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« L'université n'entend ni approuver ni désapprouver les opinions particulières de l'auteur.»

To my grandparents,

the people who would be most proud of me today.

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ABBREVIATIONS

AIB	Academy of International Business
AOM	Academy of Management
ASEAN	Association of Southeast Asian Nations
BEA	Bureau of Economic Analysis (US)
BRICS	Brazil, Russia, India, China, and South Africa
CAGE framework	Cultural, Administrative, Geographic, and Economic differences (or distances) framework
CEE	Central and Eastern Europe
CEPII	Le Centre d'études prospectives et d'informations internationales
CIS	Commonwealth of Independent States (former Soviet Union countries)
CMA	Comprehensive Meta-Analysis
CV FDI	Complex vertical FDI
EG	Economic Geography
EP FDI	Export-platform FDI
EU	European Union
EU NUTS	Nomenclature of territorial units for statistics (Nomenclature des Unités territoriales statistiques) of the European Union
EURAM	European Academy of Management
EUROSTAT	Statistical office of the European Union
F&A	Finance and Accounting
FDI	Foreign Direct Investment
FE	Fixed effect
FPI	Foreign Portfolio Investment
FSA	Firm-specific advantage
GDP	Gross Domestic Product
Gen & Strat	General and Strategy
GNI	Gross National Income
H FDI	Horizontal FDI
HDI	Human Development Index

HKMT	Hong Kong, Macao, and Taiwan
HQ	Headquarters
IB	International Business
ICRG	International Country Risk Guide
IDP framework	Investment Development Path framework
IFDI	Inward FDI
IMF	International Monetary Fund
IPR	Intellectual Property Rights
ITC	International Trade Center
KC model	Knowledge-capital model
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
MNE	Multinational Enterprise
NAFTA	North American Free Trade Agreement
NEG	New Economic Geography
OECD	Organization for Economic Cooperation and Development
OFDI	Outward FDI
OLI framework	Ownership-Location-Internalization framework
OR, MS & POM	Operations Research, Management Science, Production & Operations Management
OS/OB, HRM, IR	Organization Behavior/Studies, Human Resource Management, Industrial Relations
PCC	Partial Correlation Coefficient
PSM	Public Sector Management
RE	Random effects
SAR	Spatial Autoregression Model
SDM	Spatial Durbin Model
SEM	Spatial Error Model
SLR	Systematic Literature Review
SMP	Surrounding Market Potential

TI	Transparency International
UAE	United Arab Emirates
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
US	United States of America
V FDI	Vertical FDI
W	Spatial weight matrix
WB	World Bank
WDI	World Development Indicators
WFDI	Spatially weighted FDI
WGDP	Spatially weighted GDP
WGI	World Governance Indicators

1. FIRST CHAPTER: THESIS INTRODUCTION

1.1. INTRODUCTION TO THE RESEARCH ON FDI LOCATION IN DEVELOPING COUNTRIES

This dissertation explores the factors attracting foreign direct investment (FDI) and the motives of multinational enterprises (MNEs) for investment in developing countries. The main questions addressed in this doctoral research primarily focus on the *where* and *why* sides of the FDI location phenomenon in developing countries.

FDI continues to be an important driver of international business (IB) activities around the world, and MNEs are the main agents driving the spatial reconfiguration of the global economy. For many decades, both the significance of FDI and its unequal distribution across countries continued to fuel the interest of scholars from various disciplines in exploring factors that determine a country's attractiveness for foreign investment. Since the surge of FDI inflows in developing countries in the 1990s, FDI location researchers have produced a large body of literature interested in providing new explanations of FDI determinants and motives for investment in economically less developed countries.

This dissertation is motivated by two main aspects. First, FDI is considered to be the most important driver of economic growth in FDI destination countries, especially in the context of developing economies (Borensztein, De Gregorio, & Lee, 1998; Hansen & Rand, 2006; Iamsiraroj, 2016). Second, despite the existence of a large number of studies examining the determinants of location choice of FDI, the findings regarding the main FDI drivers and MNEs' motives for investment in developing countries are often mixed or inconclusive (Nielsen, Asmussen, & Weatherall, 2017; Ramírez-Alesón & Fleta-Asín, 2016; Zhou, Delios, & Yang, 2002). Therefore, a better understanding of the determinants of FDI and MNEs' underlying motives for investment in developing countries may provide a better understanding of the factors driving economic development worldwide (Poelhekke & van der Ploeg, 2009).

This dissertation is composed of five Chapters. This introductory Chapter begins by providing research background and motivation to give an overview of the dissertation. I begin by introducing the concepts (Section 1.2), providing context, and discussing the current trends of FDI (Section 1.3). Section 1.4 briefly discusses existing FDI theory that will be used in the following empirical Chapters and overviews the current state of empirical research on FDI location in developing countries. Sections 1.5 and 1.6 identify research gaps and state the

objectives of this doctoral dissertation. Finally, I outline methodological choices (Section 1.7) and introduce three research essays (Section 1.8).

The second, third, and fourth Chapters of this dissertation represent three research works. The first study is an interdisciplinary systematic literature review that examines 416 empirical articles on FDI location choice in developing economies over the 1975–2018 period and synthesizes 20 host country-specific factors determining FDI inflows in developing countries and regions. The second study extends the systematic literature review by employing more rigorous meta-analytic techniques to gain a deeper understanding of the relative significance of FDI location determinants for foreign investors and aims to identify the main investment motives across developing countries and regions. The third study empirically examines the determinants of European FDI in 21 Asian developing countries over the 2013–2019 period and aims to identify its main motivation using a spatial econometric methodology, which allows a researcher to directly incorporate the characteristics of neighboring countries of the host country into the empirical model.

The fifth Chapter summarizes the findings of three studies, highlights the contributions, implications, and limitations of this dissertation, and proposes avenues for future research on FDI location in developing countries.

With this dissertation, I aim to contribute to an advanced understanding of *where* and *why* MNEs locate their FDI in developing countries. What makes a particular developing country or region attractive to MNEs (the *where* question)? Why do MNEs decide to invest in a particular developing country or region (the *why* question)? This doctoral research attempts to resolve the "somewhat inconsistent empirical evidence" (Nielsen et al., 2017) regarding the impact of FDI location factors on the inflows of foreign investment in developing countries.

1.2. DEFINITIONS OF CONCEPTS

Over the past three decades, MNEs have experienced a remarkable expansion in both number and size, accounting for a large share of international transactions. They play a major role in foreign trade, contribute significantly to global employment, and accumulate many tangible and intangible assets. As multinational firms are the main agents driving global FDI flows, I begin by defining the MNEs.

The term "multinational enterprise" (MNE) refers to an organization that maintains a physical presence and generates income in more than one country (Buckley & Casson, 1976; Dunning, 1973). MNE is owned in the home country and operates in foreign host countries through its affiliates or subsidiaries. The difference between the two concerns the level of ownership, as an "affiliate" represents a minority stake and a "subsidiary" - a majority stake in the ownership of the company (Caves, 1996, 2007). According to Dunning (1989, p. 33): "A multinational enterprise (MNE) is an enterprise which owns or controls value-adding activities in two or more countries. These activities might lead to production of tangible goods (e.g., washing machines) or intangible services (e.g., an audit) or some combination of the two (e.g., the transmission of data). This output might be sold to other firms or used by the same firm for further value-adding activities, i.e., take the form of intermediate goods (e.g., pharmaceutical chemicals) or services (e.g., a warehousing facility or a patent right). Or it might be sold to final consumers, i.e., take the form of consumption goods (e.g., a bar of chocolate) or services (e.g., a haircut), or indeed items that might belong in both categories (e.g., a car or airline journey)."

1.2.1. Definition of the FDI phenomenon

There is no unified or commonly accepted definition of FDI. The United Nations Conference on Trade and Development (UNCTAD) defines FDI as "investment reflecting a lasting interest and control by a foreign direct investor, resident in one economy, in an enterprise resident in another economy (foreign affiliate)[1]".

FDI researchers usually study either flows of FDI (inward or outward) or the stock of FDI accumulated by a given country or region over time. According to UNCTAD, FDI inflows comprise capital provided by a foreign direct investor to its foreign affiliate resident in the reporting country or capital received by a foreign direct investor resident in the reporting

[1] https://hbs.unctad.org/foreign-direct-investment/#:~:text=FDI%20is%20defined%20as%20an,another%20economy%20(foreign%20affiliate).

country from its foreign affiliate abroad. FDI stock is the value of capital and reserves attributable to a non-resident parent enterprise, plus the net indebtedness of foreign affiliates to parent enterprises (UNCTAD, 2022).

The International Monetary Fund (IMF) defines FDI as the "international investment made by a resident entity in one economy (direct investor) with the objective of establishing a lasting interest in an enterprise resident in an economy other than that of the investor (direct investment enterprise)[2]". "Lasting interest" assumes a long-term relationship between the direct investor and the enterprise as well as significant degree of control and influence over the management of the direct investment enterprise.

The World Bank (WB) defines FDI as "direct investment equity flows in the reporting economy [which is] the sum of equity capital, reinvestment of earnings, and other capital[3]". Equity capital refers to a foreign investor's acquisition of shares in an enterprise located in a foreign country. Reinvested earnings represent the investor's share of earnings not distributed as dividends (as a proportion to direct equity participation). Finally, other capital includes intra-company loans, which involve the borrowing and lending of funds between a parent firm and its foreign affiliates.

Both the IMF and WB specify that the term "foreign direct investment enterprise" refers to an enterprise in which a foreign investor owns 10 percent or more of the shares or voting power of the foreign affiliate. Any investment short of 10% is known as an indirect or foreign portfolio investment (FPI). Minor stock purchases and loans obtained from entities other than the parent firm are examples of portfolio investment. FPI is very mobile and can quickly enter or exit a host country, implying its short-term orientation.

Moreover, the biggest difference between FDI and FPI is that the latter does not imply management control over acquired foreign securities or any involvement in the project's organization, management, or technical experience. The definitions of FDI presented above place particular emphasis on the concepts of "ownership" and "control", defining any enterprise

[2] https://www.imf.org/external/np/sta/di/glossary.pdf

[3] https://databank.worldbank.org/metadataglossary/world-development-indicators/series/BX.KLT.DINV.CD.WD?fbclid=IwAR2jHGK7Afu0yRtvFPiGqNKqLknjoJdNE6Bi5UdTM9J3sGvTsaLAVYCau3Y#:~:text=Foreign%20direct%20investment%2C%20net%20inflows,of%20earnings%2C%20and%20other%20capital.

that exercises control over assets, production facilities, or mines in two or more countries as a multinational firm.

In general, FDI comes in a variety of forms and involves the transfer of assets such as financial capital, human resources, technology, and knowledge. Despite this difference in definitions provided above, FDI is the transfer of capital and control through significant equity ownership, with the main goal, apart from profit, of resource transfer, fostering long and lasting interest, establishing control, and ensuring an effective voice in management.

1.2.2. Definition of developing countries

The classification of countries into "developing" and "developed" became popular in the 1960s as a convenient method to categorize countries in the context of policy discussion regarding the transfer of assets and resources from wealthier to poorer nations (Pearson, 1969). To date, there is no single definition of a "developing" or "developed" country that is accepted internationally (Rowley, 2012). These terms are usually used to describe nations with either low or high levels of economic development according to certain criteria such as per capita income, life expectancy, export diversification, etc. Other terms are used to describe "developing" countries, such as "less developed", "least developed", "underdeveloped", "transition", "newly industrialized", etc. Likewise, "developed" countries are also sometimes referred to as "advanced" or "high-income countries", among others. The main reason for these multiple terminologies that are currently used in the literature is the difficulty of defining the concept "development", which inevitably leads to challenges in development taxonomy construction. Due to the absence of a clear methodology for classifying countries based on their level of economic development, I briefly present the most common taxonomies of the IMF, WB, and UNDP. Further, I specify which countries are considered "developed" and "developing" in this dissertation.

The IMF's taxonomy classifies countries by their per capita income level, export diversification, and degree of integration into the global financial system. The IMF divides countries into (1) advanced (or developed) and (2) developing and emerging countries, where countries in the latter group were "defined for what they were not; i.e., they were not advanced" (Nielsen, 2011, p. 18). The WB categorizes countries into four groups according to their income level (measured as GNI per capita): low-, lower middle-, upper middle-, and high-income economies. Low- and lower middle-income countries are thus considered to be developing countries;

however, Rowley (2012, p. 1) notes that classification by income alone "does not reflect development status". Finally, the UNDP's taxonomy is based on the Human Development Index (HDI), composed of three sub-indices: income, education, and life expectancy. As such, developed countries are the ones in the top quartile of the HDI distribution, whereas the remaining ones are classified as developing. Table 1.1 below summarizes the most commonly used development taxonomies proposed by three international organizations.

Table 1.1. Aspects in definitions of developing countries and common country classification systems

	IMF	WB	UNDP
Aspect/focus of classification	- Income per capita - Export diversification - Financial system integration	- Income	- Income per capita - Life expectancy - Literacy
Name of "developed countries"	Advanced or developed countries	High-income and upper middle-income countries	Developed countries
Name of "developing countries"	Emerging and developing countries	Low- and lower middle-income countries	Developing countries
Type of development threshold	Most likely absolute	Absolute	Relative
Development threshold	Not explicit	US$6,000 GNI per capita in 1987-prices[4]	75 percentile in the HDI distribution
Share of countries "developed" in 1990	13%	16%	25%
Share of countries "developed" in 2010	17%	26%	25%

Source: Rowley (2012, p. 2) and Nielsen (2011, p. 19)

In this dissertation, I am relying on the IMF classification of countries into two major groups: (1) advanced/developed and (2) developing and emerging economies. As this classification is not based on strict criteria and has evolved over time, Table 1.2 provides the evolution of developed countries' classification, including the latest updates in the IMF database. As such, the IMF currently classifies 41 countries as advanced or developed, of which three represent Special Administrative Regions (SAR) of China (i.e., Hong Kong SAR and Macao SAR), as well as Taiwan Province of China. They are classified separately due to their relatively

[4] For the 2024 fiscal year, upper middle-income countries are those with a GNI per capita of $4,466-$13,845 and high-income countries are those with a GNI per capita of $13,846 or more.

autonomous status within China and the fact that they maintain separate administrative, legal, and judicial systems. Consequently, all other countries except the 41 listed in Table 1.2 below are considered to belong to the "developing and emerging" group of countries.

Table 1.2. Developed countries in the IMF classification

Year	List of countries
Prior to 1989	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, United Kingdom, United States
1989	Greece, Portugal
1997	Hong Kong SAR, Israel, Singapore, South Korea, Taiwan Province of China
2001	Cyprus
2007	Slovenia
2008	Malta
2009	Czech Republic, Slovak Republic
2011	Estonia
2012	San Marino
2014	Latvia
2015	Lithuania
2016	Macao SAR, Puerto Rico
2021	Andorra
2023	Croatia

Source: IMF - Changes to the Database (April 2023)[5]

The term "emerging" economies also does not have a universally accepted definition in scholarly literature. Emerging countries are most commonly seen as developing countries that satisfy three main criteria: (1) an absolute level of economic development; (2) a fast pace of economic growth; and (3) government policies favoring a free-market system and economic liberalization (Arnold & Quelch, 1998; Hoskisson, Eden, Lau, & Wright, 2000). In the literature, the BRICS countries, Argentina, Chile, Indonesia, the Philippines, Malaysia, and Vietnam are usually referred to as "emerging" economies. Given the focus of this thesis on developing countries, the terms "developing" and "emerging" are used interchangeably, where the latter term is used to describe a developing economy with a large GDP, economic growth prospects, and relatively high economic integration into the global economy.

Finally, it is necessary to further clarify the geographic classification of the regions of the world – developing world specifically – that will be later used in this dissertation. Like with the

[5] https://www.imf.org/en/Publications/WEO/weo-database/Changes

classifications of countries by the level of their economic development, different international organizations rely on different geographic taxonomies when classifying countries into geographic regions (see, for example, WB, IMF, International Labor Organization (ILO), UN, etc.). In this dissertation, I largely rely on the geographic classification of countries following the World Bank (see Fig. 1.1) and consider several geographic regions of the developing world:

1. The African region is composed of Sub-Saharan African countries, from Mauritania, Mali, Niger, Chad, and Sudan in the north of the continent to Namibia, South Africa, and Mozambique in the south.

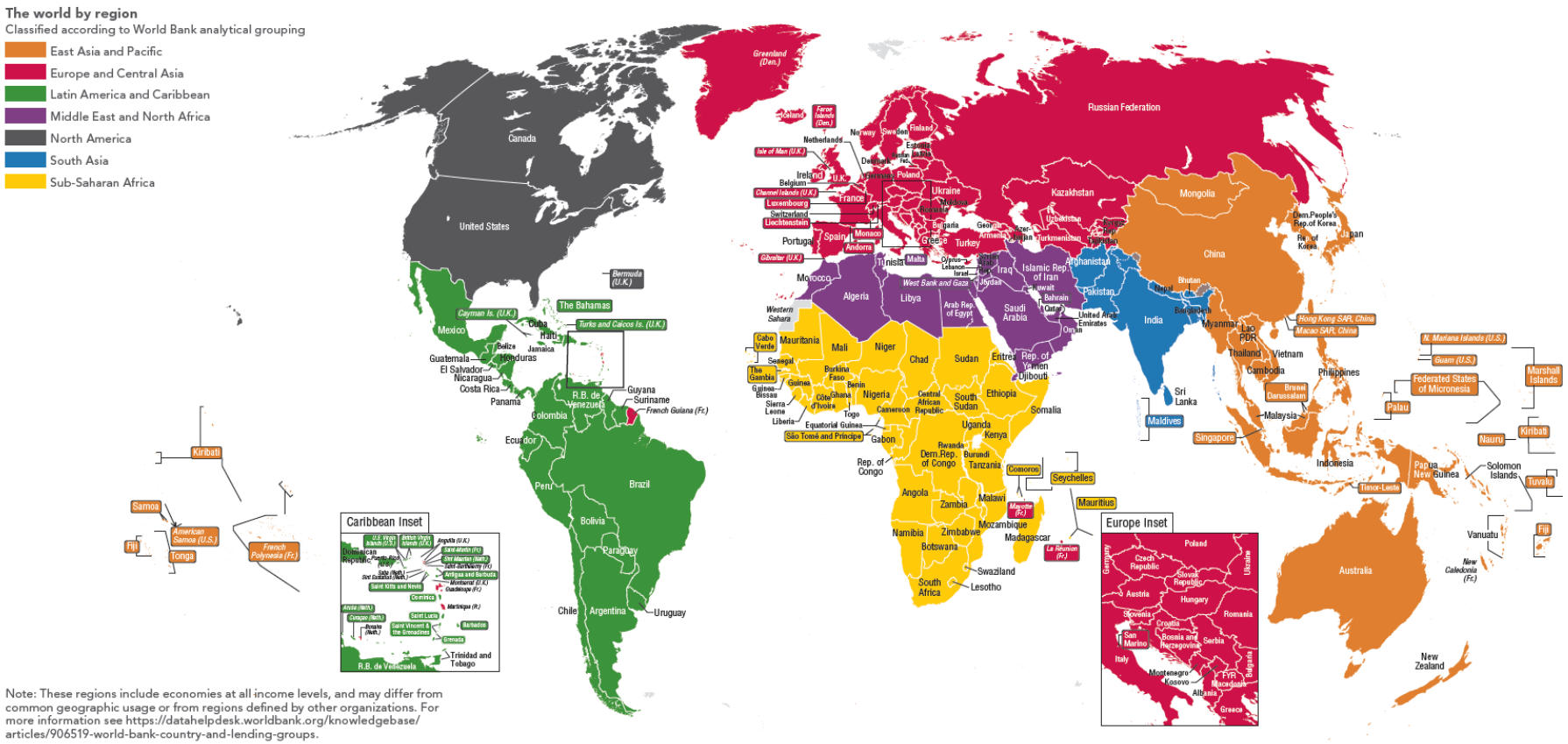
2. The Middle East and North African (MENA) region spans parts of two continents and includes countries from Southwest Asia (Iran, Iraq, Syria, Saudi Arabia, UAE, etc.) to Northern Africa (Egypt, Libya, Algeria, Tunisia, Morocco, etc.). It is important to note, however, that in some cases, North African countries (such as Algeria, Egypt, Tunisia, etc.) may be classified into the African region instead of MENA.

3. The Central and Eastern European (CEE) region includes developing countries from Europe and Central Asia regions such as Hungary, Poland, Czech and Slovak Republics (Central Europe), Romania, Bulgaria, Ukraine, Belarus, Russia (Eastern Europe), as well as countries of the former Soviet Union such as Armenia, Georia, and Azerbaijan in the Caucasus and Kazakhstan, Uzbekistan, and Turkmenistan in Central Asia. These countries are usually also referred to as countries in transition, implying their transition from centrally planned economies to market-oriented systems. However, Türkiye is sometimes considered a part of Europe and sometimes part of the Middle East. In this dissertation, I follow prior research and consider Türkiye a part of the MENA region (Al-Khouri, 2015; Helmy, 2013; Méon & Sekkat, 2004) due to its geographic location between the European and Asian continents as well as its historical, cultural, religious, and economic ties with MENA countries.

4. The Latin America and the Caribbean (LAC) region includes all countries in South America as well as Mexico.

5. Finally, the Asian region includes the developing countries of East, Southeast, and South Asia spanning from Afghanistan and Pakistan in the west to the Philippines and Indonesia in the east.

Figure 1.1. The classification of countries of the world by region



Source: World Bank[6]

[6] https://datahelpdesk.worldbank.org/knowledgebase/

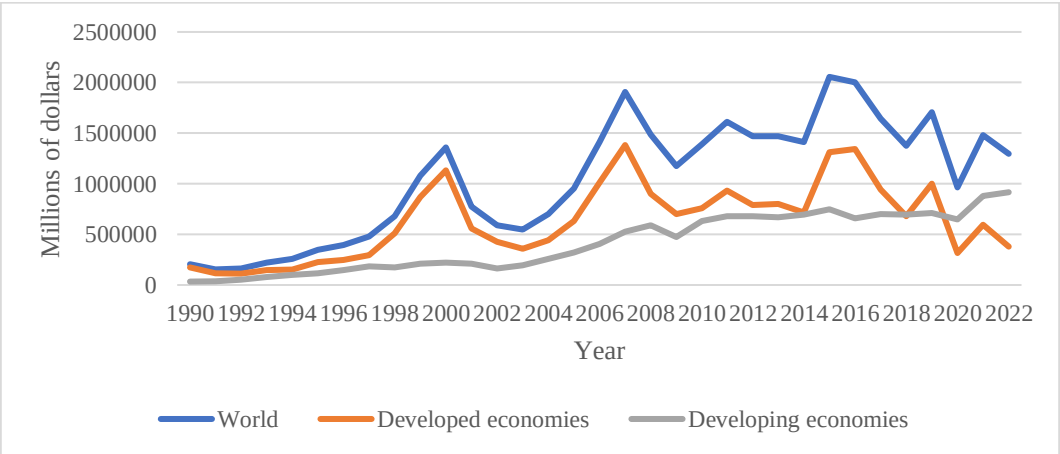
1.3. RELEVANCE OF FDI LOCATION RESEACH IN DEVELOPING COUNTRIES

Rising global FDI flows have fueled the interest of scholars from various disciplines for decades. Research in this area encompasses a wide range of disciplines, including international business, economics, finance, and political science, and strives to analyze the determinants, patterns, and consequences of FDI flows in a globalized world economy. In this Section, I present the recent FDI trends and highlight the importance of FDI location research for both the academic community and policymakers in developing countries.

1.3.1. Recent FDI trends

Since the 1990s, the world has witnessed a remarkable increase in global FDI flows. FDI stocks grew from 22% of world GDP to 35% during the 2000-2016 period alone (Carril-Caccia & Pavlova, 2018). Fig. 1.2 below illustrates global FDI inflows as well as inflows in developed and developing country groups. Traditionally, developed countries absorbed the lion's share of global FDI inflows. In the year 1990, developed economies accounted for 84% of global FDI inflows, but after the year 2000, their share started to decline. FDI inflows in developing economies, on the other hand, have continued to grow steadily since the beginning of the 2000s. As such, the amount of FDI received by developed and developing economies was nearly equal in 2014, and in 2018, the amount of annual FDI inflows in developing countries surpassed the inflows in developed economies for the first time in history. In 2022, FDI in developing economies accounted for 70% of global FDI, or $916 bln, up from 60% in 2021 (UNCTAD, 2023).

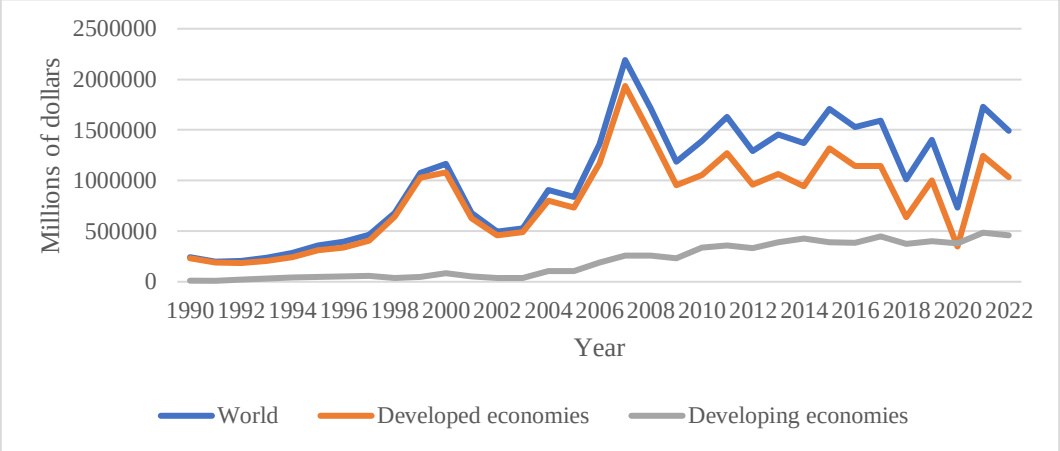
Figure 1.2. Global foreign direct investment inflows (IFDI), 1900-2022



Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics)

As in the case of inward FDI, developed countries have played a major role in outward FDI (see Fig. 1.3). In the year 2000, more than 90% of global OFDI originated in wealthy developed economies. Since the year 2008, however, there has been a dramatic shift in the global FDI landscape as the share of MNEs from developing countries began to grow globally. By the year 2014, OFDI from developing countries represented 31%, reaching a record of 52% in 2020.

Figure 1.3. Global foreign direct investment outflows (OFDI), 1900-2022



Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics)

Table 1.3 below illustrates the accumulated inward and outward FDI stock across selected regions and underlines the unequal distribution of foreign direct investment around the globe. Developed economies, comprising less than 15% of the world's total population, have consistently dominated both inbound and outbound FDI stocks over the past three decades. In 2021, developed economies accounted for more than 70% of global IFDI and nearly 80% of the OFDI stock. To date, Europe and North America are the primary recipients and sources of FDI globally.

Despite their rapidly growing economic significance, developing countries continue to lag behind in terms of FDI inflows and outflows. By the end of 2021, developing economies collectively accounted for just 27% of the world's IFDI stock and 21% of the OFDI stock. Asian developing countries stand out as a significant destination and source of FDI, with China being the largest recipient and investor among countries in this region. Other developing regions, such as the African and South American continents, despite their potential, have received a comparatively small share of global FDI. As such, China alone has attracted nearly the same amount of FDI as 40 Latin American and Caribbean countries and twice as much foreign investment as 53 African countries over the past three decades.

Table 1.3. Inward and outward FDI stock by regions, 1990-2021 (in $ mln)

Region/economy	IFDI stock	%	OFDI stock	%
World	**45 448 811,5**	**100,0%**	**41 798 484,9**	**100,0%**
Developed economies	***33 119 268,8***	***72,9%***	***33 008 669,8***	***79,0%***
Europe	16 441 775,0	36,2%	17 619 058,8	42,2%
North America	15 056 859,8	33,1%	12 098 870,3	28,9%
Other developed economies	1 620 634,0	3,6%	3 290 740,7	7,9%
Developing economies	***12 329 542,8***	***27,1%***	***8 789 815,0***	***21,0%***
Africa	1 026 320,1	2,3%	301 252,3	0,7%
Asia	9 130 112,5	20,1%	7 745 454,4	18,5%
China[7]	2 064 018,0	4,5%	2 581 800,0	6,2%
Latin America and the Caribbean	2 142 726,6	4,7%	741 118,8	1,8%

Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics)

1.3.2. Importance of FDI location research in developing countries

FDI inflows have significant implications for host developing countries as they can bring several benefits that can contribute to their economic development (Borensztein et al., 1998; Hansen & Rand, 2006; Iamsiraroj, 2016; Shafi, 2014). Both endogenous and neoclassical growth theories consider FDI a growth engine because it improves total factor productivity and, thus, enhances economic growth (Grossman & Helpman, 1993; Liu, 2008). FDI plays an important role in supplementing domestic investment in the capital accumulation process (Mody & Murshid, 2005), especially under the liquidity constraints many developing economies encounter. FDI increases GDP per capita growth (Iqbal, Masood, & Ramzan, 2013) and reduces income inequalities in developing countries (Nguyen, 2021). Furthermore, FDI can benefit a host country's economy in different ways, such as through technology and knowledge spillovers, export promotion, human capital improvement, and job creation (Caves, 1996; De Mello Jr., 1997; Lucas, 1988; Romer, 1986). FDI helps to develop domestic industries by creating backward and forward linkages in the host country (Alfaro & Rodriguez-Clare, 2004; Javorcik, 2004) and by increasing tax revenues that the government can spend on domestic infrastructure or human capital enhancement (Adhikary, 2011).

Given the numerous positive FDI spillover effects, many developing and emerging countries try to create favorable conditions to lure in a significant amount of FDI in order to put themselves on the path of rapid economic development (Dunning & Lundan, 2008; Luo, Xue,

[7] Excluding Hong Kong SAR, Macao SAR, and Taiwan

& Han, 2010) and successfully integrate into the global economy. Therefore, a better understanding of the factors driving FDI (the *where* question) and the main underlying motives for investment (the *why* question) can assist policymakers in developing countries in attracting more FDI to develop their economies.

Furthermore, a clearer understanding of FDI determinants and the underlying motives driving MNEs to engage in FDI in developing countries can contribute to the development and refinement of existing theories in the IB and economics (Benito, 2015). It allows scholars to test and validate theoretical frameworks, leading to a deeper understanding of how FDI decisions are made and how they impact host and home countries. Over the decades of intense research, FDI location stream has developed numerous theories and approaches aiming to explain FDI; however, there is no universal theory that would explain the FDI phenomenon (Faeth, 2009). Hence, contextual analysis of FDI location choice in developed countries might assist scholars in validating the generalizability of results (Cheng, 1994) and advance our understanding of the factors driving economic development worldwide (Poelhekke & van der Ploeg, 2009).

1.4. OVERVIEW OF THE LITERATURE ON FDI DETERMINANTS AND MOTIVES

Many theories have been developed to explain the phenomenon of FDI across multiple disciplines, including international economics, international trade, economic geography, regional science, strategy, and international business (IB) (for a review, see Faeth (2009)). As a result, the theoretical FDI literature is fragmented across different fields (Beugelsdijk & Mudambi, 2013; Braunerhjelm & Svensson, 1996; Faeth, 2009). These theories explain *why* firms engage in FDI, *where* they prefer to locate their investment abroad, and *how* they enter the country or region. As such, there is no single theory of FDI but a variety of theoretical models and frameworks that try to explain FDI and location decisions of MNEs (Denisia, 2010; Faeth, 2009; Villaverde & Maza, 2015). The following paragraphs focus on the main theories of FDI and present a brief theoretical background to better understand the host country-specific locational factors that attract MNEs and the underlying reasons of firms for investment abroad.

1.4.1. Early works

Prior to the 1950s, research on international business activity focused on determining the geographical location of production (i.e., the *where* question). Classical theories were largely based on a limited set of assumptions, like the immobility of natural resources across national boundaries, while the issues of ownership and organizational aspects of firms were largely ignored. Early theoretical models assumed that firms engage in one single activity with the primary goal of maximizing profits. Organizational strategies of firms were typically centered around minimizing costs and optimizing production, whereas other factors (such as institutions, for example) were assumed to be unimportant for investment decisions. For example, the Hecksher-Ohlin model is built on a simplified 2 x 2 x 2 general equilibrium framework with two countries (home and host), two factors of production (capital and labor), and two goods. However, this model ignored the role of transportation and marketing costs and assumed that countries only exported products they could produce using their own resources and imported goods that were unavailable at home. Overall, classical and neoclassical theories assumed perfect competition, which does not exist in the real world.

It is not surprising that classical theories based on perfect competition were criticized by IB scholars. Hymer (1960) and Kindleberger (1969) stressed the significance of market imperfections in explaining FDI because, in perfectly competitive markets, firms have no

incentive to invest abroad. They suggested that it is necessary to account for both endogenous factors (product differentiation and managerial expertise) and exogenous factors (government policies and factor prices) when explaining foreign direct investment. Hymer (1960) further argued that MNEs seek to establish oligopolistic or monopolistic positions in foreign markets to secure higher profits by exploiting their firm-specific advantages (FSAs), such as technology or brand recognition. As such, cross-border transactions are seen as a mean to transfer a firm's knowledge and its tangible or intangible assets to establish production in a foreign market.

Vernon (1966) linked investment theory to trade theory by asserting that the investment decisions of firms are simply a decision between exporting and engaging foreign investments. His product life cycle theory considered not only the comparative costs arising from the differences in resource endowments across different countries but also acknowledged that the decision to invest abroad is influenced by factors such as economies of scale, product differentiation, timing of innovation, uncertainty, and transportation costs. Vernon's (1966) model underlined the dynamic nature of international business, where firms transition from being exporters to becoming MNEs as their products progress through the life cycle, comprising three stages: new, mature, and standardized products.

The seminal works of Hymer (1960) and Vernon (1966) significantly changed the perspective on FDI research in IB and economics, spawning new theoretical works. For example, Caves (1971) suggested that imperfect competition pushed firms to differentiate their products and engage in horizontal FDI, whereas Knickerbocker (1973) argued that firms imitate their competitors when venturing abroad, thus exhibiting a "bandwagon effect". Another important contribution was the development of internalization theory by Buckley & Casson (1976), which was built on market imperfection theory (Hymer, 1960) and transaction cost theory (Coase, 1937). Internalization theory suggests that markets for intermediate goods (production, marketing, managerial expertise, components, etc.) were imperfect, uncertain, and risky. Therefore, firms were "better off internalizing transactions" (Faeth, 2009, p. 168), which was assumed to depend on region-, nation-, industry-, and firm-specific factors. Region-specific factors include geographic distances and socio-cultural characteristics; nation-specific factors – government regulations and financial factors; industry-specific factors – product type, economies of scale, market structure; and firm-specific factors such as managerial skills and technological capabilities.

One of the most widely accepted frameworks that aims to explain firms' engagement in FDI is the eclectic paradigm, or OLI framework (Dunning, 1977, 1979, 1993). Dunning (1979, pp. 274–275) notes that his eclectic paradigm arose from "the dissatisfaction with these partial explanations of international production", including the Hymer-Kindleberger approach, product life cycle, and internalization theories. The OLI framework explains FDI through three types of specific advantages that MNEs have: ownership (O), location (L), and internalization (I) advantages. The ownership (O) dimension refers to the unique advantages or assets that an MNE possesses, ensuring its competitive advantage over other firms. The location (L) dimension pertains to the geographical aspects of FDI, focusing on why a firm chooses a particular foreign location for its operations. As such, the location advantages of a host country are a function of natural resource endowment, lower production and transport costs, market size and growth, infrastructure, and institutions that are immobile and location-specific. Finally, the internalization (I) dimension addresses the question of how MNEs choose to enter a foreign market and whether they prefer to engage in their foreign operations through market transactions (e.g., licensing or exporting) or by establishing subsidiaries abroad (FDI). In recent years, this framework has been instrumental in explaining the complex dynamics of international business and FDI activities (Altomonte, 2000; Batschauer da Cruz, Eliete Floriani, & Amal, 2022; Chen, 2015; Godinez & Liu, 2015; Roberts & Almahmood, 2009).

1.4.2. IB perspective on FDI motives

The most cited taxonomy of FDI motives by Dunning (1973, 1998), built upon the OLI paradigm (Dunning, 1977, 1979), puts forward four main FDI motives of firms: (1) resource-seeking, (2) market-seeking, (3) efficiency-seeking, and (4) strategic asset-seeking. Resource-seeking MNEs engage in FDI to access and exploit necessary resources, such as natural resources and raw materials, or labor, that are either unavailable at home or available at a higher cost. Market-seeking firms are driven by the desire to serve the host market more effectively, leveraging factors like market growth, size, and potential profitability. Efficiency-seeking FDI pursues operational efficiency and cost-effectiveness by capitalizing on factors like economies of scale, lower production costs, or proximity to key suppliers or customers. Finally, strategic asset-seeking FDI is aimed at acquiring strategic assets, including brands, intellectual property, or competitive advantages, which can help MNEs enhance their global competitiveness.

Dunning (2009, p. 22) argued that the location choice of MNEs "depends heavily on the motives for their foreign value-added activities", and each FDI type will be attracted by a different set

of location (L) advantages. Dunning (1980) also suggested that FDI type is determined depending on the initial or sequential FDI undertaken by MNEs. As such, resource- and market-seeking investments typically occur as initial investments in a particular host country, whereas efficiency- and strategic asset-seeking FDI are usually sequential investments. Dunning (1988) further argued that the combination of OLI advantages varies significantly depending on the development level of countries (developed or developing), size of countries (large or small), industry type (high or low technological intensity), production type (processing or assembly), market positioning (competitive or monopolistic), size of the firm, etc. Table 1.4 briefly summarizes four motives, their main objectives, and the most important host country-specific location determinants.

