities and competitiveness: recent trends and future challenges", *Competitiveness Review: An International Business Journal*, <https://doi.org/10.1108/CR-10-2017-0070>, Innovation Cities Index (2019) <https://www.innovation-cities.com/city-rankings/>,
- Innovative Cities Program (2015) <http://www.innovation-cities.com/innovation-cities-index-2015-global/9609>
- 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.
- Johnson, W. H., & Medcof, J. W. (2007). "Motivating proactive subsidiary innovation: Agent-based theory and socialization models in global R&D", *Journal of International Management*, 13(4), 472-487.
- Jones A, (2007). " 'More than 'managing across borders?' the complex role of face-to-face interaction in globalizing law firms", *Journal of Economic Geography* 7, 223-246
- Kawai, N., & Strange, R. (2014). "Subsidiary autonomy and performance in Japanese multinationals in Europe", *International Business Review*, 23, 504-515.
- Kilroy, A.F.L., Mukim, M, & Negri, S. (2015). *Competitive cities for jobs and growth: what, who, and how (English)*. Competitive cities for jobs and growth. Washington, DC: World Bank Group. <http://documents.worldbank.org/curated/en/902411467990995484/Competitive-cities-for-jobs-and-growth-what-who-and-how>.

- Kitson M, Martin R, & Tyler P. (2004). "Regional competitiveness: an elusive yet key concept", *Regional Studies*, 38, 991-999
- Leff, S. & Petersen, B. (2015). Beyond the scorecard: understanding global city rankings. <https://www.thechicagocouncil.org/sites/default/files/BeyondtheScorecardReport.pdf>
- Liebeskind, J. P. (1996). "Knowledge, strategy, and the theory of the firm", *Strategic Management Journal*, 17(S2), 93-107.
- Lotz P. (1993). "Demand as a driving force in medical innovation", *International Journal of Technology Assessment in Health Care*, 9, 174-188.
- Luo Y. (2003). "Market-seeking MNEs in an emerging market: how parent-subsidiary links shape overseas success", *Journal of International Business Studies*, 34, 290-309.
- Luo, Y., & Tung, R. L. (2007). "International expansion of emerging market enterprises: A springboard perspective", *Journal of International Business Studies*, 38(4), 481-498.
- Ma, X., & Ma, X., Delios, A., & Lau, C. M. (2013). "A new tale of two cities: Japanese FDIs in Shanghai and Beijing, 1979-2003", *International Business Review*, 16(2), 207-228.
- Madhok, A., & Keyhani, M. (2012). "Acquisitions as entrepreneurship: asymmetries, opportunities, and the internationalization of multinationals from emerging economies", *Global Strategy Journal*, 2(1), 26-40.
- Mans, U. (2013). "Revisiting city connectivity", *Journal of Economic Geography*, 14(1), 155-177.
- Maskell P, 1986, "Industriens Flugt fra Storbyen: Årsager og Konsekvenser", Copenhagen: Handelshøjskolens Forlag
- Mathews, J.A. (2017). "Dragon multinationals powered by linkage, leverage and learning: A review and development", *Asia Pacific Journal of Management* 34(4), 769-775
- Meyer, K. (2017). "International business in an era of anti- globalization", *Multinational Business Review*, 25(2), 78-90.
- McCann, P., & Acs, Z.J. (2011). "Globalization: Countries, Cities and Multinationals", *Regional Studies*, 45, 17-32
- McDonald, F., Warhurst, S., & Allen, M. (2008). "Autonomy, embeddedness, and the performance of foreign owned subsidiaries", *Multinational Business Review*, 16, 73-92.
- Miller, D., Lee, I., Chang, S., & Le Betron-Miller, I. (2009). "Filling the institutional void: The social behaviour and performance of family vs. non-family technology firms in emerging markets", *Journal of International Business Studies*, 40, 802-817
- Mudambi, R. (2011). "Hierarchy, coordination, and innovation in the multinational enterprise", *Global Strategy Journal*, 1(3-4), 317-323.
- Mudambi, R., & Swift, T. (2011). "Leveraging knowledge and competencies across space: The next frontier in international business", *Journal of International Management*, 17(3), 186-189.
- Nachum, L., & Wymbs, C., (2007). "The Location and Performance of Foreign Affiliates in Global Cities", in Alan M. Rugman (ed.) *Regional Aspects of Multinationality and Performance (Research in Global Strategic Management, Volume 13)*, Emerald Group Publishing Limited, 221-259.

- Nielsen P, Hansen C, & Nielsen M. (2009). *Udenlandske Firmaer i Danmark* (Statistics Denmark, Copenhagen)
- Ning, L., Wang, F., & Jian, L. (2016). "Urban innovation, regional externalities of foreign direct investment and industrial agglomeration: Evidence from Chinese cities", *Research Policy*, 45(4), 830-843
- Paruchuri, S. (2010). "Intraorganizational Networks, Interorganizational Networks, and the Impact of Central Inventors: A Longitudinal Study of Pharmaceutical Firms", *Organization Science* 21(1), 63-80
- Peng M, & York A. (2001). "Behind intermediary performance in export trade: Transactions, agents, and resources", *Journal of International Business Studies*, 32, 327-46
- Pitelis, C. N., & Teece, D. J. (2010). "Cross-border market co-creation, dynamic capabilities and the entrepreneurial theory of the multinational enterprise", *Industrial and Corporate Change*, 19(4), 1247-1270.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y. & Podsakoff, N. P. (2003). "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, 88(5), 879-903.
- Podsakoff P, & Organ D. (1986). "Reports in organizational research: problems and prospects" *Journal of Management*, 12, 531-45
- Sassen, S. 2013. *Cities in a World Economy*, 4th ed. Thousand Oaks, CA: Pine Forge/Sage.
- Siemsen, E., Roth, A., & Oliveira, P. (2010). "Common method bias in regression models with linear, quadratic, and interaction effects", *Organizational Research Methods*, 13(3), 456-476.
- Sigler, T. J., & Martinus, K. (2016). "Extending beyond 'world cities' in World City Network (WCN) research: Urban positionality and economic linkages through the Australia-based corporate network", *Environment and Planning A*, 0308518X16659478.
- Sridhar, K.S., Wan, G. (2010). "Firm location choice in cities: Evidence from China, India, and Brazil", *China Economic Review*, 21(1), 113-122.
- Steinfeld C, & Scupola A, 2008, "Understanding the role of ICT networks in a biotechnology cluster: an exploratory study of Medicon Valley", *The Information Society*, 24, 319-333.
- Storper, M. (2013). *Keys to the City: How Economics, Institutions, Social Interaction, and Politics Shape Development*, New Jersey: Princeton University Press.
- Storper M, & Venables A. (2004). "Buzz: face-to-face contact and the urban economy", *Journal of Economic Geography*, 4, 351-376.
- Taube, M., & Mehmet, O. (2002). "Main issues on foreign investment in China's regional development: Prospects and policy challenges", *Foreign Direct Investment in China: Challenges and Prospects for Regional Development*, OECD, Paris
- Taylor, P. J. (1997). "Hierarchical tendencies amongst world cities: a global research proposal" *Cities*, 14, 323-332.
- Teece, D. (1998). "Capturing value from knowledge assets: the new economy, markets for know-how and intangible assets", *California Management Review*, 40, 55-79.
- Teece, D. (2000). "Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context", *Long Range Planning*, 33, 35-54.

- Timmermans, B., & Boschma, R. (2014). "The effect of intra-and inter-regional labour mobility on plant performance in Denmark: the significance of related labour inflows", *Journal of Economic Geography*, 14, 289-311.
- Therborn, G. (2011). "End of a paradigm: the current crisis and the idea of stateless cities", *Environment and planning A*, 43(2), 272-285.
- Thompson E. (2003). "A grounded approach to identifying national competitive advantage: a preliminary exploration", *Environment and Planning:A*, 35, 631 – 657.
- Turok I. (2004). "Cities, regions and competitiveness", *Regional Studies*, 38, 1069-1083.
- Venkatraman N, & Ramanujam V. (1986). "Measurement of Business Performance in Strategy Research: A Comparison of Approaches", *Academy of Management Review*, 11, 801-814.
- Vernaik, S., Midgley, D.F., & Devinney, T.M. (2005). "Dual paths to performance: the impact of global pressures on MNC subsidiary conduct and performance", *Journal of International Business Studies*, 36, 655–675.
- Vinodrai, T. (2015). "Constructing the creative economy: design, intermediaries and institutions in Toronto and Copenhagen", *Regional Studies*, 49(3), 418-432.
- UNCTAD (2015). *Investment Policy Framework for Sustainable Development*, Geneva, United Nations. http://unctad.org/en/PublicationsLibrary/diaepcb2015d5_en.pdf.
- UNCTAD (2019). *Digital Economy Report*, Geneva: United Nations. https://unctad.org/en/PublicationsLibrary/der2019_en.pdf
- Wang, D. T., Zhao, S. X., Gu, F. F., & Chen, W. Y. (2011). "Power or market? Location determinants of multinational headquarters in China", *Environment and Planning A*, 43, 2364-2383.
- Winther L, & Hansen H. (2006). "The economic geographies of the outer city: industrial dynamics and imaginary spaces of location in Copenhagen" *European Planning Studies* 14 1387-1406.
- Young S. & Tavares A. (2004). "Centralization and Autonomy: Back to the Future", *International Business Review*, 13, 215-237.
- Zahra, S. A., & George, G. (2002). "Absorptive capacity: A review, reconceptualization, and extension", *Academy of Management Review*, 27(2), 185-203.
- Zaheer, S. (1995). "Overcoming the liability of foreignness", *Academy of Management Journal*, 38, 341-363
- Zhao, S. X., Cai, J., & Zhang, L. (2005). "Asymmetric information as a key determinant for locational choice of MNC headquarters and the development of financial centers: A case for China", *China Economic Review*, 16, 308-331.
- Zünd D., and Bettencourt L.M.A. (2019). Growth and development in prefecture-level cities in China. *PLoS ONE* 14(9): e0221017. <https://doi.org/10.1371/journal.pone.0221017>

Substituting expats with locals: TNCs and the indigenization policies of Saudi Arabia

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Owing to rising unemployment among Saudi nationals, the Kingdom of Saudi Arabia (KSA) has instituted Saudization, a localization policy that strives to induce the employment of more Saudi nationals in the private sector. A major gap in the literature is the lack of empirical investigation regarding the relationships between indigenization and the underlying principles of its process. This study seeks to fill this gap. The study assesses the success or otherwise of the Saudization initiative empirically and uncovers several features. It finds that TNCs that experience the external pressures to “localize” their workforce, and those that wish to enhance their social legitimacy, are more likely to comply with Saudization. Furthermore, TNCs do not believe that the process of localization provides them with economic gains. Legal coercion to adhere to the Saudization initiative turns out to be a highly significant instrument in making TNCs adhere to the localization process. The study also finds that neither age nor the size of the firm have an impact on the Saudization programme. Implications for theory and practice are drawn out.

Keywords: hierarchical regressions, indigenization, KSA (Kingdom of Saudi Arabia), transnational corporations, work force localization

1. Introduction

The concept of workforce localization, or indigenization as it is sometimes referred to, is the recruitment and development of local employee skills and capabilities and the delegation of decisions to them, with the final objective to replace foreign workers with locals (Wong and Law, 1999). Indigenization policies have been a top priority for many countries in the Gulf States (Haak-Saheem and Brewster, 2017). Some governments have acted firmly and spared no efforts in forcing private organizations to implement indigenization policies. The urgency behind these

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measures is owed to rising unemployment among locals. Although indigenization policies apply to all private firms, transnational corporations (TNCs), in particular, have been pressurized to apply the regulations owing to the high rate of failed foreign assignments and the costs associated with such cases (see Haak-Saheem et al., 2016; Collings et al., 2007; Law et al., 2004; Oddou, 1991). It has been found that when all expenses are accounted for, international assignments cost more than five times the expatriate's home salary (see Collings et al., 2007; Selmer, 2001; Shaffer and Harrison, 1998; Shaffer et al., 1999).

However, some TNCs opt not to implement localization policies. The unavailability of skilled local workers and expatriates' knowledge of the parent company culture are two of the main reasons for firms' decision to retain expatriate workers (Haak-Saheem and Brewster, 2017; Collings, 2007; Law et al., 2004). TNCs may opt to preserve the central and operational control of their subsidiaries for strategic reasons through the appointment of expatriates – especially in managerial positions (Child and Yan, 1999; Wong and Law, 1999). However, most TNCs have no choice but to implement indigenization policies – especially in contexts where localization is regarded as a requirement of the host country's institutional environment. TNCs operating in foreign markets must adapt to such an environment through compliance with the norms and demands of the host government and society (Forstenlechner and Mellahi, 2011; Kostova and Roth, 2002). This enables TNCs to overcome the liability of foreignness by gaining external legitimacy from the host environment (Hymer, 1976; Chan and Makino, 2007; Forstenlechner and Mellahi, 2011). External legitimacy promotes TNCs' status in the host country, enables access to important resources, and enhances their ability to compete (Baum and Oliver, 1991).

Despite the importance of indigenization for the host economy and its potential impact on TNCs' performance, research in this area is limited (Sadi and Henderson, 2010; Haak-Saheem et al., 2016). Existing literature largely centres on issues of rationale and the barriers imposed by of indigenization policies. *Hence, a major gap in the literature is the lack of empirical investigation into the relationship between indigenization and the underlying principles of its process.* Present indigenization research lacks multidimensional models that can identify the factors associated with the success of such policies (see Forstenlechner and Mellahi, 2011; Law et al., 2009). Hence, this article closely examines indigenization policies and their implementation by TNCs in Saudi Arabia and delivers a number of interesting implications for theory and practice.

To fulfil aforementioned gaps in the literature, we have addressed the following research questions: (1) How do TNCs respond to institutional pressures? Are TNCs that perceive localization pressure as a legitimate directive from the government more successful in substituting expatriates with locals than those that do not

perceive this to be a legitimate directive? (2) Do TNCs that expect economic gains from following localization directives fare better than those that do not expect such gains? (3) What is the role of legal coercion in localization success?

The paper is structured as follows. First, we highlight the main elements of the existing literature on indigenization policies in general, and in Saudi Arabia in particular. Second, we discuss a specific set of institutional determinants that may have an impact on workforce indigenization and accordingly develop our hypotheses. Third, we present our methods, followed by the results. Finally, conclusions are drawn, and the implications for theory and practice are set out.

2. Literature reference on indigenization policies

Whilst the localization of human resources is considered a significant issue for many countries and TNCs, there is limited work on this topic (Law et al., 2009). From the limited research available, two main areas of focus have emerged. The first investigates the rationale behind indigenization and enquires whether it is beneficial to both countries and organizations (e.g., Selmer, 2004; Forstenlechner and Mellahi, 2011). The rationale behind the localization of workforce can be classified into governmental and organizational. The governmental rationale includes concerns related to local unemployment rates and the desire to lessen the socio-economic effect of over-dependence on foreign workers in the labour market. Organizational rationales pertain to cost-saving, solving the problems associated with the settling down of expatriate workers in the host country, and better relations with local customers and the host government. The second area identifies the factors affecting the outcomes of the localization process (e.g. Fryxell et al., 2004; Bhanugopan and Fish, 2007; Mellahi, 2007; Law et al., 2009). They are examined below.

2.1. Factors affecting indigenization

A number of studies on indigenization have focused on identifying the factors affecting its process (e.g. Law et al., 2009; Bhanugopan and Fish, 2007; Harry, 2007; Whiteoak et al., 2006; Wong and Law, 1999). Such factors fall into three categories: organizational factors, characteristics of the local workforce, and factors related to the host government's role.

2.1.1. Organizational factors

With regard to organizational factors, earlier studies identified organizational commitment towards employing local workers as the major factor influencing the success of any localization programme. Moreover, an elaborate study identifying successful localization factors, conducted by Kaosa-ard (1991), suggests that

such factors include the human resource base of the host country, the age and corporate strategy of a TNC, the development gap between the home and host countries, and the type of industry concerned. On the other hand, Selmer (2004) has argued that certain localization-based human resource (HR) practices, such as recruitment, selection, training, and the retention of potentially promising local employees, are crucial elements in successful localization. In the context of TNCs, Law et al., (2009) found that the high degree of autonomy of a subsidiary vis-a-vis its parent and the strategic role of the local HR function is positively related to localization success. Moreover, top management commitment to localization has a positive impact on the success of the localization process. Also, the findings support the importance of certain human resource management (HRM) practices, such as job assignment, appraisal, compensation, and repatriation of expatriates, promotion, training and retention of local managers.

2.1.2. Characteristics of local workers

There is agreement amongst scholars that negative characteristics of local workers affect the outcome of localization policies (see Forstenlechner, 2010; Forstenlechner and Mellahi, 2011). These characteristics include low skills levels, low performance compared with expatriates, negative behavioural attitudes toward working under demanding work systems, and preference to work for the government owing to job security, and better compensation and benefits (Singh et al., 2019; Haak-Saheem and Brewster, 2017; Al-Lamki, 1998). In a detailed study, Bhanugopan and Fish (2007) identify among the main obstacles to successful localization some characteristics of the local workforce, such as a relatively low level of performance and a lack of training and development. Culture is an additional factor preventing organizations from implementing localization programmes. Cultural values influence individuals in their daily lives – especially in their work-related matters. For example, in African and Middle Eastern countries, the extended family system compels local employees to settle family issues first, which affects their career plans and paths (Mellahi, 2007; Bhanugopan and Fish, 2007).

2.1.3. Factors related to the host government's role

Governments play a central role in localization policies. In many countries facing high unemployment, governments tend to act as drivers in encouraging, planning, implementing and monitoring job localization policies. Mellahi (2007) reports that such an approach might exclude or minimize the participation of private organizations in terms of the decision-making process – particularly as regards localization policy implementation. Importantly, this makes localization plans unrealistic and thus decreases the commitment of firms toward localization policies. Furthermore, corruption in government bodies tasked with implementing

localization programmes might hinder the overall effectiveness of adoption. For example, connections with powerful government officials in some Asian and African countries have enabled some private firms to avoid compliance with localization regulations, whilst other firms are sanctioned for not complying (Whiteoak et al., 2006). It should be noted, as claimed by Hoskisson et al., (2002), that this can happen as a result of inadequate law enforcement in developing countries. In such contexts, enforcing localization through laws and regulations is not adequate to influence private firms to adopt localization. The arbitrariness of law enforcement, combined with a lack of government transparency, may cause firms to respond to localization requirements through illegal practices. For example, Al-Qudsi (2006) points out that localization laws force some employers to utilize the fake employment of nationals, employing them only “on paper”, just to avoid government penalties.

3. Rationale of indigenization policy in the Kingdom of Saudi Arabia

In the Kingdom of Saudi Arabia, principally owing to rising unemployment among Saudi nationals, the drive towards localization (often called “Saudization”) has been particularly strong. The labour market in Saudi Arabia is characterized by a high presence of foreign workers, higher levels of unemployment amongst nationals, and low female participation in the labour market. In fact, the prominent presence of expatriates in the labour market has contributed to the unemployment problem amongst Saudis. In 2014, the unemployment rate was estimated at around 12 per cent of the total Saudi labour force (SAMA, 2015), although other estimates place the figure much higher. Foreign workers constitute more than 75 per cent of the total workforce and 86 per cent of the workforce in the private sector (SAMA, 2015). Other sources in the popular media and business press consider that official sources present a glossed-over view of just how bad unemployment is amongst Saudi nationals. For instance, whilst official figures on unemployment hover at around the 10-12 per cent mark, the reality is that unemployment amongst Saudi nationals is more likely higher (see Hardy, 2006). Hence, the government’s objective was to boost the percentage of locals in the workforce to reach 75 per cent of the total workforce by 2020 (Ministry of Labour Report, 2010). To achieve this aim, the government has acted firmly in compelling private organizations to implement the indigenization policy. Companies are threatened with closure and severe financial penalties if they fail to implement the policy.

There is a particular strain of research that focuses on the problems of expatriates’ employment as a basis for launching localization policies. Due to the shortage of local staff, private firms have been forced to employ expatriates from different countries; yet, it has been alleged that a significant percentage of expatriates

do not do their jobs properly, and therefore dismissals are common. The resulting turnover has subsequently caused private firms enormous direct and indirect costs (Yavas, Luqmani and Quraeshi, 1990). That being said, it seems that expatriates who fail to perform effectively have concerns regarding their salaries, rewards, job security, and overall adjustment to Saudi culture (Bhuiyan and AlJabri, 1996). Mellahi and Wood (2001) further examine HRM policies and practices in Saudi Arabia and provide a clear picture of how the socio-economic and political contexts of Saudi Arabia shape HR policies and practices. They claim that the labour market structure and the localization policy are key factors affecting the kinds of HR practices that companies choose to employ. They compare the characteristics of Saudi employees with expatriates and stress the preference of Saudis to work in the public sector.

4. Institutional theory, localization and TNCs

Institutional theory is “policymaking that emphasizes the formal and legal aspects of government structures” (Kraft and Furlong, 2017). A corollary to this definition, one of many on institutional theory, is that legally structured government institutions formulate rules and regulations that social actors are directed to follow. The study of institutions and their interface with the society has a long history beginning with the earlier writings of Veblen (1898), Mitchell (1967) and more recently Scott (1995, 2001). The “old institutional theory” is embedded in the premise of the rational-actor model of classic economics, while the “new institutional theory” seeks cognitive and cultural explanations for social actors’ behaviours (Powell and DiMaggio, 1983, 2012; Scott, 1995, Meyer and Rowan, 1977). It has been pointed out that in order to survive, organizations must conform to the rules and regulations, as institutional isomorphism would earn organizations legitimacy (Dacin, et. al., 2007, Deephouse, 1996, Suchman, 1995). The institutional theory, as defined by Scott (2001), describes the forces that pressure companies and shape their internal and external behaviour, while the framework of Oliver (1991, 1997) provides the logic behind their choices. These tenets of institutional theory are of particular relevance in the context of the localization efforts made by the Saudi government.

The framework provided by institutional theory can help explain the success or failure of the process of localization in general, and in Saudi Arabia in particular. There are more than 200 TNCs present in Saudi Arabia at the moment, and their number is likely to increase in the future. The success of the employment localization amongst TNCs is of particular importance for the success of localization policies in the country overall, as TNCs do not affect the process through direct employment only, but they influence the labour market as well, through the movement of employees from one firm to another and through their investment in upgrading the skills of local staff.

Applied to the process of Saudization amongst TNCs, institutional forces translate into the following assumptions: (a) TNC subsidiaries in Saudi Arabia engage in staff localization in order to conform to HRM regulations for employing local labour; (b) TNCs' subsidiaries adjust their HRM strategies according to the values, norms and practices that prevail in Saudi Arabia, whilst (c) the cognitive forces include the actual beliefs of their executives regarding the benefits or threats of staff localization for business. These cognitive beliefs may lead to TNCs engaging in or avoiding localization. The debate around the latter issue is related to the advantages and disadvantages of localization. The literature, however, provides more support for the advantages of job localization for a company's performance (Law et al., 2009; Haak-Saheem et al., 2016). As a result, further analysis is based on this assumption. The application of Oliver's framework (1991, 1997), detailed below, is focused on the identification of the key determinants of firms' strategic choices that result in localization success (Law et al., 2009).

5. Institutional determinants of localization success and hypotheses

The institutional determinants of job localization in Saudi Arabia are approached through the key conceptual note of Oliver (1991) and her theoretical framework for studying the relationship between institutional pressures and *companies' strategic responses* to these pressures. This framework has been tested through a number of studies in the past, such as those of Goodstein (1994), Ingram and Simons (1995), Etherington and Richardson (1994), Milken et al., (1998) and Clemens and Douglas (2005), and there is rather strong empirical support in the literature for the model. Oliver (1991, pp. 152–159) identified five categories of strategic response to institutional pressures: acquiesce, compromise, avoid, defy and manipulate. Oliver argues that these responses can be defined on a continuum from passive (compliance with institutional pressures) to active strategies (resistance to institutional pressures), with acquiescence as the most passive strategy because companies that use it agree to institutional pressures. The other four responses are classified as active strategies.

Aside from an identification of the strategic responses, Oliver (1991) developed scenarios that drive these decisions of compliance or resistance, defined by a set of five questions, as presented in Table 1. Organizational responses to institutional pressures will depend on why such pressures are being emphasized, who is exerting them, what these pressures are, how or by what means they are applied, and where they take place. Consequently, such determinants represent the following factors of strategic responses: cause, constituents, content, control, and context. For the purpose of this study, we focus on the cause and control determinants.