Table 1.4. FDI motives, their main objectives and relevant location determinants

FDI motive	Main objectives	Host country-specific location factors
Resource-seeking	To secure stable, low-cost and high-quality supply of natural resources (e.g., oil and gas, minerals, metals, or agricultural products)	Supply of natural resources (as commodities for export or as internal production inputs); infrastructure enabling resources exploitation; government restrictions on FDI; investment incentives, etc.
Market-seeking	To sustain or protect existing markets (by circumventing trade barriers), or to exploit or promote new markets (i.e., typically in the host country or their close neighbors)	Host country market conditions: market size and market growth prospects, as well as proximate regional markets; costs of skilled/unskilled labor and raw materials; transport costs and trade barriers; government restrictions on FDI with privileged access to import licenses; agglomeration economies; infrastructure; institutional quality; stable macroeconomic environment, etc.
Efficiency-seeking	To achieve economies of scale and scope, logics infrastructure, and risk diversification	Low cost and availability of labor, natural resources, and capital; freedom to engage in trade in intermediate and final products; agglomerative economies; different kinds of investment incentives and special economic zones; cost of skilled and unskilled labor; institutional quality, etc.
Strategic asset-seeking	To pursue long-term strategic objectives – especially that of sustaining or advancing global competitiveness (i.e., in home and third country markets)	Unique, intangible, and organizationally embedded assets, including advanced technology, brand assets, and managerial know-how; institutional quality; opportunities for knowledge exchange; ability to form partnerships with local firms, etc.

Source: Cui, Meyer, & Hu (2014, p. 490) and Narula & Dunning (2010, pp. 279–280)

FDI motives remain important in the IB literature because they serve as indicators of the possible outcomes stemming from the actions of multinational firms (Narula & Dunning, 2010) and are useful for theory building (Benito, 2015). In this respect, the extension of the eclectic paradigm – the investment development path (IDP) framework (Dunning, 1981; Dunning & Narula, 1996; Narula & Dunning, 2000, 2010) – presents a more dynamic nature of the relationships between MNE's main motives for FDI and the changing location (L) advantages of the host location over time (Narula & Dunning, 2010).

The main assumption of the IDP is that there is a systematic relationship between FDI activities (i.e., inward and outward FDI) in a particular location and the economic structure of that location, which is linked with its level of economic development (Narula & Dunning, 2000, 2010). This relationship can be categorized into five stages that reflect the evolution through which all countries generally go in their industrial development path. As such, countries at stages 1 and 2 are developing countries that typically attract resource- and market-seeking FDI, as their main comparative location advantages are possession of some natural resources and availability of cheap labor (for example, African countries). Firms from countries at early stages typically engage in little FDI, mostly with resource- and market-seeking motives, as they lack O advantages. Countries at stage 3 are emerging or newly industrialized economies with per capita income levels gradually catching up with those of developed nations. Countries at this stage attract all kinds of FDI but mostly efficiency- and market-seeking investment (for example, China or Brazil). At this stage, MNEs begin to accumulate certain O-specific assets and begin to engage in all kinds of outward FDI, including efficiency-seeking and strategic asset-seeking, mostly on a regional scale. Finally, countries at stages 4 and 5 are wealthy developed countries (US, EU, Japan, etc.) that attract market-, efficiency-, and strategic asset-seeking FDI. As was mentioned earlier, developed countries are the main source of OFDI globally and engage in all kinds of investment, including increasingly efficiency- and asset-seeking FDI at both regional and global scales. Table 1.5 summarizes the stages within the IDP.

Empirical IB literature using the IDP approach to explore FDI location choices commonly finds support for the argument that inward and outward FDI motives of MNEs depend on the economic stage of development of host and home countries within the IDP framework. For example, Galan, Gonzalez-Benito, & Zuñiga-Vincente (2007) examined the location of Spanish FDI in Latin America and EU countries and found that Spanish MNEs assign different relative importance to a set of location factors based on host countries' development stages in the IDP.

Table 1.5. Stages of the IDP

	Stage 1	Stage 2	Stage 3	Stages 4 and 5
	Natural resource-based	Investment driven	Innovation driven	Increasing knowledge and service intensity; knowledge economy
Balance of inward FDI (IFDI) and outward FDI (OFDI)	Little IFDI and negligible OFDI; low intra-industry trade and investment	Increasing IFDI and limited OFDI; low intra-industry investment, increasing intra-industry trade	OFDI increasing faster than IFDI; increasing intra-industry trade and investment	Substantial I and O; O often exceeds I; substantial intra-industry trade and investment; balance between I and O fluctuates: around net zero or positive level of in/outward FDI
Characteristics of inward MNE activity	Little inward FDI initially. As L advantages improve, resource-based motives, and market-seeking later	Growing presence of market-seeking FDI—attracts labor-intensive manufacturing	Raising IFDI, market-seeking and increasing efficiency-seeking FDI in manufacturing, in activities supplying more sophisticated products for domestic market, or requiring more skilled labor	Increasingly market-seeking, efficiency-seeking and asset-augmenting investment
Characteristics of outward MNE activity	No outward FDI—strategic investments and capital flight	Little OFDI. Mainly resource- and market-seeking investment in other developing countries; some "escape" investment to developed countries; mostly regional greenfield investment; natural resource investment; light manufacturing employing established technologies	Growing OFDI; all kinds of investment, including efficiency-seeking and some asset-augmenting investment; mass-produced differentiated consumer goods, e.g. electrical products, clothing; more service investment, e.g. construction, banking	Increasingly efficiency-seeking and asset-augmenting investment; regional and global; more M&As and alliances; investment in knowledge-intensive sectors, e.g. information & communication technologies, biotechnology, and high value-added services, e.g. consultancy; restructuring of global value chains
O advantages of firms	Few domestic firms with O advantages	Ability to produce low-cost, standardized products, or	Strong domestic industries; ability to differentiate products and/or adapt to local	Strong created-asset O advantages of domestic firms; coordination of the internal

		those based on natural resources of home country	consumer tastes; some limited product and process innovation	and external network of the MNE; importance of open innovation
Industrial upgrading and manufacturing comparative advantages evolution	Hecksher-Ohlin sectors			
	Undifferentiated Smithian sectors			
	Differentiated Smithian sectors			
				Innovation-intensive Schumpeterian sectors
L advantages of the home country	Few L advantages. Mainly presence of natural resources, but infrastructural support also important; government role in setting up legal and commercial system	Growing L advantages, low real wage costs; natural resources; supply capacity and clusters of local industry; growing importance of education, transport and information & communication technologies infrastructure	Created-asset L advantages are increasing; entrepreneurship; larger, more sophisticated, markets; government role in economic restructuring and enforcing competitive markets; increasing importance of informal institutions	Strong created-asset L advantages, increasing importance of supply capabilities, support services and market-facilitating services; government role in minimizing transaction costs, supporting innovation, and fostering economic restructuring; increasing importance of informal institutions
Economic structure	PRIMARY sectors	→ declining →	→ declining →	→ declining →
		→ increasing →	MANUFACTURING sectors	→ declining →
			SERVICE sectors	→ increasing →
Preferred modality of IB activity	Imperfect markets and peripheral nature imply either trade or FDI linkages	Tendency for firms to prefer more equity ownership to protect proprietary knowledge and to control markets, and more licensing activity	Increasing use of cooperative and/or contractual relationships to manage the external network of the MNE; focus on "core competence" with extensive use of outsourcing	

Source: Narula & Dunning (2010, pp. 267–268)

Chen & Yeh (2012) demonstrated that the preferences for FDI location antecedents of Taiwanese firms in China evolved during the period 1997-2007. At the early stages, Taiwanese FDI favored locations with a large market, low-cost labor, developed infrastructure, and openness to trade, whereas at the later stages, firms preferred locations with a productive and educated labor force along with advanced R&D capabilities. Similarly, Zheng (2013) found support for the IDP's theoretical assertion that the MNEs' motivations behind FDI in India have evolved over time, transitioning from primarily market- and resource-seeking to more efficiency-seeking FDI. He further argues that the patterns of Indian IFDI depend on the country of origin, where developed countries mostly pursue efficiency- and resource-seeking motives while developing countries' FDI is more likely to be market-seeking. Lastly, Ramírez-Alesón & Fleta-Asín (2016) also established that the importance of host country location factors is moderated by the host country's stage of development using a large panel of 117 countries over the period 2006–2013. Authors argued that market-seeking investment is largely attracted by countries at the early stages of development, while an educated and productive labor force drives FDI in more industrialized developing countries. Ramírez-Alesón & Fleta-Asín (2016) further highlight specific regional patterns as countries located in the same region are more likely to share similar characteristics with their neighbors and often face similar conditions (i.e., natural resources, history, social, and cultural environment).

1.4.3. Economic perspective on FDI motives

The international economic and trade literature strands of MNE theory use slightly different terminologies and perspectives related to the concept of "motives" within the IB field. Economic scholars categorize MNEs into several types according to their operational strategies when going abroad or, put differently, production patterns[8]: horizontal MNEs, vertical MNEs, export-platform MNEs, and complexly integrated MNEs.

Many FDI location researchers in the field of economics widely adopt the term "motive" when describing horizontal or vertical types of FDI and often use closely related terms like "market-seeking" and "horizontal" interchangeably (see, for example, (Blonigen, Davies, Waddell, & Naughton, 2007; Franco, 2013; Ledyaeva, 2009; Regelink & Elhorst, 2015)). As such, if foreign

[8] Including national enterprises that do not engage in FDI.

investors are motivated by a market-seeking motive - horizontal FDI will occur; if they are motivated by a resource-seeking motive (and, sometimes, efficiency-seeking[9] too) - vertical FDI will occur. However, it's important to note that Dunning's typology encompasses broader motivations for FDI, including resource-seeking (access to raw materials, labor, or technology) and efficiency-seeking (seeking cost advantages or strategic assets). In contrast, the economic perspective focuses on operational considerations, providing detailed insights into specific FDI types. While the IB perspective addresses the *why* question behind FDI decisions, the economic perspective complements it by exploring the *how* and *what* aspects of FDI.

Economic literature has traditionally distinguished between two forms of multinational activity in a two-country setting, which are based on two alternative reasons why an MNE might choose to locate its production abroad: (1) access to markets (horizontal FDI) and (2) comparative advantage motives (vertical FDI) (Markusen, 2002, pp. 17–20). Horizontal FDI (H FDI) is driven by market access and aims to serve consumers locally by setting up production plants both in home and host countries (Markusen, 1984). This type of FDI arises when trade costs between home and foreign countries are high, and firms may prefer setting up production abroad rather than exporting goods there. Vertical FDI (V FDI), on the other hand, is driven by access to cheap or rare immobile resources in host countries with the goal of minimizing production costs where final or intermediate goods are mostly exported back to the home country for further processing or final consumption (Helpman, 1984; Helpman & Krugman, 1985). Vertical MNEs are more likely to arise when the home-host factor price difference is large and both trade costs and plant set-up costs are low.

Both horizontal and vertical FDI rely on a two-country framework (also known as a gravity framework), which accounts for the possibility that FDI depends on the unilateral or bilateral characteristics of host and home countries (Antràs & Yeaple, 2014; Head & Mayer, 2014; Linnemann, 1966). Nowadays, most empirical FDI location literature in economics, IB, and other related fields employs gravity models to explain bilateral FDI flows between home and host countries (Bellos & Subasat, 2012b, 2012a; Bevan & Estrin, 2004; Carstensen & Toubal, 2004; Eaton & Tamura, 1994; Estrin & Uvalic, 2014; Lay & Nolte, 2018; Li & Vashchilko, 2010; S.-J. Wei, 2000). This focus on bilateral frameworks in FDI location research is problematic, as there are many reasons to suspect the presence of spatial linkages (i.e., interdependence) in FDI data

[9] For example, Gutiérrez-Portilla et al. (2019) describe vertical type of FDI as an efficiency-seeking strategy.

from a theoretical perspective. As pointed out by Tobler (1970, p. 236), the First Law of Geography states: "Everything is related to everything else, but near things are more related than distant things". The two-country framework, however, assumes that the decision of an MNE to invest in a particular host country is independent of the decision whether or not to invest in any other country. Put differently, gravity models completely ignore the role played by neighboring countries of the host country, otherwise known as third-country effects[10].

The influence of third countries has been introduced in recent theoretical and empirical contributions to the literature on FDI determinants and motives of MNEs. By relaxing two-country assumptions, scholars have identified new, more complex forms of FDI in addition to the simplistic binary descriptors such as horizontal and vertical motives: the export-platform FDI (Ekholm, Forslid, & Markusen, 2007), which can be considered a variation of the horizontal motive, and the complex vertical FDI (Baltagi, Egger, & Pfaffermayr, 2007) - a variation of the vertical one. In export-platform FDI (EP FDI), an MNE invests in a given host country to produce final goods aimed at exporting to third-country markets (Ekholm et al., 2007; Yeaple, 2003). In complex vertical FDI (CV FDI), an MNE establishes a production chain across multiple host countries to exploit their respective comparative advantages and engages in the trade of intermediate goods between the MNE's subsidiaries (Baltagi et al., 2007). Put more simply, the idea behind third-country effects pertains to regional integration and implies that an MNE may use a host country as an export-platform to reach another country's market with final products (EP FDI) or intermediate goods aimed for further processing (CV FDI).

Blonigen et al. (2007) proposed an estimation procedure to empirically account for third-country effects and test the theoretical implications of the spatial FDI relationship. They employed the spatial autoregressive econometric technique (SAR), which introduces two additional spatial variables into the standard empirical analysis of FDI determinants. These variables include (1) a spatial lag of dependent variable (FDI) – the estimated coefficient capturing the contemporaneous correlation between a given host country's FDI and FDI of its geographically proximate neighboring countries, and (2) the surrounding market potential variable (SMP) – the estimated coefficient describing the contemporaneous correlation between a given host country's FDI and the distance-weighted market sizes of its geographically proximate neighbor countries. The coefficient

[10] These third countries are usually countries in immediate proximity to the host country.

signs of spatial lag FDI and SMP help to empirically differentiate among four FDI motives (i.e., pure horizontal/vertical and two complex modes of FDI).

A handful of studies followed the approach of Blonigen et al. (2007) in recognizing that FDI decisions are multilateral in nature and accounting for third-country effects. A handful of recent empirical papers employing spatial econometric techniques explored the spatial dependence of US outward FDI across various countries and regions (Baltagi et al., 2007; Blonigen et al., 2007; Nwaogu & Ryan, 2014; Poelhekke & van der Ploeg, 2009; Regelink & Elhorst, 2015; Siddiqui & Iqbal, 2018; Uttama & Peridy, 2009), Chinese outward FDI (Chang, 2014; Chou, Chen, & Mai, 2011; He, 2022), and inward FDI across Chinese provinces and cities (Blanc-Brude, Cookson, Piesse, & Strange, 2014; Coughlin & Segev, 2000; He, Wang, & Cheng, 2011; Jiao & Jian, 2014; Pan, 2016; Sharma, Wang, & Wong, 2014), among others. The common finding of these studies is the presence of spatial FDI interdependence between potential hosts, i.e., FDI in a particular host country or region is affected by the characteristics of its neighboring countries or regions and FDI inflows there.

1.4.4. Other theories

There are several other theoretical works that complement previous contributions on FDI location choice, including institutional theory and the new economic geography (NEG) perspective, among others. Institutions (formal and informal) are immobile factors that establish the rules of the game in a market economy (North, 1990) and could potentially determine the FDI attractiveness of a host country. Developed institutions reduce transaction and information costs, thus minimizing uncertainty and stimulating investment (North, 1990). Empirical evidence indicates that well-established and transparent institutions are robust locational advantages for FDI location decisions, especially in developing countries (Asiedu, 2006; Bevan, Estrin, & Meyer, 2004; Busse & Hefeker, 2007; Li & Resnick, 2003; Meyer & Nguyen, 2005).

NEG literature highlights the importance of agglomeration economies as a determinant factor in the location decisions of MNEs (Fujita, Krugman, & Venables, 1999; Fujita & Thisse, 1996; Krugman, 1991b). Agglomeration refers to the concentration and co-location of economic activities that give rise to economies of scale and positive externalities such as access to a wider pool of skilled labor, specialized inputs, demand and supply linkages, knowledge spillovers, etc. (Jacobs, 1969; Krugman, 1991a, 1991b; Marshall, 1920). Moreover, agglomeration provides access to

information about the local environment (Mariotti & Piscitello, 1995), where the presence of other foreign investors is seen as proof of success in developing countries, often characterized as an uncertain environment (Lall & Streeten, 1977). Empirical literature usually finds a positive effect of agglomeration economies in the host country on FDI location (Guimarães, Figueiredo, & Woodward, 2000; Hanson, 2005; Head & Mayer, 2004; Head, Ries, & Swenson, 1995; Douglas P. Woodward & Rolfe, 1993).

Figure 1.4. Host country determinants of FDI

Host country determinants	Type of FDI classified by motives of MNEs	Principal economic determinants in host countries
I. Policy framework for FDI • economic, political and social stability • rules regarding entry and operations • standards of treatment of foreign affiliates • policies on functioning and structure of markets (especially competition and M&A policies) • international agreements on FDI • privatization policy • trade policy (tariffs and NTBs) and coherence of FDI and trade policies • tax policy	**A. Market-seeking**	• market size and per capita income • market growth • access to regional and global markets • country-specific consumer preferences • structure of markets
II. Economic determinants	**B. Resource/ asset-seeking**	• raw materials • low-cost unskilled labour • skilled labour • technological, innovatory and other created assets (e.g. brand names), including as embodied in individuals, firms and clusters • physical infrastructure (ports, roads, power, telecommunication)
III. Business facilitation • investment promotion (including imagebuilding and investment-generating activities and investment-facilitation services) • investment incentives • hassle costs (related to corruption, administrative efficiency, etc.) • social amenities (bilingual schools, quality of life, etc.) • after-investment services	**C. Efficiency-seeking**	• cost of resources and assets listed under B, adjusted for productivity for labour resources • other input costs, e.g. transport and communication costs to/from and within host economy and costs of other intermediate products • membership of a regional integration agreement conducive to the establishment of regional corporate networks

Source: UNCTAD (1998, p. 91)

All the theories briefly discussed above support the assumption that, among other factors, the host country-specific location characteristics and conditions may attract MNEs for their investment. The greater the number of certain advantageous location characteristics in the host country, the greater the country's ability to attract FDI (Chakrabarti, 2003; Tahir & Larimo, 2004). The main difficulty lies in the identification of these factors given the variety of theoretical models and hundreds of empirical papers that experimented with dozens of different location variables (Faeth, 2009). Thus, empirical literature on FDI location choice provides a long list of FDI location determinants, which

include market factors, factor inputs (such as cost of labor, tax burden, etc.), the role of institutions, human capital, infrastructure, government policies, and many others. Fig. 1.4 summarizes the list of various host country-specific location factors that different strands of research have accumulated by the end of the 1990s alone. As a result, it is very hard to account for all possible location advantages, which may differ depending on MNE's motive for investment, strategic goals, or spatial organization of the firm's economic activities (Narula & Santangelo, 2012).

1.4.5. Empirical evidence on FDI location choice

The issues of firm's location choice, antecedents and consequences of this location choice have been in the center of attention of researchers across diverse literatures, including economics, IB, strategy, and many others. In general, economic literature studies the relationship between location and its comparative advantages, trade literature focuses on economic activity in different locations, whereas economic geography (EG) and regional science researchers are concerned with relationships between location and space. IB and strategy scholars explore the relationships between location and the organization of economic activities of MNEs across geographic space (Cantwell, 2009), mostly building on L dimension of well-known Ownership-Location-Internalization (OLI) paradigm (Dunning, 1977, 1979). Cumulatively, these different research streams produced a large body of empirical literature on FDI location determinants.

Empirical FDI location choice literature can be broadly classified into two main research streams. The first one focuses on location attractiveness factors and suggests that MNEs invest in foreign locations that possess certain advantageous characteristics (Chakrabarti, 2003; Tahir & Larimo, 2004). Examples of such studies include those building on location theory and institutional environment and arguing that major FDI location antecedents include market size, labor cost, infrastructure, agglomeration, and host country's policies (Du, Lu, & Tao, 2008; Head et al., 1995; Lee, Alba, & Park, 2018; Pournarakis & Varsakelis, 2004; Treviño, Thomas, & Cullen, 2008; Wei, Liu, Parker, & Vaidya, 1999; D P Woodward, 1992). The central premise of this perspective is that the profitability of an investment is "a function of several location characteristics" and that a firm chooses a location that maximizes its profit (Shaver, 1998, p. 471). The second stream posits that the FDI motives of MNEs are driving their location decisions (Benito, 2015; Chung & Alcácer, 2002; Cuervo-Cazzura & Narula, 2015; Dunning, 1988, 1998; Makino, Lau, & Yeh, 2002; Meyer, 2015).

Although there is a theoretical consensus among scholars on which host location factors attract or deter foreign investment, the findings of empirical literature on the relationship between many host country-specific location factors and FDI remain largely mixed and inconclusive (Nielsen et al., 2017; Ramírez-Alesón & Fleta-Asín, 2016). There are several sources of this inconsistency in the previous empirical FDI literature. First, mixed findings can be partly attributed to the initial researchers' focus on developed countries and regions that have traditionally attracted the lion's share of the world's FDI, such as the USA (Ajami & BarNiv, 1984; Blonigen, 1997; Bobonis & Shatz, 2007; Head et al., 1995; Kogut & Chang, 1991) or European countries (Head & Mayer, 2004; Lunn, 1980; Regelink & Elhorst, 2015; Scaperlanda & Mauer, 1969), including studies focusing on the UK (Driffield & Munday, 2000; Edwards & Buckley, 1998) and France (Crozet, Mayer, & Mucchielli, 2004), among others. Furthermore, many scholars did not distinguish between stages of development of host sample countries (Baltagi et al., 2007; Davidson, 1980; Kravis & Lipsey, 1982), whereas others used various samples of developed countries (Culem, 1988; Globerman & Shapiro, 2002, 2003; Wheeler & Mody, 1992). However, Blonigen & Wang (2005) showed that pooling rich and poor countries in one empirical analysis can lead to incorrect inferences as FDI motives in developed and developing countries are substantially different. This argument is in line with the IDP framework discussed above (Dunning & Narula, 1996; Narula & Dunning, 2000, 2010).

Second, despite the growing interest in the FDI location phenomenon in developing countries since the 1990s, which produced a large body of context-specific knowledge, the existing empirical literature has not yet reached consensus on which factors attract or deter FDI in developing countries. For example, Grosse & Treviño (2005) argued that corruption has a deterring effect on FDI in transition countries, whereas Bellos & Subasat (2012a, 2012b) found a positive association between corruption and FDI stock using a similar panel of Eastern European countries in transition. In a similar vein, Schneider & Frey (1985) found a significant negative relationship between high political risk and FDI in developing and emerging countries, whereas Li & Resnick (2003) did not establish any statistically significant relationship. Mixed evidence regarding the direction and significance of the relationship between FDI and many "traditional" economic factors is also not uncommon in the empirical literature. As such, Kolstad & Wiig (2012) and Asiedu (2006) established that natural resource-rich developing countries attract more FDI, whereas others (Asiedu & Lien, 2011; Gastanaga, Nugent, & Pashamova, 1998) found a negative relationship

between the two variables, thus supporting the resource-curse paradox (Corden & Neary, 1982; Sachs & Warner, 1995). Low cost of labor was found to be an important factor determining FDI in Chinese provinces by Coughlin & Segev (2000) and Cheng & Kwan (2000) during 1985-1995, whereas earlier results by Head & Ries (1996) and Broadman & Sun (1997) were insignificant for the 1985-1992 period. Furthermore, Noorbakhsh, Paloni, & Youssef (2001) found that the quality of human capital, proxied by different levels of educational attainment, was among the most important factors driving FDI into Africa, Asia, and Latin America during 1980-1994. Many recent studies, however, could not establish a significant effect of human capital and FDI in Africa (Kinda, 2010; Wood, Mazouz, Yin, & Cheah, 2014), Asia (Ismail & Yussof, 2003; Wattanadumrong, Collins, & Snell, 2010), and Latin America (Sánchez-Martín, De Arce, & Escribano, 2014; Waldkirch, 2011).

Overall, empirical literature on FDI location collectively suggests that findings regarding the importance of different host country-specific factors on FDI inflows are mixed and inconclusive due to the variety of theoretical assumptions, methodological approaches, variable choices, and country-specific contexts (Asiedu, 2002; Assunção, Forte, & Teixeira, 2013; Bailey, 2018; Blonigen, 2005; Meyer & Sinani, 2009; Nielsen et al., 2017).

1.5. RESEARCH GAPS ON FDI LOCATION IN DEVELOPING COUNTRIES

This introduction shows that FDI location choices of MNEs concern researchers from different fields, and many aspects related to questions of where and why firms locate their investment have been addressed by the current literature. Many empirical studies have made their contributions to the FDI location research stream, which "is arguably reaching a level of maturity" (Nielsen et al., 2017, p. 63). Based on the brief theoretical and empirical discussion presented in the previous Section, I have identified four research gaps on *where* and *why* MNEs locate their investment in developing countries that this dissertation aims to contribute to.

1.5.1. Inconclusive and mixed findings of the extant empirical literature

To resolve somewhat inconclusive existing empirical evidence regarding the factors that attract or deter FDI in developing countries, an explicit focus on developing countries is necessary (Blonigen & Wang, 2005). This approach will help to account for the significant contextual variations that characterize the FDI location research stream, especially in the IB field (Buckley, Devinney, & Tang, 2013; Meyer & Sinani, 2009). Moreover, as the issues of a firm's location choice have been the center of attention for researchers in diverse fields, this research field remains largely fragmented and lacks integration across disciplines. These issues are important because boundary conditions relate to boundaries in time, space, and the researcher's values, which describe the limits of a theory's generalizability, i.e., the "who, where, when" aspects of a theory (Whetten, 1989). As such, for business scholars to create a universal theory of FDI location choice, cross-contextual analysis could be useful to validate the generalizability of results (Cheng, 1994).

To fill this gap in the literature on the relationship between FDI location determinants and FDI location in developing countries, I conducted a systematic evidence-based literature review (Tranfield et al., 2003) with the main goal of reviewing and synthesizing the main host country-specific FDI determinants from relevant empirical studies. This systematic literature review (SLR) is different from other similar reviews on FDI location determinants (Jain, Kothari, & Kumar, 2016; Kim & Aguilera, 2016; Nielsen et al., 2017) in several ways. First, to the best of my knowledge, previous reviews did not distinguish between developed and developing countries in their analyses (Jain et al., 2016; Kim & Aguilera, 2016; Nielsen et al., 2017). Second, unlike previous reviews (Kim & Aguilera, 2016), this review is interdisciplinary in nature and covers

several research fields that contributed to the literature on FDI location choice, including economics, IB, finance, public sector, organizational behavior, and others. Third, this review includes a large number of empirical studies, thus outnumbering the samples of other similar reviews (Kim & Aguilera, 2016; Nielsen et al., 2017). Finally, and most importantly, this review compares empirical findings on FDI location determinants across six geographic regions of the developing world (i.e., Latin America, Africa, and Central and Eastern Europe, among others) and highlights similarities and differences in FDI location patterns across different regions. Overall, this systematic literature review contributes to the FDI location choice literature by (1) improving our understanding of the host country-specific factors driving FDI in developing countries in general and across six developing regions, and (2) addressing important issues about country samples, measurements, data, methodological choices, and theoretical lenses used in previous research.

1.5.2. Lack of studies explicitly focusing on FDI motives

As was argued by Blonigen & Wang (2005) and the IPD framework (Narula & Dunning, 2000, 2010), some FDI determinants might have a varying degree of importance depending on the host country's degree of development and the firm's motives. As such, the least developed countries in Africa are assumed to mainly attract natural resource-seeking FDI, whereas more industrialized countries such as China or Mexico attract efficiency- and market-seeking FDI. Despite the presence of theoretical frameworks explaining firms' motives both in economics and IB literature, empirical literature using the IDP (Narula & Dunning, 2000, 2010) or Blonigen et al.'s (2007) approaches to exploring firms' motives for investment in developing countries remains scant. For example, several studies found support for the IDP assumptions that a firm's location choice depends on the motivation for this investment, which in turn depends on the host country's stage of economic development (Galan et al., 2007; Ramírez-Alesón & Fleta-Asín, 2016; Zheng, 2013). Many scholars call for a systemic treatment of FDI motives (Blonigen, 2005; Dunning, 2009; Franco, Rentocchini, & Vittucci Marzetti, 2010), as FDI determinants are "the fundamental factors that drive FDI behavior" (Blonigen, 2005, p. 383).

To fill this gap in the literature, I empirically examined the relative importance of host country-specific location factors using meta-analytic techniques. I further aim to identify motives for investment across different geographic regions of the developing world by building on the IDP

(Narula & Dunning, 2000, 2010) and following Dunning's (1973, 1998) taxonomy of investment motives, classified into market-seeking, resource-seeking, and efficiency-seeking. In addition, I further explore the moderating role of FDI origin countries and the nature of sectors in MNEs' location decisions across different geographic regions. To the best of my knowledge, previous meta-analyses did not focus specifically on FDI location factors in developing countries (see, for example, Bailey (2018)), and only a few studies focused on one particular geographic region, such as Central and Eastern Europe (Iwasaki & Tokunaga, 2014; Tokunaga & Iwasaki, 2017). Overall, this meta-analysis contributes to the FDI location choice literature by (1) further refining our understanding of the relative importance of the host country-specific factors driving FDI across six developing regions (including home country and industry characteristics), and (2) identifying the dominant motives for investment across six geographic regions.

1.5.3. Methodological limitations and lack of research in some geographic areas

First, from a methodological perspective, ignoring spatial linkages or third-country effects could lead to serious econometric problems in the estimation, such as biased, inconsistent, or inefficient estimates, as well as inaccurate inferences (see Anselin (1988, 2009) for an overview of the econometric problems in the presence of spatial effects). This is a very important problem as most of empirical works on FDI location use two-country gravity framework which suffers from specification issues, which could potentially question the findings of these studies (LeSage & Pace, 2009). Econometric problems stemming from relying on two-country models could also explain why uni- and bilateral empirical studies on FDI determinants yield mixed results at best. The IB literature using spatial econometric models remains scant, as the relationship between place and space was mostly studied by economic and economic geography researchers (Beugelsdijk, Hennart, Slangen, & Smeets, 2010; Beugelsdijk & Mudambi, 2013). To the best of my knowledge, there are only several papers in the IB field studying spatial interdependencies across host countries and regions, including Villaverde & Maza (2012), Blanc-Brude et al. (2014), Villaverde & Maza (2015), and Rossi, Santos, & Campos (2016). Three of these studies focus either on developed countries or do not distinguish between developing and developed ones in their samples.

Second, the spatial literature on FDI location and motives in developing countries is still growing, and some geographic regions are underresearched. Currently, there are only a few studies that use

spatial methods and explicitly focus on exploring firms' motives across small samples of ASEAN[11] countries (Hoang & Goujon, 2019; Uttama, 2009; Uttama & Peridy, 2009). All these studies found support for the spatial interdependence of FDI across their sample countries; however, the authors' conclusions regarding FDI motives in this region do not always converge. For example, Uttama & Peridy (2009) argue that US outward FDI in 6 ASEAN countries was vertical or complex vertical during the 1995-2007 period. Similarly, Hoang & Goujon (2019) suggest that aggregate FDI inflows from all over the world into 9 ASEAN countries over the 1999-2011 period also pursued complex vertical motives. However, the available empirical evidence on the dominant motive for investment for intra-ASEAN FDI does not converge. Uttama (2009) found supportive evidence pointing to vertical FDI, whereas Hoang & Goujon (2019) suggested that intra-ASEAN FDI was an export-platform investment. Moreover, previous literature has not yet explored the motivation of European MNEs in developing Asia employing spatial methods, while only two studies employed European outward FDI data to test dominant FDI strategies in the MENA region (Uttama & Peridy, 2010) and at the subnational intra-European level (Casi & Resmini, 2010).

To fill these gaps in the literature, I followed the current research in recognizing that FDI decisions are multilateral in nature and accounting for third-country effects. We built on the works of Blonigen et al. (2007) and Regelink & Elhorst (2015) and tested the interdependence of European FDI flows across a large sample of Asian developing countries to empirically identify the dominant FDI type in this region by employing the spatial Durbin model (SDM). SDM extends the spatial autoregressive (SAR) method and allows including additional spatially weighted explanatory variables in the SAR specification, thus incorporating the characteristics of third countries in determining FDI. SDM is a relatively new approach to exploring the spatial interdependence of FDI and was employed by several recent papers, including Siddiqui & Iqbal (2018), Gutiérrez-Portilla, Maza, & Villaverde (2019), and Maza, Gutiérrez-Portilla, & Villaverde (2020), among others.

Furthermore, as was briefly mentioned in subsection 3.1 that overviewed the recent FDI trends, nowadays developing Asia accounts for the lion's share of global FDI inflows. For example, FDI inflows in Asia reached a record of $662 bln, which comprises nearly 3/4 of all FDI going to

[11] The Association of Southeast Asian Nations, or ASEAN, was established in 1967 and now includes 10 member states: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

developing economies and more than 50% of global FDI flows (UNCTAD, 2023). Europe, on the other hand, is one of the largest global investors with FDI outflows of $224 bln (15% of global OFDI) in 2022 (ibid.). As such, a better understanding of the main drivers behind European FDI location decisions across Asian recipient states is of great importance for scholars, MNEs, and developing countries' governments.

Overall, this study aims to contribute to the growing literature on the spatial interdependence of FDI by investigating the dominant investment motives of MNEs from 24 developed European countries across a large sample of 21 Asian countries during 2013-2019.

The next Section presents objectives and research questions of three studies included in this dissertation.

1.6. RESEARCH OBJECTIVES

The main questions addressed in this doctoral research primarily focus on the *where* and *why* sides of the FDI location phenomenon in developing countries. The central purpose of this thesis is to contribute to the understanding of the factors determining FDI location in developing countries and the main motives of firms for investment.

1.6.1. Objectives of doctoral research

I address the above questions by writing three research studies that focus on (1) synthesizing the most important host country-specific location determinants of FDI in developing countries and regions and (2) identifying the main motives for investment there. The first study is the qualitative systematic literature review (SLR) that surveys previous empirical literature on FDI determinants in developing countries over the 1975-2018 period. The second study is a meta-analysis that extends the SLR by analyzing the relative importance of FDI location determinants and identifying dominant motives for investment across developing countries and regions. The third study is an empirical analysis of European FDI location in 21 developing Asian economies over the 2013-2019 period. Collectively, these three studies have seven objectives and aim to answer ten research questions outlined in the next paragraphs.

The first study addresses the research gap on somewhat inconclusive existing empirical evidence regarding the factors that attract or deter FDI in developing countries by surveying the empirical literature that focuses explicitly on developing countries (Blonigen & Wang, 2005). The main objectives and the research questions are as follows:

- **Objective 1:** To review, synthesize, and categorize all relevant empirical studies on FDI location choice in developing countries and address important issues about country samples, measurements, data, methodological choices, and theoretical lenses used in previous research.
    - ***Research Question 1:*** What empirical evidence is available regarding host country-specific factors that determine FDI inflows in developing countries?

- ***Research Question 2:*** Which data and methodological challenges are FDI location researchers facing?

- **Objective 2:** To provide a comprehensive analysis of the empirical findings on the relationship between twenty selected host country-specific location determinants and FDI inflows in developing countries.

  - ***Research Question 3:*** Which FDI location determinants attract and deter FDI in developing countries?

  - ***Research Question 4:*** How are FDI location determinants formulated theoretically and measured empirically?

- **Objective 3:** To compare similarities and differences in foreign investors' behavior across several geographic regions of the developing world.

  - ***Research Question 5:*** Do FDI determinants in developing countries differ across various geographic regions, and why?

The second study complements the first one by addressing the mixed findings of the previous empirical research in more detail, including the moderating roles of country of origin and industry effects. Most importantly, this meta-analytic review focuses on the relative importance of twenty host country-specific location factors and answers the call for systemic treatment of FDI motives (Blonigen, 2005; Dunning, 2009; Franco et al., 2010) by identifying the dominant motives for investment across developing countries and regions. The main objectives and the research questions are as follows:

- **Objective 4:** To synthesize accumulated findings in the empirical literature on the relative importance of twenty host country-specific FDI determinants using meta-analysis techniques.

  - ***Research Question 6:*** What is the relative significance of the host country-specific determinants in FDI location decisions in developing countries?

- ***Research Question 7:*** How does the significance of FDI determinants vary across developing countries and regions?

- **Objective 5:** To identify the dominant motives for investment across different countries and geographic regions by building on the Investment Development Path (IDP) framework (Narula & Dunning, 2000, 2010).

  - ***Research Question 8:*** What are the dominant motives for investment in various developing countries and regions?

- **Objective 6:** To further explore the contextual relationship between FDI and selected FDI determinants and investigate the relative importance of twenty FDI determinants across countries of origin (developed vs. developing) and sectors (manufacturing vs. services).

  - ***Research Question 9:*** What are the country of origin and sector-specific effects on FDI location choice in developing countries?

The third study addresses the methodological limitations of previous research and employs a spatial econometric method to empirically investigate the dominant motives for investment by building on the approaches of Blonigen et al. (2007) and Regelink & Elhorst (2015) that account for third-country effects. Moreover, I aim to explore the motives of European FDI across a large sample of 21 Asian developing countries, thus contributing to the empirical literature on FDI determinants and motives in a relatively underresearched geographic context. The main objective and the research question are as follows:

- **Objective 7:** To identify the dominant motives for investment by European MNEs from developed countries in 21 Asian developing countries using spatial econometric techniques.

  - ***Research Question 10:*** What are the dominant motives for investment by European MNEs in 21 Asian developing countries over the 2013-2019 period?

1.6.2. Structure of dissertation

This doctoral dissertation is divided into three studies (see Table 1.6). The first study is a systematic literature review surveying a large body of empirical literature on FDI determinants in developing

countries. In this review, I analyzed a substantial volume of academic journal articles published over the past four decades across numerous research fields. I investigated the existing empirical evidence on the relationship between 20 host country-specific factors and FDI location in developing countries and regions with regards to the challenges posed by data availability, empirical and methodological approaches used in the FDI location literature. I observed a substantial heterogeneity in FDI location determinants and motives for investment across six regions of the developing world. Furthermore, in this review, I outlined several promising areas for future research.

Table 1.6. Structure of dissertation

Objective	Study	Unit of analysis	Methodology
1, 2 and 3	1. What drives FDI into developing countries? A systematic literature review	Interdisciplinary empirical literature on FDI location in developing countries on 20 host country-specific location factors	Systematic Literature Review (SLR)
4, 5 and 6	2. Exploring the importance of location factors for FDI attractiveness in developing countries – a meta-analysis	Estimates collected from interdisciplinary empirical literature on FDI location in developing countries on 20 host country-specific location factors	Meta-analysis
7	3. Motives of European FDI in developing Asia: a spatial econometric analysis	Annual data on bilateral FDI from 24 developed European countries into 21 developing Asian countries over the 2013-2019 period	Spatial Durbin Model (SDM)

The second study is a meta-analysis that empirically investigates whether the relative importance of 20 host country-specific determinants varies depending on MNEs' FDI location decisions across developing countries and regions. I found a significant variation in the relative significance of host country-specific location factors and motives for investment across different regions, largely in line with the IDP framework. Moreover, country of origin effects as well as the nature of the industry where an MNE operates have a considerable influence on the host country's attractiveness for investors.

The third study is an empirical study using the spatial econometric technique to identify the main motives for investment, following the approach proposed by Blonigen et al.'s (2007) and later improved by Regelink & Elhorst (2015). We explored the data on European FDI flows across a sample of developing Asian countries using the spatial Durbin model and identified the main FDI determinants and investment motives of European firms in this region.

1.7.RESEARCH DESIGN

1.7.1. Epistemological approach

Epistemology is a research philosophy that reflects a researcher's views on the nature, origin, and limits of acceptable knowledge (Saunders, Lewis, & Thornhill, 2009). In the context of management studies, the choice of epistemological positioning represents a fundamental decision that delineates the entire research process. The epistemological position informs the researcher's perspective on what constitutes valid knowledge and how that knowledge can be obtained and verified (Saunders et al., 2009). Using a metaphor from Hakim (2000, p. 1), a researcher's epistemological stance is like "the architect's own preferences and ideas […] and the stylistic preferences of those who pay for the work and have to live with the final result". In management science, the most widespread epistemological positions include positivism, constructivism, and interpretivism (Creswell & Clark, 2017; Perret & Séville, 2007).

Table 1.7. A positivist approach

Ontology	**Epistemology**	**Axiology**
researcher's view of the nature of reality or being	*researcher's view regarding what constitutes acceptable knowledge*	*researcher's view of the role of values in research*
• External, objective, and independent of social actors	• Only observable phenomena can provide credible data and facts. • Focus on causality and law like generalizations, reducing phenomena to simplest elements.	• Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance.
Data collection techniques most often used		
Highly structured, large samples, measurement, quantitative, but can use qualitative.		

Source: Saunders et al. (2009, p. 119)

This dissertation adopts a positivist approach. This approach refers to the philosophical stance of a natural scientist (Saunders et al., 2009). The topic of this dissertation – FDI location choice in developing countries: determinants and motives – is particularly suitable for a positivist paradigm (refer to Table 1.7). The main goal of this research is to advance our understanding of the broader phenomenon of investment decisions by MNEs in developing countries and observe the general patterns regarding which factors affect the location of their investment. Consequently, following

the positivist paradigm, I opt for a deductive research design where I develop hypotheses and then design the research strategy to test the hypotheses (Saunders et al., 2009).

Using a deduction research design, I aim to explain causal relationships between FDI and 20 host country-specific location factors and use statistical analyses to determine the strength and direction of these relationships. I deduce the hypotheses from theories and use secondary quantitative data to test these hypotheses. I use a structured methodology that should facilitate possible replication studies (Johnson & Gill, 2002), thus ensuring the reliability of this research. Finally, I remain objective and neutral in data collection and analysis to minimize a researcher's bias and subjectivity.

1.7.2. Overview of data set

The first and second studies of this dissertation are systematic literature review and meta-analysis and are therefore based on the previous empirical literature collected from two of the most widely used academic databases: Reuter's Web of Science and Elsevier's Scopus. The third study is based on the data collected from secondary sources. Table 1.8 summarizes the data used in this dissertation.

Table 1.8. Data collection

Study	Sample	Data sources	Period
1	416 empirical studies from 123 academic journals covering 10 disciplines (Harzing Journal Quality List (65 edition, 22 July 2019).	Web of Science and Scopus	1975-2018
2	308 empirical studies from 106 academic journals covering 10 disciplines (Harzing Journal Quality List (65 edition, 22 July 2019). Total number of estimates extracted for 20 FDI determinants equals to 14,546.	Web of Science and Scopus	1975-2018
3	A panel of annual data on bilateral FDI from 24 developed European countries into 21 developing Asian countries over the 2013-2019 period.	ITC Investment Map database	2013-2019

In the fourth Chapter, FDI data are taken from the ITC Investment Map database. The Investment Map database integrates and organizes FDI data from several sources, including international

organizations (UNCTAD, IMF, OECD), regional organizations (ASEAN, EUROSTAT, etc.), and national institutions such as national statistical offices, central banks, ministries of trade and investment, investment promotion agencies, etc. Data for explanatory variables are taken from a variety of secondary sources, including Penn World Tables, CEPII, Global Data Lab, WDI, and WGI.

1.8.THREE RESEARCH WORKS

1.8.1. Study 1: What drives FDI into developing countries? A systematic literature review

Abstract:

Context – The choice of foreign direct investment (FDI) location by multinational enterprises (MNEs) has been fueling debates among scholars in different disciplines for decades. Nonetheless, our understanding of the factors determining investment flows across countries remains limited due to the diversity of country samplings, methodological strategies, and levels of analysis used in the extant empirical literature. Mixed evidence in the literature regarding factors that attract or deter FDI may be partly attributed to the development stage of the FDI host sample countries. Research has recently acknowledged that FDI motives in developed and developing countries are substantially different, and this creates an opportunity to take advantage of the previous research to better understand *where* and *why* MNEs locate their investment in developing countries.

Purpose – This study provides a comprehensive survey on FDI location determinants across developing countries and regions to fill the gap in the literature on the importance of location determinants in developing countries. The main purpose of this study is to review 20 host country-specific FDI location factors, identify which factors attract and deter FDI, and explore the differences in FDI attractiveness across developing countries and geographic regions.

Design – This systematic literature review examines 416 empirical studies on FDI location choice in developing economies over the 1975-2018 across multiple disciplines, including economics, international business, finance, public sector, etc.

Findings – This review provides a comprehensive analysis of the empirical evidence regarding 14 economic and 6 institutional FDI determinants across developing countries and highlights considerable differences in FDI location decisions of MNEs across six geographic regions of the developing world. Moreover, this study highlights gaps and methodological challenges in the existing empirical literature and recommends possible avenues for future research.

Value and implications – This study advances our understanding of the FDI location determinants in developing countries and provides a contextual analysis of FDI attractiveness across various geographic regions. The findings of this review have important implications for the FDI location research stream and policymakers in developing countries facing difficulties in attracting foreign investment to develop their economies.

Keywords: Foreign direct investment (FDI); FDI location choice; FDI determinants; Developing countries; Systematic literature review

Conferences/Workshops/Presentations: Prior versions of this study have been presented at the internal TSM and TBS workshops in 2019 and 2021 and at the AIB and EURAM Annual Conferences in 2021.

1.8.2. Study 2: Exploring the importance of location factors for FDI attractiveness in developing countries – a meta-analysis

Abstract:

Context – Previous review study demonstrated considerable differences in FDI location determinants across different countries and geographic regions. However, systematic review methodology has numerous flaws, especially when analyzing empirical FDI location literature, which is highly heterogeneous in terms of methods, data sampling, and timeframes employed. Due to these limitations, it is very difficult to deduce MNEs' underlying motives for investment, which are central to our understanding of *where* and *why* firms locate their FDI.

Purpose – This study further extends the systematic literature review and aims to properly aggregate the available empirical evidence to estimate the relative significance of FDI location determinants in developing countries using meta-analytic techniques. The main purpose of this study is to identify the main investment motives[12] in developing countries by building on the Investment Development Path (IDP) framework. This study analyzes the relative importance of FDI location factors not only across different host developing countries and regions but also considers country of origin and industry effects on the FDI location choices of MNEs.

[12] Here we consider FDI motivation to be resource-seeking, market-seeking, and efficiency-seeking.

Design – This meta-analysis synthesizes 14,546 estimates collected from 308 empirical studies on the relationship between 20 host country-specific FDI determinants and FDI location choice in developing countries.

Findings – By computing meta-averages, this study provides a more nuanced analysis of the importance of 20 host country-specific FDI location determinants across different geographic regions, investor countries, and sectors. The findings of this study highlight considerable variation in the relative significance of each factor for FDI attractiveness across host regions as well as differences in the FDI location motives of firms from developed and developing investor countries.

Value and implications – This study further advances our understanding of the relative significance of 20 FDI location determinants in developing countries and attempts to deduce dominant investment motives into six geographic regions. Findings of this meta-analysis may interest both researchers and policymakers in developing countries as it provides a more contextual and meaningful analysis of the relative importance of different location factors across host countries, industries, and MNEs' home countries.

Keywords: Foreign direct investment (FDI); FDI determinants; FDI motives; Investment Development Path (IDP); Developing countries; Meta-analysis

Conferences/Workshops/Presentations: Prior versions of this study have been presented at the internal TSM and TBS workshops in 2021 and at the AIB and AOM Annual Conferences in 2022.

1.8.3. Study 3: Motives of European FDI in developing Asia: a spatial econometric analysis

Context – Most of the empirical FDI location literature relies on two-country gravity models to explain bilateral FDI flows between home and host countries and largely ignores the role played by neighboring countries of the FDI host country. From a methodological point of view, ignoring the spatial effects of neighboring countries could cause serious econometric problems, leading to biased estimates and inaccurate inferences. Moreover, incorporating the characteristics of proximate countries directly into an empirical model allows researchers to not only capture the potential existence of spatial interdependence across neighboring host countries but also distinguish empirically between dominant FDI motives.

Purpose – This study empirically examines the determinants of European FDI in 21 Asian developing countries over the 2013-2019 period and aims to identify its main motivation[13].

Design – We employ a spatial Durbin model (SDM) to capture spatial linkages across Asian host countries, which are usually overlooked by most existing empirical studies. SDM is a relatively new empirical approach that extends previous spatial methods employed in the FDI location literature. We further refine this approach by addressing recent critiques concerning the construction of the spatial weight matrix and measurements of distance for our spatial model.

Findings – Our estimation results reveal the existence of spatial interdependence of European FDI across Asian host developing countries. Findings indicate that FDI is largely dominated by the export-platform motives, i.e., European MNEs establish operations in one host country and then use it as a platform to serve nearby markets via exports. Our findings also point to horizontal market-seeking motivation across the sample countries.

Value and implications – To the best of our knowledge, it is the only empirical study explicitly focusing on spatial FDI interdependencies across a large sample of Asian developing countries. FDI location researchers may find this study useful as it shows that ignoring spatial linkages in empirical models leads to serious econometric problems, which could potentially question the findings of these studies. The results of this study may also be helpful for policymakers in Asian developing economies if they wish to attract more export-platform and horizontal FDI.

Keywords: Foreign Direct Investment (FDI); FDI motives; spatial econometrics; spatial Durbin model (SDM); Asia

[13] Here we consider FDI motivation to be horizontal, vertical, export-platform, or complex-vertical FDI.

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2. SECOND CHAPTER: WHAT DRIVES FDI INTO DEVELOPING COUNTRIES? A SYSTEMATIC LITERATURE REVIEW

WHAT DRIVES FDI INTO DEVELOPING COUNTRIES? A SYSTEMATIC LITERATURE REVIEW

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Abstract: This study provides a comprehensive survey on FDI location determinants across developing countries and regions to fill the gap in the literature on the importance of location determinants in developing countries. The main purpose of this study is to review 20 host country-specific FDI location factors, identify which factors attract and deter FDI, and explore the differences in FDI attractiveness across developing countries and geographic regions. This systematic literature review examines 416 empirical studies on FDI location choice in developing economies over the 1975-2018 across multiple disciplines, including economics, international business, finance, public sector, etc. This review provides a comprehensive analysis of the empirical evidence regarding 14 economic and 6 institutional FDI determinants across developing countries and highlights considerable differences in FDI location decisions of MNEs across six geographic regions of the developing world. Moreover, this study highlights gaps and methodological challenges in the existing empirical literature and recommends possible avenues for future research. This study advances our understanding of the FDI location determinants in developing countries and provides a contextual analysis of FDI attractiveness across various geographic regions. The findings of this review have important implications for the FDI location research stream and policymakers in developing countries facing difficulties in attracting foreign investment to develop their economies.

Keywords: Foreign direct investment (FDI); FDI location choice; FDI determinants; Developing countries; Systematic literature review

2.1. INTRODUCTION

Foreign direct investment (FDI) continues to be an important driver of international business activities around the world, and MNEs are the main agents driving the spatial reconfiguration of the global economy. For many decades, both the significance of FDI and its unequal distribution across the globe continued to fuel the interest of scholars from various disciplines in exploring factors that determine a country's attractiveness for foreign investment. Hence, FDI, its determinants, and its impact on the economic growth of FDI host countries have been extensively studied by scholars from diverse disciplines (Buckley et al., 2007; Dunning, 1988b).

The relationship between FDI inflows and the economic growth of host locations is of paramount importance, particularly for developing countries (Borensztein, De Gregorio, & Lee, 1998; Hansen & Rand, 2006). FDI is viewed as a potential catalyst for fostering economic growth and development of nations (Grossman & Helpman, 1993; Liu, 2008). FDI inflows may help to limit liquidity constraints faced by many developing countries (Mody & Murshid, 2005) and foster the development of domestic industries (Alfaro & Rodriguez-Clare, 2004; Beata Smarzynska Javorcik, 2004) through positive FDI spillovers such as technology and knowledge transfer, improvements in human capital and job creation, export promotion, and so on (Caves, 1996; De Mello Jr., 1997; Lucas, 1988; Romer, 1986). Thus, gaining a deeper understanding of factors determining FDI and the dominant motives behind foreign investments may help shed light on the driving factors behind global economic development (Poelhekke & van der Ploeg, 2009).

Various alternative theories have tried to explain *why* firms internationalize (Buckley & Casson, 1976; Hennart, 1982; Rugman, 2006), and they have also enriched our understanding of *where* MNEs locate their investment abroad. Several recent reviews (e.g., Jain, Kothari, & Kumar, 2016; Kim & Aguilera, 2016; Nielsen, Asmussen, & Weatherall, 2017) made an effort to summarize and synthesize the most important FDI location determinants from the existing body of research. The literature on FDI location choice provides a long list of FDI location determinants, which include market factors, factor inputs (such as cost of labor, tax burden, etc.), role of institutions, human capital, infrastructure, government policies, and many others. Researchers consider that these host country-specific location characteristics make countries or regions attractive because they promise potential benefits to foreign direct investors. Although there is a theoretical consensus among scholars on which host location factors attract or deter foreign investment, the findings of empirical literature on the relationship between many host

country-specific location factors and FDI remain largely mixed and inconclusive (Nielsen et al., 2017; Ramírez-Alesón & Fleta-Asín, 2016).

Mixed evidence across extant empirical FDI location literature regarding factors that attract or deter FDI may also be partly attributed to the development stage of FDI host sample countries (Blonigen & Wang, 2005; Dunning, 2009; Dunning & Narula, 1996). Mainstream empirical literature on FDI location has traditionally focused on developed countries and geographical regions that traditionally attracted the lion's share of the world's FDI, such as the USA (Ajami & BarNiv, 1984; Blonigen, 1997; Bobonis & Shatz, 2007; Head, Ries, & Swenson, 1995; Kogut & Chang, 1991), Europe (Head & Mayer, 2004; Lunn, 1980; Regelink & Elhorst, 2015; Scaperlanda & Mauer, 1969), and Japan (Kimino, Saal, & Driffield, 2007). Moreover, a large portion of empirical studies on FDI location determinants do not distinguish between developing and developed countries in their samples countries (Baltagi, Egger, & Pfaffermayr, 2007; Davidson, 1980; Kravis & Lipsey, 1982). However, Blonigen & Wang (2005) showed that pooling rich and poor countries in an empirical analysis can lead to incorrect inferences as FDI motives in developed and developing countries are substantially different. Additionally, previous research illustrates that the importance of FDI determinants varies among various regions of the developing world (Asiedu, 2002; Dimitrova, Rogmans, & Triki, 2019).

Since the 1990s, however, large emerging countries like China, India, and Brazil have started to attract significantly more FDI. This sharp increase in FDI inflows in developing countries has drawn the attention of scholars who have produced a large body of research interested in providing new explanations of FDI determinants in economically less developed countries. Researchers are convinced that emerging markets will continue to grow and consolidate their business power (Kearney, 2012) and many businesses will shift towards the growing long-term opportunities in these markets (Sakarya, Eckman, & Hyllegard, 2007). According to UNCTAD (2023, p. 2), in 2022 FDI inflows in developing countries accounted for 70% of the global inflows (up from 60% in 2021), thus largely surpassing FDI in developed countries. Moreover, half of the top 20 most attractive global business locations are emerging economies, including China (#2), Brazil (5), India (8), Mexico (11), Poland (14), United Arab Emirates (16), Indonesia (17), and Chile (19) (UNCTAD, 2023, p. 8).

As different research streams have consolidated a considerable amount of knowledge on MNEs' location choices abroad, this creates an opportunity to take advantage of the extant research to better understand *where* and *why* MNEs locate their FDI in developing countries. An explicit focus on developing countries is necessary because some of the FDI location factors might have

a varying degree of importance depending on the host country's degree of development (Blonigen & Wang, 2005; Dunning, 2009; Dunning & Narula, 1996). Therefore, this review focuses exclusively on reviewing empirical articles which empirically investigate FDI location determinants in developing countries.

To fill the gap in the literature on the importance of FDI location determinants in developing countries, this study conducts a systematic evidence-based literature review (Tranfield et al., 2003). There are several objectives for this systematic literature review. First, to review, synthesize, and categorize all relevant empirical studies on FDI location choice in developing countries and address important issues about country samples, measurements, data, methodological choices, and theoretical lenses used in previous research. Second, to provide a comprehensive analysis of the empirical findings on the relationship between twenty selected host country-specific location determinants and FDI inflows in developing countries. Third, to compare similarities and differences in foreign investors' behavior across several geographic regions of the developing world. Finally, to highlight gaps and methodological challenges related to the extant empirical literature and recommend directions for future research.

This systematic literature review is different from other reviews on FDI location determinants (Jain et al., 2016; Kim & Aguilera, 2016; Nielsen et al., 2017) in several ways. First, previous reviews on FDI location determinants include empirical papers that do not distinguish between developed and developing countries in their analysis. As already mentioned, Blonigen & Wang (2005) argue that empirical studies on FDI location that pool data from both types of countries into one sample may significantly misrepresent the true relationships for both sets of countries, as the theory often suggests that relationships should differ across rich and poor countries (Dunning & Narula, 1996; Helpman, 1984). As a result, if the underlying motives for investment are indeed different across developed and developing country groups, the findings of such empirical papers regarding factors determining the location choices of MNEs may be misleading. Therefore, this study reviews empirical papers focusing exclusively on developing countries[14] and papers that include subsample(s) of developing countries. Second, this review is interdisciplinary in nature as it covers ten research fields (such as economics, IB, finance, public sector, organizational behavior, and others) and includes 416 studies, thus largely outnumbering samples of other similar reviews (Kim & Aguilera, 2016; Nielsen et al., 2017). Finally, and most importantly, this review compares empirical findings on FDI location

[14] See definition of developing countries in the introductory Chapter (subsection 1.2.2.)

determinants across several geographic regions of the developing world (i.e., LAC, MENA, and CEE, among others) and highlights similarities and differences in FDI location patterns across different regions. Empirical evidence points toward considerable differences in the FDI location behavior of firms and motives for investment in various developing regions. Overall, this systematic literature review contributes to the FDI location choice literature by improving our understanding of the host country-specific factors driving FDI across six developing regions and highlighting numerous paths for future research.

The remainder of this Chapter is structured as follows. Section 2.2 outlines the methodology employed for the selection of articles and overviews the sample chosen for this review. Section 2.3 discusses theoretical background of FDI location choice and associated hypotheses for 20 FDI location determinants. Sections 2.4 and 2.5 present methodological and empirical results of the review, respectively. Section 6 discusses results, research implications, and avenues for future research. Section 2.7 summarizes the main findings of this study and concludes.

2.2. RESEARCH DESIGN FOR SYSTEMATIC LITERATURE REVIEW

Systematic literature reviews have been traditionally used in medical science (Moher, Liberati, Tetzlaff, & Altman, 2009; Tranfield, Denyer, & Smart, 2003) but have only recently been adopted by IB research (Eduardsen & Marinova, 2020; Li, Quan, Stoian, & Azar, 2018; Xie, Reddy, & Liang, 2017). Recent research has systematically reviewed the literature on the FDI determinants and firms' location choices globally (Jain et al., 2016; Kim & Aguilera, 2016; Nielsen et al., 2017), across particular regions (Dimitrova et al., 2019), and across particular countries (Fetscherin, Voss, & Gugler, 2010).

The systematic literature review ("SLR" hereinafter) has many definitions (Briner & Denyer, 2012; Siddaway, Wood, & Hedges, 2019; Tranfield et al., 2003), but they are generally consistent. Briner & Denyer (2012, p. 112) define SLR as "a systematic review [that] addresses a specific question, utilizes explicit and transparent methods to perform a thorough literature search and critical appraisal of individual studies, and draws conclusions about what we currently know and do not know about a given question or topic."

In this study, I use systematic review methodology with reference to existing guidelines for management and business studies (Briner & Denyer, 2012; Gaur & Kumar, 2018; Pittaway, Robertson, Munir, Denyer, & Neely, 2004; Randolph, 2009; Tranfield et al., 2003) and to previous uses of the method in management research (Li et al., 2018; Macpherson & Holt, 2007; Mian, Lamine, & Fayolle, 2016; Nielsen et al., 2017; Thorpe, Holt, Macpherson, & Pittaway, 2005). This review aims to synthesize research in a systematic, transparent, and reproducible manner (Tranfield et al., 2003). I follow the systematic review steps outlined by Tranfield et al. (2003, p. 214): (1) planning the review, (2) conducting the review, and (3) reporting and dissemination.

2.2.1. Planning the review

2.2.1.1. Defining objectives

This SLR aims to answer the following questions:

> ***Q1***. What empirical evidence is available regarding host country-specific factors that determine FDI inflows in developing countries?
>
> ***Q2***. Which data and methodological challenges are FDI location researchers facing?
>
> ***Q3***. Which FDI location determinants attract and deter FDI in developing countries?

Q4. How are FDI location determinants formulated theoretically and measured empirically?

Q5. Do FDI determinants in developing countries differ across various geographic regions, and why?

To address these questions, this review primarily focuses on the *where* side of the FDI location question as articulated by Goerzen, Asmussen, & Nielsen (2013, p. 427): "the concept of location - where and why firms place specific activities in particular [geographic] areas." In addition, I attempt to tackle the *why* side of the question (i.e., firms' motives for investment) because if firms go abroad for different reasons, it is very likely that they go to different locations as well (Benito, 2015). What makes a given developing country (or region) attractive to MNEs? Why do MNEs decide to invest in a particular developing country (or region)? This study attempts to resolve the "somewhat inconsistent empirical evidence" regarding the impact of FDI location factors on the inflows of foreign investment in developing countries, which "may be partly due to biases in sampling countries" (Nielsen et al., 2017, p. 75).

2.2.1.2. Identification of the research scope

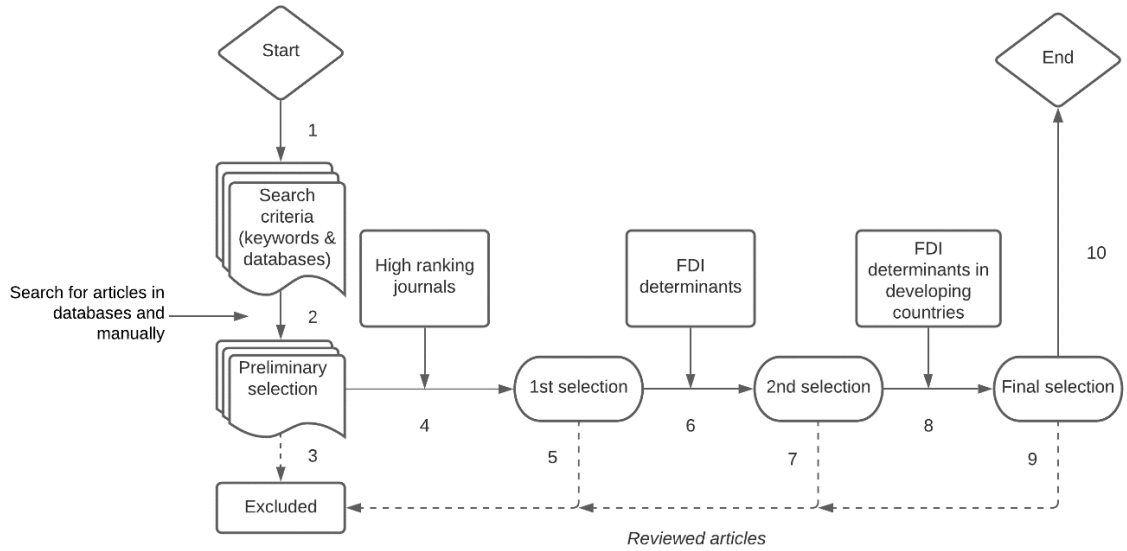
This review is limited to peer-reviewed English-language journal articles published from 1975 to 2018, inclusive. Books, reports, conference papers, and other non-refereed publications are excluded from the sample due to variability in peer review processes and more restricted availability. Academic journal articles are considered to be validated knowledge (Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005) and are likely to have the highest impact on the field (Armstrong & Wilkinson, 2007; Judge, Cable, Colbert, & Rynes, 2007). I limit this review to quantitative studies that propose and empirically test how host country location determinants influence FDI inflows in developing countries. Unlike some previous reviews, I do not restrain the research field area to IB or management journals only (Kim & Aguilera, 2016) and survey literature across all research disciplines, including economics, public sector management, finance and accounting, organizational behavior, and other relevant fields. Initially, I did not limit this review to a specific period and surveyed all available literature until December 2018. As before the publication of the seminal work of Johanson & Wiedersheim-Paul (1975), internationalization and FDI location research fields were practically nonexistent, the timeframe for this review is limited to the period between January 1975 and December 2018.

2.2.2. Conducting the review

2.2.2.1. Search for articles

The ten-step review methodology (presented in Fig. 2.1) identifies all relevant empirical research papers published from 1975 to 2018 in peer-reviewed journals (Step 1). Two databases were explored: Reuter's Web of Science and Elsevier's Scopus (see Appendix A1 for the description of databases). The following search terms were considered: "FDI" or "foreign direct investment", "location", and "internationalization". Additional terminologies were also used, such as foreign investment, determinant, international expansion, motive [for expansion], emerging/ developing/ transition countries, as well as theoretical terms including institutions and agglomeration (see Appendix A2 for a complete list of 45 keywords used and Appendix A3 for search strings). These terms were used in various combinations and searched for in titles, keywords, and abstracts. If the number of citations exceeded 1000 from the first search string, I searched within the title of the articles only.

Figure 2.1. The logic flow chart of the protocol used to find and select articles



Source: adapted from Mian et al. (2016, p. 7)

Because formal search techniques of entering index terms or keywords in electronic databases may overlook important studies, the snowball search technique (Greenhalgh & Peacock, 2005) by searching the bibliographies of relevant studies was also used. The database search yielded 19,484 publications (see Appendix A3 for search strings). Duplicates and publications other than journal articles were removed, reducing the number of articles to 9,882 (Steps 2 and 3).

2.2.2.2. Quality assessment of studies

As the preliminary selection of articles produced nearly ten thousand articles, the list was filtered to limit it to the top level of academic journals included in the Harzing Journal Quality List (65 edition, 22 July 2019), which is used as journal quality benchmarking in this review (Step 4) and was further reduced to 4,785 articles. The remaining articles from journals not included in the Harzing Journal Quality List were excluded (Step 5).

2.2.2.3. Screening and exclusion analysis

Subsequent steps further enriched and cleaned the dataset according to the inclusion and exclusion criteria outlined in Table 2.1. At this stage, the abstract and introduction of each article were read to ensure that the articles fit the established inclusion criteria (Step 6). In particular, at this stage, I excluded all non-empirical papers (such as descriptive papers, conceptual works, case studies, literature reviews, etc.) as well as qualitative studies and focused on empirical studies where the dependent variable was either a choice between alternative locations for a given FDI (e.g., foreign subsidiary), or a measure of the extent to which FDI occurred in a given location (e.g., in monetary amounts or counts of investment projects). 1,044 empirical articles on FDI determinants were selected for the next step; others were removed from the list (Step 7).

Table 2.1. Inclusion and exclusion criteria

No	Study	Inclusion criteria	Exclusion criteria
1	Type	Peer-reviewed academic journal articles	Other publications, including book chapters, book reviews, conference papers and proceedings, anonymous publications, etc.
2	Language	English	Articles published in languages other than English.
3	Date	1975-2018	Before 1975 and after 2018.
4	Exposure of interest	Location of FDI	Entry mode choice, location of headquarters, foreign patents, offshore service projects, or other potential subsets of the firm.
5	Study design	Quantitative empirical studies that directly propose and empirically test determinants of choice of FDI	Qualitative empirical studies, case studies, literature reviews, and purely conceptual papers.

		location in developing countries, i.e., studies where the dependent variable is either a choice between alternative locations for a given FDI (e.g., foreign subsidiary) or a measure of the extent to which FDI occurs in a particular location (e.g., in monetary amounts or counts of investment projects).	
6	Geographic focus	Location of FDI in developing economies according to IMF country classification.	Location of FDI in developed countries or country samples including both developed and developing ones.

Source: author's elaboration

The remaining articles were fully read to ensure that they fit the established selection criteria (Step 8). Articles with a focus on developed countries or samples including both developed and developing countries were excluded (Step 9). As a result, the final sample comprises 416 empirical papers (84 of which were found through snowballing) on FDI determinants in developing countries published in high-ranked academic journals during the 1975-2018 period (Step 10). Table 2.2 summarizes the SLR process I followed to collect a sample of studies on FDI location in developing countries. The complete list of 416 studies included in this review is provided at the end of this Chapter.

2.2.2.4. Data coding and synthesis

In the analysis of selected studies for this literature survey, I follow the method used by Nielsen et al. (2017) in their review with reference to the meta-analytic technique of Lipsey & Wilson (2001). First, I coded studies according to geography of their sampled host and home countries, econometric method employed, type of dependent variable, theoretical lenses, and other methodological choices. Second, I coded studies according to whether they provide empirical evidence for the twenty main FDI location hypotheses identified in the theoretical literature and outlined in the next Section. Finally, I recorded whether each of these studies found empirical support for one or several of these specific hypotheses, including their direction and significance.

This coding approach helped me to properly aggregate a large body of empirical evidence regarding the relationships between main location determinants and FDI across different formulations of hypotheses used in the previous literature. I assigned several mutually exclusive

Table 2.2. Summary of the systematic review process

Stage	Step	Results
Start	Preliminary parameters for the search of articles as outlined in the inclusion and exclusion criteria in Table 2.1: (1) Peer-reviewed academic journal articles; (2) published in English language; (3) 1975-2018 period.	
1. Search for articles	Step 1. Define the search criteria (keywords and databases).	Keywords (45) Databases (2)
	Step 2. Search for publications in databases and manually.	Search strings (28) Number of searches (56) Articles found (19,484)
	Step 3. Delete duplicates and publications other than peer-reviewed journal articles.	Duplicates (-9,505) Non-referred publications (-97)
	Result after Stage 1: list of articles related to foreign location choice, FDI, FDI determinants, internalization, or international expansion.	***Preliminary selection of 9,882 articles***
2. Quality assessment of studies	Step 4. Harzing Journal Quality List (65 edition, 22 July 2019).	
	Step 5. Delete publications from journals not included in Harzing JQL.	-5097
	Result after Stage 2. List of articles from high ranked journals.	***1st selection of 4,785 articles***
3. Screening and exclusion analysis	Step 6. Empirical studies on FDI determinants	
	Step 7. Delete non-relevant papers, qualitative studies, conceptual papers, case studies, and reviews.	-3,741
	Intermediate result during Stage 3. List of empirical articles on FDI location determinants.	***2st selection of 1,044 articles***
	Step 8. Empirical studies on FDI determinants in developing countries.	
	Step 9. Delete articles focusing on developed countries or employing samples with both developed and developing countries.	-628
	Step 10: Final selection of empirical articles focusing on FDI location in developing countries.	***Final selection of 416 articles***
End	Finalize the Excel workbook where I record the details of 416 selected articles: titles, authors, journals, year of publication, methodology, countries of interest, main topic, type of paper, theoretical lenses employed, and other important details.	

Source: adapted from Tranfield et al. (2003) and Thorpe et al. (2005)

categories for each hypothesis-study pair (not tested, supported, insignificant, and opposite [direction]). The main challenge in the coding of studies regarding their empirical findings was the assessment of whether the hypothesis was generally supported or rejected by a given empirical study. Usually, most empirical papers present many regression models and conduct several robustness checks where a given variable may be significant in some cases, insignificant in others, and sometimes even change the direction (i.e., sign) of parameter estimates. To mitigate these challenges and be as accurate as possible in the aggregation and analysis of the large number of studies chosen for this review, I introduced two additional categories: (1) partially supported, when approximately equal numbers of estimates from one study produce significant results in support of a given hypothesis and insignificant results; and (2) not robust, when variables' coefficients often change direction and significance across empirical tests. As a result, the broad conclusion for each hypothesis indicates the general findings collected by previous literature.

2.2.3. Reporting the review

This subsection provides a general overview of the main characteristics of the sample of studies selected for this review. Table 2.3 presents the descriptive analysis of the bibliographic data of 416 selected studies. The included articles were published in 123 different academic journals from ten research streams during 1975-2018 by 696 different authors. The average annual increase in the number of publications is nearly 9%. However, serious researchers' interest in

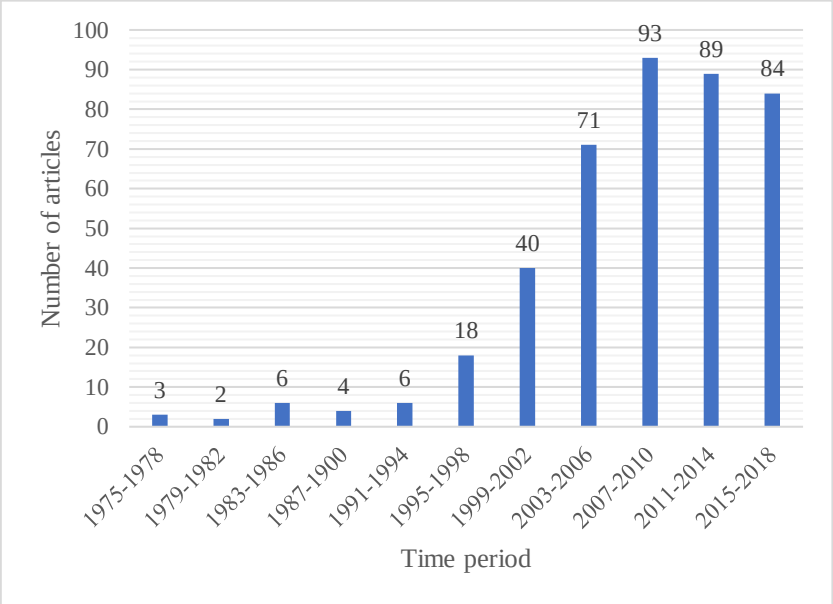
Table 2.3. Descriptive analysis: Main information regarding included studies

Description	Number
Articles	416
Journals	123
Fields	10
Time period	1975-2018
Average percentage growth rate[15]	8,98%
Total citations[16]	92 666
Average citations per article	222,75
Average weighted citations per article[17]	13,56
Authors	696
Authors per article	2,08

[15] The average annual growth rate of articles' publications is calculated by taking the arithmetic mean of a series of growth rates from 1975 until 2018.
[16] Data on citations are based on Google Scholar data and were extracted on May 30, 2023.
[17] Average weighted citations number is calculated as total citations divided by the number of years since publication.

the topic of FDI location in developing countries only started to emerge at the turn of the millennium, and more than 63% of selected empirical studies were published during the 12-year period between 2007 and 2018 (see Fig. 2.2 for information on the years of publication of sample articles).

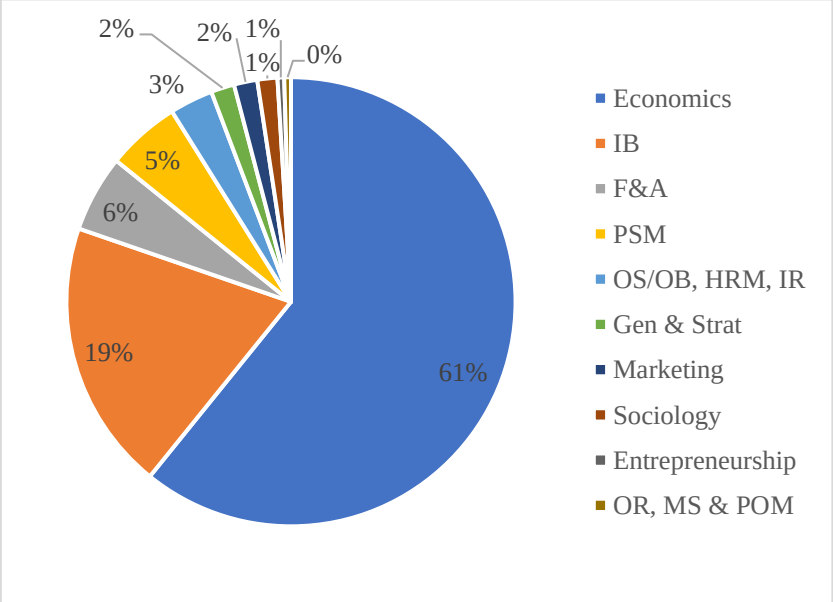
Figure 2.2. Descriptive analysis: Number of articles published over time



The extensive coverage of articles from various research fields is one of the distinct features of this review compared to other similar reviews on FDI location choice (Kim & Aguilera, 2016; Nielsen et al., 2017). Fig. 2.3 depicts the distribution of selected articles across 10 research areas. The final sample comprises 253 articles that were published by 64 economics journals, accounting for nearly 61% of the total. 81 articles were published by 16 international business (IB) journals, representing 19.5% of the sample. Finance and accounting (F&A) and public sector management (PSM) streams produced 23 and 22 studies, respectively, making up a total of 11%. Finally, 37 articles (8.9%) originated from journals in six other fields, including organizational behavior and human resource management (13 papers), general management and strategy (7 studies), marketing (7 articles), etc.