Table 1: Institutional determinants of responses to institutional pressures

Institutional factor	Questions addressed	Predictive dimensions
<i>Cause</i>	Why is the organization being pressured to conform to institutional rules or expectations?	- Legitimacy and social fitness. - Efficiency and economic fitness.
<i>Context</i>	What is the environmental context within which institutional pressures are being exerted?	- Environmental uncertainty. - Environmental interconnectedness.
<i>Constituents</i>	Who is exerting institutional pressures on the organization?	- Multiplicity of institutional constituents. - Dependence on institutional constituents.
<i>Content</i>	To what norms or requirements is the organization being pressured to conform?	- Consistency with organizational goals. - Discretionary constraints imposed on the organization.
<i>Control</i>	How or by what means are the institutional pressures being exerted?	- Legal coercion or enforcement. - Voluntary diffusion of norms.

Source: Oliver (1991).

5.1. Cause

Oliver (1991) identified the factor of cause as the reason for “the institutional pressures behind the rationale, or the intended objectives which refer to the external pressures for conformity”. These factors fall into two categories: social and economic pressures. In cases where the company assesses that the social and/or economic pressures fit with its interests, the likely response then is acquiescence, i.e. the company will not resist the pressures (Haak-Saheem et al., 2016). However, when the situation is the opposite – i.e. the company sees the pressures as contrary to its interests – this results in organizational scepticism towards the legitimacy of institutional pressures.

We conceptualize legitimacy as the “generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate” (Suchman, 1995: 544). As institutional theory indicates, gaining legitimacy or the acceptance of an organization by its external environment is a major consequence of institutional isomorphism (Deephouse, 1996; Forstenlechner and Mellahi, 2011). TNCs are subject to constant demands to comply with regulative, normative, and cognitive pressures in their institutional environment in host countries (Kostova and Roth, 2002; Forstenlechner and Mellahi, 2011). Hence, we look at legitimacy as the recognition and approval of the TNC by the key stakeholders in the host country’s institutional environment.

Further, the research of Goodstein (1994) includes TNCs in the debate as his findings emphasized that TNCs were less likely to provide resistance to institutional pressures when compliance results in a better social positioning of the organization. The subsequent research of Ingram and Simons (1995), centred on the impact of institutional factors on the work–family solutions in companies, provided the same results: TNCs were seen to be less likely to provide resistance. TNCs are large enterprises that depend on their social position in the markets they serve or the countries in which they operate. In the case of Saudi Arabia, TNCs must conform to the legal provisions on localization (Mellahi et al., 2011). At the same time, they also perceive the need to respond to the expectations of the Saudi society that more Saudis be employed by the private sector, and by TNCs in particular (Achoui, 2009; Mellahi et al., 2011). Therefore, in the case of job localization, the research model for the cause of legitimacy identifies the following hypothesis:

Hypothesis 1: *TNCs that perceive localization pressures as legitimate are more likely to achieve localization success.*

Economic gains resulting from the implementation of localization policies can be seen when hiring local employees would not result in extra costs for TNCs, and their performance is adequate for these corporations. Furthermore, economic gains can also be seen when the performance of local employees is high compared to expatriates, and when, for instance, their knowledge of the local market benefits the firm. In the case of Saudi Arabia, government subsidies were provided for hiring local employees, in combination with investments in education to overcome the perceived skills shortage of Saudi nationals (Achoui, 2009; Mellahi, 2007). Yet, it has been reported that Saudi workers are less qualified than expatriates, resulting in indirect costs – such as the need for extra investment in training and recruitment. Such costs can be significant for organizations that employ a high percentage of Saudi workers (Whiteoak et al., 2006). Hence:

Hypothesis 2: *The higher the perceived economic gain a TNC enjoys from localization, the greater the likelihood of localization success.*

5.2. Control

Institutional control describes the means by which pressure is exerted on organizations. These pressures can be legal coercion and voluntary diffusion (Oliver, 1991). This proposition was later supported by the findings of Bansal and Roth (2000) and Tenbrunsel et al., (2000), with such works indicating that higher levels of control pressure are related to less active approaches accepted by organizations. The findings of Bansal and Roth (2000) support the impact of the legislation, whilst Tenbrunsel et al., (2000) distinguish between means-oriented

and ends-oriented regulatory pressures, emphasizing means-oriented pressures as related to companies' less active strategic responses. The findings imply that, when there is strict government legislation as is the case with Saudization, the strength of the coercive control then prevents companies from choosing more active strategic responses. Hence, the following hypothesis:

Hypothesis 3: *The higher the legal coercion to implement localization, the greater the likelihood of localization success.*

Further, the broader the diffusion of the localization rules amongst the industries in which TNCs operate, the greater the social pressure for compliance. Oliver (1991) argued that the extent to which institutional requirements are voluntarily and broadly diffused amongst organizations in the same industry is a predictor of compliance with institutional pressures. Moreover, the broad diffusion of institutional rules will result in the adoption of these rules by most organizations, especially new entrants, because of their social validity. In the case of Saudization, AlShammary (2009) reports that most banks and financial institutions are voluntarily and widely implementing Saudization policies, and that this has encouraged even more banks to implement the policy in the financial industry. Applied in the case of the research on localization, it results in the following hypothesis:

Hypothesis 4: *The broader the diffusion of localization rules and practices within TNCs, the greater the likelihood of localization success.*

6. Methodology

6.1. Data and sample

Data for this study come from a primary survey administered amongst HR directors in TNCs operating in Saudi Arabia and targeting all TNCs operating in the country – estimated at 214 firms. The unit of analysis in the current study is the organization, and the targeted respondents are HR directors in TNCs given their expertise and knowledge in workforce localization policies. We approached all TNCs for the purpose of data collection. Researchers found that, in the case of e-mailed/posted surveys, respondents were not forthcoming with information. As a result of this, data had to be collected in person over a period of several months. Although all TNCs were contacted, 157 agreed to complete the survey, which makes for a relatively high and acceptable response rate.

6.2. Measurement

Outcome variable

Localization success: for the purpose and the context of the current research, we measured this outcome variable following prior work (Law et al., 2009; Alharan, 2004; Law and Wong, 2004; Alzaid, 2001; Al-Nemer, 1993; Potter, 1989); localization success was measured by five items on a Likert scale in the survey. These items were: Saudization is an important business objective for our company; the Saudization policy in our company is successful; the Saudization policy is hindering our firm's competitive advantage (reverse question); our company has a sufficient number of capable local workers; our number of Saudi workers increased owing to the implementation of Saudization.

Independent variables

We identify the institutional determinants that may have an impact on job localization in Saudi Arabia as defined in the framework of Oliver (1991, 1997). Aside from an identification of the strategic responses, Oliver (1991) developed scenarios that drive these decisions, defined by a set of five questions. Organizational responses to institutional pressures will depend on why these pressures are being emphasized, who is exerting them, what such pressures are, how or by what means they are applied, and where they take place. Consequently, such determinants represent factors of strategic responses. As mentioned above, for the purpose of this study, we look at cause (measured by legitimacy and economic gains), and control (measured by legal coercion and broad diffusion). Measures were developed for these determinants, based on some pioneering work in the literature (e.g., Oliver, 1991, 1997; Goodstein, 1994; Ingram and Simons, 1995; Etherington and Richardson, 1994; Milken et al., 1998; Clemens and Douglas, 2005). Table 2 below presents the variables and their associated measuring items.

Control variables

Some control variables are taken into consideration. A survey of literature reveals that firm size and age are most commonly used as control variables and can cause significant variations in the impact of management practices on organizational outcomes. Firm size, in particular, is considered an important control variable. In this study, TNCs' size and age are employed as control variables, measured, respectively, in natural logs (see also Kimberly, 1976; Huselid, 1995) by the number of employees in each company and the number of years the company has been in operation.

Table 2: Measures of institutional determinants of localization success
(used in the survey)

Variable	Measuring items
Legitimacy	<ul style="list-style-type: none"> a. In our company, we regard Saudization as a legal mandate which we must follow. b. We implement Saudization to avoid government sanctions resulting from non-compliance. c. Saudization policy is widely accepted and appreciated by our top management. d. Our managers believe that Saudization objectives are achievable.
Economic gains	<ul style="list-style-type: none"> a. The performance of local employees has not negatively affected our firm performance. b. Hiring local employees will not result in extra costs for our company. c. The performance of local employees is high compared to expatriates. d. Our local employees understand the local market very well. e. Our local employees are able to build good relations with local customers. f. We have benefited from the financial subsidies of Saudization.
Legal coercion	<ul style="list-style-type: none"> a. We are legally obliged to implement Saudization. b. We are legally obliged to keep the government informed about our localization progress. c. We are legally obliged to report our Saudization problems.
Broad diffusion	<ul style="list-style-type: none"> a. We believe that Saudization is widely appreciated by other companies in our industry. b. We believe that Saudization is widely implemented in our industry. c. We believe that other companies in our industry are endorsing the implementation of Saudization. d. We implement Saudization because we believe it has benefited other companies in our industry.
Localization success	<ul style="list-style-type: none"> a. Saudization is an important business objective for our company. b. The Saudization policy in our company is successful. c. The Saudization policy is hindering our firm's competitive advantage (reverse question). d. Our company has a sufficient number of capable local workers. e. Our number of Saudi workers increased due to the implementation of Saudization.

Note: all items were measured on a 5-point Likert scale.

Reliability, validity and common method variance

Factor loadings, average variance extracted (AVE) and the reliability of the constructs were used to assess convergent validity (see Hair et al., 2010). The results show that the factor loadings of each construct indicator are significant, ranging from 0.56 to 0.88, thus demonstrating a strong association between constructs and their respective factors, with the results indicating that AVE values were higher than the threshold value of 0.50, thus demonstrating adequate convergence of the constructs. Finally, the results of the Cronbach's alpha indicate that the scales satisfy the reliability criterion with values ranging from .70 to .86. When taken together, the results of factor loadings, AVE and reliability tests provide sufficient confirmation of the convergent validity. In addition, as shown in Table 3, the square roots of AVE values were compared with the constructs' correlations: the results showed that the squared roots of the AVE values were higher than any

correlation of the institutional factor constructs, therefore indicating an acceptable level of discriminant validity (see Fornell and Larcker, 1981).

6.3. Results

Descriptive Results

Table 3 reports the means, standard deviations and zero-order correlations of all variables. It is instructive to note, at the very outset, that the relationship between some of the institutional determinants and workforce localization success is significant, which provides preliminary support for some of the stated hypotheses. We can also note that the age and size of the TNCs do not significantly relate to the workforce localization success. This somewhat contradicts some prior work (see Law et al., 2009; Bjorkman et al., 2007) where authors argued that firm size is a relevant determinant of workforce localization policy.

Table 3: Mean, standard deviations, discriminant validity, and zero-order correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7
1. Legitimacy	3.05	1.01	.80						
2. Economic gains	2.95	1.07	.05	.77					
3. Legal coercion	3.63	.88	.30**	-.39**	.82				
4. Broad diffusion	3.47	.93	.44**	.04	.27**	.82			
5. Localization success	3.11	.88	.62**	.09	.26**	.44**	.70		
6. Log. firm age	.91	.29	-.01	.04	-.03	.01	.05	---	
7. Log. firm size	2.29	.43	.07	.06	-.09	.19**	.05	.39**	---

Note: $n=157$. ** Correlation is significant at the 0.01 level (two-tailed). * Correlation is significant at the 0.05 level (two-tailed). Bold diagonal elements are square roots of average variance extracted.

Test of the institutional determinants

A hierarchical regression analysis through multiple steps was conducted to test the impact of the institutional determinants on workforce localization success. In the first step, control variables – namely the age and size of TNCs – were entered, followed by the institutional factors in the second step so as to evaluate their effect on workforce localization success. The results of the regression analysis are shown in Table 4.

Table 4: Hierarchical regression analysis for localization success

<i>Variables</i>		Model 1	Model 2
		<i>Localization success</i>	
Step 1: Control variables		Coefficient	Coefficient
Log Firm age		.010	.022
Log Firm size		.042	-.044
Step 2: Institutional determinants		Coefficient	Coefficient
Cause	Legitimacy		.171*
	Economic gains		.021
Control	Legal coercion		.199**
	Broad diffusion		.412***
R ²		.002 (-.011)	.354 (.328)
ΔR ²		--	.352
F for R ²		.169	13.693***
F for ΔR ²		--	20.412***

Note: $n = 157$. Standardized regression coefficients are shown. Adjusted R² in parentheses.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

It can be noticed that legitimacy ($b = .171, p < .05$) is positively related to workforce localization success. As stated earlier, legitimacy (H1) is related to the “cause” of localization demands and refers to the underlying principles or objectives behind the call to comply with these pressures. It is one of the drivers behind the acquiescence to localization pressure. Such a result indicates that TNCs that seek legitimacy through the implementation of localization policy achieve localization results that are more successful. The results of the second hypothesis, on the other hand, revealed that perceived economic gains are not related to localization success ($b = .021, p > .10$). This indicates that the higher economic gains from the implementation of localization policies would have no notable contributions to the degree of localization success. The overall results of the first and second hypotheses provide support for both causes explained earlier. However, the results indicated that legitimacy is a strong determinant of the localization success.

In relation to “control” mechanisms, legal coercion (H3) is significantly and positively related to localization success ($b = .199, p < .01$). This outcome signifies that the higher the legal coercion imposed on TNCs to implement localization policies, the higher the likelihood of localization success. The results also provide strong support for broad diffusion (H4) in its positive relation with localization success

($b = .412, p < .001$). Hence, the results suggest that the broader the diffusion of localization rules within TNCs, the greater the likelihood of localization success. Both control mechanisms (H3 and H4) prove their strong presence as determinants of localization success. We further discuss all findings in the discussion section.

6.4. Discussion

This is a study of the institutional determinants of the workforce localization success in an emerging market setting. Following a literature review, we formulated a set of four hypotheses to empirically analyse the institutional determinants of localization success. These hypotheses included the factors of localization success as measured by legitimacy and economic gains, and control – measured by legal coercion and broad diffusion. All these parameters were controlled for firm age and size with which we will deal with first.

6.4.1. Firm age and size

Going through the results in table 4 sequentially, one result that strikes immediately is that “age of the firm” (i.e. how long the firm has been in operation) does not add to the success of localization policies. This is a little surprising, as one would imagine that firms that have been in existence for some time would influence positively the success rate of the localization policies and initiatives of the government (see Law et al., 2004; Young and Tavares, 2004). Several reasons can be attributed to this intuition. For instance, firms that have been in operation for a while would have acquired a respectable social and/or business standing. Safeguarding such a standing would be a priority for the firm (Law et al., 2004). As such, then, older firms would not only comply with localization directives but would possibly be proactive in adopting them. The reason for not doing so could possibly be that older firms, having embedded themselves well into the system, feel comfortable enough to be reticent towards government initiatives, taking the view that they would firefight the problem if and when it arose. This is only a conjecture but an interesting future topic for research. Second, the result on controls that comes out as insignificant is the size of the firm. What this result tells us is that whether the firm is large or small is of no importance to localization success. The same analogy that is applied to the age of the firm could be applied to the size of the firm. One possible explanation could be that firms – whether small or large – take the view that localization is an issue to be dealt with, but none accord any priority to it in order to add value to the success rate of localization (see Wood et al., 2019). Hence, it could be concluded that the size and age of the institution have no significant role when it comes to the success of localization policies for TNCs in Saudi Arabia.

6.4.2. *Legitimacy*

The results on legitimacy are significant and positive in relation to the success of the localization process. What these results mean is that TNCs that perceive the external pressures for localization (e.g., recognizing Saudization as a legal mandate that they must follow; seeking to avoid government sanctions resulting from non-compliance) and those that wish to enhance their social legitimacy are more likely to comply with the Saudization programme initiated by the government, resulting in the increased employment of locals (see Forstenlechner and Mellahi, 2011). The positive impact of accepting legitimacy is the result of the growing experience and knowledge of TNCs operating in different contexts, particularly in contexts with unique institutional features, as is the case in this study. In this respect, it is worth noting that the extant literature on international HRM shows that blindly following the practices of the parent company may conflict with local social and cultural norms, and subsequently result in a negative image of the subsidiary (see Haak-Saheem et al., 2016; Mellahi et al., 2011; Greenwood et al., 2010).

6.4.3. *Economic gains*

Somewhat puzzling is the result on the perceived economic gains emanating from the localization process. TNCs operating in the host country of Saudi Arabia did not believe that the process of localization would enhance economic gains for them. The dilemma for CEOs and TNCs is concentrated on comparing the additional cost of continuing to employ expatriates with the challenge of having to employ more locals who either lack the skills necessary for optimal performance or have different work ethics and practices (also see Robertson et al., 2001). At first, the response by CEOs of TNCs to indigenization policies had been somewhat unreceptive, and yielded a preliminary policy of “evasion” by TNCs and the private sector in general (see Fakeeh, 2009). Many TNCs initially sought to cope with indigenization policies by requesting authorized exemptions from quota requirements – that could be provided under various sections of the relevant Saudization laws (ibid) – rather than by actively complying with the requirements.

Later on, attitudes shifted among CEOs of TNCs and the private sector in favour of recruitment initiatives aimed at the younger Saudi generation to assist firms implement Saudization policies in a more cost-effective way. The rationale behind this was that younger workers could be paid lower wages, which could offset the additional costs resulting from the increased need for training and skills’ development to a greater or lesser extent (Fakeeh, 2009).

Many TNCs have found compliance with Saudization policy somewhat hard to manage, and they often see themselves as victims that are forced to follow the localization directives rather than beneficiaries of the policy. This becomes clear when one looks at results on legal coercion and broad diffusion.

6.4.4. Legal coercion and broad diffusion

Legal coercion turns out to be a highly significant instrument in enforcing adherence with the localization process. Legal coercion includes three aspects. First, TNCs are obliged to implement the government's Saudization initiative; second, TNCs are also obliged to keep the government informed about the progress they are making, and third, TNCs are also legally required to report any problems they might come across in implementing the Saudization programme. All three are rather stringent conditions that keep firms under strict checks. Interestingly, it also appears that the more broadly diffused the norms and rules of localization, the better the chances of success. This latter result was very significant. This is in line with Delmas et al., (2010) and Purdy and Gray (2009), who established that the adoption of institutional policies was a function of the widespread implementation of these policies by other organizations/firms. Such adoption is part of the mimetic perspective of the institutional process (Liu et al., 2010). In addition, when institutional policies and practices are diffused broadly amongst existing organizations, the new ones would implement these policies because their social validity is rarely questionable (Oliver, 1991).

7. Implications for theory and policy

7.1. Implications for theory

Our findings have important implications for institutional theory. First, institutional factors are found to be less influential in the context of Saudi Arabia compared with what has been observed in studies in developed country contexts. This is mainly owing to the distinctive features of the socio-economic context in emerging markets as institutional arrangements differ because of the specific nature of their political economy contexts (see Darwish et al., 2019; Singh et al., 2019; Thelen, 2012; Streeck, 2009).

Second, the findings imply that institutional factors that insist on a systematic and well-developed institutional context and pressures may be inappropriate in the context of developing countries such as Saudi Arabia. Given its recent history as a modern State, institutional factors in Saudi Arabia are less organized and effective, or one could argue that they are under-developed across the entire region (see Haak-Saheem et al., 2017). The evaluation of these institutional factors in such contexts through perspectives developed in Western countries may lead to false institutional realities (Darwish et al., 2016; Singh et al., 2017). A more carefully developed institutional perspective that takes into account the differing features of socio-economic contexts and existing local institutional realities would better highlight the case of emerging market settings.

Third, legislative and regulatory influence was found to be a strongly positive determining factor. This was not wholly surprising given the strength and impact of legislation in Saudi Arabia and the simple fact that, if TNCs wish to conduct business in the country, then they must abide by the rules. In the long term, increased trust between organizations and policymakers could have the effect of accelerating the localization process because TNCs would work collaboratively with policymakers and would be prepared to invest resources in improving the level of localization as a form of strategic and competitive advantage. This conclusion is in line with the work of Fryxell et al., (2004) but would of course require adaptation to suit the needs of the country in terms of labour and resource requirements.

Finally, however, we found that specific institutional elements are influential across specific contexts. In the present study, legitimacy and broad diffusion factors were found to be powerful in shaping the behaviour of TNCs. This indicates that TNCs make rational decisions when responding to institutional pressures. They mostly pay attention to institutions when they attain legitimacy, and when institutional policies and practices are diffused broadly amongst existing organizations. Delving deeper into these two aspects, the granular detail of the findings revealed that the drivers of their impact were, specifically, social perception (in the form of legitimacy) but not very much the extrinsic economic pressure. This is an important finding as it represents an under-investigated area of research which would benefit from further analysis.

7.2. Policy implications for the Kingdom of Saudi Arabia

The implications of the results of this study offer several take-home lessons for policymakers to achieve better results in their Saudization drive. Foremost would be the realization that they need to focus their efforts equally on all firms, and not only on larger firms or older established firms. There may be economies of scale in focusing on bigger firms if those firms contribute a large share of GDP. However, in a dynamic and competitive business environment, medium and smaller firms can rapidly grow in size in relation to larger established firms. Second, it is crucial not to slow efforts on disseminating information to TNCs (or for that matter to firms with various degrees of foreign ownership) on policy changes taking place in the context of the Saudization programme. In fact, such efforts can hit home the merits of complying with such measures. While staying focused on disseminating information about it, legal pressure to comply with the requirements of the localization programme should be maintained.

A second essential point by way of implication is one related to the specifics of TNCs and their unique characteristics. This study found that age and size are far less important than might have been anticipated in light of existing evidence. The practical implications of this would suggest that the prevailing culture and preferences of Saudi Arabia as a geographic and socio-cultural region actually

override theoretical boundaries and concepts. Expressed more simply, an organization can have a highly distinguished pedigree but Saudi nationals are confident in their own preferences and beliefs to the extent that, if a TNC wishes to establish itself, it then would be well advised to embrace localization policies.

Furthermore, the significance of legal coercion and broad diffusion for the success of the localization policy in Saudi Arabia implies that strict regulation, with a comprehensive framework and guidelines that penetrate and guide all levels of management of TNCs, will greatly contribute to the success of Saudization. In fact, it implies that the Saudization programme should be developed in collaboration with TNCs.

In addition, whilst this study indicated that firms did not expect economic gains from the implementation of localization policies in Saudi Arabia, the question remains as to how the government can induce TNCs to perceive localization as a way to enhance their economic gains. This could be done by working on the skill levels, education, abilities and knowledge of the Saudi workforce, and completely changing the mindset of Saudi employees. Notably, this also means that a localization policy may be about more than rules, coercion and financial penalties.

Finally, an important lesson to be learnt is that an indigenization policy has to be seen as a package of convergent policies in various areas. In other words, policymakers should take a broader and more systemic approach to ensure more successful outcomes from indigenization policies. For instance, in view of the result on economic gains, Saudi authorities could follow a wide-based approach and complement existing indigenization policies (based on rules and legal coercion) with education and talent-development policies to enhance the skills and competencies of Saudi nationals; the latter would potentially ensure that economic gains could be realized by TNCs. The same applies to broad diffusion where measures could be developed to ensure that positive messages are received at the firm level. Hence, combining compulsory regulation with actions and policies in other areas (e.g., education, youth development, communications, and outreach) could indeed be relevant.

7.3. Limitations and avenues for future work

We acknowledge some limitations of the present work. The data was collected from single respondents. Although crosschecks revealed data to be consistent, some elements of common method variance bias may have crept in. Time and funds permitting, future researchers could endeavour to use multiple respondents to gather data. Furthermore, it would be interesting to widen the parameters of the research population and broaden the nature of the study over time to assess the impact of variables on a longitudinal basis as this would offer deeper insights into the influence of independent variables over time. It would also be rewarding to study if sectoral differences (e.g. between services and manufacturing) exist.

References

- Achoui, M. M. (2009). 'Human resource development in Gulf countries: An analysis of the trends and challenges facing Saudi Arabia', *Human Resource Development International*, 12, 1, 35-46.
- Al-Haran, M. (2004). 'Toward establishing a model for nationalizing jobs in the Private Sector in Saudi Arabia: Ata'eyah Model', *Journal of King Abdulaziz University: Economics and Administration*, 18, 1, 77-118
- Al-Lamki, S. M. (1998). 'Barriers to localization in private sector: The perceptions of Omani graduates', *International Journal of Human Resource Management*, 9, 2, 377- 400.
- Al-Nemer, S. (1993). 'The Attitude of the Private Sector Towards Employing Saudi Labours', Research Centre, King Saud University, Riyadh.
- Al-Qudsi, S. S. (2006). 'Unemployment evolution in the GCC economies: Its nature and relationship to output gaps', Labour Market Study No. 22, Center for Market Research & Information (CLMRI). Abu Dhabi.
- Al-Waqfi, M. and Forstenlechner, I. (2010). 'Stereotyping of citizens in an expatriate dominated labour market: Implications for workforce localization', *Employee Relations*, 32, 4, 364-381.
- Al-Zaid, A. (2001). 'How to Gain Profit with Saudization', A paper presented to *The Employment and Saudization Forum*, held in Riyadh on 30-31 December 2001, organized by the Industrial Chamber of Commerce.
- Bansal P, Roth, K. (2000). Why companies go green: a model of ecological responsiveness. *Academy of Management Journal* 43(4): 717-736.
- Baum, J. A., & Oliver, C. (1991). Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 187-218.
- Bhanugopan, R., & Fish, A. (2007). Replacing expatriates with local managers: an exploratory investigation into obstacles to localization in a developing country. *Human Resource Development International*, 10(4), 365-381.
- Bhuiyan, S. & Aljabri, I. M. (2006). 'The competitive marketplace in Saudi Arabia: A comparative study', *Proceedings of the International Conference on Globalization and the Market Economy: The challenges of change* (pp. 473-483). New Delhi, India.
- Bjorkman, I. et.al. (2007). 'Institutional theory and MNC subsidiary HRM Practices', *Journal of International Business Studies*, 38, 3, 430-446.
- Chan, C. M., & Makino, S. (2007). Legitimacy and multi-level institutional environments: Implications for foreign subsidiary ownership structure. *Journal of International Business Studies*, 38(4), 621-638.
- Child, J., & Yan, Y. (1999). Investment and control in international joint ventures: The case of China. *Journal of World Business*, 34(1), 3-15.
- Clemens, B. & Douglas, T. (2005). 'Understanding strategic responses to institutional pressures', *Journal of Business Research*, 58, 9, 1205-1213.
- Collings, D. G., Scullion, H., & Morley, M. J. (2007). 'Changing patterns of global staffing in the multinational enterprise: Challenges to the conventional expatriate assignment and emerging alternatives', *Journal of World Business*, 42, 198-213.

- Darwish, T. K., Singh, S., & Wood, G. (2016). The impact of human resource practices on actual and perceived organizational performance in a Middle Eastern emerging market. *Human Resource Management*, 55(2), 261-281.
- Darwish, T. K., Wood, G., Singh, S., & Singh, R. (2019). Human Resource Management in India: Performance and Complementarity. *European Management Review*, <https://doi.org/10.1111/emre.12367>
- Deephouse, D (1996). 'Does isomorphism legitimate?' *The Academy of Management Journal*, 39(4): 1024-1039.
- Delmas, M. A., & Montes-Sancho, M. J. (2011). An institutional perspective on the diffusion of international management system standards: The case of the environmental management standard ISO 14001. *Business Ethics Quarterly* 21 (1):103-132.
- Etherington L.D. & Richardson A.J. (1994). 'Institutional pressures on university education in Canada', Special Education Research Issue. *Contemporary Accounting Research*, 141- 62.
- Fakeeh, M. S. (2009). Saudization as a solution for unemployment. PhD Thesis. Glasgow Business School, University of Glasgow.
- Forstenlechner, I. (2010). 'Workforce localization in emerging Gulf economies: the need to fine-tune HRM', *Personnel Review*, Vol. 39 No. 1, pp. 135-52.
- Forstenlechner, I. & Mellahi, K. (2011). 'Gaining legitimacy through hiring local workforce at a premium: the case of MNEs in the United Arab Emirates', *Journal of World Business*, 46, 4, 446-461.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1). 39-50.
- Goodstein J. D. (1994). 'Institutional pressures and strategic responsiveness: Employer involvement in work-family issues', *Academy of Management Journal* 37, 82-350.
- Greenwood, R., Diaz, A. M., Li, S. X., & Lorente, J. C. (2010). The multiplicity of institutional logics and the heterogeneity of organizational responses. *Organization Science*, 21: 521-539.
- Haak-Saheem, W. & Brewster, C. (2017). 'Hidden' expatriates: International mobility in the United Arab Emirates as a challenge to current understanding of expatriation, *Human Resource Management Journal*, 27, 3, 423-439.
- Haak-Saheem, W., Festing, M., & Darwish, T. (2017). International Human Resource Management in the Arab Gulf States: An institutional perspective, *The International Journal of Human Resource Management*, 28, 18, 2684-2712.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hardy, R. (2006). 'Unemployment the new Saudi challenge', available online at: <http://news.bbc.co.uk/1/hi/business/5406328.stm>.
- Harry, W. (2007). 'Employment creation and localisation: The crucial human resource issues for the GCC', *The International Journal of Human Resource Management*, 18, 1, 132.-150

- Hoskisson, R. E., Hitt, M. A., Johnson, R. A. & Grossman, W. (2002). 'Conflicting voices: the effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies', *Academy of Management Journal*, 45 4, 697.
- Huselid, M. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635–670.
- Hymer, S. H. (1976). *The international operations of national firms: A study of direct foreign investment* (Vol. 14, pp. 139-155). Cambridge, MA: MIT Press.
- Ingram P. & Simons T. (1995). 'Institutional and resource dependence determinants of responsiveness to work–family issues', *Academy Management Journal*, 38, 1466– 82.
- Kaosa-ard, M. (1991). 'A Preliminary Study of TNCs' Hiring and Localization Policies in Thailand', *TDR Quarterly Review*, 6, 4, 11-18.
- Kimberly, J. (1976). Organisational size and the structuralist perspective. *Administrative Science Quarterly*, 21(4), 571–597.
- Kostova, T., & Roth, K. (2002). Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of Management Journal*, 45(1), 215-233.
- Kraft, M. E. & Furlong, S. R. (2017). *Public Policy: Politics, Analysis, and Alternatives*. CQ Press.
- Law, K. S., Wong, C. S., & Wang, K. (2004). 'An empirical test of the model on managing the localization of human resource in the People's Republic of China', *International Journal of Human Resource Management*, 15, 4–5, 638–648.
- Law, K. S., Song, L. J., Wong, C. & Chen, D. (2009). 'The antecedents and consequences of successful localisation', *Journal of International Business Studies*, 40, 1359-1373.
- Liu, H., Ke, W., Wei, K. K., Gu, J. & Chen, H. (2010). 'The role of institutional pressures and organisational culture in the firm's intention to adopt internet-enabled supply chain management systems', *Journal of Operations Management*, 28, 5, 372-384.
- Dacin, M. T., Oliver, C. & Roy, J. (2007). 'The legitimacy of strategic alliances: an institutional perspective', *Strategic Management Journal*, 28 (2), 169-187.
- DiMaggio, P. J., & Powell, W. W. (1983). 'The iron cage revisited: collective rationality and institutional isomorphism in organisational fields', *American Sociological Review*, 48, 147-160.
- DiMaggio P. & Powell, W. W., (2012). *The New Institutionalism in Organizational Analysis*, University of Chicago Press.
- Mellahi, K. (2007). 'The effect of regulations on HRM: Private sector firms in Saudi Arabia', *International Journal of Human Resource Management*, 18, 1, 85-99.
- Mellahi, K. and Wood, G. (2001). HRM in Saudi Arabia, Budhwar, P. and Debrah, Y. (eds), *HRM in Developing Countries*. London: Routledge.
- Mellahi, K., Demirbarg, M., & Riddle, L. (2011). Multinationals in the Middle East: Challenges and opportunities. *Journal of World Business*, 46(4), 406-410.
- Meyer, J., & Rowan, B. (1977). 'Institutionalized organizations: formal structure as myth and ceremony', *American Journal of Sociology*, 83 (2), 340-363.

- Milliken, F. J., Martins, L. L., & Morgan, H. (1998). Explaining organizational responsiveness to work-family issues: The role of human resource executives as issue interpreters. *Academy of Management Journal*, 41(5), 580-592.
- Ministry of Labour Report (2010). The Ministry of Labour Annual Statistical Report. The Deputy Ministry for Planning and Development: Riyadh, Kingdom of Saudi Arabia.
- Mitchell, W. C. (1967). *Types of Economic Theory from Mercantilism to Institutionalism*. (Ed. Joseph Dorfman, 2 vols. New York: Augustus M. Kelley).
- Oddou, G. (1991). 'Managing your expatriates: What successful firms do', *Human Resource Planning*, 14, 301-308.
- Oliver C. (1997). 'Sustainable competitive advantage: Combining institutional and resource-based views', *Strategic Management Journal*, 18(9), 697-713.
- Oliver, C. (1991). 'Strategic responses to institutional processes', *The Academy of Management Review*, 16, 1, 145-179.
- Potter, C. C. (1989). 'Effective localization of the workforce: Transferring technology in developing countries', *Journal of European Industrial Training*, 13, 6, 25-30.
- Purdy, J. M., & Gray, B. (2009). Conflicting logics, mechanisms of diffusion and multilevel dynamics in emerging institutional fields. *Academy of Management Journal*, 52: 355-380.
- Robertson, Al-Khatib, J. A., Al-Habib, M. & Lanoue, D. (2001). Beliefs about work in the Middle East and the convergence versus divergence values. *Journal of World Business*, 36(3), 223-244.
- SAMA (2015). Saudi Arabian Monetary Agency. Fifty First Annual Report, Riyadh, Research and Statistics Department, Saudi Arabia: Riyadh.
- Sadi, M. & Henderson, J. (2010) Towards Job Localization in Saudi Arabia: Drivers and Barriers within the Services Industry, *Journal of Immigrant & Refugee Studies*, 8, 2, 121-134.
- Scott, W. R. (1995). *Institutions and organizations*. Thousand Oaks, California: Sage Publications.
- Scott, W. R. (2001). *Institutions and organizations*. Thousand Oaks, California., Sage Publications.
- Selmer, J. (2001). Adjustment of Western European vs North American expatriate managers in China. *Personnel Review*, 30(1), 6-21.
- Selmer, J. (2004). Expatriates' hesitation and the localization of Western business operations in China. *The International Journal of Human Resource Management*, 15(6), 1094-1107.
- Shaffer, M. A., Harrison, D. A. & Gilley, K. M. (1999). 'Dimensions, determinants, and differences in the expatriate adjustment process', *Journal of International Business Studies*, 30, 3, 557-581.
- Shaffer, M.A. & Harrison, D.A. (1998). 'Expatriates psychological withdrawal from international assignments: work, nonwork, and family influences', *Personnel Psychology*, 51,87-118.
- Singh, S., Darwish, T. K., Wood, G. & Mohamed, A. F. (2017). Institutions, complementarity, human resource management and performance in a South-East Asian Petrostate: the case of Brunei. *The International Journal of Human Resource Management*, 28(18), 2538-2569.

- Singh, S., Wood, G., Darwish, T., Fleming, J. & Mohammed, A.F. (2019). Human resource management in multinational and domestic enterprises: A comparative institutional analysis in Southeast Asia, *Thunderbird International Business Review*, 61, 2, 229-241.
- Streeck, W. (2009). *Re-forming Capitalism*. Oxford: Oxford University Press.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571-610.
- Tenbrunsel, A., Wade-Benzoni, K. A., Messick, D. M. & Bazerman, M. H. (2000). Understanding the influence of environmental standards on judgments and choices. *Academy of Management Journal*, 43, 854-866.
- Thelen, K. (2012). *Varieties of Liberalisation and the New Politics of Social Solidarity*. Cambridge: Cambridge University Press.
- Veblen, T. (1899). *The Theory of the Leisure Class*. Penguin Books, New York.
- Whiteoak, W. J., Crawford, G. N. & Mapstone, H. R. (2006). 'Impact of gender and generational differences in work values and attitudes in an Arab culture', *Thunderbird International Business Review*, 48, 1, 77-91.
- Wood, G., Darwish, T. K., Alanezi, A. N. & Singh, S. (2019). 'Indigenization of staffing in MNEs: The case of Saudi Arabia'. *Asia Pacific Journal of Management*, <https://doi.org/10.1007/s10490-019-09661-5>.
- Wong, C. S. & Law, K. S. (1999). 'Managing localisation of human resources in the PRC: A practical model', *Journal of World Business*, 34,1, 26-40.
- Yavas, U., Luqmani, M. & Quraeshi, Z. (1990). Organisational commitment, job satisfaction, work values: Saudi and expatriate managers. *Leadership & Organization Development Journal*, 11(7), 3-10.
- Young, S. & Tavares, A. T. (2004). 'Centralization and autonomy: Back to the future. *International Business Review*, 13(2), 215-237.

Why do western SMEs internationalize through springboarding? Evidence from French manufacturing SMEs

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This study applies both the internationalization and regulatory focus theories to understand what motivates SMEs to implement springboard strategies – i.e. to invest in a country to re-export to third countries. While some academics emphasize the importance of free trade agreements and cost differentials, others highlight the role played by the individual and network dimensions. We conducted 66 in-depth interviews and five days of non-participant observations with five French manufacturing SMEs and ten investment promotion agencies. Our analysis revealed the existence of firm, network and country-related motivations – springboard strategies being mainly firm-driven – as well as common, partially-shared and specific motivations. Public policy to promote and/or attract springboard-oriented foreign direct investment (FDI) should look at developing dedicated support and educational programmes for SMEs, offering better access to promising markets by removing barriers and enforcing transparency and trade agreements.

Keywords: internationalization, locations, small and medium-sized enterprises, SMEs, springboarding

1. Introduction

Springboard strategies can be defined as strategies in which the level of commitment is influenced by the host market's potential to serve as springboard to other countries (Javalgi et al., 2010). Their implementation has strong implications for both SMEs' locational choice and management of foreign operations. Indeed, they do not necessarily select their location based on host markets' classical specificities (size, growth, etc.) but rather on the possibility these markets offer to access a set of neighbouring countries. It constitutes a new, relatively underexplored way of internationalizing (Javalgi et al., 2010). Locational factors aside, understanding SMEs' strategic choices also requires paying particular attention to chief executive

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officers' (CEOs') demographics and attributes (Li and Gammelgaard, 2014) as "the CEO of an SME is invariably the person who has the authority for all major decisions taken" (Mesquita and Lazzarini, 2008: 306).

SMEs' internationalization is a complex phenomenon that cannot be captured adequately through a unique theoretical framework (Jones and Coviello, 2005). Scholars agree on the need to differentiate SMEs from large firms, as "SMEs represent the antithesis of 'predictable, stable environments', with small firm size and relatively low capital costs resulting in low-entry barriers for an industry, low-monopoly power and high turnover rates of firms" (D'Angelo et al., 2013: 83). They are more flexible and dynamic but also more vulnerable than their larger counterparts owing to their liabilities of smallness, newness, foreignness and outsidership (Hollender et al., 2017). Their lack of international experience, resources and competencies, and their specialization and sensitivity to external changes tend to make SMEs highly vulnerable to costly failures abroad. SMEs' internationalization received widespread attention over the last 30 years. The majority of studies conducted tend to focus on non-equity modes of entry because of their flexibility (Lu and Beamish, 2006; D'Angelo et al., 2013). However, an increasing number of SMEs tend to favour equity modes in order to internalize transaction-related risks, protect their assets, get closer to their customers and gain competitiveness (Laufs and Schwens, 2014). In a highly turbulent context, they have to be creative and implement strategies – like springboard strategies – allowing them to be competitive and enter untapped markets. In this context, combining international business and managerial psychology theories is relevant to comprehend what motivates SMEs to implement springboard strategies. More precisely, we use both internationalization and regulatory focus theories to identify the main drivers influencing SMEs' expansion strategies. In this way, the study aims to enrich the literature by applying the concept of springboarding to SME internationalization and highlighting the main drivers leading SMEs to use this approach.

A multiple-case study was conducted with five French manufacturing SMEs from the Auvergne-Rhône-Alpes (AURA) region, all of which are at different stages of implementation of the springboard strategy as labelled by Leonidou and Katsikeas (1996) – i.e. the pre-implementation stage and the initial, transition, advanced-engagement and withdrawal stages. The AURA region is one of the most dynamic industrial and international regions in Europe. The decision to focus on manufacturing SMEs is linked to the size of the investments required to create a subsidiary abroad and their hardly reversible nature. The results show that these strategies can be firm, network or country specific. The implementation of springboard strategies is mainly internally motivated and aimed at reinforcing firms' competitiveness and valuing their expertise globally. The study also noted the existence of common, partially shared and specific motivations. Those motivations evolve over time as networks become increasingly important compared to country-

related motivations. The results show that, when considering a new strategy, firms are affected by their managers' international orientation, experience, and personal networks and by the perceived distance. These results have policy implications at both the domestic and international levels. Domestic and host governments need to adapt their support policies in order to integrate springboard strategies in their toolboxes. Developing special economic zones, ensuring local transparency and reinforcing bilateral and/or multilateral trade agreements are of key importance in order to attract foreign SMEs and help them build the networks needed to successfully springboard.

The rest of the article is structured as follows. After presenting the theoretical blocks on which the paper is structured, we explain and justify the methodology used, i.e. a multiple-case study conducted with five manufacturing French SMEs. Then we present the results of the intra- and cross-case analysis before concluding on the implications, policy recommendations and suggestions for further research.

2. Theoretical perspectives on springboard strategies

2.1. Internationalization and springboard strategies

Locational decisions are complex and dynamic strategies that affect the scope, pattern, organization, growth and competitiveness of firms' activities (Dunning, 2009; Schotter and Beamish, 2013). They receive widespread interest in the literature, scholars mainly referring to Dunning's eclectic OLI (ownership, location and internationalization) paradigm and taxonomy (Dunning, 1988, 1993, 2000), Buckley and Casson's (1976) model of MNE internationalization and the Uppsala internationalization model (Johanson and Vahlne, 1977, 2009; Vahlne and Johanson, 2013, 2017). The first two frameworks consider locational decisions as a rational choice and study them using a static perspective: these choices are planned strategies primarily intended to make or protect profits (Buckley et al., 2007). Thus, firms tend to select locations offering privileged access to markets, resources, networks or efficiency outcomes at a given time (Dunning, 1993, 2000; Lei and Chen, 2011).

The Uppsala model considers locational choices as a dynamic and evolutionary process. They are influenced by the notions of psychic distance, experiential learning and risk avoidance. Firms start their internationalization in countries that are in proximity to them before expanding their geographical scope after accumulating experience. They seek to access new markets (Johanson and Vahlne, 1977) or networks (Filatotchev et al., 2007; Johanson and Vahlne, 2009; Vahlne and Johanson, 2013, 2017). However, those frameworks offer only

a partial explanation of the locational choice process. First, they are based on the case of large firms and may not be fully valid for SMEs. Second, they do not integrate the individual managerial dimension into the analysis (Schotter and Beamish, 2013). However, understanding locational behaviour is not possible without taking individual characteristics into account (Felin and Foss, 2005) – notably for SMEs – as personal capabilities, experiences, goals and attitudes have a major impact on their strategic choices (Mesquita and Lazzarini, 2008; Li and Gammelgaard, 2014).

With regard to the rising complexity of the environment in which they operate, firms have to use highly sophisticated FDI strategies. The classical econometric models – i.e. horizontal and vertical FDI – are not sufficient to explain current investment trends. Locational decisions are not only based on particular market characteristics but rather on the neighbouring countries' ones (Baltagi et al., 2007; Ito, 2013). This echoes the concept of springboard strategy, conceptualized by Ekholm, Forslid and Markusen (2007), Luo and Tung (2007, 2018) and Javalgi et al., (2010) on the basis of Motta and Norman (1996). Observing the geography of FDI and exchanges between Triad countries (the United States, European Union and Japan), Motta and Norman (1996) argue that the rising number of free trade agreements changed firms' behaviour toward international markets, thereby bringing into question the validity of existing FDI theories. According to them, the creation of barriers to entry to a free trade area induces outsider firms to locate in one of the member countries and to re-export to the rest of the area in order to reduce production, delivery and trade costs. Motta and Norman (1996) highlight the role of free trade agreements and claim that springboard strategies come to palliate firms' liability of foreignness by reducing their trade costs.

However, their approach remains purely economical and relies uniquely on the observation of developed countries. It does not explain the impact of markets' degree of development (i.e. emerging vs. developed) nor the selection of the final location within the specific free trade zone (Ekholm, Forslid and Markusen, 2007). Their research addresses those limitations by developing a three-country model involving both emerging and developing countries. Their findings show that, owing to the co-existence of emerging and developed countries within a particular free trade zone, firms may face different levels of costs, pushing them to reconsider their locational strategies. Investing in a springboard country appears to have three possible outcomes: re-export to the home country, to a third country or both. Fragmentation costs are a key determinant when selecting the strategy. According to Ekholm et al., (2007), firms will re-export to third markets when the country used as springboard presents advantages in terms of production, transport and transaction costs and moderated fragmentation costs. Firms will opt for a mixed strategy (re-export to the domestic and third markets) when the springboard country presents significant advantages in terms of both fixed and variable production, transport

and transaction costs, and low fragmentation costs. In line with Motta and Norman (1996), Ekholm et al., (2007) argue that strategies might differ under the influence of free trade agreements owing to the asymmetries of costs they cause (protectionism). Thus, free trade zones create disequilibrium that external companies counter in a two-stage process: they serve the domestic market using facilities located in the home country and enter common areas, and they open facilities in the most advantageous member country (production costs, distance, etc.). Locating in a neighbouring country reduces the transportation and trade costs as well as the distance – both geographical and cultural – to final consumers. Barry (2004) found the same results and claims that springboard strategies are profitable only if they offer cheaper access to skilled workers and if the transportation costs between the country used as springboard and the target markets are low to moderate. Yokota and Tomohara (2009) support those statements and found that the adoption of a springboard strategy is positively correlated with a low level of customs taxes, which contribute to reducing the final production costs. Thus, free trade agreements encourage the use of springboarding strategies by outsider firms as the agreements reduce firms' liability and cost of foreignness.

While the model developed by Ekholm et al., (2007) palliates the limitations identified in Motta and Norman (1996), it does not integrate the managerial nor organizational dimensions in the analysis. Luo and Tung (2007, 2018) and Javalgi et al., (2010) are the first to explain the phenomenon from a managerial perspective. According to them, springboard strategies answer firms' necessary tradeoff between risks and return. Firms can potentially reduce their exposure to international risks by investing in countries that are in cultural (Pla-Barber and Camps, 2012) and geographical proximity. The experience gained in the country used as the springboard turns into a "stepping-stone-entry that initiates further entry into connected markets" (Javalgi et al., 2010: 211), reinforcing firms' capacities to identify and seize opportunities in third emerging markets.

Initially developed in the context of emerging market multinationals, the springboarding perspective sheds light on new kinds of motivations, processes and behaviours of international firms (Luo and Tung, 2018). The core rationale is that firms consider internationalization as a springboard to acquire the critical resources they need to be competitive at the global scale and make the most efficient use of their foreign investment while simultaneously reducing their vulnerability to domestic constraints at home. As mentioned by Luo and Tung (2007, 2018), the uniqueness of springboarding lies in its deliberated nature, these strategies being designed and implemented with a long-term perspective to facilitate firms' growth, optimize the investments already realized, maximize the value of their offer and, in the end, establish more solidly their competitive positions at the global level.

According to Luo and Tung (2007, 2018), firms that springboard mainly originate from emerging economies owing to the institutional specificities of their domestic market. Domestic institutions and market conditions both push them to expand quickly and access the resources needed to accumulate international experience and knowledge. As mentioned by Ricard and Zhao (2018), internationalization speed and absorption capabilities are of crucial importance as they influence firms' overall performance.

The implementation of springboard strategies stems from the combination of push and pull factors at both the micro and macro levels, such as companies' size, market growth expectations and international experience (notably in the springboarding country – i.e. the country in which SMEs decide to establish a subsidiary to re-export to the final target market). Resources, trade agreements and countries' degree of openness are key determinants as they contribute to stabilize the area, facilitate the access to emerging or dynamic markets and reduce the exchange costs and risks perceived. N'Guyen (2011) and Minda and N'Guyen (2012) support these findings and establish a typology of the macro-level factors leading to springboard strategies. According to them, springboard strategies are motivated by six main factors, i.e. (i) markets characteristics, (ii) labour, (iii) political stability, (iv) local FDI policies, (v) infrastructure, and (vi) other external factors. In other words, springboard strategies appear to be relevant in case of institutional stability; market openness, integration and similarity; lower labour costs; low trade costs and technology transfer between the springboard and the target markets (Ekholm et al., 2007; Javalgi et al., 2010; Luo and Tung, 2007, 2018; N'Guyen, 2011). It can help firms overcome the risks linked to the quality of infrastructure, to the protection of intellectual property and realize economies of scale (Yokota and Tomohara, 2009; Minda and N'Guyen, 2012). Combining the Uppsala and springboard perspectives, Ricard and Zhao (2018) concluded that firms' internationalization can result from push and pull factors influencing the speed, the level of commitment and the experiential knowledge.