It is not surprising that economic researchers have taken the lead in producing empirical evidence on FDI location determinants, as many FDI location theories take their roots from classical macroeconomic theories. IB literature complements economic research findings by adopting other theoretical lenses, such as the institutional approach, for example.

Figure 2.3. Descriptive analysis: Research fields coverage



Note[18]*: IB – International Business; F&A – Finance and Accounting; PSM – Public Sector Management; OS/OB, HRM, IR – Organization Behavior/Studies, Human Resource Management, Industrial Relations; Gen & Strat – General and Strategy; OR, MS & POM – Operations Research, Management Science, Production & Operations Management*

Despite the high number (123) and diversity of research fields (10) in the sample, only several journals dominate and largely influence the empirical research on FDI location in developing countries. Specifically, the top 10% of most productive journals published 38.7% of sample articles and received 43.9% of total citations. Table 2.4 summarizes the top 12 journals in terms of the total number articles published and the total number of citations received by each journal.

The most prominent journals that publish empirical research on FDI location in developing countries come from the economics and IB fields. Economics journals largely dominate the list of the most productive and influential journals. World Economy (WE) and World Development (WD) journals are at the top of the list both in terms of the quantity of studies published and the total citations accumulated. Top IB journals include the Journal of International Business Studies (JIBS), International Business Review (IBR), and Transnational Corporations (TC).

Assuming that citations are used as a measure of the influence and importance of an article (Zupic & Čater, 2015), the citation analysis shows that the World Development journal has 12,474 citations (13.5% of total citations) across 19 publications. Overall, 64 economic journals

[18] Classification of journals by respective fields follows categorization of the Harzing Journal Quality List (65 edition, 22 July 2019).

account for 71% of total citations, whereas 15 IB journals make up only 16% of total citations in the review sample.

Table 2.4. Descriptive analysis: Most productive and influential journals

Rank	Journal	Number of articles	Journal	Total citations
1	WE	23	WD	12 474
2	WD	19	JIE	6 206
3	AE	18	WE	5 170
4	JIBS	14	JIBS	4 561
5	ET	13	EJPE	4 255
6	JDA	12	JCE	4 126
7	CER	11	AE	2 762
8	IBR	11	JDE	2 588
9	TC	11	ET	2 416
10	JAE	10	IBR	2 267
11	RWE	10	TC	2 247
12	JCE	9	JWB	2 219

Note: AE: Applied Economics; CER: China Economic Review; ET: Economics of Transition; EJPE: European Journal of Political Economy; IBR: International Business Review; JAE: Journal of Asian Economics; JCE: Journal of Comparative Economics; JDA: Journal of Developing Areas; JDE: Journal of Development Economics; JIBS: Journal of International Business Studies; JIE: Journal of International Economics; JWB: Journal of World Business; RWE: Review of World Economics; TC: Transnational Corporations; WD: World Development; WE: World Economy.

The most cited articles included in this review are summarized in Table 2.5. These top 10 studies represent the base of empirical research on FDI location in developing countries on which the current research is being built (Zupic & Čater, 2015). In Table 2.5 (column 2), total citations serve as a straightforward measure of an article's overall influence within the FDI location research stream. However, it tends to favor studies that have received significant attention and recognition by scholars over time. Average weighted citations (Table 2.5, column 4), on the other hand, provide a more nuanced perspective by considering not just the quantity of citations but also their temporal distribution. This approach gives more weight to citations received closer to the publication date.

The most influential empirical works include studies on FDI location determinants in Africa (Asiedu, 2002, 2006), China (Cheng & Kwan, 2000), Latin America (Bengoa & Sanchez-Robles, 2003), Central and Eastern Europe (Bevan & Estrin, 2004), as well as studies focusing on exploring institutional FDI determinants across large samples of various developing countries (Busse & Hefeker, 2007; Büthe & Milner, 2008; Kolstad & Wiig, 2012).

Table 2.5. Descriptive analysis: Most cited articles

Rank	Author	Total citations	Author	Average weighted citations
1	Wheeler & Mody (1992)	3210	Asiedu (2002)	140,6
2	Asiedu (2002)	2953	Busse & Hefeker (2007)	138,9
3	Busse & Hefeker (2007)	2223	Asiedu (2006)	119,6
4	Asiedu (2006)	2034	Kolstad & Wiig (2012)	109,8
5	Schneider & Frey (1985)	1895	Wheeler & Mody (1992)	103,5
6	Cheng & Kwan (2000)	1890	Cheng & Kwan (2000)	82,2
7	Bengoa & Sanchez-Robles (2003)	1573	Bevan & Estrin (2004)	81,9
8	Bevan & Estrin (2004)	1556	Bengoa & Sanchez-Robles (2003)	78,7
9	Eskeland & Harrison (2003)	1505	Büthe & Milner (2008)	78,2
10	Noorbakhsh, Paloni, & Youssef (2001)	1466	Eskeland & Harrison (2003)	75,3

363 out of 416 studies (87%) focus solely on developing countries, whereas 53 include an analysis for the subsample(s) of developing countries (e.g., Kang & Jiang, 2012; Wheeler & Mody, 1992). Overall, 384 studies out of 416 (92%) test FDI location determinants on one sample of developing countries, 24 studies include two different subsets of developing countries, and 8 articles include three to five distinct subsamples (see, for example, Lee, Alba, & Park (2018); Schollhammer & Nigh (1986); Sin & Leung (2001) among others). In total, 416 studies empirically tested the relationship between FDI and the host developing country's location determinants across 463 samples of developing economies.

2.3. THEORIES OF FDI

Foreign direct investment, its determinants, and its impact on economic growth have been extensively studied by scholars from diverse disciplines (Buckley et al., 2007; Dunning, 1988b). Since the 1960s, research has produced a rich literature regarding the location choice of foreign investment across different countries, regions, and contexts. As a result, the wide variety of location factors recorded by prior research makes it necessary to synthesize and systematically categorize the available evidence to facilitate navigation across various FDI determinants. The following paragraphs discuss the theoretical background of FDI location determinants and state the hypotheses. This Section reviews the theoretical underpinnings of twenty host country-specific FDI determinants, broadly grouped into (1) economic and (2) institutional drivers of FDI.

2.3.1. Economic factors

Hymer (1976) and Kindleberger (1969) presented the first economic analysis of FDI that focused on the relationship between market structures in the host and home countries and outlined specific characteristics of investing firms that can be used to explain FDI decisions. Their work is known as an industrial organization theory, which implies that foreign firms must possess a set of advantages over local firms under the conditions of market imperfections to overcome the costs of liability of foreignness that they face in a foreign market (Caves, 1971; Hymer, 1976; Kindleberger, 1969; Zaheer, 1995). Similarly, internalization theory is also based on market imperfections and states that firms engage in FDI when they are able to replace market transactions with internal transactions (Buckley & Casson, 1976). Dunning's eclectic paradigm attempts to combine organization, internalization, and location hypotheses and states that FDI takes place when firms possess ownership-specific assets that can be internalized and exploited, which gives them an advantage in setting up production abroad (Dunning, 1979, 1988b, 1998).

Dunning (1998) put forward the taxonomy of firms' investment motivations, explaining why a given location becomes attractive for FDI: (1) market-seeking (horizontal FDI strategy to access and serve the host domestic market), (2) efficiency-seeking (vertical FDI strategy to take advantage of lower factor costs, especially in developing countries), (3) resource-seeking (vertical FDI strategy to access valuable raw materials), and (4) strategic assets-seeking to access R&D, innovation, and advanced technology capabilities. These theoretical perspectives,

as well as many others (for a full review, see Faeth (2009)), not only explain why firms engage in FDI but also give insights on "where" firms should locate their investment.

The following paragraphs are dedicated to the discussion of fourteen economic factors that have received most of the researchers' attention and are frequently cited in the literature: (1) market factors, (2) labor market dynamics, (3) infrastructure, (4) agglomeration, (5) natural resource endowment, (6) macroeconomic conditions, (7) trade and (8) fiscal policies, and (9) geographic distance.

2.3.1.1. Market factors

The market size and growth of the host country are important "pull" factors and theoretically positively related to FDI flows (Dunning, 1993). Large markets offer greater opportunities for MNEs to increase their market shares and production by taking advantage of economies of scale and scope (Buckley & Casson, 1992) and to better exploit their ownership advantages (Culem, 1988). Horizontal FDI aims at serving local markets by substituting exports (Buckley & Casson, 1981) and allows firms to lower distribution costs and bulk-buying of inputs (Markusen, 1984; Markusen & Venables, 2000). As a result, foreign firms can increase their income and recover their investment more quickly. However, if FDI flows are vertical in nature, then they may not be driven by the size of the host country.

Hypothesis 1: *The larger the market size of a particular location, the more likely this location is chosen as a destination for FDI.*

The market growth rate reflects the future potential of the market, as fast-growing economies provide more profit-making opportunities than slowly growing or stagnant markets. Rapid economic growth leads to higher aggregate demand for products or services and stimulates greater demand for FDI inflows, especially in the short-term. Enderwick (2007) points out that market potential in emerging countries is often more important than current absolute market size, meaning that firms look to secure anticipated income streams along with current demand.

Hypothesis 2: *The higher the growth rate in a particular location, the more likely this location is chosen as a destination for FDI.*

Further theoretical insights emphasize the role of third countries or regions in MNEs' location decisions when taking surrounding locations into account (Fujita & Krugman, 2004; Harris, 1954; Head & Mayer, 2004). New economic geography (NEG) literature highlights the importance of accessibility from a specific location to the markets that a firm serves, which is

usually determined by the distance-weighted market sizes of proximate markets. International economic (IE) literature predicts that the market potential of neighboring regions of the host location can stimulate complex forms of FDI (i.e., export-platform and complex vertical FDI) in a given location (Baltagi et al., 2007; Blonigen, Davies, Waddell, & Naughton, 2007; Ekholm, Forslid, & Markusen, 2007).

Hypothesis 3: *The higher the potential of the surrounding markets of a particular location, the more likely this location is chosen as a destination for FDI.*

2.3.1.2. Labor market factors

One of the main assumptions of foreign location choice is borrowed from classic trade theory (Hecksher-Ohlin model) and posits that the choice of a location for a foreign subsidiary has profit maximization objectives that define the geographical distribution of FDI. In general, economic theories on FDI and trade (Helpman, 1984; Markusen, 1984) predict affiliate production by factor endowments of the region and explain FDI location decisions of MNEs by the availability of cheap factor inputs such as lower costs of labor and raw materials in the host country. High wage rates may deter inward FDI, particularly for MNEs engaged in labor-intensive production. Efficiency-seeking FDI locates in developing countries to take advantage of cheap labor that creates a cost advantage compared to potential competitors from the investor's country of origin (Dunning & Lundan, 2008b; Venables & Navaretti, 2004).

Hypothesis 4: *The higher the labor costs in a location, the less likely this location is chosen as a destination for FDI.*

However, low labor costs could be an indicator of lower labor productivity. Locations with a low wage rate but low labor productivity may create fewer incentives for foreign investors, especially for those who do not focus on low-technology or resource sectors. As FDI leads to technology spillovers (Caves, 1996; De Mello Jr., 1997; Lucas, 1988; Romer, 1986), this transition to new technologies generates new job tasks and operating procedures (Bartel & Lichtenberg, 1987). Educated people are better able to cope with the implementation of a new technology as education increases their capability to process and understand information (Nelson & Phelps, 1966). Human capital can be referred to as "workers' acquisition of skills and know-how through education and training" (Arvanitidis, Petrakos, & Pavleas, 2007, p. 250).

Using neoclassical growth models to explain why capital does not flow from rich to poor countries, Lucas (1990) suggests that physical capital is found to be relatively less productive in poor countries with a lower level of human capital, which, in turn, discourages inward FDI. Zhang & Markusen (1999) developed a theoretical model that focused on characteristics of the host country that tend to attract vertical FDI. They showed that as the supply of skilled labor in host countries decreases, inward FDI converges to zero. Dunning (1988a, 2009) further argues that levels of skills and education influence both the volume and type of FDI activity.

Hypothesis 5: *The more advanced the human capital in a location, the more likely this location is chosen as a destination for FDI.*

2.3.1.3. Infrastructure

A well-developed infrastructure (including transport, communication, and facilities for electricity, gas, and water) increases the productivity of investment and ensures higher profitability in the long run. A better transportation network decreases freight costs within a host country as well as the costs of imports and exports. Adequate communication infrastructure and internet penetration reduce transaction costs by allowing firms to connect easily with their suppliers and customers. Good infrastructure lowers the costs of doing business for both foreign and indigenous firms. Dunning (1981, 1988b, 1998) also posits that good infrastructure (including transport facilities and communications networks, among others) is a location advantage that foreign firms seek before operating and investing in the host country. Good infrastructure positively influences both vertical (resource- and efficiency-seeking) and horizontal (market-seeking) FDI (Dunning, 1998).

Hypothesis 6: *The more advanced the infrastructure in a location, the more likely this location is chosen as a destination for FDI.*

2.3.1.4. Agglomeration

Foreign investors face information asymmetry and business uncertainties in host markets and need local knowledge, especially in emerging and developing economies (Anand & Delios, 2002; Meyer, Wright, & Pruthi, 2009). Economists and geographers argue that these drawbacks could be partly offset by agglomeration economies. Agglomeration economies provide positive externalities and economies of scale due to the spatial concentration of economic activities and the co-location of firms (Smith & Florida, 1994). Clustered firms can benefit from the abundant specialized labor force, knowledge spillovers, and lower transportation costs due to the

geographic proximity of suppliers and distributors (Krugman, 1991b, 1991a). Co-location with other firms in the host country also enables foreign firms to build relationships with other firms to share relevant local knowledge (Mitchell, Shaver, & Yeung, 1994; Shaver, Mitchell, & Yeung, 1997) which is vital, especially in the early stages of FDI when a foreign firm lacks local experience (Mariotti & Piscitello, 1995).

Although foreign investors may learn from both domestic and foreign firms in the industry, Shaver et al. (1997) argue that the prior experience of domestic firms is less relevant for foreign entrants because of different backgrounds and operational difficulties. Therefore, co-location with other foreign firms provides knowledge about the local market that can enable foreign investors to overcome the liability of outsidership (Johanson & Vahlne, 1977, 2009).

Agglomeration economies literature distinguishes between positive effects of localization economies on firms in the same industry (Marshall-Arrow-Romer (MAR) externalities, see Glaeser, Kallal, Scheinkman, & Shleifer (1992)) and urbanization economies stemming from the spatial concentration of firms across various industries (Jacobs externalities, see Jacobs (1969)). Porter (1990) argues that the agglomeration of firms in the same or supporting industries helps nations develop competitive industries and firms. With regard to the location of MNEs, Dunning & Lundan (2008) emphasize the growing impact of agglomeration economies on FDI distribution across countries and regions. However, an agglomeration effect depends on a trade-off between positive Marshallian externalities and the negative impact of competition (Crozet, Mayer, & Mucchielli, 2004).

Hypothesis 7: *The higher the number of firms in a location, the more likely this location is chosen as a destination for FDI.*

2.3.1.5. Natural resources

Natural resource deposits are usually seen as an advantage that countries or regions use to attract FDI. Several strands of literature suggest how geography interacts with factor endowments to determine decisions made by MNEs on their affiliate's location. The benefits for countries rich in natural resources are created by MNEs' desire to access cheaper factor inputs, including immobile natural resources (vertical FDI) (Helpman, 1984). Therefore, if a host country has a comparative advantage in factor endowment (i.e., natural resource endowment), this location is attractive for FDI in industries that use this factor intensively (Yeaple, 2003). The objective of resource-seeking investment is to provide inputs to downstream operations of the firm, and

internalization theory stresses the importance of equity-based controls in natural resource exploitation (Buckley & Casson, 1976).

Dunning (1988, 1998) postulates (in the "L" dimension of his OLI paradigm) that a country may attract more FDI of the resource-seeking type if it has sufficient availability, price, and quality of natural resources, along with other factors including an adequate infrastructure to enable these resources to be exploited, capital controls, and government incentives. In a more recent work, he expects a "continued renaissance in all kinds of natural-resource-seeking FDI (notably in oil and hard minerals in sub-Saharan Africa)" by large emerging economies such as China and India (Dunning, 2009, p. 26). Additionally, the Investment Development Path (IDP) approach (Dunning, 1981; Dunning & Narula, 1996; Narula & Dunning, 2000, 2010) suggests the dynamic interaction between FDI and the level of development of an economy, meaning that location factors affecting FDI would vary depending on the stage of development of the host country. IDP postulates that countries at an early stage of development can offer limited location advantages based on factors characterized by their immobility across nations, such as labor or natural resources. Thus, FDI in less developed countries is likely to be almost entirely resource-seeking due to the lack of other types of location advantages (Narula & Dunning, 2000, 2010). These arguments corroborate the findings of Aleksynska & Havrylchyk (2013) who propose that even countries with low institutional quality can attract substantial FDI if they are endowed with natural resources.

The theoretical predictions based on resource-seeking motives have not gone unchallenged in the literature. Empirical evidence suggests that the relationship between natural resource abundance and MNEs' location decisions is not straightforward and varies across countries depending on other factors such as institutional quality, infrastructure, and access regulations. Additional literature tackles the problem of a "resource curse", suggesting that in resource-rich regions, resource-seeking FDI can crowd out other types of FDI. In their analysis of the "Dutch disease", Corden & Neary (1982) suggest that increased revenue in the fuel and energy sectors leads to the decline of non-resource sectors. This assumption was supported by Van der Ploeg & Poelhekke (2010), who observed that resource abundance promotes FDI in resource sectors but has a negative effect on aggregate FDI. They further argue that if the oil price doubles, non-resource FDI flows will drop by 10% (Poelhekke & Van der Ploeg, 2013; Van der Ploeg & Poelhekke, 2010). Despite the validity of the "resource curse" hypothesis, I follow the mainstream IB and economics literature and expect that resource-rich developing countries attract more FDI than natural resource-poor economies.

Hypothesis 8: *The larger the natural resource endowments in a particular location, the more likely this location is chosen as a destination for FDI.*

2.3.1.6. Macroeconomic conditions

Macroeconomic instability increases uncertainty and lowers investors' confidence in the host economy, which, in turn, can affect FDI. A high or volatile inflation rate signals internal economic and monetary instability, which can increase costs, reduce the ability of firms to compete in foreign markets, and reduce future FDI returns. When foreign firms face high inflation in the host country, their capital budgeting and long-term planning become more uncertain. High inflation reduces sales in the domestic market, implying that especially market-oriented FDI would avoid host countries with high inflation rates. Inflation may also inhibit exports from the host country, thus making vertical export-platform FDI less attractive. Rogoff & Reinhart (2003) note that low inflation alone cannot be sufficient to attract FDI but is necessary as high inflation hampers trade and makes business planning difficult.

Hypothesis 9: *The higher the inflation rate in a location, the less likely this location is chosen as a destination for FDI.*

2.3.1.7. Trade policy

According to transaction cost theory (Coase, 1937; Williamson, 1975), low transaction cost environment generates higher returns on investment, and the level of trade openness also indicates the degree of comparative advantage of a country in terms of investment flows. If FDI is export-oriented, greater trade restrictions imply higher transaction costs for exporting to other countries. In the same vein, vertical FDI may depend on the imports of raw materials and/or intermediate inputs and would prefer to locate in countries with liberalized trade regimes to avoid greater transaction costs. In these cases, greater trade openness attracts FDI.

However, FDI and trade could be substitutes, and more liberalized trade policies in the host country may decrease FDI inflows (Markusen, 2002). The tariff-jumping hypothesis postulates that when investments are market-seeking, restrictive trade policies can provide incentives for foreign firms to access host country markets through FDI. In other words, setting up a foreign subsidiary in a host country could serve as a direct substitute for imports of foreign firms' products. As FDI location literature has considered developing countries as primary destinations for resource- and efficiency-seeking investment (Noorbakhsh et al., 2001; D Sethi,

Guisinger, Phelan, & Berg, 2003), I hypothesize a positive relationship between openness to international trade and FDI inflows in a given host location.

Hypothesis 10: *The more open a location to foreign trade, the more likely this location is chosen as a destination for FDI.*

2.3.1.8. Fiscal policies

Literature that explains how investment would react to tax rates and tax incentives is rooted in the neoclassical investment theory pioneered by Jorgenson (1963). According to this theory, a firm accumulates capital as long as benefits exceed costs. Hence, if tax reductions decrease the cost of capital, investment increases. High corporate tax rates discourage FDI by increasing the costs for foreign firms, whereas fiscal incentives in the form of tax holidays or tax concessions would, on the other hand, stimulate foreign investment. The OLI paradigm posits that resource- and efficiency-seeking FDI would be particularly sensitive to tax incentives (Dunning, 1998). Similarly, government incentives in the form of special economic zones (SEZs) which offer a generous package of various fiscal incentives along with the ease of import and export duties, the elimination of entry and exit formalities, and other barriers, should encourage FDI inflows.

Some distinct features of developing countries make the relationship between tax incentives and the cost of capital more complex, such as the high compliance cost of taxes. The complexity of the tax system, transparency of the applications of tax laws and regulations, along with the predictability and credibility of tax authorities in developing countries may significantly reduce the benefits of tax incentives (OECD, 2001). New economic geography (Krugman's (1991b) core-periphery) models emphasize the role of self-reinforcing business concentration with a core region (developed countries) that attracts mobile activities and a periphery region (developing countries) with only basic activities. Hence, tax changes have little effect on investment because of capital concentration in the core. There is also evidence that the effectiveness of fiscal incentives depends on the presence of agglomeration externalities, and incentives work best in attracting FDI in regions with a relatively high density of firms in an industry (Devereux, Griffith, & Simpson, 2007).

Hypothesis 11: *The higher the corporate tax rate in a location, the less likely this location is chosen as a destination for FDI.*

Hypothesis 12: *The higher fiscal incentives in a location, the more likely this location is chosen as a destination for FDI.*

Hypothesis 13: *If a location is a special economic zone, the more likely this location is chosen as a destination for FDI.*

2.3.1.9. Geographic distance

Transaction costs are strongly associated with FDI inflows (Buckley & Casson, 1976). Greater physical distance between home and host countries implies higher transport and information costs, managerial uncertainty, and monitoring costs that makes MNEs more exposed to risks. IB scholars argue that the liability of foreignness increases proportionally with the geographic distance from home to the host country (Eden & Miller, 2004). Therefore, MNEs, ceteris paribus, will prefer to invest in nearby host countries to make their business less costly and more convenient.

Hypothesis 14: *The greater the distance between the home and host countries, the less likely this host country is chosen as a destination for FDI by firms from that home country.*

2.3.2. Institutional factors

The eclectic paradigm and other economic approaches focus on economic efficiency as the most critical determinant of MNEs' location decisions. Economic efficiency, however, provides only a partial explanation for MNEs' location choice in foreign countries because foreign firms need institutional legitimacy in order to survive and successfully operate in the host environment (Kostova & Zaheer, 1999). Zukin & DiMaggio (1990) posit that for attaining their legitimacy, organizations must adapt to the host institutional environment in which they operate. Based on institutional economics (North, 1990) and sociology (Scott, 1995), institutional perspective has been widely used as a powerful framework for analyzing the international behavior of MNEs (Dacin, Goodstein, & Scott, 2002; Kostova, Roth, & Dacin, 2008; Mudambi & Navarra, 2002; Ramamurti, 2003).

Institutions (formal and informal) are immobile factors that establish the rules of the game in a market economy (North, 1990). A central premise of institutional economics is the reduction of transaction costs related to FDI decision-making and implementation, such as the costs of obtaining information and enforcing contracts. Well-developed institutions reduce both transaction and information costs by minimizing uncertainty, which, in turn, stimulates investment (North, 1990).

The quality of institutions is particularly important for MNEs in developing countries because the influence of governments and institutions is stronger than in developed countries

(Hoskisson, Eden, Lau, & Wright, 2000). While earlier research focused on the experience of western MNEs with fully developed market-based institutions, the absence or underdevelopment of formal institutions in emerging countries can seriously constrain the activity of foreign firms (Peng, Wang, & Jiang, 2008).

There is a consensus among FDI location researchers that host country institutions affect the location of foreign investment by providing opportunities and constraints for business. There is far less consensus, however, on which of the host country's institutions matter the most to foreign investors. The following six institutional factors have received most of the researchers' attention and are frequently cited in the literature: (1) political instability, (2) corruption, (3) democracy, (4) rule of law, (5) quality of business and investment regulations, and (6) cultural distance, which is considered an informal institution that reflects cultural differences between FDI home and host countries.

2.3.2.1. Political instability

Political instability can be broadly defined as the likelihood of a country to experience regime or government change (Howell, 2011; Kaufmann, Kraay, & Mastruzzi, 2009). Political volatility creates business uncertainties and increases the cost of doing business, which act as a barrier to FDI (Butler & Joaquin, 1998). High political instability may endanger the safety of invested capital and deprive foreign investors' protection against breach of contracts and expropriation (Henisz, 2000b; Jensen & McGillivray, 2005). Political instability could potentially affect the overall economic prospects of the host country and, thereby, affect expected rates of return on investment in the long-term.

Political instability is a very complex phenomenon, and most available measures can only capture certain aspects of this factor. Besides, the extent to which FDI is exposed to the potentially negative consequences of an unstable political environment depends on the strategic intentions of the firm and the nature of the industry it operates in. For example, large Chinese mining companies mitigate high political risks in resource-rich African countries by investing in their own infrastructure and security forces. Kobrin (1976) further argues that not every type of political instability can constrain business operations of multinational firms in the host country. Unless political violence does not cause nationalization, increase state control, limit distribution or market penetration, "any number of *coups [d'état]* may be tolerable" (Kobrin, 1976, p. 37).

Hypothesis 15: *The more politically unstable a location, the less likely this location is chosen as a destination for FDI.*

2.3.2.2. Corruption

Corruption of bureaucratic mechanisms is another category of institutional environment in a host country. The classical theoretical contributions on corruption include the works of Nye (1967), Leff (1964) and Rose-Ackerman (1975). FDI literature analyzes corruption through the transaction cost theory lens, where corruption in a host location is seen from a cost-benefit perspective: corruption will hamper FDI if the costs of the potential deal exceed its benefits (Rose-Ackerman, 2008). Two main views of corruption acting as a "grabbing hand" or as a "helping hand" are discussed in the following paragraphs.

The dominant "grabbing hand" view on corruption predicts that corruption will have a negative impact on foreign investments because it increases transaction costs and distorts effective resource allocation (Aidt, 2003; Shleifer & Vishny, 1993; S.-J. Wei, 2000). Corruption thus becomes an additional tax for investors. For example, (S.-J. Wei, 2000) shows that the costs of investing in a more corrupt host country could be almost 20% higher than those of a less corrupt one. Moreover, corruption creates additional uncertainty because the payment of a bribe does not ensure that the promises will be delivered, as in the case of contracts (Cuervo-Cazurra, 2008).

The "helping hand" view, however, argues that corruption helps to bypass malfunctioning institutions and can sometimes compensate poor governance and attract more FDI (Aidt, 2003; Barassi & Zhou, 2012; Saha, 2001). This view suggests that in countries characterized by low quality of governance, corruption helps MNEs speed up administrative processes, get around regulation and red tape, or even obtain (near) monopoly power (Tanzi, 1998). This could be especially true for firms operating in developing countries where institutional voids are prevalent (Khanna & Palepu, 2010; Peng et al., 2008). The main argument that corruption is a "helping hand" to foreign investors is based on the premise that, in some cases, corruption has relatively low transaction costs compared to the benefits derived by MNEs (Cuervo-Cazurra, 2006; Leff, 1964) and, as a result, may increase FDI. Although Egger & Winner (2006, p. 459) point out that "from a theoretical perspective, corruption may act as either a grabbing hand or a helping hand for inward FDI", the mainstream literature on the effects of corruption on FDI mostly argues that corruption negatively influences levels of FDI inflows.

Hypothesis 16: *The higher the corruption in a location, the less likely this location is chosen as a destination for FDI.*

2.3.2.3. Democracy

The debate over whether democratic or authoritarian regimes are more likely to increase investor confidence has been one of the largest areas of recent FDI literature. Although the direction of the relationship between democracy and FDI remains unclear, there are several reasons to suspect that the host country's political regime influences investment distribution.

On one side of this debate, scholars argue that democracies provide a better environment for FDI. North (1990) views democracies as more politically effective systems than autocracies since, in democracies, expropriation risks are low and third-party enforcement of contracts with an independent judiciary is insured. Democracies reduce arbitrary government intervention and expropriations against foreign multinationals, lower the risk of policy reversal (e.g., changes in tax laws, royalty fees, etc.), and strengthen property right protection (Q. Li, 2009; North & Weingast, 1989; Olson, 1993). Li (2009) argues that between 1960 and 1990, out of 523 expropriation acts in 65 countries, autocratic governments committed 81% of these incidents. As such, democracies provide more secure property rights and greater political stability than autocracies (North & Weingast, 1989; Olson, 1993).

On the other side of this debate, scholars argue that foreign firms prefer to invest in autocratic countries. Authoritarian regimes in developing countries can provide investors with higher returns (Oneal, 1994), better entry deals (Rodrik, 1999) or artificially dampen wages (Jensen, 2006). In their seminal work, Li & Resnick (2003) suggest a negative relationship between democracy and FDI inflows in three ways. First, autocracies can protect and hide MNE's monopoly profits because they are not accountable to their electorate, thereby luring in monopoly-seeking FDI. Second, authoritarian regimes can provide generous tax breaks, subsidies, or other incentives to FDI (at the expense of taxpayers) outside of the public scrutiny that is more common in democracies. Third, domestic business groups that see FDI as a threat to their profits are unlikely to succeed in lobbying the autocratic governments for protection, thus increasing FDI. Because authoritarian regimes are less subject to electoral concerns and have the capacity to use repression against protesters, such regimes can promote a stable investment environment (O'Donnell, 1988; Oneal, 1994). Nevertheless, most scholarship supports the notion that democracies are better able to compete for investment as freer information availability and diffusion serve to support FDI (Jensen, 2003, 2006).

Hypothesis 17: *The more democratic a location, the more likely this location is chosen as a destination for FDI.*

2.3.2.4. Rule of law

Rule of law captures the quality of contact enforcement, property rights protection, courts, and police, as well as the likelihood of crime and violence (Kaufmann et al., 2009). Strong legal institutions decrease the transaction costs of foreign firms because external enforcement is reliable (Khoury & Peng, 2011). Unpredictable and arbitrary enforcement of regulations in the host country is a major concern for foreign investors (Drabek & Payne, 1999) especially in developing economies where the rule of law is relatively weak (Henisz & Zelner, 2005).

The relationship between intellectual property rights (IPR) protection in the host location and FDI inflows there is not theoretically clear-cut. There is no consensus regarding the optimal IPR regime for attracting foreign investment (Maskus, 2000), as both strong and weak IPR regimes can incentivize firms to engage in FDI. A strong IPR protection framework in the host location can help attract FDI by minimizing the threat of illegal imitation by domestic firms, thus ensuring higher returns for MNEs due to the limited competition. Weak IPR protection, on the other hand, can erode MNE's ownership advantages and decrease the location advantages of a host country for investment. However, strong asset protection regimes in host locations might also substitute FDI with alternative means of serving the foreign market, such as exporting or licensing. Historically, large developing countries (like China or Brazil) have maintained weak or nonexistent IPR protection to freely spread innovation and foreign technologies and avoid MNEs' attempts to maximize their profits through monopoly pricing (Klein, 2018). I follow the mainstream view in the literature and hypothesize a positive relationship between a strong rule of law and FDI inflows in the host developing country (Khoury & Peng, 2011; Smarzynska Javorcik, 2004).

Hypothesis 18: *The stronger the rule of law in a location, the more likely this location is chosen as a destination for FDI.*

2.3.2.5. Regulatory quality

Government policies concerning investment and business regulations are integral to the internalization theory of FDI because they can either reduce or create market imperfections (Brewer, 1992). Investment regulations pertaining to capital controls and repatriation of profits, as well as investment risks such as the occurrence of nationalization or expropriation, are

serious impediments to FDI location in many developing countries. Ceteris paribus, foreign firms seek full ownership of FDI without capital controls or restrictions on profit repatriations. The host country's investment regulations directly determine how likely foreign firms are to receive these expected benefits. Henisz & Delios (2001) argue that when the investment risks are high, multinationals minimize their commitment to a market or avoid investment. Therefore, the removal or relaxation of inward FDI restrictions and proper protection of investors' interests are likely to increase FDI inflows in the host country. Similarly, business environment regulations such as economic freedom, the absence of government interventions, and the removal of excessive bureaucratic red tape help reduce transaction costs and positively affect the competitiveness of foreign firms in the host markets.

Hypothesis 19: *The more favorable the regulatory quality in a location, the more likely this location is chosen as a destination for FDI.*

2.3.2.6. Cultural distance

As North (1990) argues, informal institutions complement formal ones. Unlike formal institutions, informal ones are not designed or enforced by governments. Informal institutions emerge spontaneously and represent private constraints stemming from norms, customs, and culture.

Greater distance in language or religion increases investors' uncertainty over communication with agents in the host market (Johanson & Vahlne, 1977). As a result, greater difficulty in understanding the environment of the host country increases transaction costs faced by MNEs (Williamson, 1975, 1985), reducing the attractiveness of such markets. If FDI home and host countries are culturally close, investing firms are likely to have better knowledge of the host market, customers, and networks. Loree & Guisinger (1995, p. 289) suggest that FDI may be higher between culturally similar countries "because foreign investment requires interface on many levels, including the state, local competitors, and at least some element of a foreign work force."

Hypothesis 20: *The more culturally distant a location, the less likely this location is chosen as a destination for FDI.*

Table 2.6 summarizes the main location choice hypotheses derived from the theoretical survey discussed above.

Table 2.6. Main FDI location choice hypotheses

Location determinant(s)	Hypothesis	Expected sign
Market factors	1. The larger the market size of a particular location, the more likely this location is chosen as a destination for FDI	+
	2. The higher the growth rate in a particular location, the more likely this location is chosen as a destination for FDI	+
	3. The higher the potential of the surrounding markets of a particular location, the more likely this location is chosen as a destination for FDI	+
Labor market	4. The higher the labor costs in a location, the less likely this location is chosen as a destination for FDI	-
	5. The more advanced the human capital in a location, the more likely this location is chosen as a destination for FDI	+
Infrastructure	6. The more advanced the infrastructure in a location, the more likely this location is chosen as a destination for FDI	+
Agglomeration	7. The higher the number of firms in a location, the more likely this location is chosen as a destination for FDI	+
Natural resources	8. The more abundant a location with natural resources, the more likely this location is chosen as a destination for FDI	+
Macroeconomic conditions	9. The higher the inflation rate in a location, the less likely this location is chosen as a destination for FDI	-
Trade policy	10. The more open a location to foreign trade, the more likely this location is chosen as a destination for FDI	+
Fiscal policies and incentives	11. The higher the corporate tax rate in a location, the less likely this location is chosen as a destination for FDI	-
	12. The higher fiscal incentives in a location, the more likely this location is chosen as a destination for FDI	+
	13. If a location is a special economic zone, the more likely this location is chosen as a destination for FDI	+
Geographic factors	14. The greater the distance between the home and host countries, the less likely this host country is chosen as a destination for FDI by firms from that home country	-
Institutions	15. The more politically unstable a location, the less likely this location is chosen as a destination for FDI	-
	16. The higher the corruption in a location, the less likely this location is chosen as a destination for FDI	-
	17. The more democratic a location, the more likely this location is chosen as a destination for FDI	+
	18. The stronger the rule of law in a location, the more likely this location is chosen as a destination for FDI	+
	19. The more favorable the regulatory quality in a location, the more likely this location is chosen as a destination for FDI	+
	20. The more culturally distant a location, the less likely this location is chosen as a destination for FDI	-

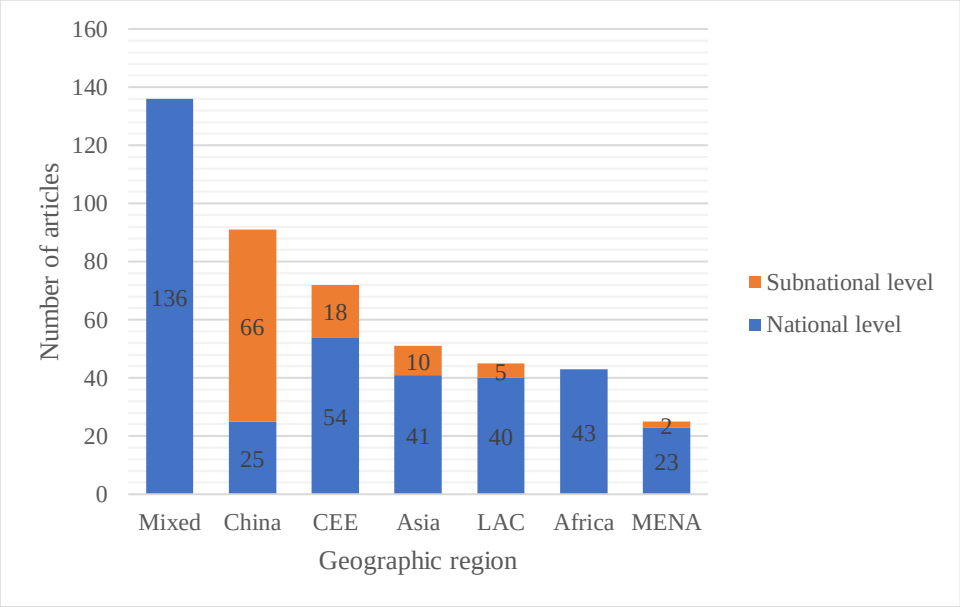
2.4. DATA AND METHODOLOGICAL REVIEW

Empirical studies collected for this review originate from different domains and are prone to various biases stemming from country samples, geography, data sources, and methodological choices. This Section provides an overview of 416 selected studies with a focus on data and methodological approaches to critically assess the sampling and credibility of empirical findings in the extant empirical literature on FDI location in developing countries.

2.4.1. Geographic coverage bias

When reviewing the empirical literature on FDI determinants in developing countries, it is necessary to consider the level of analysis and geographic coverage of the data. Some studies use country-level data (i.e., a country is a unit of analysis) to examine MNE's location choice among a set of host countries and are generally referred to as "aggregate" or "macro-level studies". Such studies help to understand the impact of national structural characteristics and macroeconomic policies on the attractiveness of FDI inflows. On the other hand, "microeconomic" or "micro-level studies" use subnational level data (i.e., a region within a country is a unit of analysis) to predict FDI inflows in regions, cities, or districts of a particular host country. Out of 416 studies, 316 (76%) use aggregate macro-level perspective, 98 (23.5%) use regional or city-level data, and two articles include analysis on both national and subnational levels (Avioutskii & Tensaout, 2016; C. Hsiao & Shen, 2003).

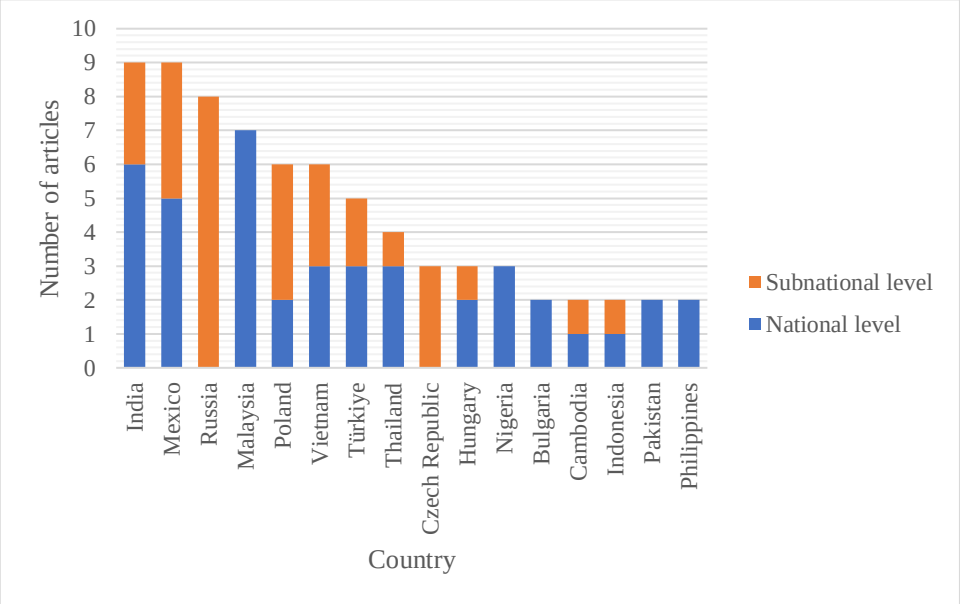
Figure 2.4. Geographic coverage of studies by regions



Note: CEE: Central and Eastern Europe; LAC: Latin America and the Caribbean; MENA: Middle East and North Africa

Besides the lack of studies that examine FDI location at the subnational level, there is also a clear pattern in geographical focus in terms of which countries have been studied by the existing literature. Fig. 2.4 above depicts which regions have received the most attention in empirical literature, with the division into national and subnational focus. One-third of the sample articles (136 studies) focus on a panel of various developing countries (further denoted as "mixed" sample studies) that could not be attributed to any specific geographic region. 72 papers (17%) focus on developing countries in Central and Eastern Europe (CEE) and other transition countries of the former Soviet Union. 21% of studies explore FDI location in China, where most of them (66 out of 91 studies) focus on subnational variation across Chinese provinces and cities; 51 studies (12%) focus on other Asian countries. Latin America and the Caribbean (LAC) region was studied by 45 papers (11%). The African continent as well as the Middle East and North African region (MENA) received relatively less attention in the empirical literature, with 43 and 25 studies, respectively (16% cumulative).

Figure 2.5. Geographic coverage of single-country studies[19]



As for single-country studies, China has received way more attention in the literature than any other country, with 66 papers focusing on the subnational and 25 on the national level. The general pattern of geographical distribution shows that researchers are mostly interested in large emerging countries such as India, Mexico, and Russia, followed by emerging Asian countries like Malaysia and Vietnam (see Fig. 2.5). In addition, several studies explored the relationship between FDI and location factors at the subnational level in Puerto Rico (Guimaraes, Rolfe, &

[19] Excluding China

Woodward, 1998) and Romania (Hilber & Voicu, 2010), and on the national level in Chile (Ramirez, 2006), South Africa (Fedderke & Romm, 2006), Saudi Arabia (Roberts & Almahmood, 2009), Jordan (Bekhet & Al-Smadi, 2015), Kuwait (Al-Shammari, Al-Halaq, & Al-Shammari, 2016), and Ethiopia (Bekana, 2016) among others. Overall, there is a significant geographic bias towards China and other large emerging countries, especially in terms of the number of micro-level studies, which is probably caused by the difficulty of obtaining the necessary data or finding sufficiently distinct subnational variations in smaller countries.

In terms of FDI home country focus, more than 60% of studies in the sample (252 out of 416) do not make a restriction on the geographic source of the FDI because when the data is obtained at the host country level, information about the home countries of the investing firms is not available in most cases. Other studies draw FDI data from a sample of investing firms based in one particular country where they are covered by national databases. These types of studies primarily focus on FDI from the USA (50 studies), Japan (23 studies), and one or several Western European countries (28 studies). The latter type of studies include FDI from Germany (Buch, Kleinert, Lipponer, & Toubal, 2005; Hecht, 2017; Overesch & Wamser, 2010; Schäffler, Hecht, & Moritz, 2017), France (Ben Kheder & Zugravu, 2012; Eskeland & Harrison, 2003; Pfister & Deffains, 2005), UK (Smith-Hillman & Omar, 2005; te Velde & Bezemer, 2006), Italy (Ascani, Crescenzi, & Iammarino, 2016b; Majocchi & Strange, 2007a, 2007b), and Spain (Galan, Gonzalez-Benito, & Zuñiga-Vincente, 2007; García-Canal & Guillén, 2008).

As for South-South FDI flows, 18 studies use Hong Kong, Macao, and Taiwan (HKMT) FDI in China on both national (Chen, Rau, & Lin, 2006; Jean, Tan, & Sinkovics, 2011; Li & Hu, 2002; Wang, Clegg, & Kafouros, 2009; Zhang, 2000, 2005) and subnational levels (Chen & Yeh, 2012; He, 2003; Lien & Filatotchev, 2015; Strange, Filatotchev, Lien, & Piesse, 2009; Zhao & Zhu, 2000). 10 papers use data on China's FDI outflows to study location determinants mostly across African countries (Cheung, De Haan, Qian, & Yu, 2012; Dong & Fan, 2017; Mourao, 2018; Shan, Lin, Li, & Zeng, 2018; Wood, Mazouz, Yin, & Cheah, 2014).

Nearly ¾ of the sample studies (307 articles) use aggregate FDI data, which does not distinguish among different industries. As in the case of FDI home country focus discussed above, the problem is data availability, which haunts empirical FDI location studies, especially in the context of developing countries. Out of the109 remaining articles, most rely on manufacturing FDI data (68 studies or 16%), whereas only a dozen studies (3%) employed service FDI data for such sectors as logistics (Hong, 2007b; Hong & Chin, 2007), banking (Mariscal, Zhang, & Pascual, 2012; Nigh, Cho, & Krishnan, 1986), and insurance (Outreville, 2008; Wu & Strange,

2000) among others. 28 articles use data for two or more sectors (e.g., (Blanton & Blanton, 2009; Elheddad, 2018; Kiyota & Urata, 2004; Witte, Burger, Ianchovichina, & Pennings, 2017)), and only the study of Lay & Nolte (2018) uses primary (agriculture) FDI data.

2.4.2. Data source bias

Overall, the above observations show that the empirical literature on FDI in developing countries suffers from a substantial sampling bias toward investing firms from the Triad countries and firms entering China. The most important driver of this bias is the availability of data and the geographic focus of studies in this review closely correlates with the data sources used. Table 2.7 summarizes FDI data sources that are used by two or more studies in the review sample.

Databases with international coverage on both home and host countries are the dominant data source for FDI inflows in developing countries and are compiled by UNCTAD, OECD, World Bank, and IMF. Unfortunately, national databases on FDI in many developing countries are either nonexistent or do not provide consistent information on foreign investment inflows. The notable exceptions are the China Statistical Yearbooks from China National Bureau of Statistics and the Almanac of China's Foreign Economic Relations and Trade, that provide data on FDI inflows in China, including provincial-level data. Other widespread data sources include the US Bureau of Economic Analysis, Bureau van Dijk, and Japanese Toyo Keizai database.

Among the 416 studies in the sample, only 10 use primary data collected through surveys (Agodo, 1978; Chidlow, Salciuviene, & Young, 2009; Galan et al., 2007; Lee & Mansfield, 1996; Lei & Chen, 2011; Li & Hu, 2002; Majocchi & Strange, 2007a, 2007b; Smith-Hillman & Omar, 2005; Staats & Biglaiser, 2012). Hence, nearly all studies on FDI location choice in developing countries use secondary data available through various public and administrative sources. Besides, 29 articles employing secondary data do not provide sources of information used (see, for example, (Abbas & Klemm, 2013; Amaro & Miles, 2006; Brock, 1998; Dees, 1998; Gani, 2007; Treviño & Mixon Jr., 2004)). These obvious flaws may lead to questionable results.

Scholars employ various types of data to investigate FDI location choice in developing countries including time series, cross-sectional, and panel data. 18 articles in my sample use two types of data in their analyses: 15 studies conduct panel and cross-section regression analyses (Asiedu, 2002; Busse & Hefeker, 2007; Khadaroo & Seetanah, 2009; Mukim &

Nunnenkamp, 2012) and 3 studies use panel and time series data (Elliott & Shimamoto, 2008; Eskeland & Harrison, 2003; Khadaroo & Seetanah, 2010).

Table 2.7. Most widely used data sources

Data source	Country/region	Level	No. of studies
UNCTAD	International	International	67
World Bank	International	International	67
China Statistical Yearbooks & China National Bureau of Statistics (CNBS)	China	Host	42
US Bureau of Economic Analysis (BEA)	USA	Home	31
OECD International Direct Investment Statistics Yearbook	International	International	30
IMF	International	International	26
Almanac of China's Foreign Economic Relations and Trade (China Commercial Yearbook)	China	Host/home	25
Bureau van Dijk (Orbis/Amadeus/Ruslana/Zephyr)	International	International	13
Toyo Keizai Kaigai Shinshutsu Kigyo Soran	Japan	Home	11
Eurostat New Cronos	International	International	6
Vienna Institute for International Economic Studies (WIIW)	CEE	Host	6
Financial Times fDi Markets	International	International	5
Japanese Ministry of Finance	Japan	Home	5
Mexican Ministry of the Economy	Mexico	Host	5
Deutsche Bundesbank	Germany	Home	3
Direction of Foreign Economic Relations (DREE) of the French Ministry of Economic and Finances	France	Home	3
Federal Statistic Service of Russia (Rosstat)	Russia	Host	3
General Directorate of Foreign Investment (GDFI) of Türkiye Treasury Department	Türkiye	Host	3
Hungarian Central Statistical Office	Hungary	Host	3
Department of Industrial Promotion and Policy (DIPP) of the Ministry of Commerce and Industry	India	Host	2
Economic Commission for Latin America and the Caribbean (ECLAC)	LAC	Host	2
Export-Import Bank of Korea	South Korea	Home	2
IAB-ReLOC dataset	Czech Republic	Host	2
Japanese Ministry of International Trade and Industry (MITI)	Japan	Home	2
Secretariat of Industrial Assistance (SIA) Newsletter of Ministry of Commerce and Industry of India	India	Host	2
Thomson Mergers & Acquisitions	International	International	2

35 articles (8%) use time series data to observe changes in FDI inflows over a particular period for a single country (see, for example, single-country national level studies in Fig. 2.5 in subsection 2.4.1). 88 studies (20%) are cross-sectional in nature and focus on a specific point in time and compare different countries or regions at that specific moment. These studies provide a snapshot of the relationship between host country factors and FDI inflows across different locations, but they neither capture changes over time nor provide insights into how these relationships may evolve. Most studies included in this review use longitudinal (panel) data (72%) which observe a combination of cross-sectional and time-series variations, i.e., multiple countries or regions are observed over a period of time. By employing panel data, scholars can capture the heterogeneity across countries (cross-sectional variation) and track changes within each country over time (time-series variation). This allows for a more comprehensive analysis of the determinants of FDI inflows and the impact of various host country factors. The use of longitudinal data is considered to be more effective than cross-sectional data (where t=1) or time series (where n=1) as it improves the efficiency of econometric estimation by ensuring more degrees of freedom and less multicollinearity (Hsiao, 2007).

Figure 2.6. Overview of data type used

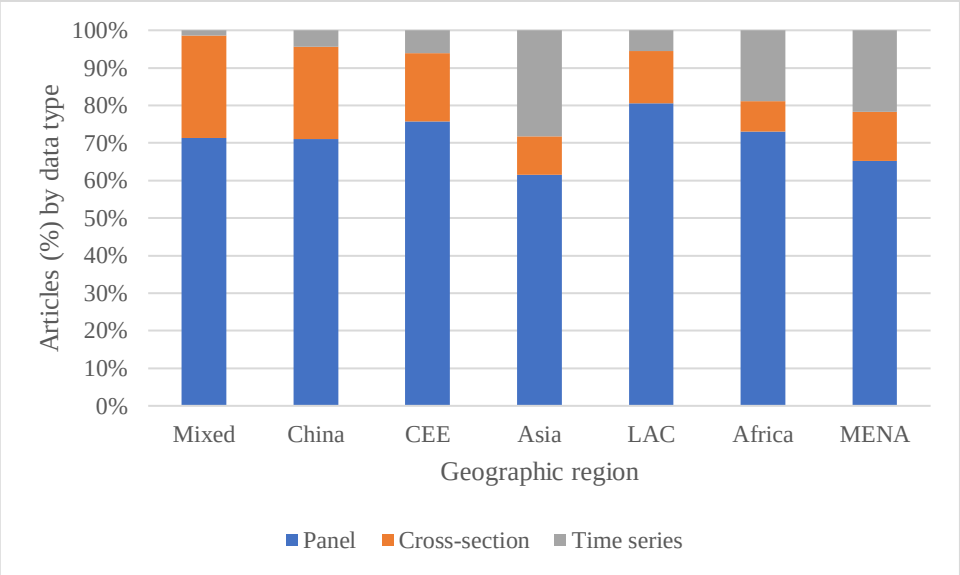


Fig. 2.6 above depicts the distribution of studies employing various types of data to study FDI location choice across different geographic regions. The use of longitudinal data prevails in empirical literature irrespective of the region in question; however, time series regression analyses are clearly more widespread to study specific countries in Asia than in other regions

(Ang, 2008; Ismail & Yussof, 2003; Kinuthia & Murshed, 2015; Shah, Ahmad, & Ahmed, 2016).

2.4.3. FDI as a dependent variable

The main question in empirical FDI location research is whether to enter a specific location or not. Therefore, it is important to take a dependent variable into account. The majority of studies in this literature focus on stocks (i.e., the static number) versus flows (i.e., the change) of FDI in a specific location. Others use the probability of a country (or a region) being chosen by a foreign investor by employing the number of previous entries of foreign firms in a specific location as well as different types of count variables.

FDI flows data shows how foreign investment into a particular location in a given time changes and is useful to analyze the entry decisions of FDI (e.g., Zhao & Zhu, 2000). Most studies in the sample use gross or net FDI flows data, representing annual FDI flows into a host country or a region within a country (Khoury & Peng, 2011; Kolstad & Wiig, 2012; Salike, 2016). Many researchers opt for FDI flows scaled by the GDP of host countries or regions (i.e., FDI flows/GDP) (Cole, Elliott, & Zhang, 2009; Naudé & Krugell, 2007) or per capita FDI flows (Mina, 2012; Zeneli, 2016). Using FDI/GDP ratios can make data stable over time, as FDI inflows strongly fluctuate from one year to another in most developing economies. Moreover, normalizing FDI inflows by the GDPs of countries in the sample makes the flows data comparable across countries of different economic sizes.

Alternatively, FDI stock data allows tracking the correlation between the FDI location and the characteristics of the location but not the entering decision per se (e.g., Kang & Jiang, 2012). Some researchers employ total FDI stock, calculated as the sum of total yearly FDI inflows in a given location over a certain period of time (Boudier-Bensebaa, 2005; Coughlin & Segev, 2000). Similarly, some studies use FDI stock per capita (Durmaz, 2017; Voyer & Beamish, 2004) or FDI stock normalized by the host country's GDP (Khadaroo & Seetanah, 2010; Ramírez-Alesón & Fleta-Asín, 2016).

Similar to FDI stock data, studies using the probability of a country or region being chosen by a foreign investor also allow looking for the correlation between FDI and location characteristics, but an increase in the number of firms may not necessarily mean an increase in money invested in a location (e.g., Kang & Lee, 2007). For example, studies employing different logit estimation techniques define values of the dependent variable as 1 if a country or

region received investment and 0 otherwise (Du, Lu, & Tao, 2008b; Rasciute, Pentecost, & Ferrett, 2014; Smarzynska Javorcik, 2004).

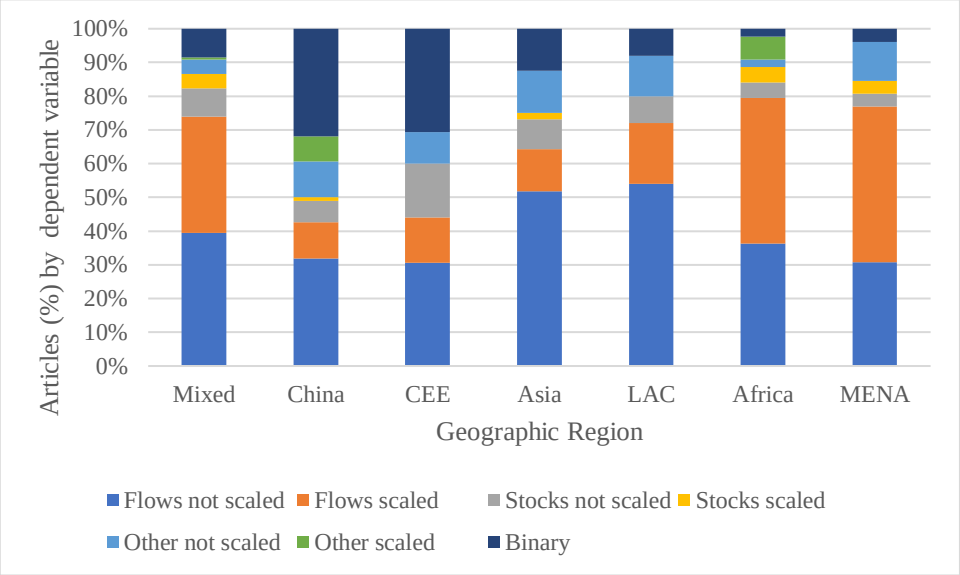
Most papers in the sample use one type of dependent variable to proxy FDI (i.e., flows, stocks, binary, or other), whereas 24 studies (6%) conduct several empirical tests using two or more different dependent variables. Overall, FDI flows data is used by 65% of studies (271 papers), stock data by 50 (12%), and binary dependent variable (1 if country/region receives FDI, 0 otherwise) is used by 71 papers (17%). Remaining studies use count dependent variables such as number of foreign firms entering country or a region (Amiti & Smarzynska Javorcik, 2008; Ledyaeva, Karhunen, & Kosonen, 2013), number of FDI projects (Huang & Cantwell, 2017; Mukim & Nunnenkamp, 2012), number of employees in overseas subsidiaries (Zhou, Delios, & Yang, 2002), and other types of dependent variables (FDI growth rate, etc.).

As already mentioned above, the location choice of FDI can be measured in several ways. Using a scaled measure of the dependent variable (i.e., ratios such as FDI /GDP, FDI/population, FDI/number of employees in the subsidiary, etc.), can provide a more meaningful and informative analysis compared to using simple FDI flows or stock data. FDI measured at scale contextualizes FDI relative to the size of the host economy and reduces the influence of the economic size of a given host country, as larger economies such as China or India may naturally attract more FDI simply due to their huge population size and market potential. Second, FDI measured at scale facilitates cross-country comparisons because different countries have varying levels of GDPs and population sizes, so using simple FDI flows without scaling can lead to biased comparisons. Therefore, scaling FDI enables a researcher to compare the relative magnitude of FDI inflows across countries and identify patterns or trends that might not be apparent when looking at net or gross FDI flows.

Only 122 studies out of 416 (29%) have at least one dependent variable measured at scale. Fig. 2.7 below illustrates the distribution of different measurements of the dependent variable across six geographic regions. Overall, scholars most often employed FDI measured at scale when looking at mixed samples of developing countries compared to studies focusing on a specific region or country. The use of scaled measures of FDI, however, is becoming more widespread in recent studies (especially those focusing on MENA and African regions), which have adopted scaled and unscaled measures of dependent variables almost equally.

Overall, this review highlights significant differences in data and dependent variables among host country regions, posing challenges for making meaningful cross-country comparisons.

Figure 2.7. Overview of the dependent variables used



2.4.4. Empirical methods

Various methods have been employed to analyze the factors influencing the location of FDI, depending on the characteristics of the dataset. The empirical research on FDI location has extensively utilized techniques such as Ordinary Least Squares (OLS) regression, different types of logit models (conditional, multinomial, and nested), Tobit model, Poisson model, negative binomial model (NBM), and various panel data methods. A big challenge for business scholars is the evaluation of the causal relationship between host country locational characteristics and FDI inflows. Given that the FDI location literature widely uses secondary data, FDI researchers face the widespread issue of separating correlation from causation (Kenny, 1979).

A fundamental problem in FDI location research pertains to the bidirectional causality between FDI and host country characteristics. For example, consider the relationship between FDI and economic growth. While FDI inflows can foster economic growth through mechanisms such as job creation, technology diffusion, and enhanced productivity, economic growth itself can attract greater levels of FDI due to growing market opportunities. This is a classic example of endogeneity problem, arising because the observed correlation between FDI and economic growth does not inherently indicate a direct causal link. Instead, the relationship is confounded by bidirectional causality, thereby complicating the identification of the causal driver. Addressing this endogeneity concern is necessary to mitigate biased and inconsistent estimates in empirical analyses on FDI location. A common approach is to incorporate multiple relevant

control variables, which would reduce omitted variable bias to a certain degree, but it is nearly impossible to account for all relevant controls.

Many FDI location researchers deal with endogeneity problems by employing appropriate econometric methods such as instrumental variable (IV) analysis. The IV approach utilizes an instrument – a variable that is correlated with the endogenous explanatory variable but is not directly affected by the outcome variable. The instrument serves as a proxy for the endogenous variable and allows for isolating the exogenous variation in the explanatory variable.

The IV analysis requires two stages. The first stage involves regressing the endogenous explanatory variable on the instrument. This estimates the effect of the instrument on the endogenous variable, providing a measure of how the instrument affects the variation in the explanatory variable. In the second stage, the outcome variable is regressed on the predicted values of the endogenous explanatory variable obtained from the first stage regression, along with other relevant control variables. This accounts for the endogeneity and provides consistent estimates of the causal relationship between the endogenous variable and the outcome variable. Commonly employed models that use instruments to account for unobserved heterogeneity include two-stage least squares (2SLS) and three-stage least squares (3SLS), as well as the estimation methods of Arellano & Bond (1991), Arellano & Bover (1995), and Blundell & Bond (1998). This review shows that 94 studies out of 416 (23%) have used one of these approaches to instrument endogenous location characteristics with relevant exogenous instrumental variables.

Another methodological issue in FDI location research is incorporating hierarchical location in empirical analysis. For example, consider the scenario where an MNE engages in a hierarchical decision-making process for FDI location selection in Europe. A firm first determines to establish operations in either Eastern or Western Europe, followed by the subsequent selection of a specific country within the chosen region, followed by choosing a city within the selected country.

Examination of hierarchical location choices requires modeling potential locations at multiple geographic levels. The failure to account for the hierarchical nature of choice and treat all location options as equally comparable (like in conditional logit models, for example) can lead to stronger correlation among error terms within each country than across different countries. This violates the assumptions of independence of irrelevant alternatives (IIA) and may bias the estimates. FDI location researchers address this issue by employing various nested models, such

as nested logit models, mixed logit models, and generalized nested logit models which enhance the likelihood of satisfying the underlying IIA assumptions. However, only 20 studies (less than 5%) used nested models to account for hierarchical location choice (e.g., Chang, Hayakawa, & Matsuura (2014); Disdier & Mayer (2004); Hong & Chin (2007)) and half of them explored FDI location in Central and Eastern Europe (Pusterla & Resmini, 2007; Rasciute & Pentecost, 2010; Rasciute, Puckett, & Pentecost, 2015).

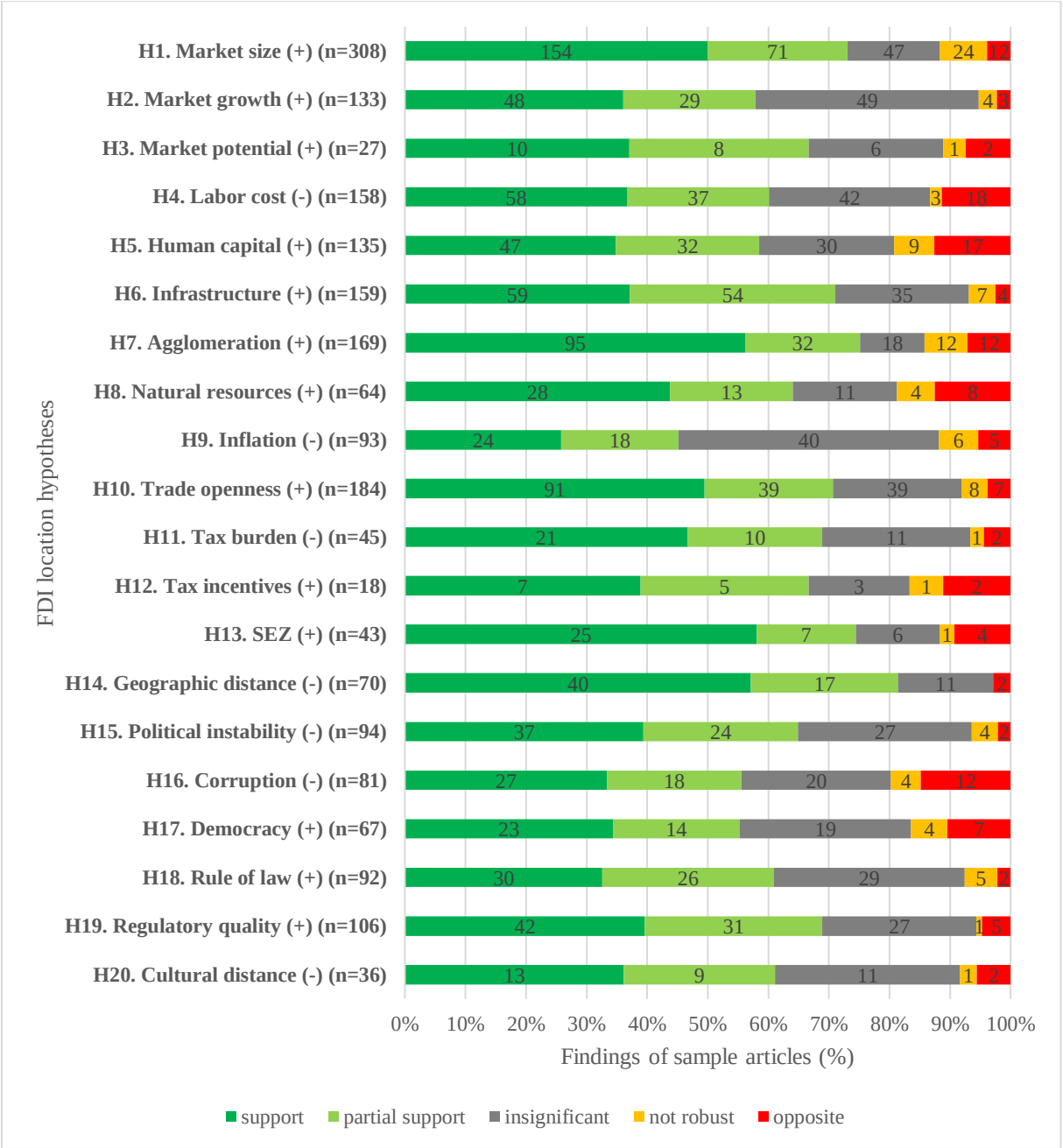
A relatively new empirical approach that FDI location researchers have started to use recently is spatial econometric techniques. Spatial models allow capturing unobserved spatial linkages between countries (or regions) located in proximity to each other by directly incorporating the characteristics of nearby countries/regions into the model. Since the pioneering work of Blonigen et al. (2007), FDI location research has begun to recognize that the investment decisions of MNEs in one region can be influenced by the characteristics or attributes of neighboring or proximate regions. Spatial models weigh the influence of neighboring countries or regions based on the geographic distance between them, which is mathematically represented by the spatial weight matrix (W). By considering the spatial relationships and dependencies between potential locations, these models offer insights into the spatial diffusion and spillover effects of FDI. As such, spatial techniques help researchers address the limitations of traditional models that assume independence among regions. Commonly employed spatial models include the spatial autoregressive model (SAR), spatial error model (SEM), and spatial Durbin model (SDM).

A mere 10 studies (2.5%) employ spatial econometric methods to study the spatial dependence of FDI both at national (Blanco, 2012; Blonigen et al., 2007; Klemm & Van Parys, 2012; Nwaogu & Ryan, 2014; Siddiqui & Iqbal, 2018) and subnational levels in large countries like China (Blanc-Brude, Cookson, Piesse, & Strange, 2014; Coughlin & Segev, 2000; He, Wang, & Cheng, 2011; Sharma, Wang, & Wong, 2014) and Russia (Ledyaeva, 2009). Additionally, 9 studies include some sort of spatial variables in their analyses without directly using spatial models (e.g, Liang (2015); Mathur & Singh (2013)).

2.5. FINDINGS

Based on the theoretically derived hypotheses outlined above (and presented in Table 2.6 at the end of Section 2.3), I now turn to the interpretation and evaluation of empirical findings in the literature. Fig. 2.8 provides an overview of the empirical findings of 416 studies in relation to 20 theoretical hypotheses.

Figure 2.8. Overview of literature review findings in relation to main hypotheses



Overall, 19 out of 20 hypotheses are largely supported by the empirical literature on FDI location in developing countries, i.e., more than half of studies that tested a specific hypothesis found supportive evidence. The only exception is the inflation hypothesis (H9) where only 45% of studies (42 out of 93) found a negative relationship between high inflation in the host country and FDI inflows. Among the most important factors that were found to attract FDI into a host developing country are a shorter geographic distance between FDI home and host (H14), agglomeration (H7), presence of special economic zones (H13), large market size (H1), and developed infrastructure (H6). The above hypotheses are supported by more than 70% of studies that explored their effect on FDI. On the other hand, democracy (H17), corruption (H16), market growth (H2), and human capital quality (H5) hypotheses were supported by less than 60% of studies. Even though the aggregate empirical findings generally align with these predictions, it is evident that there exists a considerable variability in the observed evidence.

This Section presents the findings of the review in relation to 20 hypotheses and discusses the variation in results across six geographic regions. The detailed results for each geographic region are illustrated in Fig. 2.9-2.15 below.