In spite of their utility, research studies conducted on the topic suffer from several limitations. First, they were mainly conducted at the macro level and paid scant attention to micro and individual variables. Second, little is known about SMEs. Javalgi et al., (2010) observed that, owing to the complexity and the amount of resources needed, springboard strategies would mainly be implemented by large firms. Considering the fact that SMEs are more flexible and innovative than their larger counterparts, this question needs to be addressed. In the same vein, previous studies, owing to their specificities, focused mainly on emerging market multinationals (Luo and Tung, 2007, 2018). Our knowledge remains limited to the motivations driving western SMEs to implement springboard strategies. Third, the temporal dimension is missing from the analysis. Indeed, most of the studies were conducted from a static perspective. However, locational choices

do not have to be considered as static and permanent but rather as dynamic by nature, subject to constant examination and adjustment (Kang and Jiang, 2012). They may stem from a rational logic but can also be linked to subjective factors such as managers' preferences and experiences (Schotter and Beamish, 2013; Nowinski and Rialp, 2015). Thus, more attention needs to be paid to understand what might lead western SMEs to implement springboard strategies.

2.2. Regulatory focus theory

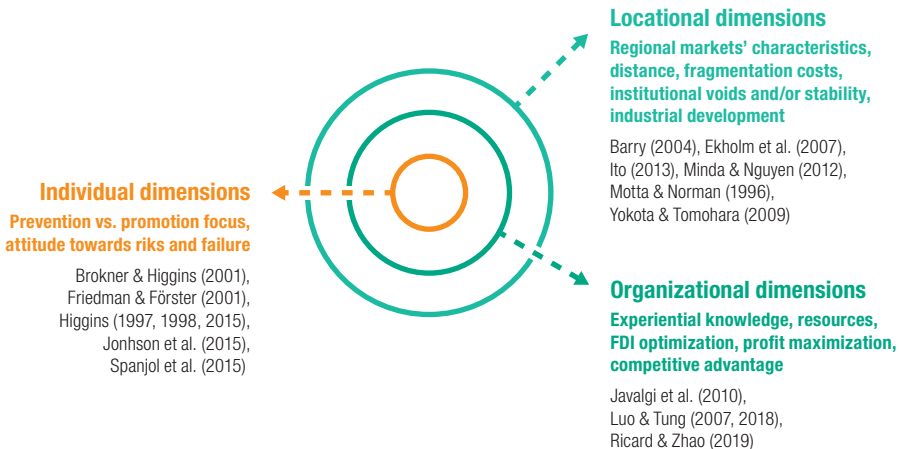
Understanding managers' behaviour amounts to analysing the impact of emotional experiences on their choices. While being a key element, international business (IB) scholars devoted scant attention to the psychological process affecting both the nature and the magnitude of managers' experiences and emotions (Brockner and Higgins, 2001). Regulatory focus theory might help to fill the gap. Regulatory focus is a prominent theory in psycho-sociology to analyse self-regulatory motivation at the individual, collective and organizational levels (Johnson et al., 2015). Individuals' regulatory foci have an impact on the strategic choices they make as well as on their ability to manage change and growth (Spanjol et al., 2015). Thus, introducing regulatory focus theory is relevant in our case as it deepens understanding about the nature of and the role played by psychological factors on SMEs' internationalization paths.

According to Higgins (1997, 1998), individuals can have two attitudes towards the same situation: they can try to maximize their satisfaction (i.e. promotion focused) or avoid losses (i.e. prevention focused). Their regulatory foci will be influenced by the needs they seek to satisfy, the goals they try to achieve and the psychological situations that matter for them (Brockner and Higgins, 2001). Promotion-focused managers will be particularly concerned by satisfying growth and development needs, reaching an ideal and motivated by positive outcomes (i.e. pleasure of the gain). They tend to be more creative (Friedman and Förster, 2001), take the risks needed to reach their objectives (Higgins, 1997, 2015) and, therefore, intensify escalation behaviours (Altintas and Royer, 2009; Brockner, 1992) – i.e. a set of successive decisions to pursue an action despite negative information or returns from markets (regarding SMEs' products/services, strategy, etc.) leading to a failure – as their projects near completion (Barsky and Zyphur, 2016). They follow "eager strategies"¹ and do not see failures as

¹ Eager strategies can be defined as proactive, risk-taking and opportunity-driven attitudes dedicated to seize opportunities despite the risks existing on the market. SMEs implementing these strategies consider failing as an opportunity to learn rather than as a negative result. Vigilant strategies tend to be adopted by risk-averse firms, the objective being to limit as much as possible the exposure to risks by targeting mature economies in order to avoid failure – since failing abroad is perceived as a sign of the firm's inability to meet the market-specific needs.

negative but rather as opportunities for experiential learning. By contrast, prevention-focused managers are driven by security needs, fulfilling duties, obligations and responsibilities, and aim to avoid negative outcomes. In contrast to their promotion-focused counterparts, they have a negative attitude towards failure and avoid risk-taking initiatives by following “vigilant strategies”. Whether managers are promotion or prevention-focused is an individual variable (Higgins, 1998) but these motivational states can also be situation induced, i.e. influenced by external events (Brockner and Higgins, 2001). Therefore, environmental shocks can lead promotion-focused managers to adopt a preventive attitude and vice versa. Thus, by mapping regulatory focus theory onto springboard strategies, one should expect that risk-averse managers (prevention-focused) would opt to implement springboard strategies in reaction to the degradation of their market conditions. They might belong to traditional industries and target markets that are in proximity in order to reduce the negative impact of psychic distance. Promotion-focused managers might, by contrast, belong to creative industries and implement springboard strategies proactively. They should be able to take risks, behave opportunistically and target emerging markets in order to reach their growth objectives (Das and Kumar, 2010). In sum, our approach provides an important bridge between understanding how SMEs internationalize and what motivates decision-makers to implement a springboard strategy. Paying attention to SMEs’ internationalization shows how existing theories are not sufficient to fully understand decision-makers’ strategic choices. A more thorough explanation requires combining IB and psychological theories to get a better understanding of what drives SMEs to implement springboard strategies. Our conceptual framework is summarized in figure 1.

Figure 1. Conceptual framework



3. Methodology

To understand *why* manufacturing SMEs implement springboard strategies, we conducted exploratory qualitative case-study research (Ghauri and Gronhaug, 2005; Yin, 2009). Because of the multidisciplinary nature of our work, we adopted an abductive approach, that switches constantly back and forth between our conceptual and our empirical frameworks. Abduction is a form of reasoning particularly relevant when trying to identify the origins of phenomena or to find explanations for social actions (Catellin, 2004). In this vein, multiple case studies are one of the most appropriate tools for exploring critical, emerging or early phases phenomena (Eisenhardt, 1989; Gibbert, Ruigrok and Wicki, 2008; Yin, 2009) as they provide insights that are hardly producible with quantitative data (Gephart, 2004). They provide rich, detailed descriptions of actions in their real-life contexts, preserving the meanings actors give to these actions (Denzin and Lincoln, 1994). Thus, they reinforce our understanding about human interactions and social process drivers (Gephart, 2004).

3.1. Selection of the empirical context and case-firms

The Auvergne-Rhône-Alpes (AURA) region is the second most dynamic, innovative and internationally open industrial region in France (French Chamber of Commerce, 2018). It is also – with Baden-Württemberg, Cataluña and Lombardy – one of the Four Motors for Europe, i.e. one of the four strongest European regions in terms of economic as well as research performance (Four Motors, 2020). The AURA region counts nearly 40,000 manufacturing SMEs, among which the majority are internationally active. Focusing on this region helped us to access a great variety of SMEs that are internationally active, thus maximizing the generalizability of our results. For the purpose of our study, we decided to focus on independent manufacturing SMEs (as defined by the European Commission) that have at least one subsidiary abroad. Therefore, we purposely excluded firms larger than 250 employees and/or realizing more than 50 million euros turnover and/or owned by a third company, as they do not match the profile sought. We also excluded service firms and firms having their headquarters based in another region. Focusing on the manufacturing sector allowed us to minimize the impact of industry-specific factors on SME internationalization paths (Wincent et al., 2014; Zaefarian et al., 2016). Finally, we excluded SMEs that rely only on exports. Indeed, the creation of a foreign subsidiary is a complex process, notably for SMEs that are restrained by limited resources and competencies. As export and small multinational firms do not face the same issues, notably in terms of exposure to risk, distance management or even headquarter-subsidiary relationships (Vachani, 2005), we decided to exclude export SMEs from the scope of the study.

The selection of our case firms relied on a three-step process. First, we looked for the regional SMEs corresponding to our criteria. We identified 128 SMEs using financial databases (DIANE, Datastream and Factiva). Then, we conducted an exploratory study with 18 owner-managers and ten investment promotion agencies through open interviews. This second step led us to get a first understanding of what drives SMEs to implement springboard strategies, to test and refine our interview guide and to identify case firms. The empirical study was conducted with five manufacturing SMEs: Company A, Emball'iso, SLAT, Mixel Agitators and Hydrola. Each firm was selected on the basis of its springboard experience – from pre-engagement to withdrawal. The classification used is informed by Leonidou and Katsikeas (1996). Table 1 presents the main characteristics of our final sample. Our sampling strategy is in line with Eisenhardt's (1989) indications, i.e. that cross-case analysis involving four to ten case studies may be sufficient for analytical generalization.

Table 1. Main characteristics of the case firms

	Company A	SLAT	Emball'iso	Mixel Agitators	Hydrola
Stages	Pre-engagement	Initial	Transition	Advanced	Withdrawal
Date set up	2000	1953	1990	1969	1978
Type of company	Family-owned SME	Management-led SME	Family-owned SME	Family-owned SME	Management-led SME
Total sales (2019) € million	48.2	17.7	20	10	1.7
Total workforce (2019)	248	70	130	69	30
International intensity (foreign sales as % total sales)	68	26.1	70	67	47.6
First internationalization	2004 Direct exports to Spain	Late 1970s Indirect exports to Latin America	1995 Direct exports to England	1990 Direct exports to Belgium, Switzerland and Morocco	2005 Direct exports to Tunisia and Morocco
Number of foreign markets (2019)	±50	±30	20	±30	±60
First overseas expansion	2010 Acquisition of an Italian company	2011 Greenfield investment (sales subsidiary) in Germany	2000 Acquisition of a supplier in Germany	2005 Greenfield investment (production subsidiary) in China	2008 Greenfield Investment (sales subsidiary) in Mexico

3.2. Data collection and analysis

Our primary data were collected with CEOs, managers and promotion agencies. During the third step, we conducted 40 in-depth interviews with CEOs, export managers, subsidiary managers, research and development managers and other employees of these five SMEs. In parallel, we conducted 20 interviews with investment promotion agencies that accompanied the SMEs in their internationalization process. The interviews lasted between 45 minutes and four-and-a-half hours. We completed the primary data collection through five days of participatory observation in the case firms. To triangulate and enrich the primary data, extensive secondary data were used, including field notes, companies' websites, specialized newspaper articles and archives. Interviews were designed to get a better understanding about the context leading SMEs to implement a springboard approach over any other form of internationalization strategy. We used a pre-tested guide derived from our literature review and validated during the exploratory phase. This enhanced the reliability of our research by ensuring that the information collected were the same for each case firm (Miles and Huberman, 1994; Yin, 2009; Zaefarian et al., 2016). In terms of the contextuality of our research, four blocks of questions were submitted to the respondents. After a set of general questions related to the identity of the firm, we asked CEOs and managers (i) to talk about their career within the company, (ii) to trace back the SME's international development mentioning the most critical events, (iii) to explain where, why and how they implemented their springboard strategy and, finally, (iv) what were the main results and perspective over a three-year horizon. Promotion agencies were also asked questions about their current offer of ancillary services, notably their perception about the efficiency of those offers and the adaptations needed to meet SMEs' needs. Participants received – 48 hours after the initial meeting – a summary of their interview to verify their responses and, where appropriate, to clarify or rectify elements that could create confusion. Wherever possible, interviews were audio-taped and transcribed. In addition to the interviews, we conducted six days of participatory observation and data collection with the firms surveyed. Observations offer privileged access to respondents in their real-life context and allow scholars to familiarize themselves with the firms studied. This method is particularly relevant to analyse strategic topics as it allows researchers to access quickly and effectively elements not readily available to outsiders. By observing actors in their environment, we were able to identify the prevailing power games and/or internal tensions, hidden issues linked to the implementation of springboard strategies. The data collection process is derived from Schouten and McAlexander's (1995) ethnological work. As recording interlocutors might inhibit openness, we jotted down brief notes and tried to flesh them out as quickly as possible. We recorded our impressions at the end of each day in order to obtain a complete and detailed set of fieldnotes.

The primary and secondary data collected were analysed on a two-step basis. First, a case story was written of each case. We used a chronological matrix to highlight the most critical events and identify the stages of internationalization (Miles and Huberman, 1994). Second, we proceeded to a content analysis using the qualitative data analysis software NVivo.

4. Presentation of the empirical study

Company A

Company A is a family SME created in 2000 and specialized in the development of solutions dedicated to equipping and protecting ski resorts against avalanches. The company generated global sales revenue of 48.2 million euros (68 per cent abroad) and employed 248 persons in 2019. It started its first international operations in Spain through direct exports in 2004, after the arrival of a new CEO, and rapidly expanded to European and American markets. In 2013, the company sold its products in more than 50 countries through various distributors. This rapid expansion was the result of two elements, i.e. (i) the exploitation of the managers' personal networks and (ii) a patent that gave the SME a competitive advantage at the global level. To satisfy its growth objectives, Company A worked with two venture capitalists and used partial and full acquisitions as well as greenfield investments to establish eight production and sales subsidiaries abroad. The weak financial results registered in 2012 and the pressure of shareholders forced Company A to reorganize its activities, reduce the number of foreign distributors and restructure its subsidiaries in 2013. Company A is in a pre-engagement phase, i.e. considering the possibility and relevance of using a springboard strategy to enter the Argentinian, Chilean and Canadian markets via its American subsidiary.

SLAT

Founded in 1953, SLAT is a management-led SME – i.e. owned, today, by two shareholders (the CEO and the chief administrative officer (CAO)) and a venture capital firm. It designs, manufactures and sells secure power supply solutions. It operates in a highly normative field, thus its degree and path of internationalization is limited by the scope of recognition of the certifications it holds. The company generated global sales revenue of 17.7 million euros (26.1 per cent abroad) and employed 70 people in 2019. Its products are sold in more than 30 countries, primarily in Europe. The company started its international expansion through indirect exports (via its clients) in the late 1970s to Latin American, African, Asian and European markets. In 1999, SLAT decided to enter the Chinese market in order

to benefit from the important growth of this industry in China and counter difficulties faced in France owing to a crisis in the telecom sector. This first attempt of proactive expansion was a failure owing to the underestimation of the different dimensions of distance between the French and the Chinese markets. Because of this failure, the SME ceased international operations to focus exclusively on the domestic market and adopted a reactive attitude towards foreign markets. First sold to a German telecom group and then to an American pension fund, the company was acquired by the American multinational 3M. A new CEO took charge of the company in 2004, who was an engineer and former French branch manager of 3M with international experience. He restructured the company, reoriented its business activities and invested in foreign operations. At that point, SLAT adopted a proactive attitude and accelerated its expansion by developing export activities and increasing its commitment to foreign markets. The SME was privatized again in 2009 through a leveraged buyout by the CEO and the CAO. The first sales subsidiary was created in 2011 in Germany, a market characterized by stringent technical norms and a strong industrial reputation. The SME aimed to gain a strong position in Germany but also, eventually, to access central and western European countries. The first step was successful owing to the privileged business relations established with the German multinational Bosch and the local certifications obtained – namely TÜV (Technischer Überwachungsverein) and VDS (Verband der Schadenversicherer). As the sales subsidiary was financially viable, SLAT engaged in the first steps to expand into neighbouring countries – notably Austria, Switzerland and Poland – via its German subsidiary at the end of 2013. SLAT is in initial engagement phase, i.e. implementing the very first steps of its springboard strategy (first exports to third countries).

Emball'iso

Emball'iso is a family-owned company created in 1990 and specialized in the conception, production and commercialization of plastic packaging, mainly for the pharmaceutical sector. In 2015, its total sales were 20 million euros (80 per cent abroad – from 20 countries) and it employed 70 people. Emball'iso began its international operations in 1994 through indirect exports in the United Kingdom and Asia, addressing orders from its French customers operating locally. Since 2000, the SME has adopted a more proactive attitude towards international markets by seizing the opportunity to acquire a German (2000) and an English (2004) supplier facing financial difficulties, to establish its first production subsidiaries abroad. This action sought to reduce the risk of dependency on a unique supplier of raw material. In 2005, Emball'iso tried to diversify its activity by purchasing a German production facility operating in the agro-food industry but this initiative failed because of a lack of market-specific knowledge. This last experience provided knowledge and convinced Emball'iso to change

strategy and opt for greenfield subsidiaries. Emball'iso created its first subsidiaries in Shanghai and Singapore in 2008 and 2009, respectively, to enter Asian markets. The Chinese subsidiary was set up with the aim to reduce production costs and develop the Chinese market. The Singapore facility (a 50-50 joint venture) was set up to get closer to customers, anticipate major public investments in the biotech sector and access the Japanese and Korean markets. Emball'iso is in a transition phase: the SME already has some experience but is still going through adjustments (changing the entry strategy, ownership structure, etc.) in order to make the most efficient use of its springboard strategy.

Mixel Agitators

Mixel Agitators is a family-owned company that develops, produces and sells industrial agitators. The company generated global sales revenue of 10 million euros (67 per cent coming from 30 countries) and employed 69 persons in 2019. It is the most advanced firm of our sample in terms of the implementation of the springboard strategy as it already has several years of experience – and thus experiential knowledge. Mixel Agitators started its internationalization through direct exports in 1991 after the arrival of a new, internationally-oriented CEO. He exploited client networks to export to Morocco, Belgium and Switzerland and explore, at the same time, Asian markets for opportunities. In 1995, Mixel Agitators tried to take over a sales office based in Hong Kong with three other SMEs but failed, mainly because of problems linked to the management of local staff and to the underestimation of the costs associated with the operation. After an eight-year period of reorganization, the company re-adopted a proactive attitude towards Asian markets and signed its first contracts in China with two multinational firm members of the SME's network. Increasing numbers of orders and a need to be closer to clients in Asian markets prompted the company to create a greenfield production subsidiary in Beijing in 2004, and to recruit an experienced subsidiary manager to foster its development and increase its control locally. By opening a facility in China, Mixel Agitators sought to more efficiently serve neighbouring countries, notably Thailand, the Republic of Korea, Japan and Vietnam. Mixel Agitator is in an advanced phase of internationalization: the SME accumulated a lot of springboard experience, allowing it to implement the same approach in other countries.

Hydrola

Hydrola is a management-led SME (the current CEO acquired the company from the founder in the late 1990s) that develops, produces and sells hydraulic, mechanical and pneumatic components for various industries. The company generated global sales revenue of 1.7 million euros (43.2 per cent abroad) and employed 30 persons in 2019. Hydrola started its international operation through indirect exports in

2005 in Morocco and Tunisia after the arrival of a new CEO and the creation of a website in several languages. In 2008, Hydrola used an internal opportunity to create its first sales subsidiary in Mexico, convinced by the market's promising growth perspectives. The significant distance between France and Mexico, and the lack of experience and market-specific knowledge forced Hydrola to stop the operations, restructure the subsidiary and change the management team. In parallel, the company decided to create two subsidiaries in Tunisia and Senegal. This operation can be explained by the experience previously gained locally, historical links between France and the latter two countries and the growth potential offered by the neighbouring African and Middle Eastern countries. However, the Arab Spring events and local instability forced the SME to divest and withdraw from the region.

5. Results and discussion

The objective of our research is to identify the main motivations leading SMEs to internationalize through springboard strategies. Our multiple-case study reveals the existence of common, partially-shared and unique motivations that are enterprise, network and/or country-driven.

5.1. Motivations that are commonly shared

Our content analysis highlighted the existence of eight motivations that are commonly shared by our case firms – regardless of their commitment to the implementation process. Those common motivations are mainly enterprise-driven. Indeed, the decision to implement a springboard strategy appeared to be mainly owing to managers' anticipations, competencies and/or international orientation. This decision can be assimilated in an entrepreneurial process as it results from the desire to seize opportunities previously created, identified, or network-originated while limiting the exposure to local risks. The five SMEs of our sample all explained their decision, first, by the need to accelerate their expansion and increase their overall volume of activity. The growing need for diversification and reinforcement of bargaining power is mainly related to the saturation of Western markets and the desire to ensure the company's sustainability. Those results show the key role of entrepreneurial, strategic (Vahne and Johanson, 2013, 2017) and individual dimensions in SMEs' internationalization paths. The use of springboard strategies is also driven by the characteristics of the products sold abroad. Company A, Mixel Agitators and Hydrola sell few differentiated, heavy or voluminous products. Their competitiveness is particularly affected by the geographical distance between the home and the target markets. They rely on springboard strategies in order to reduce the total transportation delays and costs and are, thus, concerned with

infrastructural quality, development and accessibility in the countries to be used as springboards and the target markets. Those results confirm the findings of Li and Park (2006), Filatotchev et al., (2007) and Minda and Nguyen (2012) about the role of infrastructure in SMEs’ internationalization paths. Emball’iso and SLAT offer technical and differentiated products. Each company tries to reduce the negative impact of distance, ensuring compliance with technical standards and adding value to its offer by means of the certifications it holds. In their cases, the decision to implement a springboard strategy can be explained by the desire to benefit from the cultural, economic, geographical, historical and linguistic proximity existing between the home, the country used as springboard and the target markets to better exploit a competitive advantage. Those results show the validity and importance of distance in the internationalization process (Johanson and Vahlne, 1977, 2009) – in relation to both the decision to implement a springboard strategy and the locational choice. Serving foreign markets through a springboard strategy is a reassuring option for SMEs as it acts as a steppingstone to third, more distant, countries (Javalgi et al., 2010). The decision to use a springboard strategy also appeared to be commonly motivated by the experience previously acquired by the SMEs, their members and/or their networks in the country the company wants to use as springboard. Indeed, the five case firms had longer and stronger experience in these countries than in the target markets. The local operations enabled them to build relations with different actors and join strategic local networks. By re-exporting through their subsidiaries set up to facilitate springboarding, SMEs seek to consolidate and expand their network in the earmarked springboard country as well as obtain access to new networks in the target markets via their current partners. Those elements attest to the key role of networks and experience (Filatotchev et al., 2007; Johanson and Vahlne, 2009; Lei and Chen, 2011; Vahlne and Johanson, 2013, 2017) as they both appeared to act as triggers in the decision to implement a springboard strategy. The motivations commonly shared are presented in table 2.

Table 2. Motivations commonly shared

	Company A	SLAT	Emball’iso	Mixel Agitators	Hydrola
Level of commitment	Pre-engagement	Initial	Transition	Advanced	Withdrawal
Firm	Accelerate the international expansion Increase the volume of activity globally Product sophistication Market-specific knowledge and experience				
Network	Local partners/clients Relations with clients				

5.2. Motivations that are partially shared

Our content analysis shows the existence of motivations that are partially shared by SMEs. The motivations appeared to differ according to (i) subsidiaries' activities, (ii) firms' degree of internationalization, (iii) SMEs' experience in the target market and, finally, (iv) the location of the subsidiary set up to springboard and the firm's level of commitment to the springboard strategy. First, the motivations differ between SMEs based on whether they had created commercial or production facilities. In the first case (SLAT and Hydrola – commercial enterprises), they want to increase their market-specific knowledge and internationalize their organizational culture. In the second case (Company A, Emball'iso and Mixel Agitators – productive SMEs), they essentially want to gain efficiency (Dunning, 1993, 2000), to diversify their activities and increase their flexibility. While the availability and the cost of raw materials are of key importance, the three SMEs appeared to be less concerned about local labour costs. In line with Huett et al., (2014), we found that productive SMEs (Company A, Emball'iso and Mixel Agitators) attach greater value to the competencies than the costs of the local workforce when selecting their location. However, the results show that these SMEs do not necessarily favour mature countries as the reforms engaged in by emerging countries over the last decades – catch-up strategies, integration into the world economy, etc. – stabilized them and reinforced their attractiveness. In other words, SMEs creating commercial subsidiaries (here SLAT and Hydrola) appear to be essentially motivated by an attempt to reinforce their strategic assets while productive SMEs (here Company A, Emball'iso and Mixel Agitators) are more concerned with efficiency.