Figure 2.9. Overview of literature review findings by regions: Africa

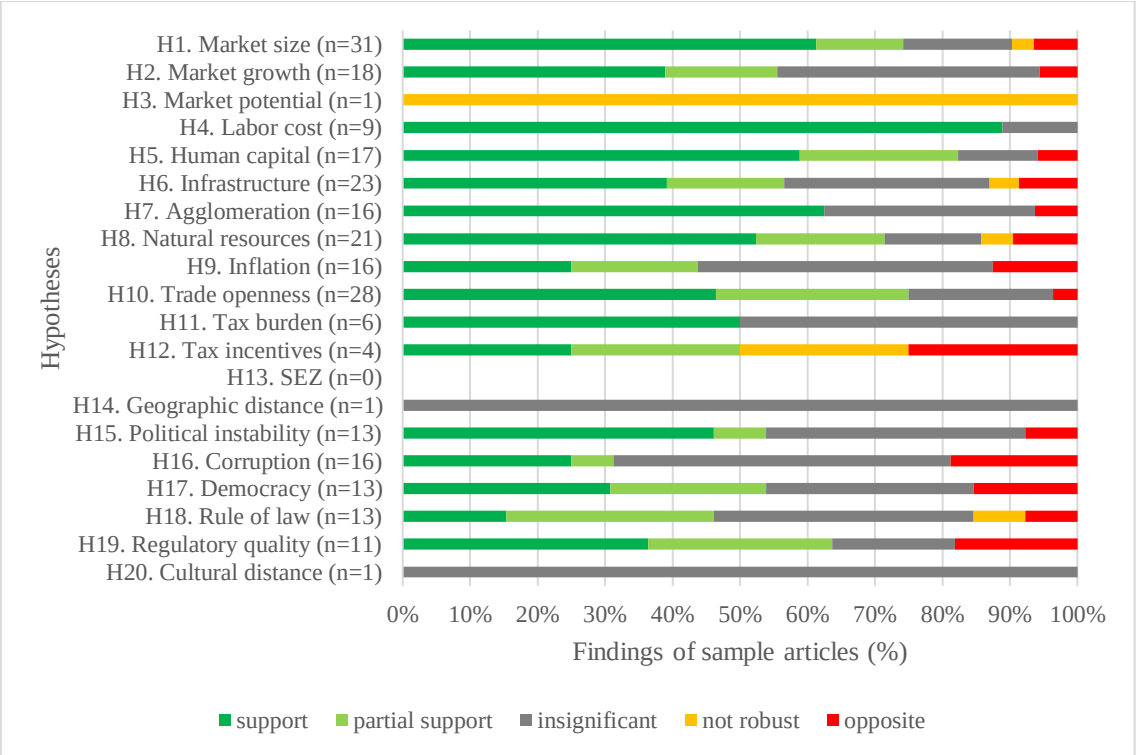


Figure 2.10. Overview of literature review findings by regions: Asia

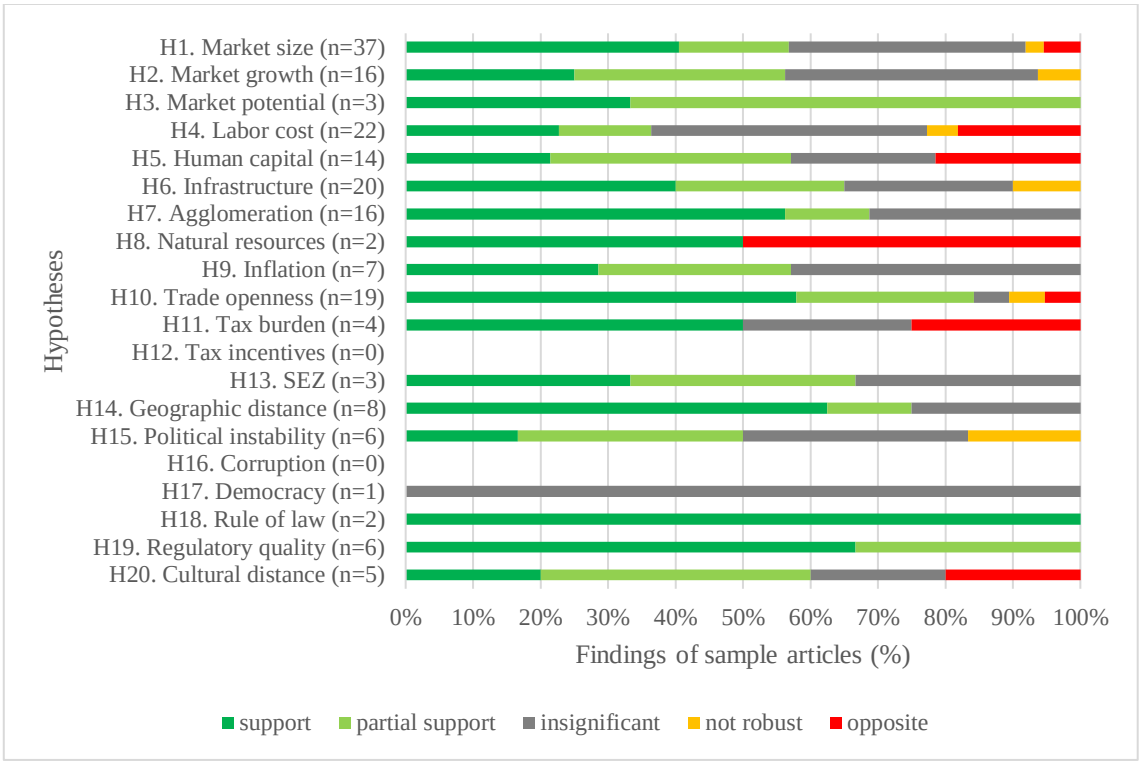


Figure 2.11. Overview of literature review findings by regions: CEE

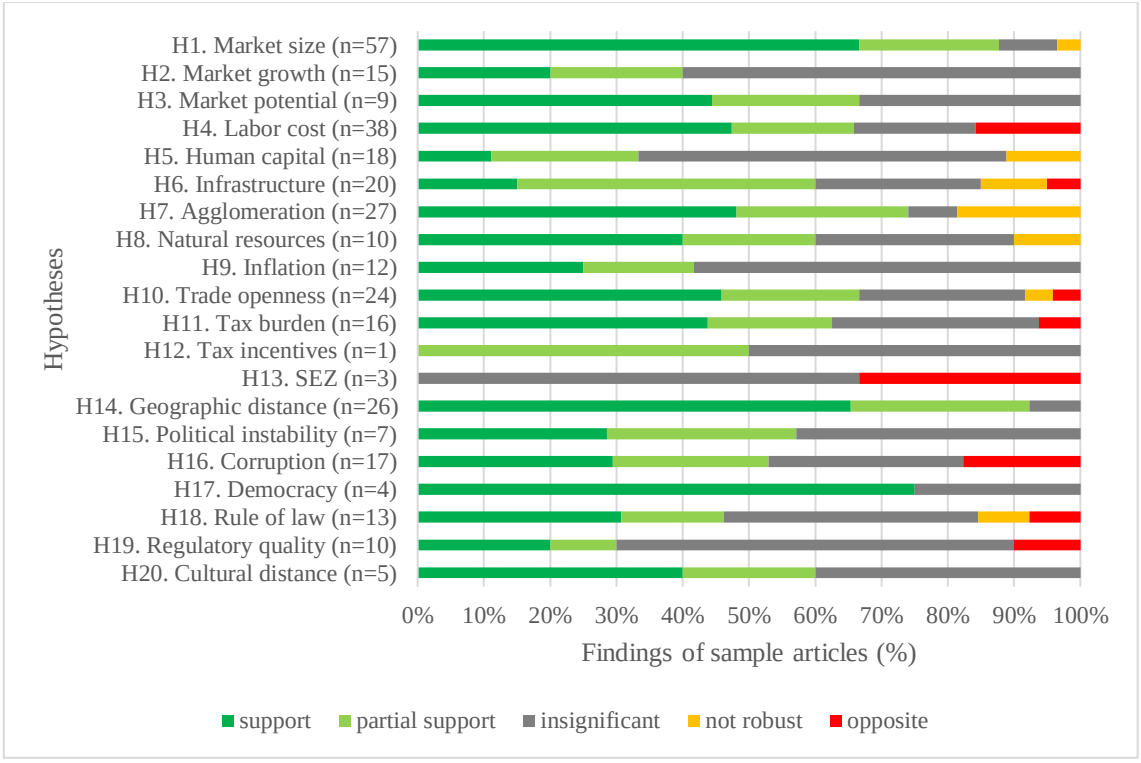


Figure 2.12. Overview of literature review findings by regions: China

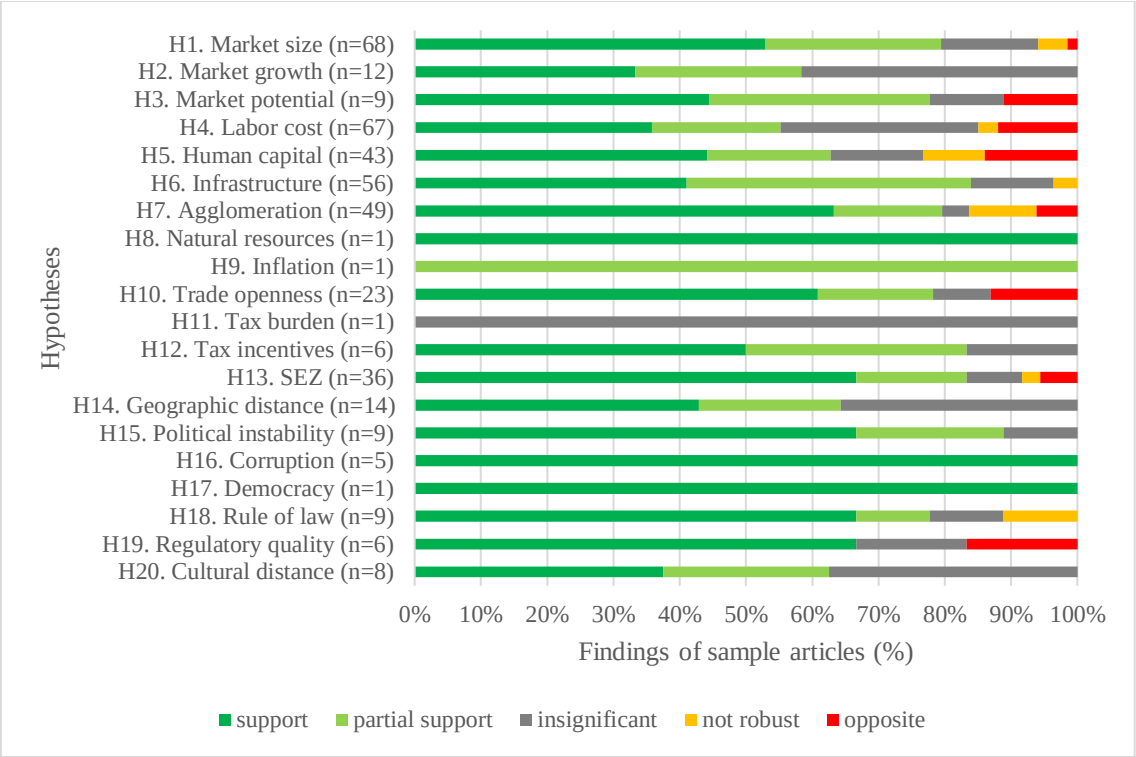


Figure 2.13. Overview of literature review findings by regions: LAC

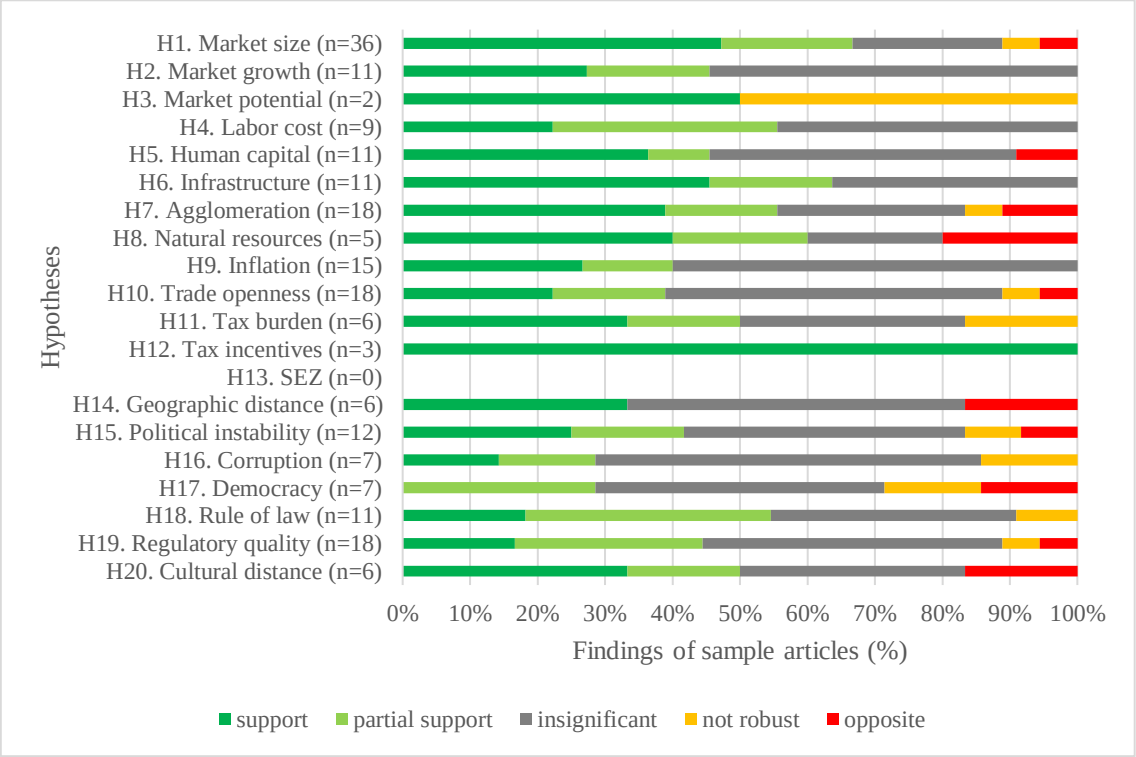


Figure 2.14. Overview of literature review findings by regions: MENA

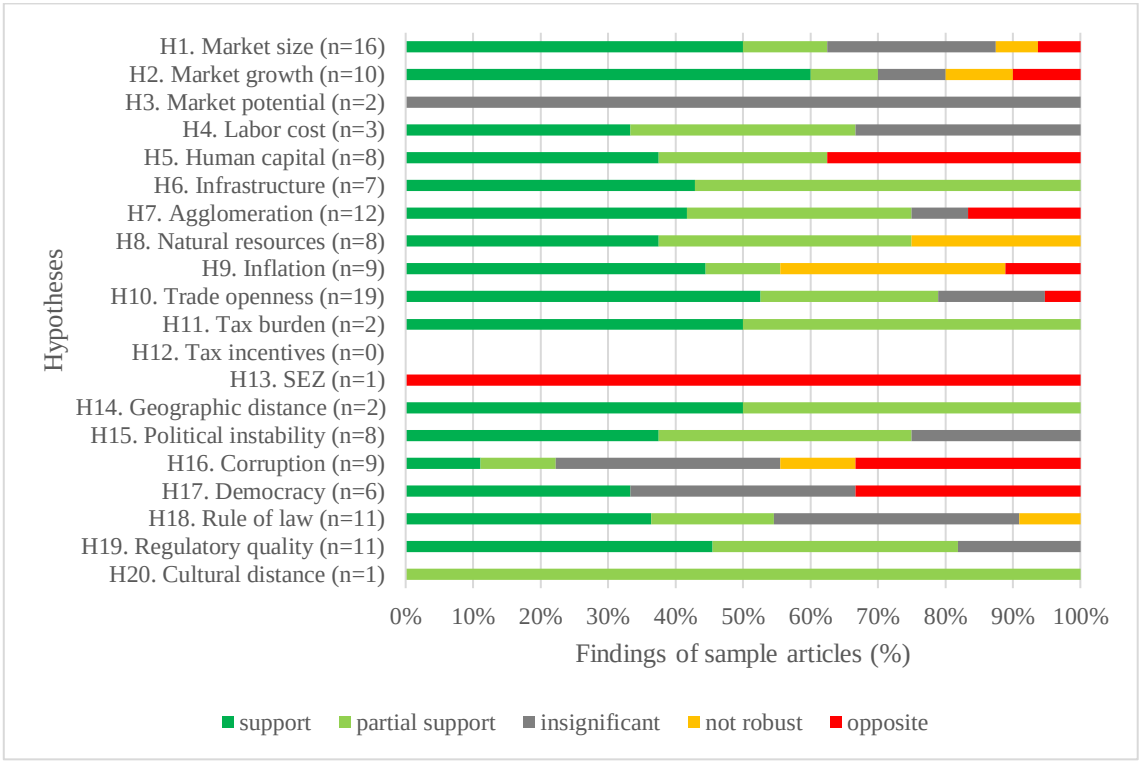
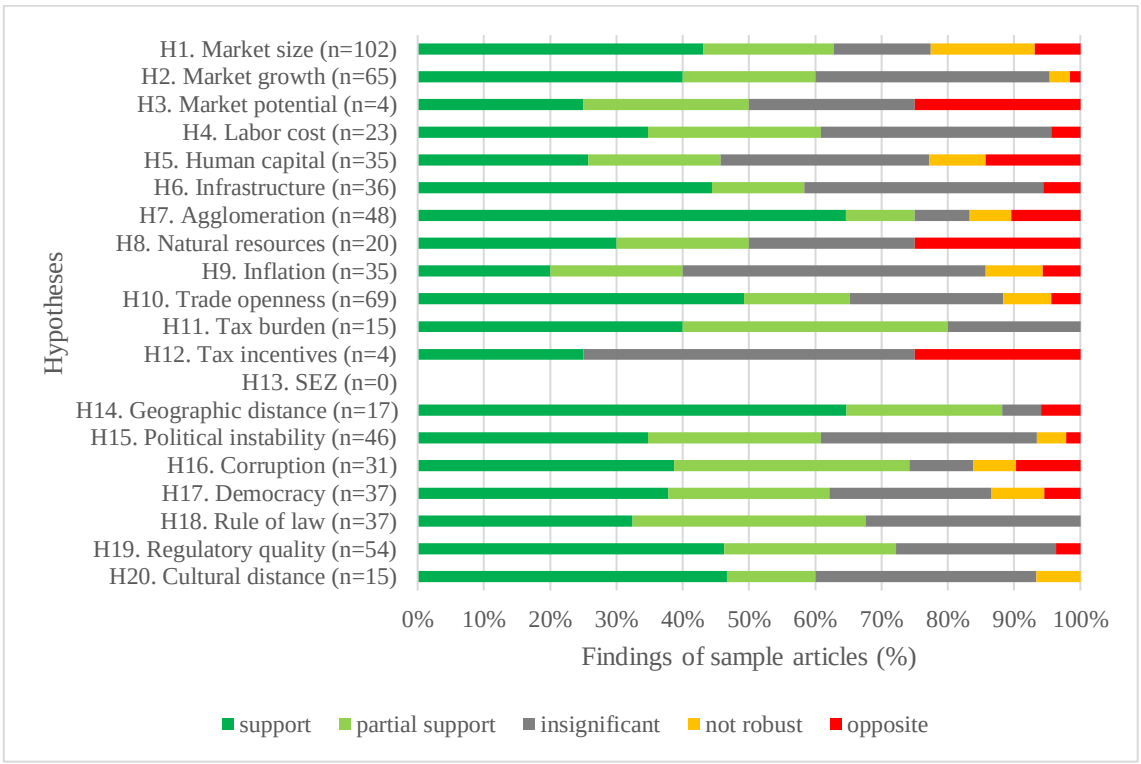


Figure 2.15. Overview of literature review findings by regions: Mixed country samples



2.5.1. Economic hypotheses (H1-14)

The following paragraphs present and discuss the empirical findings of this SLR regarding the 14 selected economic factors and their effects on FDI inflows across developing countries and regions: (1) market factors, (2) labor market dynamics, (3) infrastructure, (4) agglomeration, (5) natural resource endowment, (6) macroeconomic conditions, (7) trade and (8) fiscal policies, and (9) geographic distance.

2.5.1.1. Market factors (H1-H3)

Market size (H1)

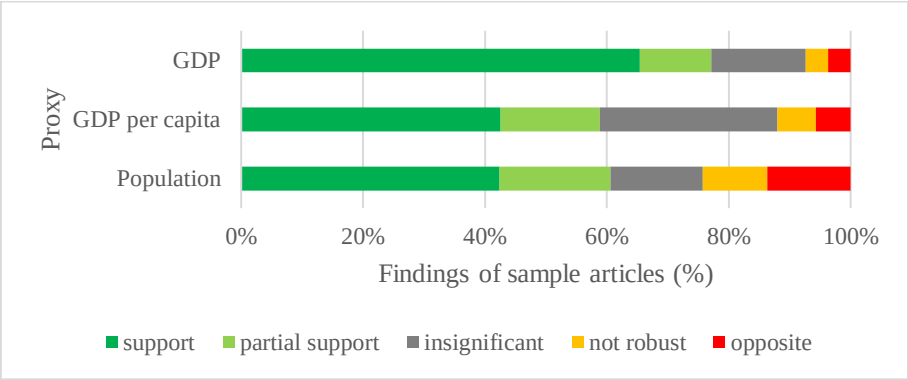
Market factors are among the most widely studied FDI determinants in developing countries, as can be seen from Fig. 2.8. 74% of empirical papers include at least one proxy representing the market size of the host country in FDI location analysis and 73% of studies (225 out of 308) found this factor to be positively related to FDI inflows in a given country or regions within countries.

FDI location researchers employ various measurements to serve as proxies for the market size of host countries. The commonly accepted proxies include Gross Domestic Product (GDP), GDP per capita, and the population size of the host country or region. While the influence of market size on FDI inflows is generally positive, the results obtained using different proxies exhibit variations.

Fig. 2.16 below illustrates that when GDP is used as a proxy for the market size, it provides stronger support for market size hypothesis in most studies (125 out of 162) compared to GDP per capita or population size proxies. Although the significance of GDP as a proxy for market size is evident across all regions, approximately 90% of studies focusing on CEE countries and China establish a positive relationship between GDP and FDI.

Around 30% of studies examining FDI location choice in developing countries find GDP per capita insignificant as a proxy for market size. In Asian countries, the effect of GDP per capita on FDI is notably weak, with only one out of eight studies identifying a statistically significant positive relationship (Mai, 2002). Similarly, in the MENA and LAC regions, less than half of the studies find statistically significant positive results in support of high GDP per capita as an attractive factor for FDI. On the other hand, GDP per capita as a proxy for market size is found to be important for FDI inflows in China at the provincial level (Blanc-Brude et al., 2014; Chang et al., 2014; Cheng & Kwan, 2000; McDonald, Buckley, Voss, Cross, & Chen, 2018).

Figure 2.16. Market size proxies



Interestingly, studies that used population size as a proxy for the size of the host market more frequently find a negative impact on FDI compared to the other two proxies (9 out of 66 studies or, 14%). Some studies argue that countries and regions with smaller populations tend to attract more FDI (Lederman, Mengistae, & Xu, 2013; Liang, 2015; Sharma et al., 2014; Wattanadumrong, Collins, & Snell, 2010), while others propose that countries and regions with larger populations receive more FDI (Al-Shammari et al., 2016; Mourao, 2018; Mukim & Nunnenkamp, 2012). However, research suggests that as a country's population grows, it tends to receive less rather than more FDI (Hayakawa, Kimura, & Lee, 2013; Neumayer, 2007; Neumayer & Spess, 2005).

Market growth (H2)

Market growth, typically measured simply as GDP or GDP per capita growth rate, was tested by 133 studies, and 77 of them (58%) found empirical support in favor of the host country's economic growth attracting FDI.

Among six regions, economic growth was found to be an especially important factor for FDI inflows in MENA countries, where 7 out of 10 studies established its positive effect on FDI inflows (Al-Khouri, 2015; Aziz, 2018; Erdal & Tatoglu, 2002; Jabri & Brahim, 2015). General results point out that market growth in the MENA region is as important for FDI as market size. Empirical support for market growth across other regions shows that foreign investors consider it somewhat important when investing in China, Asia, and Africa, as nearly 60% of studies focusing on these regions found it positive and significant. On the other hand, empirical evidence suggests that economic growth in CEE and LAC countries is less important for foreign investors, as around 60% of studies that tested this FDI determinant found it insignificant.

Surrounding market potential (H3)

The impact of the market potential of the host location's surrounding countries or regions was tested by only 27 studies (6.5%) where 18 studies (67%) found a positive effect on a given country's FDI inflows.

The market potential variable represents external market demand in the region where a given host country is located and can be proxied in several ways. According to Harris (1954), who introduced a market potential indicator into economic geography, the actual demand in a specific location depends not only on the size of the domestic economy but also on the combined market sizes of neighboring countries, weighted by the obstacles related to moving goods in space and across borders. In Harris (1954) formulation, market potential is proxied as the sum of the GDPs of surrounding neighboring countries (including own host country's GDP) divided by the distance to them. Head & Mayer (2004) tested several proxies of market potential and found that the indicator of Harris (1954) had the best explanatory power in their analysis. Another widely used method to proxy market potential in the FDI location literature is the sum of all distance-weighted GDPs of neighboring countries (Blonigen et al., 2007). The main difference between the two measures of market potential is that Blonigen et al.'s (2007) does not include the host country's GDP into it and incorporates it as a separate regressor.

The effect of market potential as an FDI determinant was mostly explored in the context of China and CEE countries (9 studies each). Market potential of surrounding provinces is generally found to significantly and positively affect FDI inflows into a particular Chinese province (Debaere, Lee, & Paik, 2010; He, 2003; Huang & Cantwell, 2017; Kang & Lee, 2007; Liang, 2015; Mucchielli & Yu, 2011; Sharma et al., 2014). The relationship between market potential and FDI inflows in the CEE region at the country level is also supported in the empirical literature (Altomonte, 2007; Ben Kheder & Zugravu, 2012; Carstensen & Toubal, 2004; Pusterla & Resmini, 2007). Market potential is found to be relatively important for FDI at the regional level in Russia (Gonchar & Marek, 2014; Ledyaeva, 2009; Ledyaeva et al., 2013) but not across regions in smaller countries such as Poland or Czech Republic (Gauselmann & Marek, 2012).

2.5.1.2. Labor market (H4-H5)

Labor cost (H4)

60% of studies (95 out of 158) found that high labor costs discourage FDI inflows in developing countries. Such relatively weak support for the labor cost hypothesis is surprising, given the

importance of factor input costs for FDI in developing countries derived from the theoretical arguments discussed above (e.g., Dunning (1998); Helpman (1984)).

Labor cost variable is usually proxied by the average, nominal, effective, or manufacturing wage levels in the host country. When data on wages is not available, researchers proxy labor costs by labor force growth (Blanton & Blanton, 2009; Noorbakhsh et al., 2001; Voyer & Beamish, 2004) or by the logarithm of the inverse of GDP per capita (Amaro & Miles, 2006; Asiedu, 2002).

Labor cost is found to be a very important host country location factor in Africa, where 8 out of 9 studies have established a strong negative relationship between high wages and FDI inflows. On the other hand, only 8 out of 22 studies (36%) focusing on Asia found support for the labor cost hypothesis.

It is worth mentioning that the high cost of labor in a developing country is not necessarily seen as a negative factor for FDI. 18 studies (11% of 158 studies) have found a positive relationship between high labor costs and FDI inflows, mostly at the subnational level. Namely, a positive effect of higher labor cost on FDI was found on the provincial level in China (Chang et al., 2014; Cheng, 2006; Cheng & Stough, 2006; Du, Lu, & Tao, 2012; Lin & Sun, 2016; Salike, 2016; Tuan & Ng, 2004; Zhao & Zhu, 2000), India (Horn & Cross, 2016; Mukim & Nunnenkamp, 2012; Nunnenkamp & Mukim, 2012), and CEE countries on both national (Colen, Persyn, & Guariso, 2016; Estrin & Uvalic, 2014) and subnational levels (Bessonova & Gonchar, 2015; Boudier-Bensebaa, 2005; Gauselmann & Marek, 2012). These results are usually explained by relying on the assumption that higher salaries imply high qualification of workers, leading to a higher productivity of the labor force. Besides, wages in most developing countries are still considerably lower than in developed home countries, and higher labor costs mostly reflect the quality of human capital rather than actual cost factors (Zhao & Zhu, 2000).

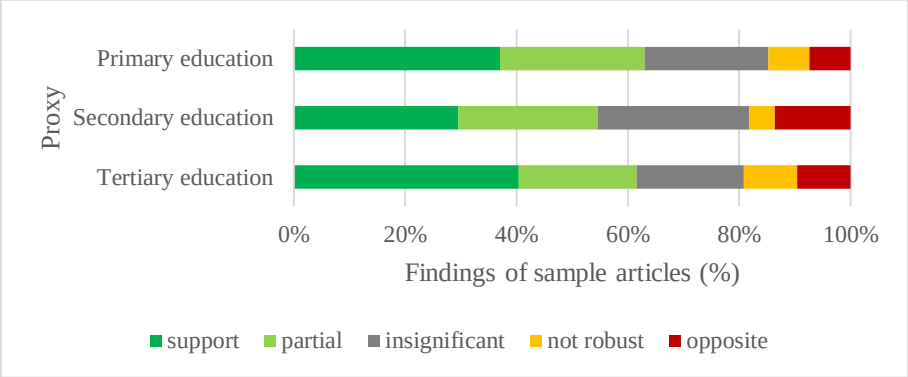
Human capital (H5)

59% of studies (79 out of 135) found that the quality of human capital, broadly measured by different levels of the local population's education attainments, has a positive influence on FDI inflows in developing countries.

FDI location researchers use numerous indicators to capture human capital quality. Human capital is usually proxied by various levels of educational attainment, including primary education (such as adult literacy rate or enrollment in primary school), secondary education,

and tertiary education. Other proxies include the average years of schooling received by the working age population of Barro & Lee (2001, 2013), government spending on education (Hecock & Jepsen, 2013; Kaur, Khatua, & Yadav, 2016) or science (Blanc-Brude et al., 2014; Liu, Daly, & Varua, 2014) among others. Fig. 2.17 illustrates that the empirical support obtained by these three human capital proxies does not differ dramatically.

Figure 2.17. Human capital proxies



The quality of human capital was found to be particularly important in Africa, where 14 out of 17 studies established a positive effect on FDI inflows. Around 60% of studies supported H5 in Asia (including China) and MENA countries, whereas only one-third of studies (6 out of 18) established a positive relationship between FDI and human capital in Central and Eastern European developing countries. In Asia, FDI tends to locate in countries where a higher proportion of the population completed secondary and tertiary education, whereas in CEE countries, only tertiary education is found to attract FDI (Brock, 1998; Carstensen & Toubal, 2004; Ledyaeva et al., 2013; Schäffler et al., 2017). Tertiary education seems to also have a higher positive impact on FDI inflows in MENA (Aziz, 2018; Moosa, 2009; Yavan, 2010) than secondary education (Helmy, 2013; Mina, 2007, 2009). In Latin America, high human capital quality was found to stimulate FDI in less than half of studies (5 out of 11) (Jordaan, 2008; Lall, Norman, & Featherstone, 2003; Nwaogu & Ryan, 2014; Ramos & Ashby, 2017; Treviño, Thomas, & Cullen, 2008).

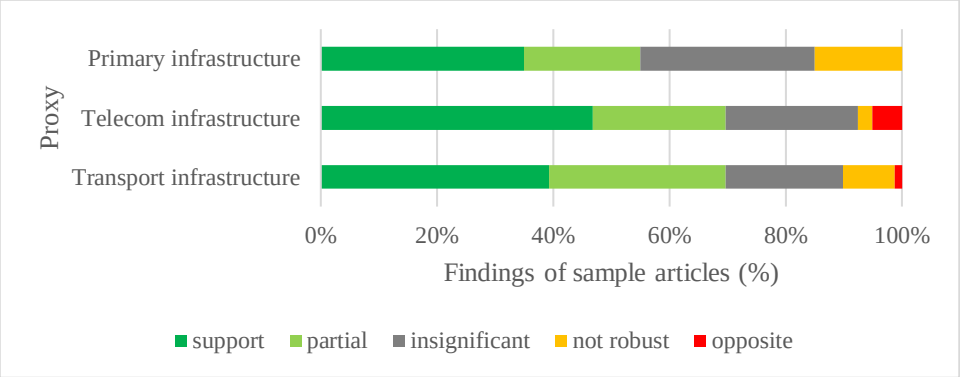
Similar to the finding regarding the labor cost factor, 17 studies out of 135 (13%) concluded that developing countries with high human capital quality attract less FDI. For example, several papers argue that labor-intensive FDI (such as clothing and textile industries) is encouraged by lower education in Chinese provinces with a relatively high surplus of unskilled labor (Cole et al., 2009; Lin & Sun, 2016). Chen & Yeh (2012), building on the investment development path (IDP) framework (Dunning & Narula, 1996), found that quality of labor is crucial only at the

later stages of investment rather than in the early stages in China. Empirical evidence on the importance of human capital for FDI inflows in MENA countries is also inconsistent, as 3 out of 8 studies found a significant negative effect of the availability of an educated workforce in the host country on FDI inflows (Helmy, 2013; Mina, 2007, 2009). Mina (2007) suggests that an increase in human capital creates local entrepreneurs who undertake domestic investment, which in turn leads to less FDI inflows. Dutta & Osei-Yeboah (2013), on the other hand, argue that the association between human capital and FDI inflows in developing countries is enhanced only in the presence of good institutions, i.e., the improvement of political rights or civil liberties leads to more FDI inflows as human capital increases.

2.5.1.3. Infrastructure (H6)

71% of studies (113 out of 159) found that the quality of domestic infrastructure has a positive influence on FDI inflows in developing countries. Like human capital quality variable, infrastructure can be measured in different ways, including primary infrastructure (such as electricity generation or consumption, access to water), telecommunication (fixed/mobile telephone density or internet access), and transport infrastructure (availability of roads and railways, airports, ports, riverways, etc.). FDI researchers also use a variety of composite infrastructure indices combining various types of telecom, transportation, and electricity generation variables (see, for example, Bellak, Leibrecht, & Damijan (2009); Donaubauer et al. (2016)). This review shows that the three commonly used infrastructure proxies are comparable in their effect on FDI. As shown in Fig. 2.18, studies employing telecom and transport infrastructure proxies gained slightly more support in the empirical literature than primary infrastructure.

Figure 2.18. Infrastructure proxies



Empirical evidence suggests that the availability of good-quality infrastructure has a positive impact on FDI inflows across all regions of the developing world. However, infrastructure

seems to be particularly important for investors entering MENA countries and China. Although only 7 studies included in this review explored the relationship between developed infrastructure and FDI inflows in the MENA region, all of them could establish a significantly positive relationship between the two variables (Al-Shammari et al., 2016; Deichmann, Karidis, & Sayek, 2003; Erdal & Tatoglu, 2002; Mina, 2007; Moosa, 2009; Siddiqui & Iqbal, 2018; Yavan, 2010). The effect of infrastructure quality in China was studied much more extensively; 47 out of 56 studies (83%) found a significant positive effect of infrastructure on FDI inflows. 7 out of 11 studies (64%) established a positive relationship between FDI and infrastructure proxied either by transport (Guimaraes et al., 1998; Lall et al., 2003; Nwaogu & Ryan, 2014) or telecommunication infrastructure (Dixon & Haslam, 2016; Garcia-Fuentes, Kennedy, & Ferreira, 2016; Godinez & Liu, 2015; Jordaan, 2008).

The positive association between quality of infrastructure and FDI inflows is weaker in CEE countries and Africa (60% and 57% of support, respectively). However, the reasons driving these results are substantially different between the two regions. In Central and Eastern Europe, FDI tends to locate in countries and regions with developed transport infrastructure (Bessonova & Gonchar, 2015; Boudier-Bensebaa, 2005; Cieślik, 2005; Hilber & Voicu, 2010; Pusterla & Resmini, 2007), whereas primary infrastructure (and telecommunications, to a certain extent) generally do not have a statistically significant effect on FDI location choice (Boudier-Bensebaa, 2005; Jiménez, 2011; Lansbury, Pain, & Smidkova, 1996; Overesch & Wamser, 2010). On the other hand, both infrastructure availability and its quality are rather low in many African countries compared to CEE states. Hence, researchers usually find any type of infrastructure to attract FDI in Africa, including primary infrastructure (Bekana, 2016; Kinda, 2013; Nwaogu & Ryan, 2014).

2.5.1.4. Agglomeration (H7)

127 out of 169 studies (75%) established a positive relationship between agglomeration and FDI inflows into the host country. The literature on FDI location choice employs various proxies for agglomeration economies. The most utilized ones include foreign agglomeration, usually captured either as stock of previous FDI, number of foreign-owned firms in the host country, or manufacturing/service sector density (usually defined as share of labor force employed by foreign firms in the sector). Many researchers proxy agglomeration by a location's population density or urbanization rate (i.e., urbanization agglomeration). Finally, several studies tested the impact of domestic agglomeration on FDI inflows, proxied either by the number of indigenous firms or the number of employees working in domestic industrial enterprises.

Figure 2.19. Agglomeration proxies

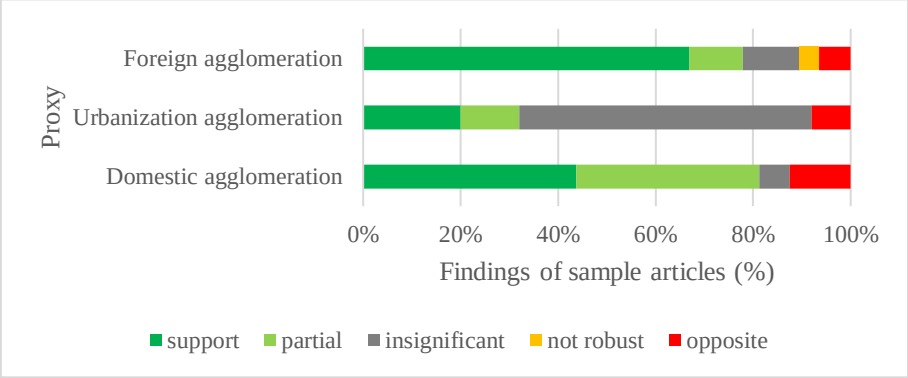


Fig. 2.19 illustrates substantial differences in the collected evidence on the relationship between commonly used agglomeration proxies and FDI. Positive effect of foreign agglomeration (irrespective of country of origin) yields the most support in the empirical literature (120 out of 154 studies, or 78%), validating the theoretical assumptions that agglomeration economies help foreign firms overcome the liability of foreignness by co-locating with other foreign firms in a specific country or region (Lamin & Livanis, 2013). On the other hand, only 8 out of 25 studies (32%), which used population or urban density as a proxy for agglomeration, found a positive effect on FDI. The effect of domestic agglomeration on FDI was explored by 16 studies only and was found largely positive, but was mainly tested in the context of Chinese provinces, which probably could not be generalized to other regions (Cheng, 2006, 2008; Cheng & Stough, 2006; Dean, Lovely, & Wang, 2009; Du, Lu, & Tao, 2008a; Du et al., 2008b, 2012; Gao, Wang, & Che, 2018; Head & Ries, 1996; Huang & Cantwell, 2017).

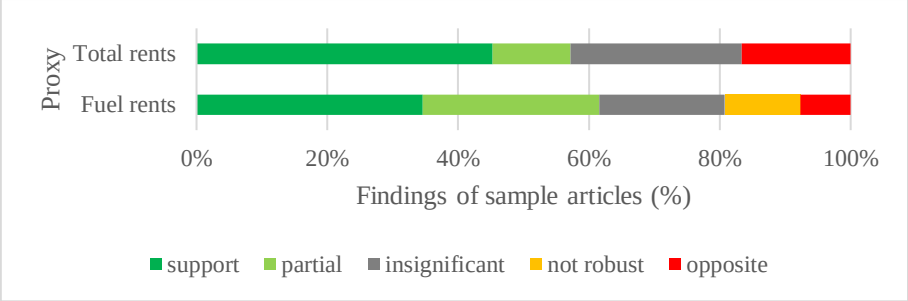
Agglomeration is an important location factor for FDI across all regions. Empirical results show that foreign investors are particularly attracted by agglomeration economies in China, where 39 out of 49 studies (80%) found a positive effect on FDI location. 75% of studies focusing on CEE and MENA countries also supported the importance of agglomeration for foreign investors' location choice. Among the six regions reviewed in this study, agglomeration economies are somewhat less important for FDI inflows in Latin America and the Caribbean compared to other ones, as only 10 out of 18 papers (56%) found a significant positive effect.

2.5.1.5. Natural resources (H8)

Natural resource abundance in the host country is a significant driver for FDI inflows in developing countries, as supported by 64% of studies (41 out of 64). A variety of measures are used as proxies for the natural resource wealth, including fuel rents (oil and natural gas), ore and mineral exports, exports of agricultural commodities, or natural resource rents from all

types of resources in a host country combined. As Fig. 2.20 shows, there is not much difference in results on the aggregate level between the most frequently used natural resource proxies: total natural resource rents and fuel rents.

Figure 2.20. Natural resources proxies



The availability of natural resources is an important FDI determinant in African and MENA countries, where more than 70% of studies found support for the natural resource hypothesis. Interestingly, the results suggest that in Africa, FDI is mostly attracted by the production or export of oil and gas (i.e., fuel rents) rather than by the total natural resource endowments. 7 out of 8 studies established a significant positive effect of fuel rents on FDI (Bokpin, Mensah, & Asamoah, 2015; Brafu-Insaidoo & Biekpe, 2014; Cheung et al., 2012; Dong & Fan, 2017; Emudainohwo, Boateng, Brahma, & Ngwu, 2018; Okafor, 2015). On the other hand, only half of the 16 studies that used various composite indices or combinations of various resources as proxy for the natural resource endowment of the host country found a significant positive effect on FDI inflows, whereas three studies supported the resource-curse paradox (Okafor, 2015; Okafor, Piesse, & Webster, 2015; Tunyi & Ntim, 2016). The negative relationship between natural resources and FDI in Africa could possibly happen as huge rents from natural resources can lead to an appreciation of local currency, which makes a country's exports less competitive (Corden & Neary, 1982). As a result, resource-seeking FDI can crowd out investment from other non-natural resource sectors.

60% of studies also established a positive relationship between natural resource endowment and FDI inflows in the CEE and LAC regions. The empirical evidence on the effect of natural resources on FDI in the context of Asian countries (including China) is practically nonexistent, as only 3 studies tested for the natural resource variable, albeit 2 studies found supportive evidence (Kang & Jiang, 2012; Zhao, 2003) whereas Ramírez-Alesón & Fleta-Asín (2016) found that natural resources have a negative effect on FDI inflows for a sample of Asian countries.

2.5.1.6. Inflation (H9)

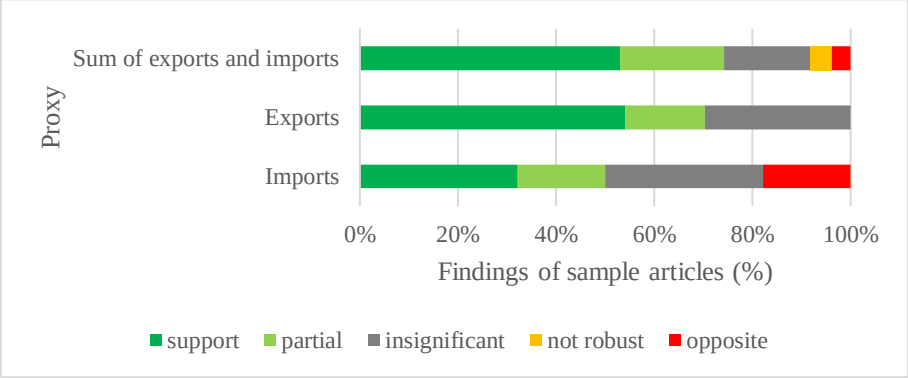
Less than half of the studies found a deterring effect of high inflation on FDI inflows (42 out of 93 studies, or 45%). Overall, the inflation hypothesis yields the least support out of the 20 FDI determinants included in this review. Inflation is typically measured as the annual percentage increase in producer prices, although in rare cases scholars use inflation volatility as a proxy (Al-Khouri, 2015; Fowowe, 2013).

Inflation has a negative effect on FDI inflows in Asian and MENA regions, where 56% of studies established a significant negative relationship. On the other hand, only 40% of studies focusing on CEE and LAC countries found a negative effect of inflation on FDI. In China, only Salike (2016) explored the effect of inflation on FDI inflows in Chinese provinces and established a negative relationship between the two variables.

2.5.1.7. Trade openness (H10)

130 out of 184 studies (71%) found that a host country's openness to international trade promotes FDI inflows. Among the most commonly used proxies for trade openness are the host country's total trade amount (sum of exports and imports), exports from and imports to the host country. Usually, trade openness variables are scaled by the host country's GDP, as it allows to account for the differences in economic scale among countries and enables meaningful comparison.

Figure 2.21. Trade openness proxies



As shown in Fig. 2.21, studies using imports into the host country as a proxy for trade yielded the least support for H10 compared to total trade volume and exports to the host country. Only half of the studies that tested the effect of imports on FDI location choice found it positive and statistically significant, whereas 5 papers found that larger volumes of imports into host

developing countries affects FDI negatively (Eskeland & Harrison, 2003; Fedderke & Romm, 2006; Wang & Swain, 1995, 1997; Zheng, 2013). Such results suggest that growing import penetration negatively affects FDI because foreign investors prefer to locate their FDI in countries with little competition from imports.

Trade openness is found to be particularly important for investment in Asia, where 16 out of 19 studies (84%) established a positive link between trade and FDI inflows. Similarly, trade openness is crucial for FDI in MENA countries (79%), China (78%), Africa (75%), and the CEE region (67%). Surprisingly, only 7 out of 18 studies (39%) focusing on LAC countries found positive statistically significant results, thus indirectly indicating that MNEs in the LAC region do not engage in trade and lean towards market-seeking behavior.

2.5.1.8. Fiscal policies and incentives (H11-H13)

Tax burden (H11)

31 out of 45 studies (69%) found that high tax rates in the host country reduce FDI inflows. The tax burden in the host country is most often proxied by statutory corporate income tax rates, effective statutory tax rates, and marginal tax rates, among others. The relationship between tax rates and FDI inflows into developing countries was mostly studied in the context of Central and Eastern Europe, where 10 out of 16 studies (63%) established a significantly negative effect of high taxes on FDI in the region (Bellak & Leibrecht, 2009; Bellak et al., 2009; Carstensen & Toubal, 2004; Edmiston, Mudd, & Valev, 2003; Leibrecht & Scharler, 2009; Overesch & Wamser, 2010; Rasciute et al., 2015; Smarzynska Javorcik, 2004).

Empirical evidence on the relationship between tax rates in host countries and FDI inflows is rather scarce and inconclusive. For example, an equal number of studies focusing on Africa and Latin America found significant negative effect of high taxes on FDI (Fedderke & Romm, 2006; Khadaroo & Seetanah, 2010; Klemm & Van Parys, 2012; Shah & Slemrod, 1991; Wood et al., 2014) and insignificant effect (Hecock & Jepsen, 2014; Kinda, 2010; Lee et al., 2018; Treviño et al., 2008; Van Parys & James, 2010). In the Asian region, high corporate income and statutory tax rates have a strong negative effect on FDI inflows in Malaysia (Ang, 2008; Tang, Yip, & Ozturk, 2014), but the tax burden of foreign firms in Chinese provinces is not an impediment to FDI inflows (Wang, Xu, & Zhu, 2012). Finally, Helmy (2013) found a negative effect of heavy tax burden only for the sample of larger-sized and poorer MENA countries (such as

Algeria, Egypt, Iran, Türkiye, etc.) but not for the sample of smaller-sized richer countries (such as Bahrain, Qatar, the UAE, Kuwait, etc.).

Tax incentives (H12)

The impact of tax incentives on FDI was tested by only 18 studies, and two-thirds of them (67%) established a positive effect of fiscal incentives on FDI inflows. Tax incentives attracted FDI in China during 1980-2000 in the form of concessionary tax rates (Tung & Cho, 2000, 2001) and tax incentives aimed at export-oriented FDI (Zhang, 2000, 2005; Zhou et al., 2002). The length of tax holidays has a positive impact on FDI inflows in Latin America and the Caribbean (Guimaraes et al., 1998; Klemm & Van Parys, 2012; Woodward & Rolfe, 1993). In sub-Saharan Africa, the positive relationship between corporate income tax holidays and foreign investment also received a certain amount of support from a panel of African countries (Cleeve, 2008; Van Parys & James, 2010). However, Fowowe (2013) established a negative relationship between CIT rate incentives, export-oriented incentives and FDI in Nigeria during the 1973-2006 period. The author further argues that developing countries should focus more on improving the general investment climate than promoting fiscal incentives alone (ibid.).

SEZs (H13)

The relationship between special economic zones (SEZs) of various types and FDI was explored by 43 studies, of which 32 articles (74%) found support for H13. This result is, however, strongly biased towards China, as the SEZ hypothesis was mostly tested on the provincial level in China (36 out of 43 studies). The availability of special economic zones is often proxied by the total number of different types of economic, trade, and technological development zones in a location or by a dummy variable for a province with either SEZs or Open Coastal Cities (OCCs). SEZs as an FDI determinant were explored only by subnational level studies.

Surprisingly, two studies found that foreign logistics investors respond negatively to SEZs and OCCs in China (Hong & Chin, 2007) as well as to new economic and technological zones (Hong, 2007b) which may be caused by high congestion costs in such zones due to a mass inflow of foreign investments. The number of SEZs increases FDI in India (Horn & Cross, 2016) and Thailand (Wattanadumrong et al., 2010) but has no statistically significant influence on FDI inflows in Cambodia (Tanaka & Tsubota, 2013). Turning to other regions, special economic zones do not have an impact on FDI inflows in Poland (Avioutskii & Tensaout, 2016;

Cieślik, 2005) and in CEE in general (Pusterla & Resmini, 2007), as well as in Türkiye (Yavan, 2010).

2.5.1.9. Geographic distance (H14)

57 out of 70 studies (81%) argue that greater geographic distance hinders FDI inflows in developing countries. The geographic distance hypothesis gains the most support out of the 20 FDI determinants included in this review. It is surprising, however, that only 17% of empirical articles tested for the relationship between geographic distance and FDI, given the importance of the distance argument in both classic trade and IB theories (Beugelsdijk & Mudambi, 2013; Eden & Miller, 2004; Zaheer, 1995). Geographic distance is most often proxied by the direct distance between the capitals of the home and host countries or between two countries' centroids.

The negative effect of geographic distance is also supported at the regional level (excluding Africa and the MENA regions due to a lack of empirical evidence). The negative effect of a larger physical distance between CEE host and FDI home countries is supported by 24 out of 26 studies, except Altomonte (2000) and Jiménez, Palmero, & Jiménez (2014). Such a high correlation could be partly due to FDI home country focus, as many studies that explore FDI determinants in the CEE region use FDI data from Western European investor countries (Brenton, Di Mauro, & Lücke, 1999; Buch et al., 2005; Hecht, 2017; Resmini, 2000; Schäffler et al., 2017) and developed countries more broadly that also include many Western European states (Bellak & Leibrecht, 2009; Bellak et al., 2009; Iwasaki & Suganuma, 2009). Western European firms might prefer to invest more in the developing economies of Eastern Europe because the transaction costs associated with subsidiary management there are much smaller than they could possibly be in other regions.

Geographic distance between investor countries and Asian countries also has a strong negative effect on FDI inflows (7 out of 9 studies). Larger distances from FDI home country impede FDI in Vietnam (Hanh, 2011; Vo, 2018), Thailand (Wattanadumrong, Collins, & Snell, 2014), and Cambodia (Cuyvers, Soeng, Plasmans, & Van Den Bulcke, 2011), among others. Geographic distance has a lesser impact on FDI in India (Wei, 2005; Zheng, 2009). Interestingly, the negative impact of a larger distance between FDI home country and China pertains mostly on the provincial level (Blaise, 2005; Chang et al., 2014; Fung, Iizaka, & Siu, 2003; Gao, 2005; Kang & Lee, 2007) but to a much lesser extent on the national level (Awokuse & Yin, 2010; Liu, Song, Wei, & Romilly, 1997; Pan, 2003; Wei, 2005; Zheng, 2009).

Interestingly, the geographic distance hypothesis is barely supported in LAC countries, as only 2 out of 6 studies found a statistically negative relationship between greater distance and US FDI inflows (Lall et al., 2003; Nwaogu & Ryan, 2014). Investment in Mexico, however, does not respond negatively to the large geographic distance to the FDI home country, neither on the national (Thomas & Grosse, 2001; Waldkirch, 2011) nor subnational level (Ashby & Ramos, 2013; Ramos & Ashby, 2013).

2.5.2. Institutional hypotheses (H15-20)

Nearly 60% of the articles in this review (242 out of 416) explore the relationship between FDI and institutions in the host developing country. The next paragraphs present and discuss findings from empirical literature concerning six most studied institutional factors: (1) political instability, (2) corruption, (3) democracy, (4) rule of law, (5) quality of business and investment regulations, and (6) cultural distance.

2.5.2.1. Political instability (H15)

Overall, 61 out of 94 studies (or 65%) found that political instability has a negative relationship with FDI inflows into host developing countries. Political instability is proxied by researchers using a variety of indices from different sources, such as the International Country Risk Guide's (ICRG) scores on government instability, external and internal conflict, tensions among religious and ethnic groups; the World Governance Indicators' (WGI) political instability and violence indicator, Henisz's (2000a, 2002) POLCON index of domestic political constraints on the executive branch, and others. Some authors simply use dummy variables such as the Tiananmen Square Incident in China during 1989-1992 (Kwon, 1999; Pan, 2003; Zhang, 2000, 2005; Zheng, 2009; Zheng & Tan, 2011) or the occurrence of a civil war in the host country (Burger, Ianchovichina, & Rijkers, 2016; Jakobsen, 2006; Witte et al., 2017).

Extant empirical evidence suggests that political instability deters FDI inflows in all regions. Investors are particularly concerned by a stable political environment when investing in China (8 out of 9 studies, or 89%) (Giner & Giner, 2004; Pan, 2003; Zhang, 2000, 2005; Zhao, 2003; Zheng, 2009). FDI inflows are strongly affected by political instability in MENA countries where 6 out of 8 studies established a statistically negative relationship between the two variables (Aziz, 2018; Bannaga, Gangi, Abdrazak, & Al-Fakhry, 2013; Burger et al., 2016; Jabri & Brahim, 2015; Mina, 2009, 2012). Empirical research also suggests that political instability is not a great concern for MNEs investing in LAC countries as only 5 out of 12 studies (42%)

found support for the political instability hypothesis (Nigh, 1986; Ramirez, 2006; Sánchez-Martín, De Arce, & Escribano, 2014; Treviño et al., 2008; Tuman & Emmert, 1999).

Interestingly, some studies found that, in some cases, political instability in host developing countries has a positive effect on FDI. For example, García-Canal & Guillén (2008) explored the effect of political instability proxied by the POLCON V index of political constraints (Henisz, 2000a) on Spanish FDI in regulated industries (such as banking, electricity, petroleum, and gas) in Latin American countries during 1987-2000 and found that political instability does not discourage FDI. They further argue, however, that as Spanish firms accumulate foreign experience, their positive attitude toward entering politically unstable countries becomes negative, and the increase in policy instability discourages their FDI (ibid.). Likewise, Shan et al. (2018) found that the political stability and absence of violence indices of the ICRG are negatively correlated with China's FDI stock in 22 African countries over the 2008-2014 period. Such results suggest that politically unstable countries are attractive to Chinese investors, probably due to political reasons such as bilateral agreements aimed at limiting risks for Chinese investment (Baek & Qian, 2011). Overall, three recent studies explored the relationship between political instability and Chinese FDI using large subsets of African countries. Shan et al. (2018) found a positive effect of political instability, Mourao (2018) established a negative impact on FDI, whereas Chen, Dollar, & Tang (2018) could not establish a statistically significant relationship between the two variables.

2.5.2.2. Corruption (H16)

The effect of host country corruption on FDI was tested by 81 studies, and 45 studies (56%) confirmed the negative effect of a high level of corruption on FDI. 20 studies could not establish any meaningful relationship between corruption and FDI, while 12 studies (15%) found a positive effect of corruption on FDI in developing countries, thus supporting the view of corruption as a "helping hand" for foreign investors.

FDI research gathers data on corruption from various sources. The most popular sources among sample articles include: (1) ICRG's 'Corruption' assessment, which focuses on corruption within the political system; (2) Transparency International's (TI) 'Corruption Perceptions Index' which focuses on overall political corruption; and (3) 'Control of Corruption' dimension

of governance, which is a broader measure of public sector corruption from WGI published by the World Bank (WB)[20].

Prior empirical evidence produced rather inconclusive results for the relationship between FDI and corruption across regions. Among six regions, literature suggests strong support for the negative effect of corruption on FDI only in China at country level (Du et al., 2008b, 2008a, 2012) and provincial level (Cole et al., 2009; Huang & Cantwell, 2017). While the available literature on the correlation between corruption and FDI location choice in China provides substantial empirical support for corruption being a "grabbing hand", it is important to note that this conclusion is drawn from a limited number of studies.

The relationship between corruption and FDI was relatively well explored in the CEE region, where 9 out of 17 studies (53%) found support for the negative effect of corruption on FDI. The discouraging effect of corruption on FDI is particularly pronounced at the subnational level in Russia (Baccini, Li, & Mirkina, 2014; Kuzmina, Volchkova, & Zueva, 2014; Ledyaeva et al., 2013). However, country level studies pooling several CEE countries together more often find corruption not significant (Avioutskii & Tensaout, 2016; Demekas, Horváth, Ribakova, & Wu, 2007; Pournarakis & Varsakelis, 2004; Smarzynska Javorcik, 2004) or even positively affecting FDI (Bellos & Subasat, 2012a, 2012b; Jiménez et al., 2014). Cuervo-Cazurra (2008) suggests that it is not the level of corruption per se but rather the type of corruption that encourages or deters FDI. He distinguishes between two types of corruption: pervasive corruption, which is certain and widespread, and arbitrary corruption, which is uncertain. In examining the effect of these two types of corruption on FDI inflows in transition economies, Cuervo-Cazurra (2008) found that both of them are negatively associated with FDI inflows in transition countries, but to a lesser extent than in other developing countries. However, the following paragraphs show

[20] All these sources provide composite subjective indicators based on the subjective evaluations of experts or survey respondents. ICRG provides a single measure of corruption based on evaluations by its network of experts and has been available annually since the early 1980s. ICRG data actually measures not perceived corruption but the risk of political instability caused by corruption (Graf Lambsdorff, 2005). TI and WB collect data from several sources that include country risk ratings produced by business consultancies, elite business surveys and expert panels, and polls of country inhabitants. TI calculates corruption ratings annually since 1995, whereas WB published its indices biannually from 1996 to 2002 but now publishes new versions yearly. ICRG data have been used in the construction of the WB index, and not surprisingly, these indices are highly correlated with both TI and WB (Treisman, 2007). See Graf Lambsdorff (2005), Hamilton & Hammer (2018), Knack (2007), and Treisman (2007) for more details on different corruption measures. Even though these three corruption indices have been widely used in many fields, their reliability has been seriously questioned (see Knack (2007) for an excellent review of various corruption data sources).

that the absence of a pronounced negative effect of corruption on FDI is not exclusive to transition countries but can be found in other developing regions as well.

In Africa, half of the studies (8 out of 16) could not establish any statistically significant relationship between corruption and FDI. 5 studies established a negative relationship between corruption and FDI (Asiedu, 2006; Cleeve, 2008; Okafor et al., 2015; Osabutey & Okoro, 2015; Tunyi & Ntim, 2016), whereas 3 studies suggest that corruption has a positive effect on FDI, thus supporting the "helping hand" view of corruption (Cheung et al., 2012; Gossel, 2018; Wood et al., 2014). Similarly, results for the MENA region illustrate the limited effect of corruption on FDI. As in the case of Africa, three studies also support the "helping hand" hypothesis in MENA countries (Gani & Al-Abri, 2013; Helmy, 2013; Mina, 2012). Mina (2012) suggests that more corrupt countries are associated with worse economic policies that limit domestic savings and investment and increase reliance on foreign capital, whereas Helmy (2013) argues that corruption helps to simply bypass weak institutions. Likewise, empirical support of the negative effect of corruption on FDI is also limited in the LAC region, where only 2 out of 7 studies conclude that foreign investors avoid countries with widespread corruption (Blanco, 2012; Godinez & Liu, 2015).

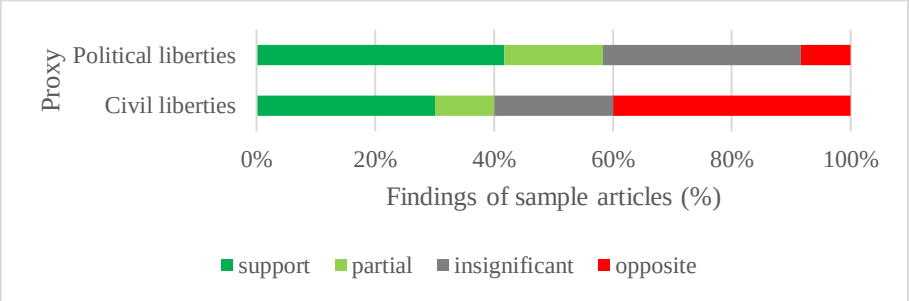
2.5.2.3. Democracy (H17)

The positive relationship between democracy in developing countries and FDI inflows was established by 37 out of 67 studies (55%). As in the case of other institutional variables, researchers use an abundance of various indices to measure democracy in the host countries. These include the POLITY IV score (Marshall, Jaggers, & Gurr, 2004), the political and civil liberties indices from Freedom House, which are used separately or as an average of the two as defined in Helliwell (1994), the ICRG's indices of democratic accountability or the presence of military influence in politics, the voice and accountability index from WGI, etc.

Interestingly, civil liberties and political liberties do not affect FDI in the same way. While more political liberties in the host country are associated with higher FDI, more civil liberties in the host developing country do not increase FDI inflows (see Fig. 2.22). Adam & Filippaios (2007) found that the repression of civil liberties (i.e., suppressing the activities of labor unions, interest groups, etc.) had a positive relationship with US FDI, suggesting that US investors have primarily an efficiency-seeking motive for FDI. Many researchers have also established either a positive (Gani & Al-Abri, 2013; Li & Resnick, 2003; Pournarakis & Varsakelis, 2004) or

insignificant (Kingsley & Graham, 2017; Kucera, 2002) relationship between low civil liberties and FDI inflows in developing host countries. The positive effect of political liberties on FDI, on the other hand, yielded more substantial support (Asiedu & Lien, 2011; Guerin & Manzocchi, 2009; Harms & Ursprung, 2002; Lall et al., 2003; Pfister & Deffains, 2005).

Figure 2.22. Democracy proxies



In terms of reginal coverage, the importance of democracy as an FDI determinant was largely supported in the CEE region (Bellos & Subasat, 2012b; Ben Kheder & Zugravu, 2012; Ledyaeva et al., 2013), albeit the number of studies is small.

The relationship between democracy and FDI inflows in Africa has received most scholars' attention in the past decade. However, empirical evidence on the relationship between democracy and FDI remains unclear, as half of the studies found that democracy promotes FDI inflows in various subsets of African countries (Agbloyor, Abor, Adjasi, & Yawson, 2013; Cleeve, 2012; Fowowe, 2013; Gossel, 2018; Shan et al., 2018; Tunyi & Ntim, 2016), while the other half of studies could not establish a positive relationship (Cleeve, 2008; Cleeve, Debrah, & Yiheyis, 2015; Emudainohwo et al., 2018; Mhlanga, Blalock, & Christy, 2010; Naudé & Krugell, 2007; Osabutey & Okoro, 2015).

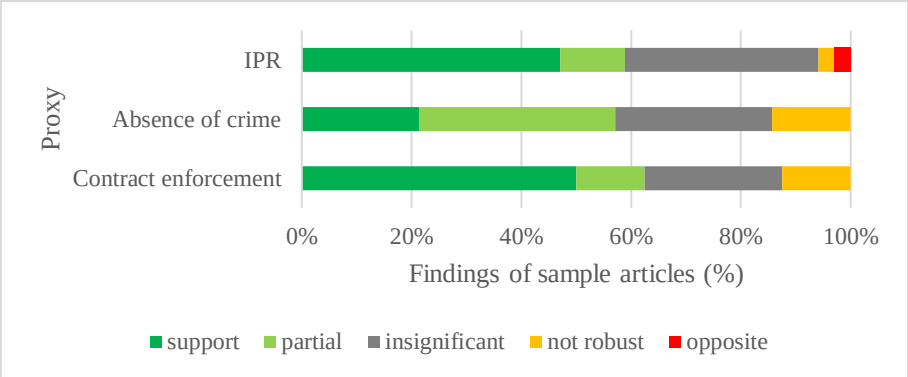
The impact of democracy on FDI is inconclusive in the MENA region. Mina (2009) and Al-Khouri (2015) found democracy insignificant for FDI inflows; Bannaga et al. (2013) and Gani & Al-Abri (2013) suggest that a lack of democracy encourages FDI; and Durmaz (2017) and Aziz (2018) argue that democratic institutions stimulate FDI. In Latin America, the relationship between democracy and US FDI is either insignificant (Blanco, 2012; Garcia-Fuentes et al., 2016) or only marginally positive (Lall et al., 2003; Staats & Biglaiser, 2012).

2.5.2.4. Rule of law (H18)

The rule of law hypothesis was supported by 56 out of 92 studies (61%). Most studies (52 out of 91) proxy the rule of law using combined indices borrowed from ICRG and WGI. These

indices broadly reflect the strength and impartiality of the legal system and of order concerning contract enforcement, property rights, theft, crime rates, etc. 30 studies employ intellectual property rights (IPR) protection indices drawn from a variety of sources (such as the Fraser Institute, Ginarte & Park (1997), the Heritage Foundation, and local host country statistics). The remaining studies measure the rule of law using crime or homicide rates in the host country or the legal enforcement of contracts. This review shows that the current empirical literature does not demonstrate significant variances in empirical findings when it comes to the selection of the law-and-order proxy (see Fig. 2.23 below).

Figure 2.23. Rule of law proxies



The effect of better legal protection of business transactions and market operations in the host country on FDI has received almost equal attention across developing regions (except for Asia). Clearly, empirical evidence shows that better IPR protection and contract enforcement are vital for FDI inflows in China (Awokuse & Yin, 2010; Belkhodja, Mohiuddin, & Karuranga, 2017; Du et al., 2008a, 2008b; Gao et al., 2018). Empirical evidence on the effect of law and order across regions provides mixed results where, on average, half of studies support H18 and the other half did not find any supporting evidence.

2.5.2.5. Regulatory quality (H19)

73 out of 106 studies (69%) of the empirical literature on FDI in developing countries found quality of investment and business regulations to increase FDI flows in the host developing country.

Numerous approaches have been employed by scholars to proxy for the quality of the regulatory environment in host countries. Broadly, host countries' regulations pertain to foreign capital regulations and domestic business environment regulations. Investment regulatory quality is often proxied by (1) openness to foreign capital flows and (2) investment climate. *Openness to*

capital flows encompasses the degree to which a nation's policies and regulations facilitate the entry and operations of foreign investors, allowing for the free movement of financial resources across borders. One of the most commonly used measures is the Chinn–Ito index on financial openness (Chinn & Ito, 2005, 2008), which captures the institutional restrictions that a host FDI country places on current account and capital account transactions. *Investment climate,* on the other hand, broadly measures the likelihood of expropriation or nationalization, exchange controls, default on government contracts, and repatriation restrictions imposed by the government on overseas fund transfers. Most studies employ the investment profile index from ICRG as a proxy for the host country's investment climate, which encompasses potential risks related to expropriation of assets, repatriation of profits, and payment delays.

Local business environment regulations are usually proxied by (1) economic freedom and (2) bureaucratic quality. *Economic freedom* proxies include the Fraser Institute's indicator that represents costs associated with bureaucracy, taxes, bribes, and other administrative burdens that may discourage MNEs from starting a business in the host country. Another frequently used proxy is the index of economic freedom from the Heritage Foundation that expresses the critical relationship between individuals and the government and evaluates the liberty of individuals to use their labor or finances without undue restraint as well as the possibility of government interference. Finally, *bureaucratic quality* captures the strength, competence, and autonomy of a country's bureaucratic system in effectively performing its duties without introducing drastic changes in policy or interruptions in government services. Most researchers use the bureaucracy quality index from the ICRG to proxy for the efficiency of local bureaucratic mechanisms.

Figure 2.24. Regulatory quality proxies

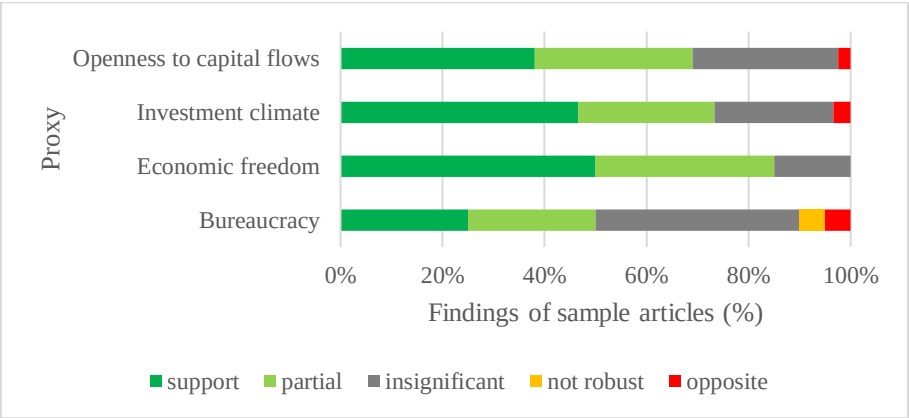


Fig. 2.24 depicts the general empirical results of the different regulatory quality proxies discussed above. Both investment and domestic business environment policies have a

stimulating effect on FDI inflows. Investment regulations and a favorable investment climate are equally effective in attracting FDI into the host country, whereas among the two proxies for domestic business policies, economic freedom is clearly more important to foreign investors than the quality of local bureaucratic procedures.

Empirical evidence shows that regulatory quality is a very important concern for foreign MNEs in the Asian region, especially when proxied by economic freedom in the host domestic market (Kang & Jiang, 2012; Ullah & Khan, 2017) and capital account openness for foreign investors (Kang & Jiang, 2012; Sin & Leung, 2001). In MENA countries, foreign investors are particularly sensitive to the host country's favorable investment profile (Al-Khouri, 2015; Aziz, 2018; Jabri & Brahim, 2015; Mina, 2009, 2012), but the absence of red tape also increases FDI (Aziz, 2018; Mina, 2009; Siddiqui & Iqbal, 2018). In Africa, FDI avoids countries with high expropriation risks (Asiedu, 2006; Cleeve, 2012; Emudainohwo et al., 2018; Naudé & Krugell, 2007) and countries with policies restricting entry and exit for foreign capital (Agbloyor et al., 2013; Brafu-Insaidoo & Biekpe, 2014; Sin & Leung, 2001).

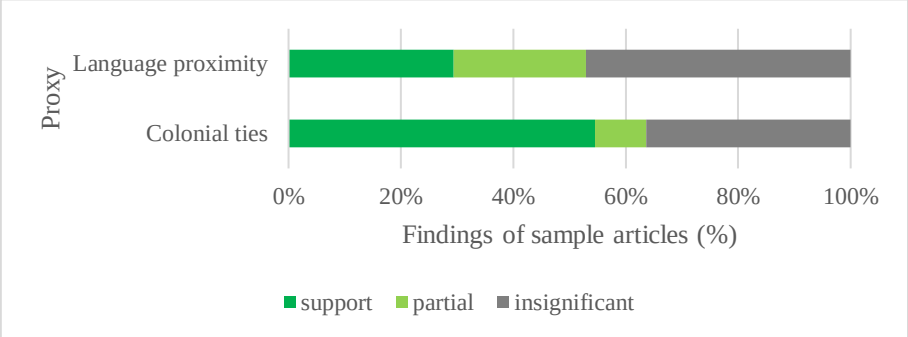
18 studies explored the relationship between regulatory quality and FDI inflows in the LAC region; however, only 8 studies found a significant positive effect of various measures of regulatory quality on foreign investment inflows. Most articles employ indicators of capital account openness and capital markets liberalization, which were found insignificant by the majority of them (Blanco, 2012; Eskeland & Harrison, 2003; Hecock & Jepsen, 2014; Staats & Biglaiser, 2012; Treviño, Daniels, & Arbeláez, 2002; Treviño et al., 2008). Likewise, bureaucratic quality is not seen as an obstacle to inflows of investment in LAC countries (Godinez & Liu, 2015; Sánchez-Martín et al., 2014). Finally, collected empirical evidence indicates that the quality of investment and business regulations do not hamper FDI inflows into Central and Eastern Europe. Results show that the absence of foreign entry restrictions has no statistically significant relationship with FDI inflows into the region (Bellos & Subasat, 2012b; Buch et al., 2005; Estrin & Uvalic, 2014; Lungu, Caraiani, & Dascălu, 2017), nor does the investment climate (Baccini et al., 2014; Grosse & Treviño, 2005).

2.5.2.6. Cultural distance (H20)

Finally, the negative effect of large cultural distance between home and host countries on FDI flows is supported by 22 out of 36 studies (61%). Cultural proximity between FDI origin and host countries is usually proxied by dummy variables representing common language or past colonial relationships. A handful of studies employ one or several scores of cultural dimensions

as identified by Hofstede (1983) or Kogut & Singh (1988) (see, for example, Kang & Jiang, 2012; Lucke & Eichler, 2016; Thomas & Grosse, 2001; Wei, 2005). As can be seen from Fig. 2.25, studies more frequently found the absence of past colonial ties between home and host countries exerting a negative impact on FDI inflows than the absence of commonly spoken language.

Figure 2.25. Cultural distance proxies



Among the six institutional determinants of FDI discussed in this review, the least attention was paid to cultural distance. Out of 8 studies exploring the relationship between cultural distance between investor countries and China, 5 papers found empirical support for the cultural distance hypothesis (Gao, 2003; Jean et al., 2011; Liu et al., 1997; Zhang, 2001; Zheng & Tan, 2011). These studies, however, mostly use FDI data from the 1990s, when the top 3 investors in China were Hong Kong, with approximately 50% of the total volume of inward FDI, followed by Japan and Taiwan (see, for example, Tseng & Zebregs (2002, p. 4)). Clearly, Asian economies favored such investment due to their close geographic proximity, cultural affinity, and existing social networks. The trend remains valid nowadays, as in 2021, according to data from China's National Bureau of Statistics[21], more than 75% of inward FDI into China originates in HKMT countries and Singapore.

Studies adopting a national perspective found cultural proximity to positively affect FDI inflows into LAC countries (Galan et al., 2007; Lall et al., 2003; Mariscal et al., 2012). However, cultural distance is not a significant determinant of FDI inflows in Mexico (Ashby & Ramos, 2013; Ramos & Ashby, 2013; Thomas & Grosse, 2001).

As can be seen from the above analysis of the literature studying FDI location choices in developing economies, empirical support for each of the 20 hypotheses varies significantly from one geographic region to another. The next Section summarizes and discusses the key

[21] http://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm

empirical findings of this SLR regarding 20 host country-specific FDI determinants across different regions and countries. It further raises important issues regarding data and methodological challenges empirical FDI literature faces and offers several promising research paths.

2.6. DISCUSSION AND FUTURE RESEARCH DIRECTIONS

This study offers an interdisciplinary systematic review of the empirical literature on FDI location choice determinants in developing countries, spanning more than four decades of research. The review provides an analysis of 416 quantitative studies and summarizes their findings for 20 selected FDI location choice hypotheses for developing countries in general and across various geographic regions.

The findings of this review suggest that our understanding of investment location drivers in developing countries remains limited despite the rich empirical literature produced by FDI location researchers. Due to serious data source limitations, geographic bias across studied host countries, methodological choices, and empirical challenges, the collected empirical evidence provides inconsistent results. The following paragraphs are dedicated to the discussion of the most important outcomes of this review and possible avenues for future research. First, I summarize the empirical findings on 20 FDI determinants and highlight the considerable heterogeneity of MNEs' motives across various geographic regions. Second, I explore data and methodological issues in the FDI location research stream and discuss ways to address them.

2.6.1. Empirical findings on FDI location determinants

General findings of this review presented in Fig. 2.8 in the previous Section show that the empirical literature on FDI location factors in developing countries largely supports the theoretically derived hypotheses on 20 host location-specific factors. Overall, 19 hypotheses were supported with one exception: the inflation hypothesis (H9), where less than half of studies that investigated the relationship between high inflation and FDI inflows established the expected significant negative correlation.

Top factors attracting FDI into host locations include agglomeration economies (H7), large domestic market (H1), developed infrastructure (H6), openness to trade of goods (H10), and quality of capital flows and local business regulations (H19). These hypotheses were supported by at least 70% of the studies in the sample collected for this review.

Other FDI determinants, such as SEZs (H13), fiscal incentives in the form of tax reductions and tax holidays (H12), as well as the market potential of surrounding locations (H3) have also received much support in this review. However, findings on the importance of SEZs for FDI inflows mostly concern China, whereas the number of studies that tested for H12 and H3 is

relatively small (18 and 27 studies, respectively), and these results should be interpreted with caution.

Likewise, the top factors deterring FDI from host locations include the large bilateral geographic distance between FDI origin and host (H14), heavy tax burden (H11), and political instability (H15). On the other hand, labor market conditions such as labor cost (H4) and human capital quality (H5), market growth (H2), as well as institutional factors including corruption (H16) and democratic institutions (H17) received the least support from the extant empirical literature on developing countries. These hypotheses were supported by no more than 60% of studies, with democracy (H17) gaining the least support of all.

The previous Section presented and discussed the considerable divergence in empirical findings on 20 FDI determinants across diverse geographic regions. The following paragraphs offer a summary of empirical findings derived from existing research on FDI location choice within various regions of the developing world. Fig. 26 illustrates the main outcomes of this review for each geographic region and compares the empirical support for 20 hypotheses across these regions.

In Fig. 2.26, the FDI determinants are categorized into three tiers based on the percentage of studies that have found support (either full or partial) for each hypothesis. Tier 1 encompasses FDI determinants that gained support from over 70% of studies, signifying the most crucial factors that either attract or deter foreign investors in the host countries. Tier 2 consists of determinants supported by more than half of the studies (but less than 70%), highlighting factors of considerable concern for foreign investors. Tier 3 comprises determinants supported by 50% or fewer empirical studies, signifying comparatively less important factors for encouraging or discouraging FDI in a given region. As such, Tier 3 determinants encompass hypotheses that lack support from prior empirical research across various geographic regions.

Finally, certain determinants have not received sufficient attention in prior empirical research, as they have been tested by a limited number of studies (3 or fewer) in the context of a given geographic region. Consequently, there is an inadequate foundation for assessing their impact on FDI in each region. However, this opens the potential avenues for future research to shed light on these unexplored determinants and their effects on FDI location in the respective regions.

Figure 2.26. Summary of findings in relation to main hypotheses by regions

Support for H1-20 (%)	Africa	MENA	CEE	LAC	Asia	China	Mixed
Tier 1 > 70%	H4. Labor cost (n=9) 89% H5. Human capital (n=17) 82% H10. Trade openness (n=28) 75% H1. Market size (n=31) 74% H8. Natural resources (n=21) 71%	H6. Infrastructure (n=7) 100% H19. Regulatory quality (n=11) 82% H10. Trade openness (n=19) 79% H7. Agglomeration (n=12) 75% H8. Natural resources (n=8) 75% H15. Political instability (n=8) 75% H2. Market growth (n=10) 70%	H14. Geographic distance (n=26) 92% H1. Market size (n=57) 88% H17. Democracy (n=4) 75% H7. Agglomeration (n=27) 74%		H19. Regulatory quality (n=6) 100% H10. Trade openness (n=19) 84% H14. Geographic distance (n=8) 75%	H16. Corruption (n=5) 100% H15. Political instability (n=9) 89% H6. Infrastructure (n=56) 84% H12. Tax incentives (n=6) 83% H13. SEZs (n=36) 83% H7. Agglomeration (n=49) 80% H1. Market size (n=68) 79% H10. Trade openness (n=23) 78% H3. Market potential (n=9) 78% H18. Rule of law (n=9) 78%	H14. Geographic distance (n=17) 88% H11. Tax burden (n=15) 80% H7. Agglomeration (n=48) 75% H16. Corruption (n=31) 74% H19. Regulatory quality (n=54) 72%
50% > Tier 2 > 70%	H19. Regulatory quality (n=11) 64% H7. Agglomeration (n=16) 63% H6. Infrastructure (n=23) 57% H2. Market growth (n=18) 56% H15. Political instability (n=13) 54% H17. Democracy (n=13) 54%	H1. Market size (n=16) 63% H5. Human capital (n=8) 63% H9. Inflation (n=9) 56% H18. Rule of law (n=11) 55%	H3. Market potential (n=9) 67% H10. Trade openness (n=24) 67% H4. Labor cost (n=38) 66% H11. Tax burden (n=16) 63% H6. Infrastructure (n=20) 60% H8. Natural resources (n=10) 60% H20. Cultural distance (n=5) 60% H15. Political instability (n=7) 57% H16. Corruption (n=17) 53%	H1. Market size (n=36) 67% H6. Infrastructure (n=11) 64% H8. Natural resources (n=5) 60% H4. Labor cost (n=9) 56% H7. Agglomeration (n=18) 56% H18. Rule of law (n=11) 55%	H7. Agglomeration (n=16) 69% H6. Infrastructure (n=20) 65% H20. Cultural distance (n=5) 60% H5. Human capital (n=14) 57% H9. Inflation (n=7) 57% H1. Market size (n=37) 57% H2. Market growth (n=16) 56%	H19. Regulatory quality (n=6) 67% H14. Geographic distance (n=14) 64% H5. Human capital (n=43) 63% H20. Cultural distance (n=8) 63% H2. Market growth (n=12) 58% H4. Labor cost (n=67) 55%	H18. Rule of law (n=37) 68% H10. Trade openness (n=69) 65% H1. Market size (n=102) 63% H17. Democracy (n=37) 62% H4. Labor cost (n=23) 61% H15. Political instability (n=46) 61% H2. Market growth (n=65) 60% H20. Cultural distance (n=15) 60% H6. Infrastructure (n=36) 58%
Tier 3 < 50%	H11. Tax burden (n=6) 50% H12. Tax incentives (n=4) 50% H18. Rule of law (n=13) 46% H9. Inflation (n=16) 44% H16. Corruption (n=16) 31%	H17. Democracy (n=6) 33% H16. Corruption (n=9) 22%	H18. Rule of law (n=13) 46% H9. Inflation (n=12) 42% H2. Market growth (n=15) 40% H5. Human capital (n=18) 33% H19. Regulatory quality (n=10) 30%	H11. Tax burden (n=6) 50% H20. Cultural distance (n=6) 50% H2. Market growth (n=11) 45% H5. Human capital (n=11) 45% H19. Regulatory quality (n=18) 44% H15. Political instability (n=12) 42% H9. Inflation (n=15) 40% H10. Trade openness (n=18) 39% H14. Geographic distance (n=6) 33% H16. Corruption (n=7) 29% H17. Democracy (n=7) 29%	H11. Tax burden (n=4) 50% H15. Political instability (n=6) 50% H4. Labor cost (n=22) 36%		H3. Market potential (n=4) 50% H8. Natural resources (n=20) 50% H5. Human capital (n=35) 46% H9. Inflation (n=35) 40% H12. Tax incentives (n=4) 25%
Insufficient data	H3. Market potential (n=1) H14. Geographic distance (n=1) H20. Cultural distance (n=1) H13. SEZs (n=0)	H4. Labor cost (n=3) H3. Market potential (n=2) H11. Tax burden (n=2) H14. Geographic distance (n=2) H13. SEZs (n=1) H20. Cultural distance (n=1) H12. Tax incentives (n=0)	H13. SEZs (n=3) H12. Tax incentives (n=1)	H12. Tax incentives (n=3) H3. Market potential (n=2) H13. SEZs (n=0)	H3. Market potential (n=3) H13. SEZs (n=3) H8. Natural resources (n=2) H18. Rule of law (n=2) H17. Democracy (n=1) H12. Tax incentives (n=0) H16. Corruption (n=0)	H8. Natural resources (n=1) H9. Inflation (n=1) H11. Tax burden (n=1) H17. Democracy (n=1)	H13. SEZs (n=0)

In Africa, FDI is essentially attracted by low labor costs, educated workforce, openness to trade, a large market size (especially when proxied by GDP or population size), and the availability of natural resources (fuel, in particular). Tier 2 factors that are also considered rather important for FDI location in Africa include the quality of investment regulations, agglomeration economies, infrastructure development, market growth rate, a stable political environment, and established democratic institutions. Finally, empirical findings provide rather weak support for the critical importance of institutional factors such as corruption and rule of law, the effectiveness of fiscal policies (tax burden and incentives), and inflation. Overall, results point to resource-seeking and, partly, market-seeking motives on the African continent.