Second, we also found differences in firms' degree of internationalization (see Table 1). Traditional SMEs – i.e. aged and mainly focused on the home market (SLAT, Hydrola) – are mainly concerned with protecting their competitive position in the domestic market. They seek to counter increasing competition and to access new business opportunities by exploiting their client networks. In this case, springboard strategies constitute a response to external pressures and the evolution of the competitive environment. Highly internationalized firms – i.e. realizing most of their turnover in a wide range of countries (Company A and Mixel Agitators) – intend to diversify risks, bypass entry barriers and benefit from agreements existing between the countries used as springboards and target markets. Those results confirm the key role played by free trade agreements (Ekholm et al., 2007; Yokota and Tomohara, 2009; Javalgi et al., 2010) and the interest to include the strategic dimension into the analysis to better understand the implementation process of springboard strategies. Finally, multi-country firms – i.e. firms realizing most of their turnover in a limited number of countries (Emball'iso) – are particularly concerned with the need to minimize their exposure to local risks. The springboard strategy acts, in this case, as an alternative solution enabling the company to maximize the value of its offer in a given geographical area while minimizing

uncertainty linked to each target market. This is particularly true concerning emerging and/or unstable markets (Luo and Tung, 2007, 2018).

Our results show that – when springboard strategies are considered – highly internationalized SMEs can, at a given time, and accounting for experiential knowledge previously acquired, be more concerned with reducing uncertainty than maximizing profits. Thus, including the experiential and temporal dimensions as well as managerial attitude towards risks and uncertainty would be useful to understand the initiating conditions or factors surrounding springboard strategies. Third, the implementation of springboard strategies is partially linked to SMEs' previous unsuccessful experiences and/or difficulties in the target markets. Indeed, two of the case firms (Mixel Agitators and Hydrola) explained their choice by the need to maintain their access to promising or key markets despite past failures. They opted for a springboard strategy in order to diversify the operational and financial risks faced, and anticipated the potential opportunities offered by future stabilization and/or openness of the target markets. In this case, past difficulties and failures are sources of learning, attesting to the role of individual and organizational learning in firms' internationalization process (Johanson and Vahline, 1977, 2009; Filatotchev et al., 2007; Javalgi et al., 2010; Ricard and Zhao, 2018; Vahline and Johanson, 2013, 2017).

Finally, the motivations differed according to the location and the level of commitment to the springboard strategy. In initial stages, firms are more interested in locating a subsidiary in developed countries that are in proximity – those countries being perceived as less risky (Krauss et al., 2015) – to serve both mature and emerging markets. They are mainly motivated by the reinforcement of their product portfolio (innovation and adaptation) and securing access to dynamic but intensely competitive markets. They intend to benefit from the industrial reputation of the country used as a springboard to rapidly gain a competitive advantage in the target markets. Thus, they favour markets in proximity in order to reduce the negative impact of distance, risk and lack of experience. Conversely, the most advanced SMEs (Emball'iso, Mixel and Hydrola) tend to locate in emerging markets to serve both emerging and mature countries. They seek to access dynamic markets, increase their flexibility and reactivity, reinforce their bargaining power and seize new business opportunities. Thus, distance and market characteristics are important dimensions. SMEs begin the implementation process in target countries close to them to reduce risks (Johanson and Vahline, 1977, 2009) while more advanced firms are more interested in accessing new and distant markets to benefit from their dynamism.

Two observations can be made about target markets' characteristics. On the one hand, SMEs targeting mature countries appear to be particularly concerned about customers' technical knowledge, purchasing power (Jain, 2011) and value offering

(Kraus et al., 2015) as well as about the needs to protect their intellectual property, to follow their clients and to secure international operations. Local institutional stability (Svetličič et al., 2007; Meyer et al., 2009; Vahlne and Johanson, 2013) and risk mitigation are two key drivers – notably for specialized firms – for springboard strategies. Contrary to Svetličič et al., (2007) and Jain (2011), we found that SMEs offering high value added products do not hesitate to target emerging markets because of the availability of financial resources and adequate technologies on offer owing to reforms (Emball'iso, Mixel Agitators, Hydrola). On the other hand, market size appears to have a different importance when it comes to firms' level of commitment to the springboard strategy. Market size is not a key determinant as both markets used as springboards and target markets range from small to large (cf. table 1). Thus, the role of market size needs to be appreciated in relative terms, comparative to the countries that surround the springboard country, when it comes to firms' strategy, attitude towards risks and strategic assets. Locational choice is an evolutionary and individual process, so springboard and target markets' attractiveness might be differently perceived by firms and change across time.

5.3. Specific motivations

Finally, we identified several motivations specific to each stage. Company A, in the pre-engagement stage, sought to access subventions offered by the country used as a springboard. While these motivations do not constitute a key determinant per se, financial incentives still have a strong influence on the final choice of location (Blomström et al., 2004) – notably in the case of springboard strategies. These elements confirm Luo and Tung's (2007, 2018) and Ricard and Zhao's (2018) analyses regarding the impact of resources on the decision process when it comes to springboarding. In the initial engagement stage, SLAT relied on prospective clients' appetite for German products to enter Central and Eastern European markets. The SME used the technical norms and certifications held in Germany to maximize the value of its offer in the region (Javalgi et al., 2010). Emball'iso expressly claimed to be motivated by the need to reduce its exposure to local risks – notably in terms of production quality and intellectual property protection. The location and the entry mode selected both reflect this fear. Indeed, by creating a joint venture with a local partner in Singapore, Emball'iso sought to benefit from the country's stability to access third markets that are institutionally weaker. In this case, institutional stability acts as a key determinant and attests to the growing importance of institutions both for locational choice and the implementation of springboard strategies. Mixel Agitators, the most advanced company, was mainly motivated by the need to secure its access to financial resources. The objective was to diversify the subsidiary's sources of revenue to palliate the liquidity crisis in the Chinese financial market. Thus, financial institutions had a major impact on Mixel Agitators' strategy

(Dunning and Lundan, 2008). Finally, Hydrola wished to take an upstream position in emerging markets with high growth potential but also in unstable countries. The decision to use a springboard strategy was linked to the CEO's anticipation that the target markets would stabilize. Serving unstable markets by using another country as springboard allows the firm to maintain its position locally and, when the time comes, to benefit from first mover advantage in the target market. The strategic and individual dimensions (notably the CEO's expectations) were the main factors influencing the firm's internationalization path (Vahlne and Johanson, 2013).

Our multiple-case study shows the existence of several motivations that are commonly or partially shared as well as motivations specific to each stage. Among the three levels of analysis we identified (i.e. firm, network and country), springboard strategies seem to be mainly motivated by internal factors (i.e. firm-specific motivations). It is essentially a proactive decision aimed at accelerating SMEs' international expansion by taking advantage of free trade agreements (Motta and Norman, 1996; Ekholm et al., 2007), diversifying their exposure to local risks or making use of networks that are either their own or their clients' (Li and Chen, 2011). Thus, the decision is closely linked to managers' international orientation (Mesquita and Lazzarini, 2008; Li and Gammelgaard, 2014), strategy, experience and attitude towards risks. Our results show that the most experienced companies tend to locate in emerging countries while less experienced ones show a preference for mature countries. In other words, distance and experience have an influence on the decision process.

On the psychological side, our results attest to the critical role of managers' emotions and focus on the decision process. Promotion-focused managers (Emball'iso, Mixel Agitators, Hydrola), use springboard strategies in order to reach their business ideal, to be proactive on emerging or untapped markets and to be competitive at the global level. They tend to invest in emerging markets essentially to re-export to other emerging markets. Conversely, prevention-focused managers (Company A, SLAT) appear to consider springboard strategies as vigilant approaches, ensuring access to the target market while limiting the risks of losses by investing in a country that is geographically or culturally close to them (Pla-Barber and Camps, 2012). Our results also confirm the impact of contextual factors on managers' regulatory foci. Interestingly, our case study shows that under particular circumstances, promotion-focused managers may also use springboard strategies preventively (SLAT, Hydrola) after a failure, to limit their exposure to local risks. Combining IB and psychological theories allowed us to identify the main motivations leading SMEs to implement springboard strategies at individual, organizational, network and country levels.

6. Conclusion and policy implications

This paper explores the motivations of manufacturing SMEs to implement springboard strategies. Specifically, we identified three levels of analysis, with a predominant focus on internal motivations. We combined internationalization and regulatory focus theory to get a deeper understanding of the impact of managers' psychological attitude towards SME internationalization paths. Furthermore, we identified common, partially shared and specific motivations. First, the increased pace of activity, the valuation of SMEs' expertise and the reinforcement of networks and global competitiveness appeared to be common factors motivating SMEs to use springboard strategies. We identified divergences at four levels. Second, motivations appear to differ according to the type of subsidiary created, firms' degree of internationalization, the difficulties or failures previously faced and, finally, the location of the country used as springboard or target markets and the level of commitment to the springboard strategy. Third, we highlighted several motivations – specific to each stage – underlining the rising importance of local institutional networks.

Our findings offer several contributions to our understanding of SMEs' locational and internationalization strategies. Drawing on literature on locational choice (Buckley and Casson, 1976; Johanson and Vahlne, 1977, 2009; Dunning, 1993, 2000; Dunning and Lundan, 2008) and internationalization process (Johanson and Vahlne, 1977, 2009), we introduce the concept of springboard strategies and the necessary distinction between countries used as springboards and target locations. We offer an alternative way to evaluate foreign locations' relative attractiveness. Our study shows that locations have to be considered in dynamic and relative terms (i.e. submitted to changes and comparisons across time) as firms may select their locations based on the opportunities they offer to access a whole region. Springboard strategies help SMEs palliate their liability of foreignness and outsidership (Johanson and Vahlne, 2009; Vahlne and Johanson, 2017) by allowing them to get closer to their targets, countering protectionism by benefiting from free trade agreements (Motta and Norman, 1996; Ekholm et al., 2007; Tomohara and Yokota, 2009), and entering new networks. Thus, it confirms previous findings regarding the importance of networks (Filatotchev et al., 2007; Johanson and Vahlne, 2009; Lei and Chen, 2011; Vahlne and Johanson, 2013) and strategic choices (Vahlne and Johanson, 2017) when firms internationalize. Internal and external networks offer privileged access to resources and raise firms' awareness about opportunities existing in the target region. Networks' contributions need to be evaluated beyond the traditional boundaries considered in the literature.

Applying regulatory focus theory (Higgins, 1997, 1998, 2015; Brockner and Higgins, 2001; Friedman and Förster, 2001; Spanjol et al., 2015) to SMEs' internationalization allowed us to get a deeper understanding of firms' motivations.

Depending on managers' regulatory foci, springboard strategies are either considered as eager strategies aimed at accessing new markets and increasing the firm's global competitiveness or as vigilant options aimed at limiting risks. Thus, paying attention to managers' regulatory focus offers a new angle of analysis to explain the strategic choices made in terms of internationalization.

The theoretical findings of our work have consequences for policymakers and for future research on SMEs' internationalization. First, they show the importance of designing new promotional tools integrating the specificities of springboard strategies. Extant research showed the idiosyncratic nature of SMEs and their need for special attention owing to the obstacles they face. In relation to springboard strategies, more attention needs to be paid to SMEs' specificities and uniqueness. Since these approaches are mainly driven by internal and network factors, efforts should be made at the domestic level by investment promotion agencies and governments to provide tailor-made support solutions, i.e. solutions taking into account SMEs' internal resources, past (international) experiences, and networks among other considerations. Governments can either adapt existing investment incentives and policies to the specificities of SMEs and/or springboard strategies, or create new tools to provide administrative or financial aid to re-export from the country used as springboard, and create networking programmes, among others. Furthermore, our results show that springboard strategies could be considered as part of an entrepreneurial process because it results from the desire to seize opportunities previously created or identified, or that are network-originated, while limiting the exposure to local risks. With this in mind, we believe that including springboard approaches to entrepreneurship policies could be useful, as it would give governments and support agencies the means to better help SMEs exploit their competitive advantage abroad and to maximize profits. To do so, cognizant of the complex nature of springboard strategies, it is important to formulate a regional entrepreneurship strategy (such as the EU 2020 Entrepreneurship Action Plan) to help domestic companies expand abroad and to attract foreign investors. Since managers and founders play a key role in SMEs' expansion, specific attention is warranted for training and preparedness in order to raise firms' awareness, networking and administrative capabilities. These recommendations are in line with the objectives set by the EU 2020 Entrepreneurship Action Plan to develop entrepreneurs' education, remove barriers and reignite the culture of entrepreneurship in Europe. They go deeper by extending these recommendations to other contexts and including options to springboard in the array of expansion strategies available for entrepreneurs today.

Several critical points could be addressed by the governments of countries where companies may opt to springboard. Integrated policy frameworks could be developed and implemented in order to ensure transparency and clarity for foreign businesses and investors, notably for SMEs investing in emerging countries.

This is of key importance because of the complex nature of springboard strategies. Indeed, SMEs implementing these strategies have to juggle at least three different administrative and legal frameworks. Thus, the more complex the legal framework, the harder it is for SMEs to operate compared to large MNCs. Simplifying local legislation, improving institutions, reinforcing trade agreements, ensuring IP rights and enforcing non-discrimination measures would send positive signals and attract foreign firms. Over and above transparency efforts, governments and investment promotion agencies have a role to play by including springboard strategies in their inward FDI strategies. By strengthening their institutional networks and developing transnational programmes, promotion agencies can help SMEs collect information, network and implement the first steps linked to springboard strategies.

Our theoretical and empirical analyses show that, when selecting their location to use as springboard, SMEs are often interested in the proximity of large markets and/or the opportunity to access a regional market (such as the EU, for example). Thus, they tend to favour locations that offer privileged access to these markets or confer advantages offered by some specialized structures such as special economic zones (SEZ). When well managed, SEZs have proven to be an interesting tool to attract foreign companies and ensure the transfer of resources and competencies locally, thereby supporting local economic development (Frick and Rodríguez-Pose, 2019). By factoring springboarding into SEZ planning, local governments could reinforce their countries' attractiveness by promoting their proximity to other markets and facilitating the exchange between countries. These measures would not only increase the economic stability of a given region but also promote linkages between foreign and local companies, facilitating the transfer of competencies and technologies and helping developing and emerging economies move up the value chain. SMEs have a key role to play here since they are often considered as the main drivers for economic development, innovation and employment in today's economy. Thus, facilitating the implementation of springboard strategies for SMEs (local as well as foreign ones) could generate positive outcomes for countries at the local and regional levels.

This research is not without flaws. Our sample of five manufacturing SMEs from the French Rhône-Alpes region, deserves to be extended and diversified in order to strengthen the validity of our findings. Including services firms and extending the scope to other regions and countries would broaden the scope to consider industrial and technology-specific factors. This could facilitate understanding about the role played by assets specificity (high vs. low added value) and see to what extent our results are valid in other countries. This might lead academics to identify industries in which springboard strategies are more likely to be undertaken. A great diversity of countries used as springboards and target markets were observed. This deserves further research.

References

- Aggarwal, A. (2019). "SEZs and economic transformation: towards a developmental approach". *Transnational Corporations*, 26(2), pp. 27-48.
- Altintas, G. & Royer, I. (2009). "Renforcement de la résilience par un apprentissage post-crise: une étude longitudinale sur deux périodes de turbulence". *M@n@gement*, 12(4), pp. 266-293.
- Baltagi, B. H., Egger, P. & Pfaffermayr, M. (2007). "Estimating models of complex FDI: Are there third-country effects?" *Journal of Econometrics*, 140(1), pp. 260-281.
- Barsky, A. P. & Zyphur, M. J. (2016). "Disentangling sunk-costs and completion proximity: The role of regulatory focus". *Journal of Experimental Social Psychology*, 65, pp. 105-108.
- Brockner, J. (1992). "The escalation of commitment to a failing course of action: Toward theoretical progress". *Academy of Management Review*, 17(1), pp. 39-61.
- Brockner, J. & Higgins, E. T. (2001). "Regulatory focus theory: Implications for the study of emotions at work". *Organizational Behavior and Human Decision Processes*, 86(1), pp. 35-66.
- Buckley, P. J., Devinney, T. M. & Louviere, J. J. (2007). "Do managers behave the way theory suggests? A choice-theoretic examination of foreign direct investment location decision-making". *Journal of International Business Studies*, 38(7), pp. 1069-1094.
- Catellin, S. (2004). "L'abduction: une pratique de la découverte scientifique et littéraire". *Hermès, La Revue*, 39(2), pp. 179-185.
- D'Angelo, A., Majocchi, A., Zucchella, A. & Buck, T. (2013). "Geographical pathways for SME internationalization: insights from an Italian sample". *International Marketing Review*, 30(2), pp. 80-105.
- Das, T. K. & Kumar, R. (2011). "Regulatory focus and opportunism in the alliance development process". *Journal of Management*, 37(3), pp. 682-708.
- Denzin, N. K. & Lincoln, Y. S. (1994). "Introduction: Entering the field of qualitative research". *Handbook of Qualitative Research* (pp. 1-17). Thousand Oaks, CA: Sage Publication, Inc.
- Dunning, J. H. (1993). *The Globalization of Business*. London: Routledge.
- Dunning, J. H. (2000). "The eclectic paradigm as an envelope for economic and business theories of MNE activity". *International Business Review*, 9(2), pp. 163-190.
- Dunning, J. H. (2009). "Location and the multinational enterprise: John Dunning's thoughts on receiving the Journal of International Business Studies 2008 Decade Award". *Journal of International Business Studies*, 40(1), pp. 20-34.
- Dunning, J.H. & Lundan, S. (2008). "Institutions and the OLI paradigm of the multinational enterprise". *Asia Pacific Management Journal*, 25(4), pp. 573-593.
- Eisenhardt, K. M. (1989). "Building theories from case study research". *Academy of Management Review*, 14(4), pp. 532-550.
- Ekholm, K., Forslid, R. & Markusen, J. R. (2007). "Export-platform foreign direct investment". *Journal of the European Economic Association*, 5(4), pp. 776-795.

- European Commission (2012), Entrepreneurship 2020 Action Plan, Internal Market, DG Industry, Entrepreneurship and SMEs. Accessed online at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0795>.
- Felin, T. & Foss, N. J. (2005). "Strategic organization: a field in search of micro-foundations". *Strategic Organization*, 3(4), pp. 441–455.
- Filatotchev, I., Strange, R., Piesse, J. & Lien, Y.-C. (2007). "FDI by firms from newly industrialised economies in emerging markets: corporate governance, entry mode and location". *Journal of International Business Studies*, 38(4), pp. 556–572.
- Frick, S. & Rodríguez-Pose, A. (2019), "Are special economic zones in emerging countries a catalyst for the growth of surrounding areas?", *Transnational Corporations*, 26(2), pp. 75–94.
- Friedman, R. S. & Förster, J. (2001). "The effects of promotion and prevention cues on creativity". *Journal of Personality and Social Psychology*, 81(6), pp. 1001–1013.
- Galan, J. I., Gonzalez-Benito, J. & Zuñiga-Vincente, J. A. (2007). "Factors determining the location decisions of Spanish MNEs: an analysis based on the investment development path". *Journal of International Business Studies*, 38(6), pp. 975–997.
- Gephart, R. P. (2004). "Qualitative research and the Academy of Management Journal". *Academy of Management Journal*, 47(4), pp. 454–462.
- Ghuri, P. N. & Grønhaug, K. (2005). *Research Methods in Business Studies: A Practical Guide* (3rd ed). Harlow, England: Financial Times Prentice Hall.
- Gibbert, M., Ruigrok, W. & Wicki, B. (2008). "What passes as a rigorous case study?" *Strategic Management Journal*, 29(13), pp. 1465–1474.
- Goerzen, A., Asmussen, C. G. & Nielsen, B. B. (2013). "Global cities and multinational enterprise location strategy". *Journal of International Business Studies*, 44(5), pp. 427–450.
- Higgins, E. T. (1997). "Beyond pleasure and pain". *American Psychologist*, 52(12), pp. 1280–1300.
- Higgins, E. T. (1998). "Promotion and prevention: regulatory focus as a motivational principle". *Advances in Experimental Social Psychology*, 30, pp. 1–46.
- Higgins, E. T. (2015). "Regulatory focus theory". In R. A. Scott & S. M. Kosslyn (Eds.), *Emerging Trends in the Social and Behavioral Sciences* (pp. 1–18). Hoboken, NJ, USA: John Wiley & Sons, Inc.
- Huett, P., Baum, M., Schwens, C. & Kabst, R. (2014). "Foreign direct investment location choice of small- and medium-sized enterprises: The risk of value erosion of firm-specific resources". *International Business Review*, 23(5), pp. 952–965.
- Ito, T. (2013). "Export-Platform Foreign Direct Investment: Theory and Evidence". *The World Economy*, 36(5), pp. 563–581.
- Javalgi, R. G., Deligonul, S., Ghosh, A. K., Lambert, D. M. & Cavusgil, S. T. (2010). "Foreign market entry mode behavior as a springboarding to further entries: The NAFTA experience". *International Business Review*, 19(3), pp. 209–222.
- Jean, R.-J. B., Tan, D. & Sinkovics, R. R. (2011). "Ethnic ties, location choice, and firm performance in foreign direct investment: A study of Taiwanese business groups' FDI in China". *International Business Review*, 20(6), pp. 627–635.

- Johanson, J. & Vahlne, J.-E. (1977). "The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments". *Journal of International Business Studies*, 8(1), pp. 23–32.
- 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), pp. 1411–1431.
- Johnson, P. D., Smith, M. B., Wallace, J. C., Hill, A. D. & Baron, R. A. (2015). "A review of multilevel regulatory focus in organizations". *Journal of Management*, 41(5), pp. 1501–1529.
- Jones, M. V. & Coviello, N. E. (2005). "Internationalisation: conceptualising an entrepreneurial process of behaviour in time". *Journal of International Business Studies*, 36(3), pp. 284–303.
- Kang, Y. & Jiang, F. (2012). "FDI location choice of Chinese multinationals in East and Southeast Asia: Traditional economic factors and institutional perspective". *Journal of World Business*, 47(1), pp. 45–53.
- Lamb, P., Sandberg, J. & Liesch, P. W. (2011). "Small firm internationalisation unveiled through phenomenography". *Journal of International Business Studies*, 42(S5), pp. 672–693.
- Laufs, K. & Schwens, C. (2014). "Foreign market entry mode choice of small and medium-sized enterprises: A systematic review and future research agenda". *International Business Review*, 23(6), pp. 1109–1126.
- 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), pp. 338–352.
- Leonidou, L. C. & Katsikeas, C. S. (1996). "The export development process: an integrative review of empirical models". *Journal of International Business Studies*, 27(3), pp. 517–551.
- Li, X. & Gammelgaard, J. (2014). "An integrative model of internationalization strategies: The corporate entrepreneurship – institutional environment – regulatory focus (EIR) framework". *Critical Perspectives on International Business*, 10(3), pp. 152–171.
- Lu, J. W. & Beamish, P. W. (2006). "SME internationalization and performance: Growth vs. profitability". *Journal of International Entrepreneurship*, 4(1), pp. 27–48.
- Luo, Y. & Tung, R. L. (2007). "International expansion of emerging market enterprises: A springboard perspective". *Journal of International Business Studies*, 38(4), pp. 481–498.
- Luo, Y. & Tung, R. (2018). "A general theory of springboard MNEs". *Journal of International Business Studies*, 49(2), pp. 129–152.
- Mesquita, L. F. & Lazzarini, S. G. (2008). "Horizontal and vertical relationships in developing economies: implications for smes' access to global markets". *Academy of Management Journal*, 51(2), pp. 359–380.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative DATA ANALYSIS: AN EXPANDED SOURCEBOOK*. Thousand Oaks, CA: Sage.
- Minda, A. & N'Guyen, H.-T.-T. (2012). "Les déterminants de l'investissement direct étranger d'exportation-plateforme: L'exemple du Vietnam". *Revue économique*, 63(1), pp. 69–72.

- Motta, M. & Norman, G. (1996). "Does economic integration cause foreign direct investment?" *International Economic Review*, 37(4), 757-783.
- N'Guyen, H.-T.-T. (2011). "Export-platform foreign direct investment: from location factors to impacts on host country the case of manufacture industries in Vietnam". Ph.D Dissertation, Toulouse Capitole University, Toulouse.
- Nowiński, W. & Rialp, A. (2016). "The Impact of Social Networks on Perceptions of International Opportunities". *Journal of Small Business Management*, 54(2), pp. 445-461.
- Pla-Barber, J. & Camps, J. (2012). "Springboarding: a new geographical landscape for European foreign investment in Latin America". *Journal of Economic Geography*, 12(2), pp. 519-538.
- Ricard A. & Zhao, Y. (2018). "Processus d'internationalisation et performance: Apport de la théorie Springboard au paradigme Uppsala". *Finance Contrôle Stratégie* [online]: <http://journals.openedition.org/fcs/2317>.
- Schotter, A. & Beamish, P. W. (2013). "The hassle factor: An explanation for managerial location shunning". *Journal of International Business Studies*, 44(5), pp. 521-544.
- Schouten, J. W. & McAlexander, J. H. (1995). "Subcultures of consumption: An ethnography of the new bikers". *Journal of Consumer Research*, 22(1), 43-61.
- Spanjol, J., Tam, L., Qualls, W. J. & Bohlmann, J. D. (2015). "Enacting change in strategic marketing decisions: the role of regulatory focus in teams". In C. L. Campbell (Ed.), *Marketing in Transition: Scarcity, Globalism, & Sustainability* (pp. 37-37). Cham: Springer International Publishing.
- Tomohara, A. & Yokota, K. (2009). "Export-led growth via export platform strategies: The impact of free trade agreements on the structure of FDI". *World Economy*, 10(4), pp. 147-160.
- Vachani, S. (2005). "Problems of foreign subsidiaries of SMEs compared with large companies". *International Business Review*, 14(4), pp. 415-439.
- Vissak, T. & Francioni, B. (2013). "Serial nonlinear internationalization in practice: A case study". *International Business Review*, 22(6), pp. 951-962.
- Welch, C., Piekkari, R., Plakoyiannaki, E. & Paavilainen-Mäntymäki, E. (2011). "Theorising from case studies: Towards a pluralist future for international business research". *Journal of International Business Studies*, 42(5), pp. 740-762.
- Wincent, J., Thorgren, S. & Anokhin, S. (2014). "Entrepreneurial orientation and network board diversity in network organizations". *Journal of Business Venturing*, 29(2), pp. 327-344.
- Yin, R. K. 2019. *Case STUDY RESEARCH: DESIGN and METHODS* (5th ed). Los Angeles: Sage.
- Zaefarian, R., Eng, T.-Y. & Tasavori, M. (2016). "An exploratory study of international opportunity identification among family firms". *International Business Review*, 25(1), pp. 333-345.

The blurring of corporate investor nationality and complex ownership structures

Eleonora Alabrese and Bruno Casella*

Recent years have seen a significant increase in the complexity of multinational enterprise (MNE) ownership structures. Complex corporate structures raise concerns about the effectiveness of national and international investment policies, based on the notion of investors' nationality. This motivates this research effort, aimed at analysing the ownership structures of some 700 000 foreign affiliates (FAs). A new methodology, the bottom-up approach, is introduced. The main objective is to empirically map the "shareholder space" of FAs, along the vertical dimension, from the direct shareholders to the ultimate owners. We find that FAs are often part of transnational investment chains; more than 40 per cent of foreign affiliates have direct and ultimate shareholders in different jurisdictions ("double or multiple passports"). Based on shareholders' nationality, we then propose and empirically analyse the salient features of four main archetypes of FAs ownership structure: plain foreign, conduit structures, round-tripping and domestic hubs. Each poses specific challenges to policymakers.

Keywords: firm-level, investors' nationality, multinational enterprises, ownership structures

JEL Classification: F23, G32, H87

1. Introduction: multinationals' ownership structures

Recent years have seen a significant increase in the complexity of multinational enterprise (MNE) ownership structures. On the one hand, as the global economy becomes more integrated, and industrial production processes increasingly fragmented across countries, the enhanced complexity of corporate structures seems a natural outcome of a search for efficiency; see for example the World Investment Report (UNCTAD, 2013) on the link between global value chains and MNEs' activity as captured by foreign direct investment (FDI). On the other, there is a widespread sentiment that MNEs "artificially" add complexity mostly for tax and

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financial purposes. Indeed, the UNCTAD report (2015) provides evidence that investment schemes involving offshore financial centres (OFCs), special purpose entities (SPE) and transit FDI are important tools in MNE tax minimization efforts.

This may result in the increased depth of corporate structures, with affiliates ever further removed from corporate headquarters in chains of ownership, dispersed shareholdings of affiliates (with individual affiliates being owned indirectly through multiple shareholders), cross-shareholdings (with affiliates owning shares in each other), and shared ownerships (e.g. in joint ventures).

The increased complexity of corporate structures raises important concerns about the effectiveness of national and international investment policies relying on the notion of investors' nationality. To address this possible challenge one needs to characterize ownership structures based on clear features and identify them via a well-defined toolkit. This paper seeks to provide an answer to both demands. Our effort intends to map the ownership structures of foreign affiliates (FAs) with the use of a new methodological approach. The methodology allows a simple systematic characterization of intricate conglomerates for a large number of observations. To our knowledge, we are the first to look at the shareholder space of numerous FAs along a vertical dimension moving up from the individual affiliate level. We can therefore investigate traits of FAs based on the so identified jurisdictions of their direct and ultimate shareholders, and examine their policy impact.

This work contributes to a promising and expanding literature. La Porta et al. (1999) provide one of the earliest attempts to describe ownership patterns of large corporations across countries. The study looks at the beneficial ownership of a sample of large corporations in rich countries, to assess the level of concentration of their ownership, who exerts control and how. The authors document the presence of pyramidal structures of control and rare cases of cross-shareholding.

A later stream of academic research investigates specific factors influencing the financial and investment choices of MNEs, which may in turn affect the structure of ownership chains. Many look at possible tax considerations: Althshuler and Grubert (2002) analyse how multinationals use affiliates to implement investment-repatriation strategies; Desai et al. (2003) look at ownership chains to quantify the extent to which location of investment and reported profits are sensitive to tax rate differentials; Desai et al. (2006) explore tax avoidance strategies of multinational firms and report evidence suggesting that affiliates in tax havens are used to reallocate income and defer home country taxation; Grubert (2012) estimates suggest that foreign tax differentials may have significantly raised the foreign share of multinationals' worldwide income. Other factors were also considered, for example: Desai et al. (2004a) explore trends in joint venture (JV) formation looking at both tax changes and coordination incentives; Desai et al. (2004b) investigate how financing frictions and general local capital market conditions influence multinationals' choices

in capital structure; Desai et al. (2008) study how multinationals can overcome financial constraints using their internal capital market.

With the exception of the pioneering paper of La Porta et al. (1999), in all these studies the analysis of complexity in corporate ownership structures was incidental rather than the focus. Only recently a stream of literature has emerged that directly focuses on links in the global ownership chains of multinational corporations to explore their configurations, their complexity, the heterogeneity of these structures and the factors driving their evolution. Mintz and Weichenrieder (2010) analyse the ownership chains of German MNEs with specific focus on the role of conduit entities and holding companies. They first document the increasing relevance and complexity of both holding companies and indirectly-owned subsidiaries in German FDI over the 1990s. The study further shows that factors influencing the existence of these complicated ownership structures are withholding taxes, the possibility of group consolidation and the type of credit system of the capital exporting country.

Another relevant contribution comes from Lewellen and Robinson (2013). The paper analyses the ownership structures of U.S. multinationals and explores the determinants of their complexity. It shows that complex structures are widespread, involving as many as half of the MNEs in the sample. At the same time, there is a divergence in complexity trends. While there has been a steady reduction in the overall share of complex firms between 1994 and 2009, complex MNEs are becoming increasingly complex. Lewellen and Robinson (2013) find that specific tax motives, including the minimization of U.S. tax on income earned abroad, as well as withheld income and capital gains tax imposed abroad, are prominent determinants of complex structures. In addition, concerns about political and expropriation risks, prompt investors to seek out investment protection through international agreements (bilateral investment treaties (BITs)), while considerations on financial exposure, financing strategies and the broader institutional environment of the host country may also play a role.

Analysis on U.S. MNEs by Dyreng et al. (2015) confirm that both considerations about tax on equity distribution, as well as other country characteristics, such as corruption and foreign investment risk, influence the structure of equity chains.

A important recent research stream, laying at the intersection between international business, economics and computer science, applies the powerful analytical toolkit provided by network theory to the analysis of complexity in corporate structures. The aim is that of identifying trends and patterns in global corporate control (Vitali et al., 2011; Rungi et al., 2017). Recent work of Garcia-Bernardo et al. (2017) also uses network theory to examine the role of offshore financial centres (OFCs) in global corporate structures.

The above-mentioned studies have generally applied a “top-down” approach, looking at all possible ownership links in a given corporate group (i.e. starting from the parent company). This paper is the first to employ a “bottom-up” approach. Complexity here is seen from the perspective of the individual affiliate and the host country rather than the parent and the investor country. In line with this approach, immediate policy applications addressed in this analysis primarily concern national investment policies in FDI host countries and, more specifically, the effectiveness of investment rules and regulation based on the notion of foreign ownership.

2. Analytical perspective

2.1 The bottom-up approach

A parent entity is connected to its subsidiaries through layers of equity ownership links that determine its direct or indirect level of control. Affiliates can have one or more direct shareholders and numerous indirect shareholders in addition to their ultimate owner, all potentially located in different countries.

Looking at the depth and the transnationality of these ownership chains is crucial to understand elements of complexity of multinationals most relevant to investment policy.

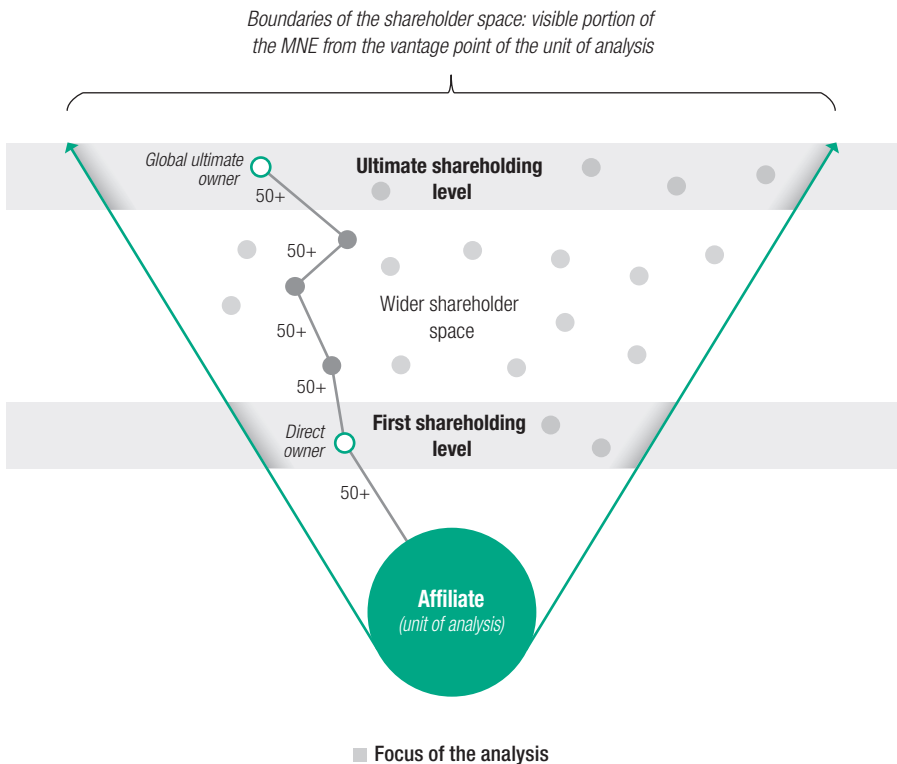
This work empirically analyses FAs ownership scenarios based on the nationality of its shareholders. For this purpose, we introduce a new “bottom-up” approach that looks at the ownership chain starting from the foreign affiliate. The approach is then applied to the analysis of a large database of FAs extracted from Bureau van Dijk’s Orbis database.

Compared to the approach in the literature this far, the bottom-up approach (Figure 1) shifts the focus from the parent to the single affiliate company and analyses its *shareholder space* all the way up to the parent entity. While this space consists of all companies that directly or indirectly own a stake in the target unit, this analysis specifically focuses on two main shareholders: the direct owner and the ultimate owner (i.e. global ultimate owner or GUO, as defined in Orbis). The direct owner is the direct shareholder holding a majority stake; the ultimate owner is the last corporate entity connected to the direct owner through a chain of majority shares. In principle, the direct and the ultimate owner may not exist when the shareholder structure is fragmented; however, previous UNCTAD research (see for example UNCTAD, 2016) has proven that the vast majority of FAs, up to 90 per cent, do have a majority shareholder (that may or may not coincide with the GUO, depending on the vertical complexity of the ownership chain). In addition to the mapping of direct and ultimate owners, this methodology also permits the derivation of auxiliary indicators of complexity of ownership, e.g. number of links from the

affiliate to its GUO (hierarchical distance or HD) or the number of jurisdictions crossed by the majority ownership chain.

This approach is not meant to explore the full complexity of a corporate group. Yet, it is helpful to describe the salient features of the shareholder space for individual affiliates, to map the main ownership chain from the direct shareholder level to the ultimate owner, and to assess the complexity of ownership networks for aggregates of companies (e.g. by country, by region or by industry), mainly in terms of their “depth” and “transnationality”.

Figure 1. A “bottom-up” perspective on MNE ownership structures: the view from the host country



Sources: Authors elaboration based on data used in UNCTAD’s World Investment Report 2016.

Note: The direct owner and the global ultimate owner are identified among shareholders owning a majority stake (i.e. at least 50 per cent of ownership shares).

2.2 Data extraction

The bottom-up analysis requires a massive extraction of firm-level ownership information from Bureau van Dijk's Orbis database.

Bureau van Dijk's Orbis database is widely recognized as the most comprehensive firm-level database of its kind. At the time of the extraction (November 2015) it provided information on 136 million active companies across over 200 countries merged from different sources (e.g. official administrative registries). Starting from the full sample of Orbis, we progressively refine the perimeter of interest, to finally target 4.5 million companies, of which 700,000 foreign affiliates, the focus of this study (see appendix for description of the steps for the construction of the database).

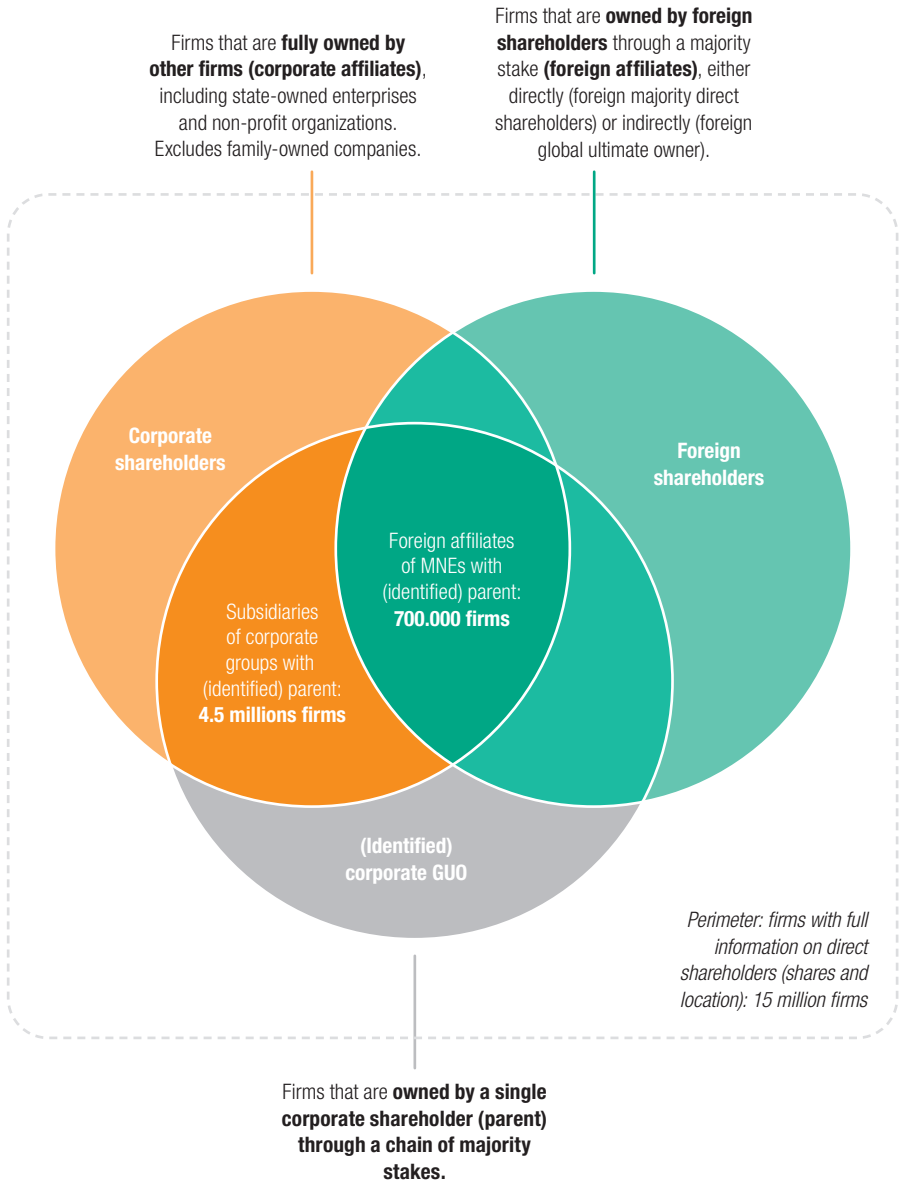
The final sample emerges from the combination of three main criteria (Figure 2). (1) Corporate shareholding confines the analysis to corporate entities. (2) Identified corporate GUOs focus the scope to majority-owned links. (3) Foreign shareholding further zooms in on foreign affiliates, i.e. companies with a foreign ownership component, either at the level of the direct or of the ultimate owner.

A few caveats should be kept in mind. First, even though the cases of cross-shareholdings, preferential shares and voting blocs should not be common, restraining the sample to majority ownership chains inflates the share of simpler ownership structures. Second, the focus on corporate boundaries excludes *de facto* beneficial ownership from the scope of the analysis.¹ Third, selected entities with more complete data may bias the sample coverage toward bigger and potentially more complex firms. Finally, but crucially, coverage of companies' information in Orbis is highly heterogeneous across countries, being significantly higher for developed countries than for developing ones.²

¹ However, companies with corporate shareholders have better information than those with individual or family-shareholders. For example, 95 per cent of the corporate-owned companies (with known shareholders) also report information on shares and location of the shareholders while the share decreases to 60 per cent for family-owned companies.

² This is a very well-known limit of any firm-level analysis based on Orbis, partially mitigated in this study by two considerations. First, foreign affiliates, the focus of this analysis, are less exposed to sample heterogeneity because they are generally larger and subject to more stringent reporting standards compared to domestic firms. Second, coverage of ownership information in Orbis is significantly better than financial information, even in developing economies.

Figure 2. Perimeters of interest



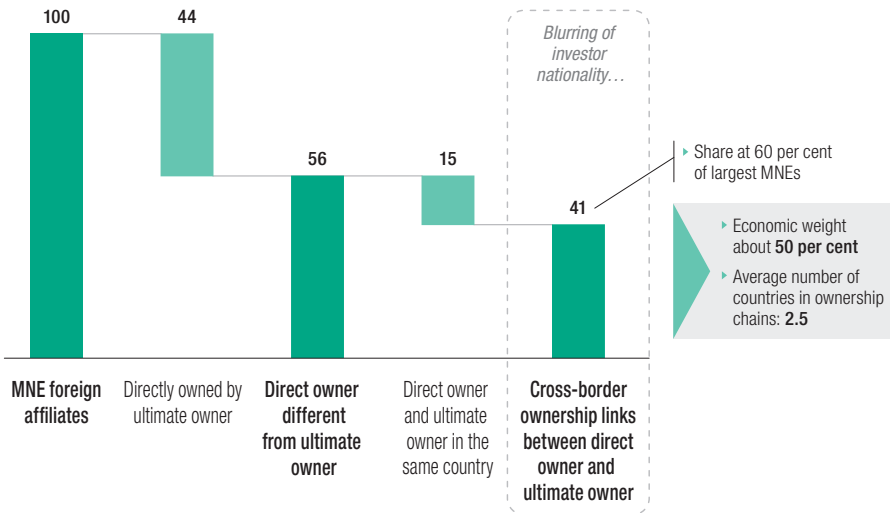
Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Note: Abbreviations stand for: multinational enterprises (MNEs), global ultimate owner (GUO).

3. Investor nationality mismatch

Comparing the nationalities of the direct and the ultimate owner for the 700,000 foreign affiliates in the sample, it emerges that in 40 per cent of the cases they are from different countries, resulting in *investor nationality mismatches* (Figure 3). Indeed, the mismatch index represents the share of cases of nationality mismatch between the direct and the ultimate owner in a group of affiliates – an indicator of the transnationality of the ownership chain.

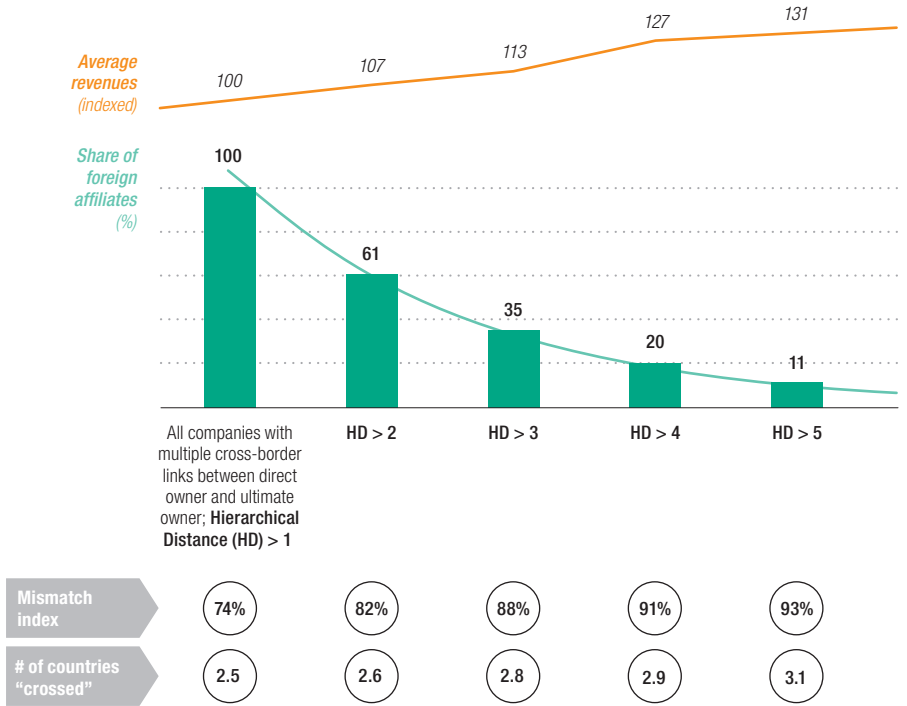
Figure 3. Investor nationality: the big picture



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Nationality mismatches are linked to vertical complexity. The mismatch index and the transnationality of the ownership chain (number of countries involved) increases with the depth and complexity of the ownership chain, as measured by the hierarchical distance (HD), i.e. the number of ownership steps between the ultimate owner and the target affiliate (Figure 4). While in the main sample the mismatch index is at 41 per cent (see Figure 1), FAs part of multi-step chains (HD>1) exhibit a share of mismatch cases of over 70 per cent. Highly complex and transnational ownership chains, however, are not so common, involving a relatively limited number of large foreign affiliates.

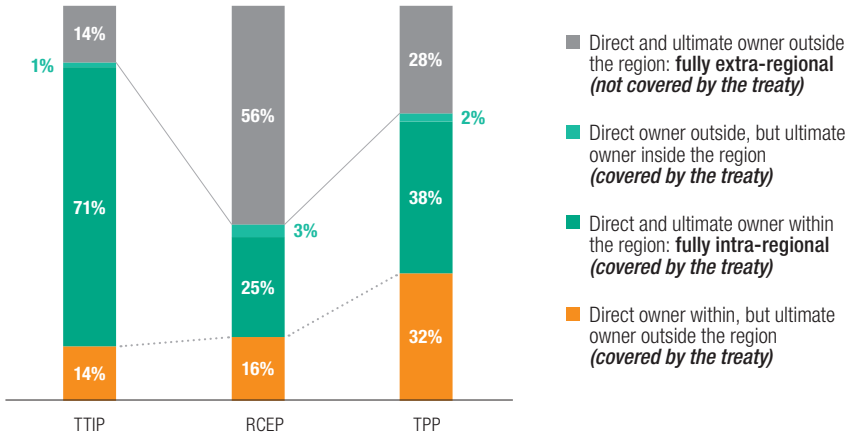
Figure 4. Nationality mismatches and MNE complexity



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

The policy implications of investor nationality mismatches are discussed in great detail in the World Investment Report (UNCTAD, 2016). The multilateralizing effect of complex structures lies at the core of the policy discussion for international investment policies. The possibility of designing ever more “inclusive” corporate structures expands *de facto* the coverage of multilateral treaties way beyond their original scope. Investors can even engage in treaty shopping to deliberately chase the most convenient treatment. Up to a third of apparently intra-regional parent-FA relationships in major prospective mega-regional areas are in reality controlled by ultimate owners outside the region (Figure 5). This clearly raises concerns about ultimate beneficiaries of these treaties and negotiations. National investment policies too can be affected by mismatches in investor nationality. The set of implications depend on the specific scheme generating the nationality mismatch; they will be discussed in the next section introducing ownership archetypes.

Figure 5. Ownership of foreign affiliates in some mega-regional areas
(as discussed at the time of the analysis)



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Note: The trade areas considered are the Transatlantic Trade and Investment Partnership (TTIP), the Trans-Pacific Partnership (TPP) and the Regional Comprehensive Economic Partnership (RCEP).

4. The ownership matrix and archetypes

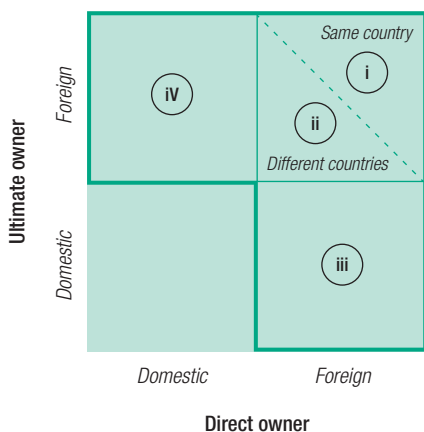
In addition to high-level mapping of FA investors' nationality, the bottom-up approach allows a closer look at the most relevant shareholding schemes. Comparing the location of the direct and the ultimate owners of all 4.5 million companies in the perimeter (i.e. including domestic ones) yields a two-by-two matrix, the *ownership matrix*, summarizing the relevant investor-nationality scenarios by means of four main archetypes (Figure 6). Excluding then domestic companies (bottom left quadrant in the matrix), the resulting ownership archetypes for FAs are: i. Plain Foreign; ii. Conduit Structure; iii. Round-tripping; and iv. Domestic Hubs.

(i) Plain foreign

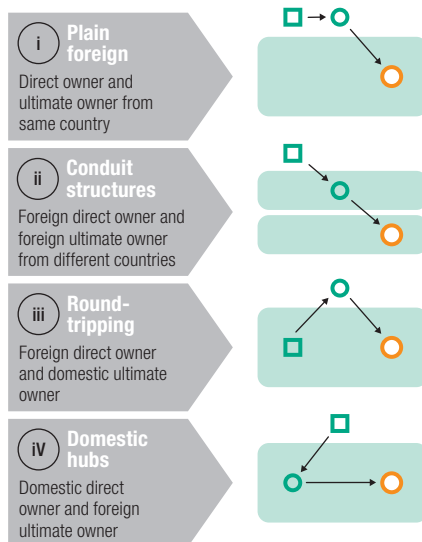
This is the simplest case with both the direct and the ultimate owner from the same (foreign) country (Figure 6). Numerically it is the most frequent scheme, covering almost 60 per cent of the FAs in the sample. However, in operational terms, the average size of both FAs and MNEs involved is significantly smaller than that of any other archetype (Table 1).

Figure 6. The ownership matrix and archetypes

Direct vs ultimate owner and foreign vs domestic



Cases



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

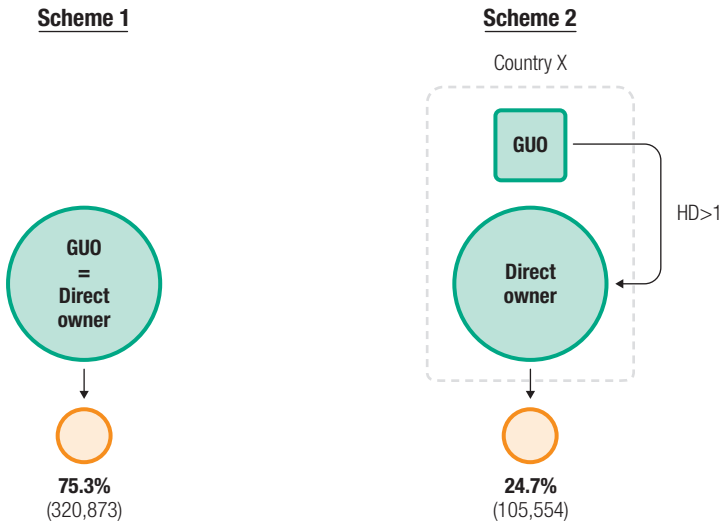
Note: To better illustrate different archetypes we use: large green rectangles to exemplify country areas, small green-outlined rectangles to represent ultimate owners, green-outlined circles to indicate direct owners, orange-outlined circles to mark affiliates, and arrows to represent ownership links.

Table 1: Key statistics by archetype

	Archetype i (Plain Foreign)	Archetype ii (Conduit)	Archetype iii (Round-Tripping)	Archetype iv (Domestic Hubs)
N of cases	426,427	78,722	7,903	209,229
Frequency	59%	11%	1%	29%
Avg. Hierarchical Distance	1.39	3.15	3.19	3.31
Subsidiary Avg. Revenues (million \$)	0.07	0.11	0.14	0.10
GUOs Avg. Revenues (million \$)	10.56	19.60	12.01	23.66
Share Conduit OFCs	30%	51%	60%	14%
Share GUOs OFCs	30%	32%	27%	34%

This scheme does not raise any issue of investor nationality mismatch.³ Around 75 per cent of archetype (i) cases, corresponding to half of the entire sample, are just one-to-one links between an investor and a recipient (hierarchical distance equal to 1), where the direct and the ultimate owners coincide. This is the simplest possible type of shareholding structure (Figure 7). By construction, the distribution of the direct and ultimate owners across different countries is the same, and roughly reflect the economic size of the countries (Figure 9). The share of OFCs, at 30 per cent, is limited compared to more complex schemes such as conduit structures (archetype ii) and round-tripping (archetype iii), but sizable (and larger than expected based on the economic size of OFCs) (Table 1).

Figure 7. A closer look to plain foreign archetype: frequency of simple schemes



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Note: Bold numbers represent the share of each scheme within the subgroup of plain foreign FAs, while the corresponding number of observations are presented in parentheses. HD stands for hierarchical distance; GUO stands for global ultimate owner.

³ Its frequency, at 59 per cent, corresponds to the complementary of the mismatch index (at 41 per cent; Figure 4 and 5). In principle it is possible to have multiple investor nationalities also in this case when direct and ultimate owners are from the same (foreign) country but some intermediate shareholder from a different country. However, this option is residual.

(ii) Conduit structure

Conduit structures arise when direct and ultimate owners are from two different foreign countries. This is typically a result of transit or conduit FDI. These schemes are particularly complex because they involve at least three countries, the domestic country of the foreign affiliate and two foreign countries (of the direct and the ultimate owner, respectively), and potentially more intermediate jurisdictions. The minimal hierarchical distance is two, with the average above three (Table 1). Archetype (ii) covers 11 per cent of the FAs in the sample, confirming that highly complex structures, although not prominent, they are not residual either. In financial and operational terms, their weight is likely to be higher as conduit structures are generally associated with bigger companies (both at the parent and foreign affiliate levels).

In around half of the cases, the conduit jurisdictions (i.e. the jurisdictions of the direct owner) are OFCs (Table 1 and Figure 9). The composition of GUOs instead reflects more closely the economic size, even though the share of OFCs among the GUOs (at about 30 per cent) is somewhat surprising. Conduit structures are challenging from the investor nationality perspective; indeed they are one of the components of the mismatch index. The relative weight of conduit structures is higher for developing than for developed countries, both in the whole sample (16 per cent against 10 per cent) and, more visibly, as a share of the mismatch cases (59 per cent vis à vis 21 per cent) (Figure 10).

(iii) Round-tripping

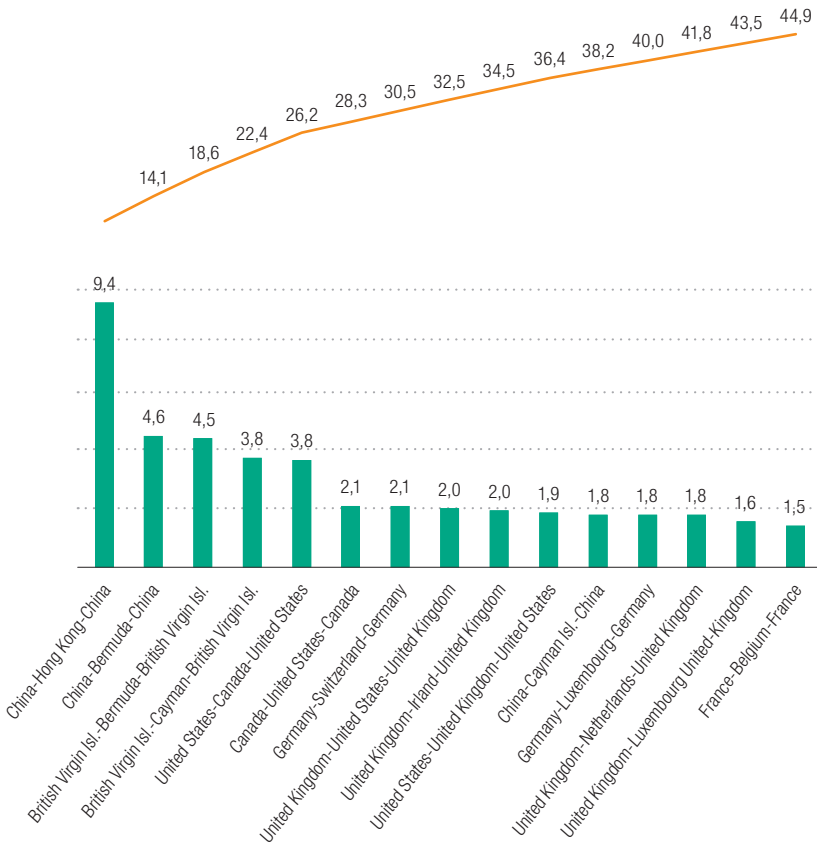
Round-tripping describes a situation where the affiliate is from the same country as the ultimate owner, while the direct owner is foreign; in other words, the parent invests domestically through a foreign intermediate subsidiary (Figure 6). It is the most controversial archetype, often brought up as an example of a harmful or abusive MNE practice. Looking at the frequency of this scheme, at only 1 per cent of all FAs in the sample, its relevance in the world of international production is likely to be smaller than generally perceived (Table 1).⁴ Not only is round-tripping quite limited, but it is also very much confined to a small set of identifiable cases;

⁴ As a caveat, such a small share of round-tripping can be partially due to the fact that the foreign conduit jurisdictions employed in round-tripping schemes typically have strong confidentiality standards, to disguise the “real” domestic nature of the investment. In such cases, Orbis may not detect upper layers in the ownership chain, and the bottom-up approach may stop at the level of the conduit jurisdiction, qualifying the archetype as plain foreign or a conduit structure with an OFC GUO rather than round-tripping (with domestic GUO). Balance of Payment statistics on ultimate investors available for a limited sample of countries suggests a share of round-tripping in FDI stock at about 5 per cent, with significant variability across countries.

the first fifteen schemes in order of frequency cover almost half of the cases of round-tripping (Figure 8).

Round-tripping and conduit structures have in common the heavy use of offshore financial centres as direct investors (reaching here 60 per cent of cases) (Table 1). Interestingly though, large MNEs rely more on conduit structures and are less involved in round-tripping, which is instead more popular among small and medium-sized multinationals.

Figure 8. The most common round-tripping schemes (Per cent)



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

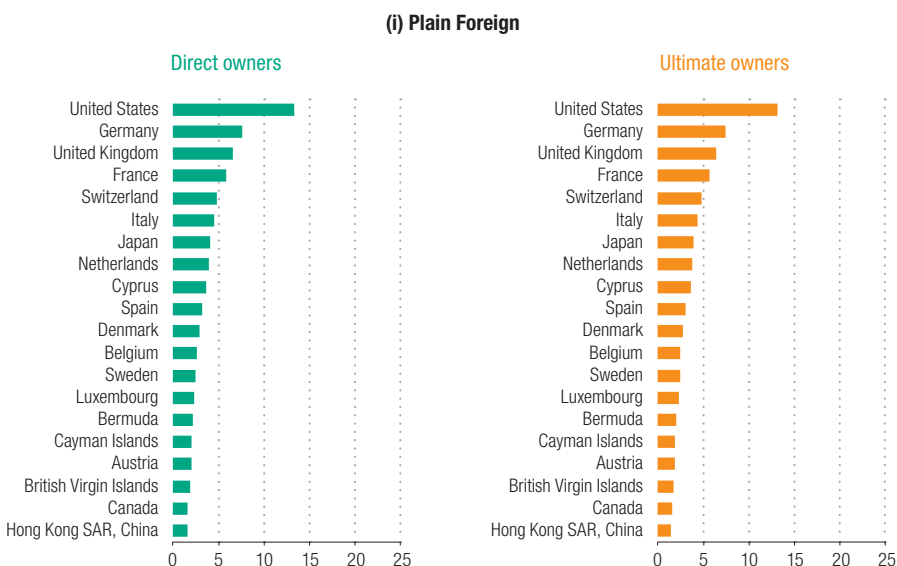
Note: Schemes are listed in decreasing order of frequency from left to right. Bars refer to the frequency of individual schemes while the line refers to cumulative frequency.

(iv) Domestic hubs

Foreign affiliates may be directly owned by a domestic corporate entity, acting as a domestic hub, while the ultimate owner, the MNE parent, is located in a different country (Figure 6). This archetype is quite common, covering up to a third of foreign affiliates (Table 1). It implies the establishment of a local network of affiliates and it is more widespread in mature and large economies, such as those of the larger members of the European Union (EU) or the United States (Figure 10). It can also emerge as the result of merger and acquisition (M&A) operations, whereby local affiliates of an MNE acquire companies operating in the host country.

Domestic hubs are generally associated not only with major economies, but also with large MNEs, with a need to establish a multiple and capillary presence in some important host markets (Table 1). Similar to conduit structures (archetype ii) and round-tripping (archetype iii), this archetype generates mismatches in investor nationality (i.e. between a domestic direct owner and a foreign ultimate owner). However, in many respects it is less problematic. It is characterized by a limited use of OFCs and both the distribution of direct shareholders and GUOs tend to reflect the economic size of the investor countries (Table 1 and Figure 9).

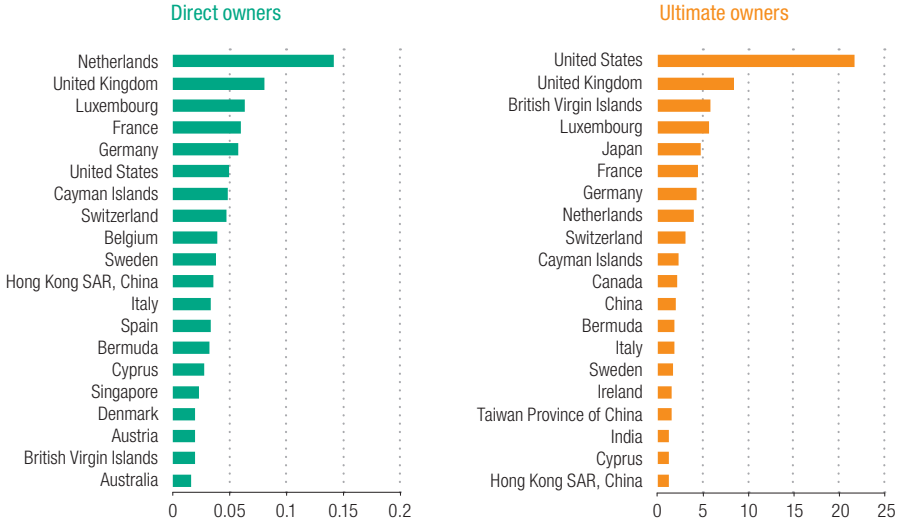
Figure 9. Top 20 largest investor countries by archetype: share of total
(continued)



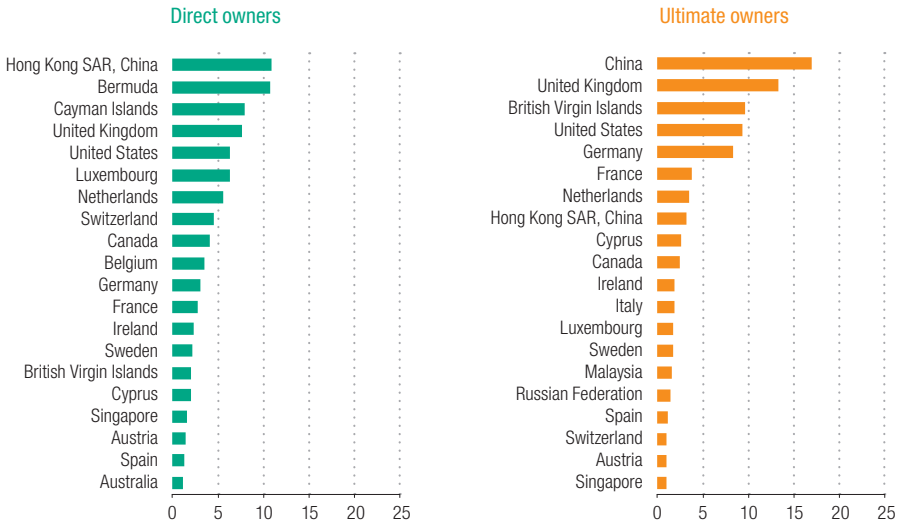
Note: Bars represent frequencies of country appearances as direct or ultimate owners.

Figure 9. Top 20 largest investor countries by archetype: share of total
(continued)

(ii) Conduit Structure

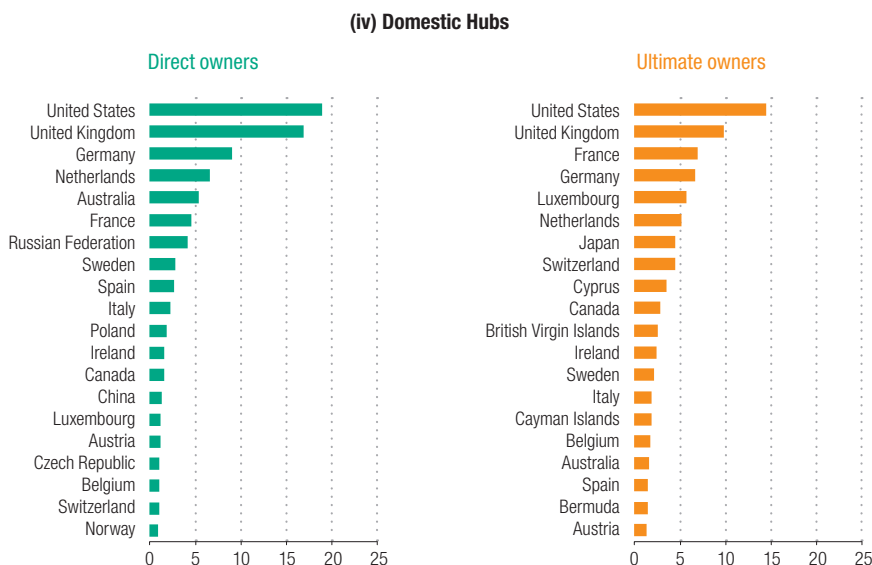


(iii) Round Tripping



Note: Bars represent frequencies of country appearances as direct or ultimate owners.

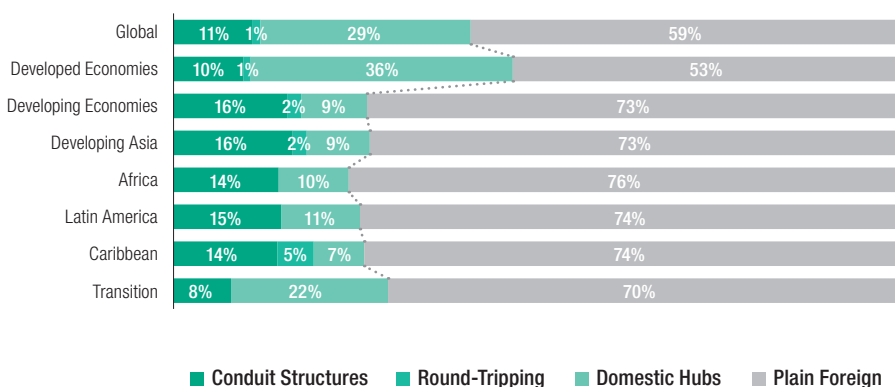
Figure 9. Top 20 largest investor countries by archetype: share of total
(concluded)



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Note: Bars represent frequencies of country appearances as direct or ultimate owners.

Figure 10. Share of archetypes by region



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Note: The dashed line helps visualize the share of archetypes with investor nationality mismatch (i.e. green and light green).

5. Summary and policy challenges

This work adds several contributions to the existing literature. We propose a way to categorize the complexity of large conglomerates based on the identification and the comparison of direct and ultimate owners' nationalities. The issue of mismatch in investor nationality is assessed at the aggregate level, based on a large firm-level sample of around 700,000 FAs. The identification of these investors is conducted starting at the foreign affiliate level with the use of a new "bottom-up" approach. This allows a more granular view on the underlying shareholding schemes, leading to the definition of four relevant archetypes: plain foreign, conduit structure, round-tripping and domestic hubs.

Figure 11 summarizes the main empirical findings from the analysis of the archetypes. Contrary to the perception, complex multi-country structures are not the norm. Most ownership structures are quite simple (plain foreign); half are limited to a one-to-one relationship between the shareholder and the foreign affiliate. However, nationality mismatches are relevant (40 per cent) and remains a challenge in the current FDI landscape. Nationality mismatch does not necessary imply highly complex ownership structures; complexity is mostly confined to conduit structures and round-tripping. Conduit structures are not prominent but sizable; round-tripping is residual (and less common than perceived). Both conduit structures and round-tripping make heavy use of offshore financial centres. The use of domestic hubs is a common feature of nationality mismatch, not associated with particularly complex structures. It is concentrated in large and mature markets. The distribution of ownership archetypes is not uniform across level of development and MNE sizes. Smaller companies tend to prefer simpler solutions (plain foreign) while larger MNEs are more prone to build complex network, either in the form of domestic hubs (developed economies) or transnational conduit structures (developing economies). Round-tripping schemes are instead limited to few jurisdictions, usually involving smaller sized MNEs.

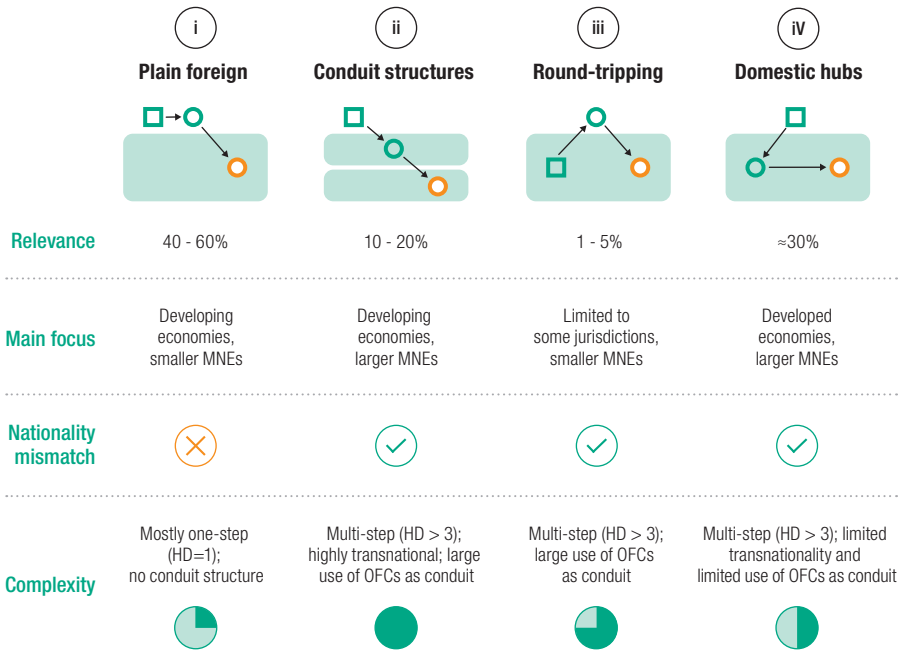
On the policy side, this paper focuses on the implications of archetypes from the perspective of the recipient country (figure 12).

Compared to the standard case with only one foreign investor (archetype i), conduit structures (archetype ii) pose a problem of international investment coverage, as international agreements with two countries A and B may indirectly benefit an ultimate investing country C (multilateralizing effect). Round-tripping (archetype iii) has similar policy implications as conduit structures in terms of international investment policies. At the national level, it is also relevant to the extent that nationals can gain access to benefits (for example incentives) reserved for foreign investors. Archetype iv – domestic hubs – are less challenging from an international policy perspective: their rationale is largely determined by economic and business considerations rather than international regulatory arbitrage. Still, at the national

level, concerns may arise about national investment policies, as disguised foreignness may lead to the circumvention of foreign ownership restrictions.

The policy relevance of these archetypes goes well beyond the domain of investment policies. Tax policy is the most obvious example as complex ownership structures have recently been under spotlight for issues related to tax avoidance. Particularly, indirect structures through third foreign countries (archetype ii and iii) play a major role in tax avoidance practices, where the use of offshore financial centres as intermediate countries allows for entities to shift profits from high-tax to low-tax jurisdictions (UNCTAD, 2015; Bolwijn et al., 2018).

Figure 11. Archetypes: summary of the empirical features



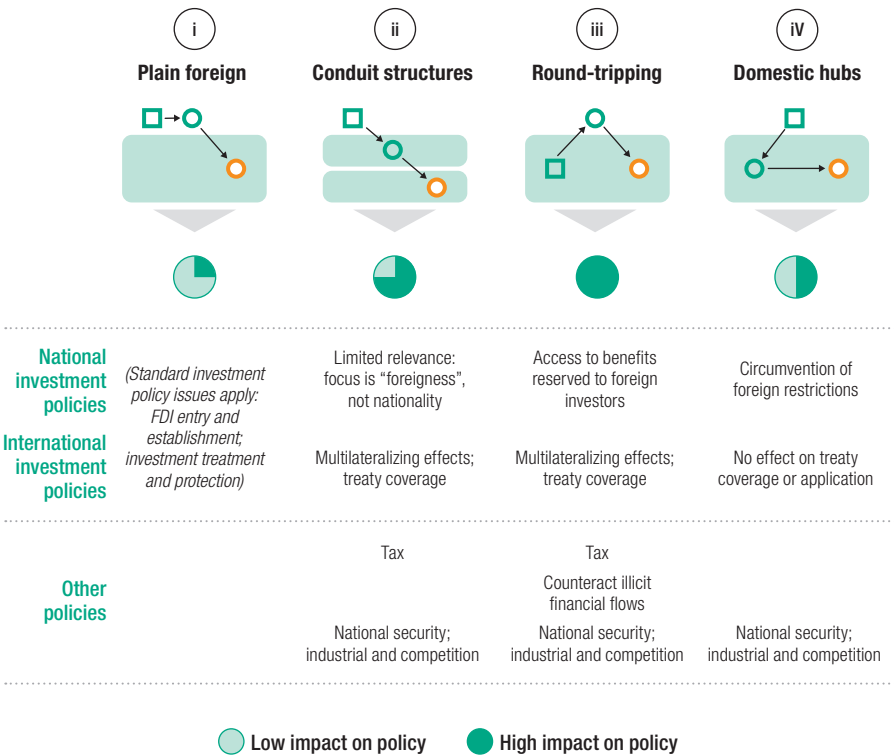
Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

Note: The "size" is based on the frequency of the archetypes in the sample. However, a range was introduced to adjust upward (i.e. with empirical frequency at the lower bound) archetype ii (conduit structures) and iii (round-tripping) and downward (i.e. with empirical frequency at the upper bound) archetype i (plain foreign). This adjustment accounts for a potential bias in the sample, arising when Orbis GUO in archetype i is an OFC (30 per cent of cases). In these cases, it is possible that Orbis is unable to detect upper layers of ownership due to opaque reporting standards of the GUO and a conduit or round-tripping scheme is then classified as plain foreign (see also footnote 4). HD denotes hierarchical distance; OFC denotes offshore financial centre.

Round-tripping (archetype iii) has also been the centre of attention of policymakers and the public as it is used by national investors to disguise the “real” ownership of the investment when illicit financial flows and money laundering are involved.

Beyond the most striking cases of tax avoidance and illicit financial flows, more generally, complex ownership structures become relevant in all policy areas where the differentiation between investors of different nationalities (foreign and domestic or foreign investors from different countries) matters. This can involve for example national security concerns, when limitations on foreign investment in defence or strategic sectors apply. Similarly, in industrial and competition policies, entry restrictions to foreign investors can be introduced to prevent dominant market positions of large MNEs or crowding out of small domestic firms.

Figure 12. Policy implications of the archetypes



Sources: Authors elaboration based on data used in UNCTAD’s World Investment Report 2016.

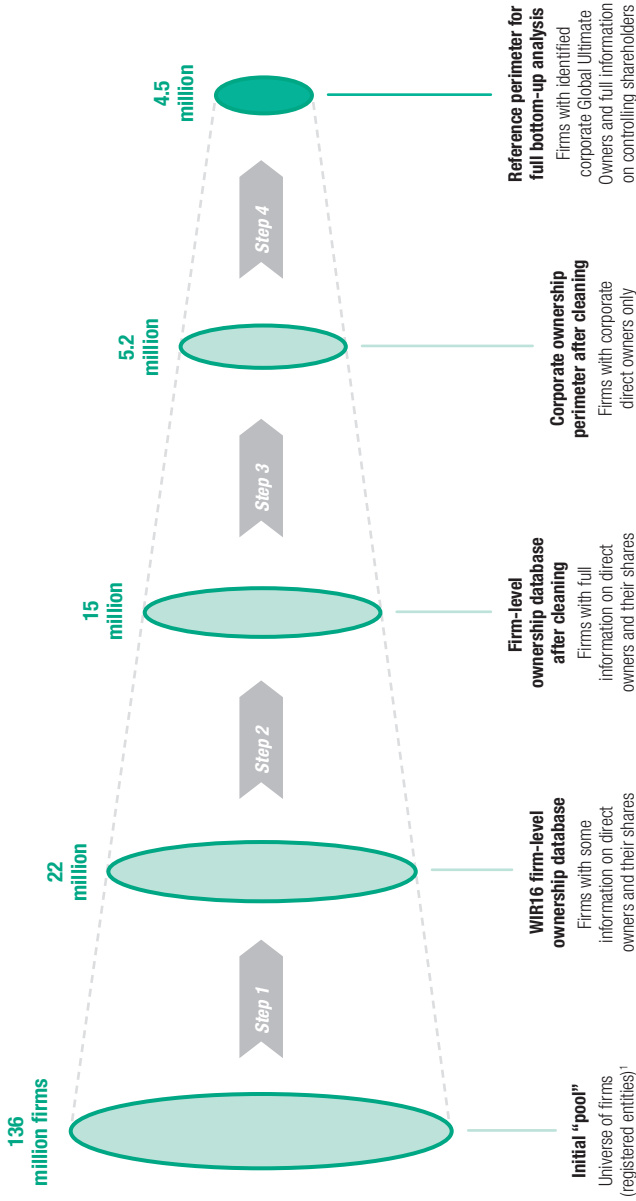
Note: The archetypes in the green rectangle country areas are presented as follows: the green rectangles represent ultimate owners, green circles indicate direct owners and orange circles denote affiliates.

References

- R. Altshuler and H. Grubert. Repatriation Taxes, Repatriation Strategies and Multinational Financial Policy. *Journal of Public Economics*, 87(1):73–107, 2002.
- R. Bolwijn, B. Casella., and D. Rigo. An FDI-driven approach to measuring the scale and economic impact of BEPS. *Transnational Corporations*, 25(2):107–143, 2018.
- M. A. Desai, C. F. Foley, and J. R. Hines Jr. *Chains of Ownership, Regional Tax Competition, and Foreign Direct Investment*. In *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries*. Springer, 2003.
- M. A. Desai, C. F. Foley, and J. R. Hines Jr. The Costs of Shared Ownership: Evidence from International Joint Ventures. *Journal of Financial Economics*, 73 (2):323–374, 2004a.
- M. A. Desai, C. F. Foley, and J. R. Hines Jr. A Multinational Perspective on Capital Structure Choice and Internal Capital Markets. *The Journal of Finance*, 59(6):2451–2487, 2004b.
- M. A. Desai, C. F. Foley, and J. R. Hines Jr. The Demand for Tax Haven Operations. *Journal of Public Economics*, 90(3):513–531, 2006.
- M. A. Desai, C. F. Foley, and K. J. Forbes. Financial Constraints and Growth: Multinational and Local Firm Responses to Currency Depreciations. *The Review of Financial Studies*, 21(6):2857–2888, 2008.
- S. D. Dyreng, B. P. Lindsey, K. S. Markle, and D. A. Shackelford. The Effect of Tax and Nontax Country Characteristics on the Global Equity Supply Chains of U.S. Multinationals. *Journal of Accounting and Economics*, 59(2-3):182–202, 2015.
- J. Garcia-Bernardo, J. Fichtner, F. W. Takes, and E. M. Heemskerk. Uncovering offshore financial centers: Conduits and sinks in the global corporate ownership network. *Scientific Reports*, 7(6246):1–10, 2017.
- H. Grubert. Foreign Taxes and the Growing Share of U.S. Multinational Company Income Abroad: Profits, not Sales, are Being Globalized. *National Tax Journal*, 65(2):247–282, 2012.
- R. La Porta, F. Lopez-De-Silanes, and A. Shleifer. Corporate Ownership Around the World. *Journal of Finance*, 54(2):471–517, 1999.
- K. Lewellen and L. A. Robinson. Internal Ownership Structures of U.S. Multinational Firms. 2013.
- J. M. Mintz and A. J. Weichenrieder. *The Indirect Side of Foreign Direct Investment: Multinational Company Finance and Taxation*. 2010.
- A. Rungi, G. Morrison, and F. Pammolli. Global Ownership and Corporate Control Networks. *IMT Lucca EIC working paper 07*, 2017.
- S. Vitali, J. B. Glattfelder, and S. Battiston. The network of global corporate control. *PLoS ONE*, 6(10):1–6, 2011.
- UNCTAD. *World Investment Report: Global Value Chains: Investment and Trade for Development*. New York & Geneva: United Nations, 2013.
- UNCTAD. *World Investment Report: Reforming International Investment Governance*. New York & Geneva: United Nations, 2015.
- UNCTAD. *World Investment Report: Investor Nationality: Policy Challenges*. New York & Geneva: United Nations, 2016.

Appendix

Construction of the firm/level database.



Sources: Authors elaboration based on data used in UNCTAD's World Investment Report 2016.

¹ Total number of active firms reported by Orbis as of November 2015.

Step 1. Extract companies reporting at least one shareholder. This initial subsample consists of 22 million firms, mainly private liability companies (almost 80 per cent); it excludes branches, most sole traders and proprietorship and all companies with missing information. For each of the selected companies retained, when available, the following data: name, location, type, key financials (assets, revenues and employees), shareholder (SH) names, SH stakes, SH types, and SH location.

Step 2. Remove all those entities for which the shareholder's location is unavailable or the stakes of direct shareholders are missing or incomplete (i.e. the sum of direct shares is below 50 per cent). The remaining sample presents complete information on direct shareholding and a total sum of direct shares above 50 per cent (for 80 per cent of observations the aggregate share adds up to 100 per cent).

Step 3. Restrict the perimeter of the analysis to corporate boundaries. Specifically, select affiliates with shareholders belonging to the following corporate types only: corporate industrial, corporate financial, foundations/no profit, public entities. This leaves out mainly companies with individual or family shareholders and residual cases of mixed ownership or marginal ownership categories.

Step 4. Retain companies with complete and consistent information on the global ultimate owner. The remaining companies in the sample have one shareholder which qualifies as a corporate GUO and present complete information of the ownership path linking the affiliate to the GUO.

Final perimeter of the analysis includes 4.5 million affiliates with complete information of the majority ownership chain, of which 0.7 million companies qualify as foreign affiliates, i.e. with either a foreign direct shareholder or a foreign ultimate owner or both.

BOOK REVIEWS

Research Methods in International Business

Lorraine Eden, Bo Nielsen and Alain Verbeke

(Palgrave MacMillan 2020, ISBN 978-3-030-22113-3), 511 pages

"Facts are the materials of science, but all facts involve Ideas ... we must, for the purposes of science, take care that the ideas are clear and rigorously applied."

William Whewell

Aphorism 4, 'Aphorisms Concerning Science'

The Philosophy of the Inductive Sciences (1840), Vol. 1, xxxvii.

This quote by William Whewell effectively summarizes the message of the volume edited by Lorraine Eden, Bo Nielsen, and Alain Verbeke. The volume is the latest in the Journal of International Business (JIBS) collection series. It is presented as a unique, up-to-date reference source on good and best practice, with a specific focus on international business (IB) research methods. Motivated by the belief that high-quality research methods enhance the credibility and usefulness of IB research for other scholars, policymakers, managers and the public, the different chapters in the volume identify a number of traditional methodological challenges that IB scholars face, and propose best practice for addressing them. The editors of the volumes are in a privileged position to embark on such a journey, with Lorraine Eden having served as Editor-in-Chief of JIBS and having been actively involved in the development of the Academy of International Business (AIB) Code of Conduct, Bo Nielsen being among the founders of the AIB Research Methods Shared Interest Group, and Alain Verbeke currently serving as JIBS Editor-in-Chief.

The effort of Eden and her colleagues is framed within the ongoing action, taking place across all business and social science disciplines, of improving the overall quality of methods used in business research. Similar initiatives have been echoed within the IB community to help IB scholars stay up to date with the latest research methods and to push the field toward the adoption of more advanced methods. The volume adds to these initiatives by putting together a bouquet of original JIBS articles on method, together with commentaries and reflections on these articles.

The volume is structured into 12 parts, including the introduction. Each part opens with an original JIBS article that is followed by a commentary from one or more

content experts. Four parts also include a Further Reflection chapter from one or more of the authors of the original JIBS article. To select the JIBS articles, the editors focused on 2010 as the starting year, thereby covering 10 years of JIBS publications. These publications identify different methodological challenges and contribute toward raising the rigor and relevance of IB scholarship. The selected JIBS articles included in the volume also reflect the diversity and plurality in the methodological focus of the field. They cover challenges and offer suggestions for both qualitative and quantitative methods, as well as mixed-method approaches.

The different parts of the volume can be organized into four main themes. The first concerns the recurring methodological challenges in contemporary IB research (Parts II through IV). The discussion ranges from the reproducibility and replicability of research findings to hypothesis-testing research and the relevance of ruling out alternative explanations to improve the trustworthiness of IB research. I personally appreciated the framing of the discussion on reproducibility and replicability within the more fundamental question of whether IB scholars want to invest in rethinking their core methods and in addressing the long-standing challenges of the field so as to conduct good, repeatable empirical research. The discussion around hypothesis-testing research and alternative explanations has a more operative tone, with the conversation between the authors of the original JIBS articles and of the associated Commentary outlining best practice for adequately reporting and interpreting research findings and improving the validity and generalizability of the findings.

In line with the volume's aim of offering a reference for the diversity and plurality of methodological focuses in the IB community, the second theme (Part V to VII) revolves around the methodological challenges and advances in qualitative research in IB. The focus of the discussion is on the relevance of developing a rigorous context-sensitive theory to challenge the view of case studies being a tool solely for inductive theory building. Case study research is proposed as a natural experiment for confirming or modifying theory, and as a form of interpreting sensemaking. I enjoyed this discussion because it highlights the versatility of this methodology for conducting both theory-building and theory-testing research along novel routes. The conversation further develops with suggestions for more holistic explanations that overcome the dichotomy between qualitative and quantitative research and fully explore the potential of longitudinal qualitative research. In general, I found the overall discussion around this theme well developed, and especially appreciated the discussion on fuzzy-set qualitative comparative analysis as a tool to span both qualitative and quantitative analyses and generalize and contextualize qualitative findings that often span multiple levels of analysis.

The third theme turns the discussion to the methodological challenges in quantitative methods (Parts VIII to X). It focuses upon the challenges involved

in theorizing adequately, and in accurately testing interaction effects within and across levels of analysis in IB research, and on issues related to endogeneity and common method variance (CMV). For this theme also, the discussion indicates best practice by specifically focusing on the explanation of interactions, offering guidance on the steps IB researchers must take to deal with endogeneity, and reiterating the relevance of appropriate ex-ante research design decisions so as to limit CMV issues. Despite the technical nature of the issues at hand, in general, I think the authors have managed to find the right balance in avoiding unnecessary technical jargon while covering the topics extensively.

Frontier methodological challenges in IB research (Parts XI and XII) form the fourth theme the volume addresses. The complexities of modeling the multilevel nature of IB phenomena and of conducting distance research in IB are the two frontier challenges identified. I would personally have liked to have seen an additional chapter on lab experiments, a methodology hardly adopted by IB scholars but increasingly used in strategy and management. Yet, the two chapters addressing the identified frontier challenges do an excellent job of providing the reader with an in-depth overview of the topics examined. The conversation on multilevel models in IB research introduces the concept of cross-classified cases, and urges IB scholars to pay due attention to them, while also indicating several software packages that allow the adoption of multilevel modeling. Similarly, the conversation on distance research offers a detailed analysis of the various measures of cultural distance available, and a constructive discussion on how to solve the methodological issues faced by studies examining the distance between a single home or host country, and multiple other countries.

In conclusion, the volume fulfills the ambitions of the editors. It provides a firm reference for master's students as well as senior academics in IB by reflecting on the best methodological practices that can reasonably be adopted given the nature of the phenomena IB scholars examine. It also contributes, by raising awareness about the type of methodological challenges that plague IB research, towards improving the image of the IB field as a research field that is methodologically aligned with the more conventional subject areas in business schools. Such an effort was long overdue. Hence, I see the volume as a landmark in the development of the IB field and expect it to be highly welcomed by the IB research community.

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China's International Investment Strategy Bilateral, Regional, and Global Law and Policy

Julien Chaisse (editor)

(Oxford: Oxford University Press, 2019,

ISBN: 9780198827450), 560 pages

China's international investment law and policy have been the subject of detailed study since the liberation endeavour of the late 1970s, which was a landmark change in the country's development path and integration into the global economy. The country's active participation in the global economy is mirrored by its evolving profile of cross border capital flows, with China both a prominent source of, and destination for, foreign investment. Indeed, China's rise as a global investor has made its approach to international investment an important issue on which a considerable amount of literature has already been published. The recent past has, nevertheless, seen several important events within China, as well as bilateral, regional and global events influencing China's approach towards international investment and adding new perspectives thereto.

This scenario necessarily calls for a consideration of whether China's international investment law and policy vary across these different perspectives. This task is the focus of this large volume edited by Julian Chaisse. The volume contains twenty-seven well-written chapters by several eminent academics and professionals, representing many parts of the world. It commences with the editor's introduction, which provides an overview of the arguments developed in each chapter and lays out the structure of the book. It consists of five distinct parts, each of which tackle different, but interrelated aspects of China's international investment law and policy. The first part lays the foundation for the discussion developed by the subsequent chapters by elaborating on China's inbound and outbound investments and the factors that influence them, such as taxation, national security, free trade zones and sustainable development.

Subsequent parts consider the bilateral, regional and global prongs of China's investment strategy followed by an exploration of China's role in the investor-State dispute settlement (ISDS) mechanism, elaborating on the investment treaty jurisprudence developed based on China's bilateral investment treaties (BITs). Indeed, the three prongs provided for in the book have made it easy to comprehend the different perspectives of China's international investment strategy, shedding light on the emergent geopolitical and geo-economic significance of cross border investments beyond their commercial value. The bilateral prong focuses on the gradual evolution of China's bilateral investment treaty-making practice, highlighting

the political economy of selected bilateral investment treaties that have been concluded; China's BITs with Israel and Canada that are still under negotiation; and BITs that China expects to conclude with the European Union and the United States.

The regional prong focuses both on small-scale economic integration already achieved by means of existing investment agreements such as the Korea-China-Japan trilateral agreement, and larger-scale economic integration expected to be achieved in the future through the Regional Comprehensive Economic Partnership (RCEP). The global prong elaborates upon China's phenomenal rise as a global power and an ambitious global investor that wishes to provide political leadership to a multilateral investment regime, while identifying the political challenges faced by Chinese investors and the political factors that drive Chinese investments along the Belt and Road initiative. Commentary on the geopolitical and geo-economic factors add to the topicality and criticality of the book, as such non-commercial motives have been perceived as one of the driving forces behind the proliferation of Chinese outward investments in recent years, particularly in respect of infrastructure investment projects.

In addition, each part of the book considers various issues pertaining to China's international investment strategy, ranging from extremely distinctive to largely common issues. Among the specific issues covered are Taiwan's BITs and their role in informal diplomacy and a focus on innovation in the context of the China-Israel BIT. More general issues include market access provision for foreign investments and the regulation of foreign investment by China's State-owned enterprises (SOEs). The contribution made by the chapters on unique issues is a vital extension of the existing literature. The chapters on commonplace issues make an equally important contribution to the current discourse on the effect of Chinese outward investments across the globe, covering almost all sectors, ranging from the acquisition of natural resources to advanced technology.

In light of such discussions, the content of the book in its entirety demonstrates the effect on the existing international system of China's rise as an ambitious global investor. For context, there is discussion of China's role in global investment governance arguing its current position as a "rule shaker" and further, identifying "selective adaptation" as a unique trait in China's investment treaty-making practice. China's flexibility is dissected when it comes to investment treaty negotiations and its receptiveness to demands by counterparts on issues such as sustainable development is acknowledged. Such discussions shed light on China's approach to international investment treaty making, whilst some of the chapters highlight and analyse approaches in recently-concluded investment treaties or treaties currently under negotiation.

Important issues such as the treatment of technology transfer and SOEs in the China-US BIT negotiations are tackled. It is suggested that China may be expected

to assert itself more strongly in investment treaty negotiations on issues that are distinct and important to the Chinese economy. It indeed reveals a novel, but promising aspect of China's investment treaty-making strategy obviously resulting from its emerging role as a world-leading capital exporter. Another current topic under the spotlight in the book is that of enhanced national screening mechanisms, notably those put in place by countries hosting Chinese investments, with divergent perspectives raised on the subject. These include the political dynamics that accompany such measures and the exceptional nature of outward investments from China driven by SOEs.

These discussions highlight the tension between China's outward and inward investment strategies, and the interplay between the different prongs. The chapters on the global prong, in particular, signpost the emergent restrictiveness towards foreign investment from China. Against this backdrop, the political leadership given by China to formulate global non-binding rules on international investment policymaking has been identified as an indication of China's readiness to be a "rule maker" in the realm of international investment. In particular, there is an appreciation for the G20 Guiding Principles for Global Investment Policymaking (devised with the help of the United Nations Conference on Trade and Development) as an important step towards "outlining the architecture of a comprehensive framework on international investment" in the future. The discussion on China's engagement in the ISDS mechanism elucidates the country's increased role in implementing hard law commitments on international investment through the conclusion of legally binding international investment agreements both at bilateral and plurilateral levels.

On the one hand, the discussions developed by each chapter of this volume highlight the constriction of the conventional architecture of international investment law in the wake of rapid and expansive outward investments by Chinese SOEs perhaps not only for profits but in pursuit of domestic policy priorities. On the other hand, they indicate the challenge China faces to raise its profile in global investment governance in a context where protectionism has gained momentum. By providing a comprehensive analysis of China's international investment law and policy, which currently stands between these two major challenges, the book expands the parameters of the conventional wisdom on China's investment strategy, thereby providing critical insights for future research.

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