Among the most crucial factors attracting FDI in Middle East and North African countries are the quality of infrastructure, good regulatory quality (in particular, a favorable investment climate in the host country), trade openness, agglomeration economies, natural resource abundance, political stability, and a high pace of economic growth. Additionally, foreign investors are quite sensitive to the size of the local market (proxied by GDP or population), quality of human capital, inflation rate, and rule of law. Extant research suggests that the absence of corruption and democracy in the host MENA countries is not vital for FDI. Similar to the African region, review outcomes suggest that the main motives for investment in MENA countries are primarily resource-seeking, and secondly, and market-seeking in nature.

In Central and Eastern Europe, investors are particularly prone to invest in countries located in close proximity to their home country, with large market size (proxied as GDP and/or GDP per capita), well-established democratic institutions, and agglomeration economies. Tier 2 determinants include the market potential of the surrounding countries, liberalized trade regimes, low labor costs and taxes, developed infrastructure, availability of natural resources, cultural proximity to the investor country, political instability in the host country, and the absence of corruption. Other factors that are relatively less important for FDI location in CEE countries include rule of law, inflation rates, market growth, quality of human capital, and regulatory quality.

Interestingly, many of the tier 3 determinants gained much less support in CEE countries than in other regions of the developing world. For example, quality of regulations and human capital have the least positive impact on FDI in CEE when compared to other geographic regions. Such results could be explained by the maturity and relative stability of most CEE countries, their EU

membership or proximity to developed European countries, traditionally well-educated workforce, and considerable achievements in developing and strengthening their institutional frameworks, including legal systems and regulatory bodies. Overall, this review shows that FDI inflows in the CEE region are dominated by economic factors, whereas institutional factors are not crucial for foreign investors. The motives for investment in CEE countries are largely market-seeking, although the importance of cheap (or rare) factor inputs also manifests efficiency-seeking motives to a certain extent.

Interestingly, this review shows that the level of empirical support for 20 hypotheses across Latin America and the Caribbean is considerably weaker than in other regions. Namely, there is not a single tier 1 level determinant identified from previous research, whereas tier 2 determinants include large market size (proxied as GDP, in particular), developed infrastructure, natural resource availability, low labor costs, agglomeration economies, and a strong rule of law. Among the 11 FDI determinants included in Tier 3, it is particularly interesting to note the limited positive relationship between openness to trade and FDI, thus supporting the tariff-jumping behavior of investment. As such, extant empirical evidence indicates a predominantly market-seeking behavior of foreign firms, and partly, resource-seeking considerations.

In Asia, the most important FDI location factors include the quality of the host country's regulations (specifically, regulations concerning openness to foreign capital inflows and economic freedom in the host country market), openness to trade, and geographic proximity to the investor country. Second-tier determinants in Asia comprise agglomeration economies, developed infrastructure, a shorter cultural distance to the FDI origin country, an educated workforce, low inflation rates, market size and growth. Finally, tax rates, political instability, and high labor costs are not the largest concerns for MNEs in their location decisions across Asian developing economies. These results suggest that FDI across Asian countries is predominantly efficiency-seeking and export-oriented. However, market-seeking investment is also attracted to Asia, given the importance of market factors for foreign investors together with huge population and raising income levels across many Asian countries.

In China, half of the FDI determinants examined in this review received a high level of support for FDI location choice. Such results may be because China is the most studied host country in terms of FDI location, as prior empirical literature produced nearly twice as many articles as for other

regions (except CEE). Findings suggest that China is the only region where the strong negative effect of corruption is clearly manifested. Likewise, the positive effect of tax incentives and the availability of various economic zones are found to be very important to MNEs when investing in China. Developed infrastructure, agglomeration economies, large market size (especially when proxied as GDP and/or GDP per capita), openness to trade, and the market potential of surrounding Chinese provinces are the most important economic host country factors for FDI location in China. In addition to corruption, other important institutional antecedents of FDI in China include political stability and a strong rule of law.

Remarkably, the labor cost hypothesis yields the least support from the extant literature, where only half of studies (37 out of 67, or 55%) found a deterring effect of high labor costs on FDI inflows in China. The findings, nonetheless, exhibit a notable bias towards studies conducted at the provincial level. A considerable majority of the studies conducted on the national level in China (9 out of 11) provide substantial support for the labor cost hypothesis and affirm its significance in the investment decision-making process concerning the choice among countries. However, this support significantly diminishes when examining the selection of a particular province within China. Overall, results indicate that foreign investors pursue both efficiency- and market-seeking motives in China.

Overall, the findings of this review highlight the considerable variation in the FDI location behavior of foreign firms across various geographic regions of the developing world. Except for several key determinants that are found to be largely important for most developing countries irrespective of their geographic location, such as agglomeration economies, market size, or infrastructure, it becomes evident that motives for FDI largely vary across regions. This brings up the issue of external validity, indicating that the FDI attractiveness of a specific region cannot be generalized to all developing countries, let alone developed countries, as earlier pointed out by Blonigen & Wang (2005).

Furthermore, this review shows that empirical studies pooling together developing countries irrespective of their size or geographical location may also provide limited value for understanding the nature of the FDI location phenomenon. The best illustration for this argument is the summary of the most important FDI determinants derived from 136 studies, where a variety of developing countries were combined into one sample without considering their geographic locations (refer to

the last column labeled "Mixed" in Fig. 2.26 above and to the detailed results presented earlier in Fig. 2.15). These crucial FDI location factors for the mixed country group are substantially different from those observed within the six geographic regions discussed above.

Geographic distance, tax burden, agglomeration, corruption, and regulatory quality hypotheses received the most support from studies using "geographically mixed" samples of developing countries. While the importance of economies of agglomeration is equally manifested across all regions, the negative relationship between corruption and FDI found support only in China, albeit with a small number of studies examining this factor. Similarly, the negative effect of the heavy tax burden on FDI inflows was supported only in the CEE region, and the relationship between the two remains seriously understudied in the context of other geographic regions.

Remarkably, the geographic distance hypothesis received the strongest support in studies using mixed country samples, similar to the results for CEE and Asian regions (including China). At the same time, it is surprising that scholars do not control for geographic distance when investigating FDI location choice in Africa and MENA regions, especially when there are no data problems (e.g., Cleeve et al., 2015; Elheddad, 2018; Mourao, 2018; Okafor et al., 2015; Shan et al., 2018). Finally, the quality of investment and business regulations hypothesis is also among the top five factors found vital for FDI inflows into a host developing country, which is also supported across African, MENA, and Asian countries (including China) but not in the CEE and LAC regions. Overall, FDI location determinants as well as firms' motives for investment in a particular region or country are intricately contextual and should not be generalized across historically, economically, geographically, and culturally distinct regions of the world.

2.6.2. Data challenges

First, in terms of unit of analysis, most studies (76%) in this review use country as the unit of analysis, while 98 studies explore the role of location determinants at the subnational level. Only two articles include analysis on both national and subnational levels simultaneously (Avioutskii & Tensaout, 2016; Hsiao & Shen, 2003). Evidently, determinants of FDI location may greatly vary between these two levels, as collected empirical evidence suggests that some location factors do not exert the same impact on FDI at the national and subnational levels. For example, the role of high labor costs as a factor hampering foreign investment in host developing countries varies significantly in China (and CEE countries as well) depending on the level of analysis. High labor

costs have been found to deter FDI inflows in China more often at the country level than at the provincial level, implying that foreign investors consider low labor costs an important condition for their overseas operations when choosing a country for their FDI. However, the significance of this factor diminishes on the provincial level as average wages within one country may not exhibit a very strong variation. Consequently, selecting the province with the lowest labor costs is no longer deemed crucial. Future research should acknowledge the differences between national and subnational location decisions by taking into account the relative importance of FDI host country characteristics at both levels of analysis.

Second, the significant bias in geographic coverage of the studied host countries distorts the available empirical findings in the literature. There is a relatively high diversity of host countries represented for macro-level studies, but on the subnational level, focus is strongly diverged towards large economies like China. The absence of empirical studies focusing on Brazil, the current world's 6th largest FDI recipient (UNCTAD, 2023), is particularly puzzling. Additionally, there is a limited number of studies on FDI location determinants at the subnational level in large economies like India, Russia, Mexico, Malaysia, and Indonesia, where substantial subnational variation can be expected. Little attention is dedicated to the drivers of FDI location choice in Africa in general and in fast-growing emerging African economies such as South Africa, Nigeria, Egypt, or Morocco. Moreover, subnational level studies are practically nonexistent in MENA countries with the exception of Türkiye (Deichmann et al., 2003; Yavan, 2010) and are entirely lacking in the African context. Therefore, future research should put more emphasis on understudied host countries and regions to further extend our knowledge and increase the validity of MNEs' location choice hypotheses. This, however, requires adequate data collection, which is especially difficult in the context of developing countries.

Aside from obvious source data problems, developing and emerging countries are highly diverse, not only across geographic regions but also within the same geographic region. For example, Hoskisson et al. (2000) argue that there are obvious differences between countries of the former Soviet Union and countries of the former socialist bloc, such as Poland or Hungary, as they have followed different paths to transition to market economies. Nonetheless, these countries are usually grouped by FDI location researchers into one Central and Eastern European region. Furthermore, one-third of the articles included in this review do not distinguish among different geographic

regions and instead combine heterogeneous developing countries from different continents into one sample. This practice can potentially distort the findings of such studies and should be taken into consideration while interpreting their results.

Third, this review shows that not many empirical studies on FDI determinants in developing countries provide proper analysis of FDI home countries, as more than 60% of sample studies rely on aggregate FDI data without distinguishing between FDI home countries. Just like the host countries' geographic bias, many scholars use data on FDI outflows from the US, Japan, and Western Europe, while only 10 papers utilize Chinese OFDI data. Although the phenomenon of OFDI from developing countries is not new and was documented even in early studies (Lall, 1983; Lecraw, 1977), the rapidly increasing pace and scale of investment originating from developing countries is truly remarkable. According to UNCTAD (2023), developing countries currently constitute 30% of global FDI outflows, amounting to $459 billion in 2022. China emerges as the largest investor, accounting for one-third of the total OFDI from developing countries.

Despite two decades of debates in the theoretical literature on the internationalization of emerging multinationals (EMNEs) and the introduction of new theoretical frameworks (Luo & Tung, 2007; Mathews, 2006; Meyer & Peng, 2016), which acknowledge that EMNEs and DMNEs have different characteristics, empirical research on FDI originating from developing and emerging countries remains scant. For example, the literature review conducted by Li et al. (2018) revealed that developed and emerging country MNEs are at different stages of internationalization, and future research should aim to explain the differences in the location behavior of DMNEs and EMNEs. Asmussen (2009) supports the notion that home country market characteristics play a crucial role in determining firms' geographical choices for their overseas investments. Rugman & Oh (2013) suggest that regional home country effects partially determine the geographic expansion of MNEs. Furthermore, the internationalization behavior and performance of EMNEs are affected by home country conditions (Cuervo-Cazurra, Ciravegna, Melgarejo, & Lopez, 2018), and this relationship varies greatly by firms' country of origin (Marano, Arregle, Hitt, Spadafora, & van Essen, 2016), making it a prospective area for research. Subsequent studies should provide more insights into the relative importance of FDI flows originating inside or outside a particular region or country.

Likewise, due to considerable data limitations, only a quarter of studies use sectoral FDI data, mostly for manufacturing industries. Rugman & Oh (2013) found that the observed variability of the geographic expansion of MNEs is explained not only by regional effects (23-83%) but to a great extent by industry effects as well (12-54%) and when combined, these region and industry effects account for 78-95% of the observed variance. Future research should further investigate the effects of industries (especially service industries that lack empirical evidence) on firms' location choice behavior.

Fourth, there are several dozens of FDI determinants proposed and tested in the literature, and every study provides its own set of variables. Even the most frequently used FDI determinants, such as market size or infrastructure development, are proxied differently by different authors. Moreover, researchers often use the same measurements to proxy different FDI determinants. For instance, population density or degree of urbanization is used as a proxy for infrastructure (Kucera, 2002), agglomeration (Ascani, Crescenzi, & Iammarino, 2016a; Wei, Liu, Parker, & Vaidya, 1999), and even potential market size (Cole et al., 2009). This complicates the operationalization of variables, and Jain et al. (2016) propose to use some common and standardized definitions of variables in order to limit methodological errors.

The biases and challenges discussed above are directly related to sampling and data collection procedures that could distort the existing accumulated knowledge on FDI location choice in developing countries. FDI location research in developing economies mostly relies on aggregated secondary data due to the difficulty and cost of collecting primary data. Secondary data collected by others for purposes other than FDI location research usually omits the variety of firm-, industry-, and location-specific factors necessary for a clearer understanding of MNEs' motivations for investment in a particular location. As suggested by Nielsen et al. (2017), instead of relying on readily available secondary data, future research should aim to purposefully collect data to test hypotheses, regardless of the difficulty and costs associated with such data collection. In the context of developing countries, such data collection practices could potentially mitigate the absence or inconsistency of data collected by international organizations (such as the WB, IMF, OECD, etc.) or provided by developing country governments.

2.6.3. Methodological challenges

First, probably due to numerous data limitation issues, only several empirical studies focus explicitly on studying the motives of FDI. Some firms may locate in a specific country (or in a region within this country) to gain access to particular resources or gain more market share, while others aim to expand their operations in proximate countries or a region, such as for export-platform motives (Ekholm et al., 2007; Ito, 2013). Such models usually incorporate the characteristics of the host location's neighboring countries directly into the model and require sophisticated spatial econometrics methods, such as in Blonigen et al. (2007), for example. Future research should aim at explicitly studying underlying motives for investment, as motives are associated with central aspects of the internationalization of MNEs and are useful elements for theory building in IB (Benito, 2015).

Second, FDI location research in developing countries encounters a significant methodological challenge related to reverse causality. The presence of large MNEs, especially from advanced rich countries, in the host developing economy may affect the local activities and behavior of domestic firms, as in the case of agglomeration economies, for example.

An even more complicated problem is simultaneous causation (also known as simultaneity), which happens when two variables are interrelated and influence each other simultaneously. It is, therefore, difficult to discern whether one variable is causing changes in the other variable, or if both variables are mutually influencing each other in a bidirectional manner. For example, Hill, Chae, & Park (2012) found that geographic factors of a country (such as physical distance from major markets, oil production, landlocked status, and land area) affect its ability to develop infrastructure (such as electricity production, telecommunication networks, port facilities, etc.) and, hence, its economic development and international integration. Simultaneity may also be the reason why it is difficult to test the impact of some determinants, like wages, on FDI. Wage levels in a location could be correlated with broad economic and institutional environmental factors, including those that researchers are unable to observe and account for, such as technological development or labor productivity.

Cross-sectional studies comprise 20% of the sample selected for this review and are particularly subject to reverse causality bias as such data is collected at a single point in time, making it difficult to determine cause-and-effect relationships accurately. Moreover, only one quarter of studies use

IV estimation techniques and similar methods to test for causality, and future research should opt for longitudinal data and employ advanced statistical methods with a focus on establishing causality to improve the reliability of empirical results.

Third, as this review shows, the FDI location phenomenon interests scholars from various disciplines, although economists and IB scholars have jointly produced the main body of empirical literature on this topic so far. However, FDI location literature lacks integration across disciplines despite the fact that these two streams can mutually advance our understanding of economic activity dispersed across different locations (Cantwell, 2009; Iammarino & McCann, 2013).

IB research is frequently criticized for its lack of focus on subnational location, as most IB scholars usually conceptualize location at the country level, thus largely overlooking subnational heterogeneity (Beugelsdijk, McCann, & Mudambi, 2010; Beugelsdijk & Mudambi, 2013; McCann & Mudambi, 2005). This criticism corroborates the results of this review. Empirical IB studies mostly focus at the country level (64 out of 81 studies, or nearly 80%), typically ignoring the subnational FDI location, with several exceptions like China (e.g., Blanc-Brude et al., 2014; Strange et al., 2009; Zhou et al., 2002), Poland (Avioutskii & Tensaout, 2016; Chidlow et al., 2009), and Mexico (Ramos & Ashby, 2013, 2017). Moreover, IB scholars often focus on factors internal to the firm and emphasize the role of firm-specific advantages, i.e., on the I (internalization) dimension of the OLI framework (Dunning, 1998, 2009). On the other hand, economists, economic geographers, and public sector researchers are mostly interested in the L (location) dimension of the OLI framework, where the geographic unit of analysis is not restricted to the country level. However, the economic literature tends to overlook the organizational aspects of MNEs, which are undoubtedly intertwined with their FDI location choices (McCann & Mudambi, 2005).

Overall, while both economics and IB researchers are interested in exploring FDI location choice and its determinants, their approaches largely differ in terms of level of analysis and theoretical perspectives. Future research should capitalize on the interdisciplinary nature of studying FDI and try to integrate firm resources, industry characteristics, and location-specific factors to enhance our understanding of the complex FDI phenomenon.

2.7. CONCLUSION

This systematic literature review provided a comprehensive analysis of 416 studies focusing on FDI location determinants in developing countries. At least several important contributions emerge from this systematic literature review of the focal questions, i.e., *where* do MNEs locate their investment and *why* do they invest in a given location in a developing country or region.

First, this review aggregates and synthesizes a large body of empirical literature on FDI location determinants in developing countries. To the best of my knowledge, this review is the only one focusing specifically on the context of developing countries and meticulously analyzing a substantial volume of academic journal articles published over the past four decades across numerous research fields. Second, this review investigates the existing empirical evidence on the relationship between 20 host country-specific factors and FDI inflows in developing countries with regards to the challenges posed by data availability, empirical and methodological approaches used in the FDI location literature. Third, this review compares the empirical findings from prior literature on 20 FDI determinants across six distinct geographic regions of the developing world and highlights substantial heterogeneity in FDI location determinants and motives for investment across these regions. Finally, this SLR offers several promising areas for future research, including data and methodological improvements concerning geographic coverage of FDI home and host countries, level of analysis, issues related to causality, and novel econometric methods, as well as the integration of different research streams dealing with the FDI location phenomenon.

In Africa, foreign investors clearly illustrate their resource-seeking behavior by locating their FDI in predominantly populous richer countries with cheap or abundant factor inputs (skilled or unskilled labor and natural resources) and openness to international trade. MENA countries attract foreign firms that look for abundant natural resources, good infrastructure, liberalized trade regimes, and low investment risks, again highlighting predominantly resource-seeking FDI. CEE countries attract foreign firms that look for large markets with high per capita incomes, accessibility to proximate countries or regions, agglomeration economies, as well as cheaper factor inputs and open trade policies. As such, FDI in CEE countries manifests both market- and efficiency-seeking motives. FDI in Latin America is mostly attracted by large markets, developed infrastructure, the availability of factor inputs, and a strong rule of law. These results, combined with relatively low support for the trade openness hypothesis, point to the tariff-jumping market-seeking behavior of

foreign firms in this region. FDI in the Asian region is mostly efficiency-seeking in nature and is export-oriented, as foreign MNEs prefer to invest in countries with liberalized trade regimes and favorable investment and business regulations. Finally, China serves a as magnet for both market-seeking and efficiency-seeking FDI, bolstering its renowned status as the “world's factory” while also benefiting from its huge economic size.

As a result, this study further advances our understanding concerning the importance that MNEs attribute to 20 surveyed host country-specific economic and institutional factors when making FDI location decisions in different geographic regions. This demonstrates serious external validity issues within the FDI location literature, as factors determining FDI do not uniformly influence MNEs' decisions across countries and regions. In essence, this review calls for caution against overly broad interpretations of the literature in this field, as findings obtained for one geographic region or country cannot be indiscriminately generalized to other regions or countries. Therefore, careful consideration and contextual analysis is imperative when drawing conclusions or making policy recommendations based on existing research.

This SLR has important implications for research, policymakers in developing countries, and MNEs. First, this review identified key host country-specific factors that influence FDI inflows in developing countries and provided insights into regional variations in FDI determinants and firms’ motives. FDI location researchers may find valuable gaps identified in the literature and make use of the numerous research paths offered in this study. Second, the findings of this review have important policy implications for developing countries’ governments. Scholars largely agree that foreign investment helps promote economic growth in developing economies (Borensztein et al., 1998; Dunning & Lundan, 2008a; Hansen & Rand, 2006; Iamsiraroj, 2016; Luo, Xue, & Han, 2010). As stated by the United Nations (2003, p. 9), “a central challenge, therefore, is to create the necessary domestic and international conditions to facilitate direct investment flows”. As such, this review provides a comprehensive list of the most important factors encouraging and deterring FDI inflows across six heterogeneous regions of the developing world, which may be helpful to policymakers who are facing difficulties attracting foreign investment into their countries. If governments of developing countries understand more clearly the antecedents for MNEs’ investment in their countries, they will be able to tailor their policies and FDI promotion strategies to increase FDI inflows into their economies. Finally, MNEs may also find the outcomes of this

review useful for making informed decisions about entering new developing markets. Foreign firms can prioritize locations where host country-specific factors are favorable, align with their business goals, and mitigate risks associated with their long-term FDI commitment in developing countries.

While this research offers valuable insights, it is important to acknowledge and address several limitations that might impact the scope and interpretation of the findings. First, this study focuses only on a specific set of host country-specific FDI location determinants without considering other important factors such as country of origin, industry-, and firm-specific characteristics. Firm characteristics capture firm-specific advantages and their interactions with host country-specific advantages co-determine FDI location choices (Bu & Wagner, 2016). Therefore, empirical models that do not include unobservable firm-specific effects are probably not correctly specified and lead to incorrect inferences. Moreover, nearly all studies, included in the sample of this SLR, use aggregate data, which may hide heterogenous patterns at both firm- and industry-levels which can be very different.

Second, as in many other literature reviews, it is nearly impossible to account for all relevant studies. Although this review includes a substantially larger number of studies compared to other similar reviews (e.g., Nielsen et al. (2017)) and is not limited to top management and IB journals (e.g., Kim & Aguilera (2016)), it might still suffer from publication bias. Moreover, many academic journals focusing on developing and emerging economies are not included in the Harzing Journal Quality List, such as *Communist and Post-Communist Studies*, *International Journal of Emerging Markets*, and others publishing relevant empirical articles.

Third, a systematic literature review methodology has numerous flaws, especially in terms of comprehensive synthesis of the findings due to the high heterogeneity in terms of methods, data sampling, and timeframes, among others. Future research may employ alternative methods, such as meta-analysis, to properly aggregate the available empirical evidence and make meaningful comparisons in FDI location across different geographic regions. Finally, this review was conducted and written by a single author and may be subject to personal biases, coding errors, limited expertise, and reduced objectivity.

In conclusion, this review demonstrates that despite the extensive empirical literature on FDI location choices in developing countries, there are many areas for improvement and refinement

concerning geographic focus, data collection, estimation methods, and theoretical developments. This review synthesized the most important FDI location determinants in developing countries, highlighted substantial heterogeneity in location motives of foreign firms across various geographic regions, and outlined suggestions for future research. I hope that this study will motivate new research to advance our understanding of FDI location phenomenon and factors influencing firms' overseas investment choices.

LIST OF SAMPLE ARTICLES

Database (332 studies)

Abbas & Klemm, 2013; Abbott, Cushman, & De Vita, 2012; Adam & Filippaios, 2007; Adams, Neumann, & Tabrizy, 2018; Ahlquist, 2006; Aisbett, Busse, & Nunnenkamp, 2018; Akhtaruzzaman, Berg, & Hajzler, 2017; Al-Khouri, 2015; Al-Shammari et al., 2016; Altomonte, 2007; Ambaw & Sim, 2018; Amiti & Smarzynska Javorcik, 2008; Ang, 2008; Araujo, Lastauskas, & Papageorgiou, 2017; Ascani et al., 2016a, 2016b; Ashby & Ramos, 2013; Asiedu, 2002, 2006; Asiedu & Lien, 2011; Avioutskii & Tensaout, 2016; Awokuse & Yin, 2010; Azémar, Desbordes, & Mucchielli, 2007; Aziz, 2018; Baccini et al., 2014; Becker, Ekholm, Jäckle, & Muendler, 2005; Bekhet & Al-Smadi, 2015; Belkhodja et al., 2017; Bellak & Leibrecht, 2009; Bellak et al., 2009; Bellos & Subasat, 2012a; Ben Kheder & Zugravu, 2012; Benáček, Lenihan, Andreosso-O'Callaghan, Michalíková, & Kan, 2014; Bengoa & Sanchez-Robles, 2003; Bessonova & Gonchar, 2015; Bevan & Estrin, 2004; Bevan, Estrin, & Meyer, 2004; Bilgili, Tülüce, & Doğan, 2012; Bitzenis & Vlachos, 2013; Blanc-Brude et al., 2014; Blonigen et al., 2007; Bokpin et al., 2015; Boudier-Bensebaa, 2005; Brafu-Insaidoo & Biekpe, 2014; Braun, 2006; Brenton et al., 1999; Buch et al., 2005; Burger et al., 2016; Busse, 2004; Busse & Hefeker, 2007; Busse, Nunnenkamp, & Spatareanu, 2011; Büthe & Milner, 2008; Cassidy & Andreosso-O'Callaghan, 2006; Chadee, Qiu, & Rose, 2003; Chan, Hou, Li, & Mountain, 2014; Chang et al., 2014; Chen, 1996; Chen & Yeh, 2012; Chen et al., 2006; Chen et al., 2018; Chen, 2009; Chen, Gao, Ge, & Li, 2015; Cheng & Kwan, 2000; Cheng, 2006, 2008; Cheng & Stough, 2006; Cheung et al., 2012; Cheung & Qian, 2009; Chidlow et al., 2009; Clausing & Dorobantu, 2005; Cleeve, 2012; Cleeve et al., 2015; Clougherty & Grajek, 2008; Cole et al., 2009; Coughlin & Segev, 2000; Cuervo-Cazurra, 2008; Cushman & De Vita, 2017; Cuyvers et al., 2011; Dam & Scholtens, 2008; Dam, Scholtens, & Sterken, 2007; De Vita & Kyaw, 2008; Dean et al., 2009; Debaere et al., 2010; Dees, 1998;

Deichmann et al., 2003; Demekas et al., 2007; Demir & Hu, 2016; Devadason & Subramaniam, 2016; Disdier & Mayer, 2004; Dixon & Haslam, 2016; Donaubauer et al., 2016; Dong & Fan, 2017; Driffield, Jones, & Crotty, 2013; Du et al., 2008b, 2008a, 2012; Durmaz, 2017; Dutta & Osei-Yeboah, 2013; Edmiston et al., 2003; Elheddad, 2018; Elliott & Shimamoto, 2008; Emudainohwo et al., 2018; Eskeland & Harrison, 2003; Estrin & Uvalic, 2014; Evrensel & Kutan, 2007; Fatehi-Sedeh & Hossein Safizadeh, 1988, 1989; Fedderke & Romm, 2006; Fukumi & Nishijima, 2010; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, & Siu, 2004; Galan et al., 2007; Gani & Al-Abri, 2013; Gao et al., 2018; Gao, 2003, 2005; Garcia-Fuentes et al., 2016; García-Herrero & Santabárbara, 2007; Garibaldi, Mora, Sahay, & Zettelmeyer, 2001; Garriga & Phillips, 2014; Gastanaga, Nugent, & Pashamova, 1998; Gauselmann & Marek, 2012; Giner & Giner, 2004; Globerman & Shapiro, 2002, 2003; Godinez & Liu, 2015; Gonchar & Marek, 2014; Goodspeed, Martinez-Vazquez, & Zhang, 2011; Gossel, 2018; Gottschalk & Hall, 2008; Greenaway, Sapsford, & Pfaffenzeller, 2007; Grosse & Treviño, 2005; Guerin, 2006; Guerin & Manzocchi, 2009; Hanh, 2011; Harms & Ursprung, 2002; Hayakawa et al., 2013; Hayakawa & Tsubota, 2014; He, 2002, 2003; He et al., 2011; He & Sun, 2014; He & Guisinger, 1993; Head & Ries, 1996; Hecht, 2017; Hecock & Jepsen, 2014; Helmy, 2013; Hilber & Voicu, 2010; Hong, 2007b, 2007a, 2009; Hong & Chin, 2007; Horn & Cross, 2016; Hsiao & Shen, 2003; Hsiao & Hsiao, 2004; Huang & Cantwell, 2017; Hyun & Kim, 2010; Ismail & Yussof, 2003; Iwasaki & Suganuma, 2009; Jabri, Abid, & Guesmi, 2013; Jabri & Brahim, 2015; Janicki & Wunnava, 2004; Beata S. Javorcik & Wei, 2009; Jean et al., 2011; Jensen, 2002; Jiménez et al., 2014; Jones, Serwicka, & Wren, 2018; Jordaan, 2008; Kang & Lee, 2007; Kang & Jiang, 2012; Kaur et al., 2016; Kayalvizhi & Thenmozhi, 2018; Khadaroo & Seetanah, 2009, 2010; Khamfula, 2007; Khan & Suh, 2006; Kheng, Sun, & Anwar, 2017; Khoury & Peng, 2011; Kinda, 2010, 2013; Kingsley & Graham, 2017; Kinuthia & Murshed, 2015; Kirkpatrick & Shimamoto, 2008; Klein, 2018; Ko, 2007; Kok & Acikgoz Ersoy, 2009; Kolstad & Wiig, 2012; Kucera, 2002; Kudina & Pitelis, 2014; Kulchina, 2014; Kumar, 1996, 2001; Kwon, 1999; Lall et al., 2003; Lankes & Venables, 1996; Lay & Nolte, 2018; Lederman et al., 2013; Ledyaeva, 2009; Ledyaeva et al., 2013; Lee et al., 2018; Lei & Chen, 2011; Li & Resnick, 2003; Li & Park, 2006; Li & Hu, 2002; Liang, 2015; Lien & Filatotchev, 2015; Lin, 2010; Lin & Sun, 2016; Lin & Kwan, 2011; Lin, 2015; Liu et al., 2014; Love & Lage-Hidalgo, 2000; Lucas, 1993; Lucke & Eichler, 2016; Lungu et al., 2017; Luo, Luo, & Liu, 2008; Mai, 2002; Majocchi & Strange, 2007a, 2007b; Maniam & Chatterjee, 1998; Mariscal et al., 2012; Mathur & Singh, 2013;

McDonald et al., 2018; Meyer & Nguyen, 2005; Mhlanga et al., 2010; Milner, Reed, & Talerngsri, 2004; Mina, 2007, 2009, 2012; Moon, 2015; Moosa, 2009; Mourao, 2018; Mucchielli & Yu, 2011; Mudambi, 1995; Mudambi, Navarra, & Delios, 2013; Mukim & Nunnenkamp, 2012; Naudé & Krugell, 2007; Neumayer, 2007; Neumayer & Spess, 2005; Ng & Tuan, 2003; Nigh, 1986; Nigh & Schollhammer, 1987; Noorbakhsh et al., 2001; Nunnenkamp & Mukim, 2012; Ojede & Kishan, 2017; Okafor et al., 2015; Osabutey & Okoro, 2015; Outreville, 2008; Pan, 2003; Peng & Beamish, 2008; Pfister & Deffains, 2005; Pusterla & Resmini, 2007; Rachdi, Brahim, & Guesmi, 2016; Ramírez-Alesón & Fleta-Asín, 2016; Ramirez, 2006; Ramos & Ashby, 2017; Rasciute & Pentecost, 2010; Rasciute et al., 2014, 2015; Resmini, 2000; Riedl, 2010; Roberts, Thompson, & Mikolajczyk, 2008; Saini & Singhania, 2018; Salike, 2016; Sánchez-Martín et al., 2014; Schäffler et al., 2017; Schneider & Frey, 1985; Schollhammer & Nigh, 1986; Deepak Sethi, Judge, & Sun, 2011; Seyoum, 2009; Seyoum & Manyak, 2009; Shah & Slemrod, 1991; Shah et al., 2016; Shan et al., 2018; Sharma et al., 2014; Siddiqui & Iqbal, 2018; Šimelytė & Liučvaitienė, 2012; Smarzynska Javorcik, 2004; Smith-Hillman & Omar, 2005; Soumaré & Tchana Tchana, 2015; Staats & Biglaiser, 2012; Stein & Daude, 2007; Strange et al., 2009; Sun, Tong, & Yu, 2002; Sun & Bennett, 1988; Swamy & Narayanamurthy, 2018; Tan & Meyer, 2011; Tang et al., 2014; te Velde & Bezemer, 2006; Teulon & Guesmi, 2013; Thomas & Grosse, 2001; Treviño & Mixon Jr., 2004; Treviño et al., 2008; Tsai, 1991; Tuan & Ng, 2003, 2004; Tung & Cho, 2000, 2001; Tunyi & Ntim, 2016; Ullah & Khan, 2017; Urata & Kawai, 2000; Vasileva, 2018; Vo, 2018; Voyer & Beamish, 2004; Waldkirch, 2011; Wang et al., 2009; Wang et al., 2012; Wang & Swain, 1995, 1997; Wattanadumrong et al., 2010, 2014; Wei, 2005; Wei et al., 1999; Wheeler & Mody, 1992; Wint & Williams, 2002; Witte et al., 2017; Wood et al., 2014; Woodward & Rolfe, 1993; Wu, 1999, 2000; Wu & Strange, 2000; Xaypanya, Rangkakulnuwat, & Paweenawat, 2015; Xing, 2006; Yavan, 2010; Zeneli, 2016; Zhang, 2000, 2001, 2005; Zheng, 2009, 2013; Zheng & Tan, 2011; Zhou et al., 2002.

Snowballing (84 studies)

Agbloyor et al., 2013; Agodo, 1978; Allee & Peinhardt, 2011; Altomonte, 2000; Amaro & Miles, 2006; Arbeláez & Ruiz, 2013; Asiedu & Lien, 2004; Bandelj, 2010; Bannaga et al., 2013; Bekana, 2016; Bellos & Subasat, 2012b; Biglaiser & DeRouen Jr, 2007; Blaise, 2005; Blanco, 2012; Blanton & Blanton, 2006, 2009; Broadman & Sun, 1997; Brock, 1998; Busse, Königer, & Nunnenkamp, 2010; Campos & Nugent, 2003; Carstensen & Toubal, 2004; Cieślik, 2005; Cleeve,

2008; Colen et al., 2016; Dua & Garg, 2015; Erdal & Tatoglu, 2002; Falvey & Foster-McGregor, 2018; Fowowe, 2013; Fung et al., 2003; Gani, 2007; García-Canal & Guillén, 2008; Gordon, Loeb, & Zhu, 2012; Guimaraes et al., 1998; Haaland, Wooton, & Faggio, 2002; Hajilee & Al Nasser, 2015; Hakro & Ghumro, 2011; Hanson II, 1996; Harding & Javorcik, 2011; Harms & Lutz, 2006; Hecock & Jepsen, 2013; Jakobsen, 2006; Jakobsen & De Soysa, 2006; Jun & Singh, 1996; Kahai, 2004; Kapuria-Foreman, 2007; Kerner, 2009; Kimura & Todo, 2010; Kiyota & Urata, 2004; Klemm & Van Parys, 2012; Kobrin, 1976; Kuzmina et al., 2014; Lansbury et al., 1996; Lee & Mansfield, 1996; Leibrecht & Scharler, 2009; Levis, 1979; Li & Vashchilko, 2010; Lim, 1983; Liu et al., 1997; Méon & Sekkat, 2004; Morisset, 2000; Naanwaab & Diarrassouba, 2016; Nigh, 1985; Nigh et al., 1986; Nunnenkamp & Spatz, 2002; Nwaogu & Ryan, 2014; Okafor, 2015; Overesch & Wamser, 2010; Pournarakis & Varsakelis, 2004; Ramos & Ashby, 2013; Roberts & Almahmood, 2009; Root & Ahmed, 1978, 1979; Selaya & Sunesen, 2012; Sharma, Nayagam, & Chung, 2012; Sin & Leung, 2001; Suliman, Elmawazini, & Shariff, 2015; Tanaka & Tsubota, 2013; Treviño et al., 2002; Tuman & Emmert, 1999; Van Parys & James, 2010; Wellhausen, 2015; Xing & Wan, 2006; Zhao, 2003; Zhao & Zhu, 2000.

APPENDIX

Appendix 1. Databases description

Web of Science Core Collection[22]

Thomson Reuter's Web of Science Core Collection, launched in 1997, is the largest citation database available, with over 1 billion cited reference connections indexed from high quality peer reviewed journals, books, and proceedings. With complete citation coverage from 1900 to the present, Web of Science Core Collection indexes 100% of available cited references for all items included in the index.

With more than 100 million records from 33,000 journals, this unique collection of resources provides researchers with the breadth they need to be comprehensive without sacrificing the precision they need to understand the nuances of the field. The coverage of social science, arts, and humanities is unmatched. Web of Science indexes all types of research output, not just publications. Comprehensive and complete, Web of Science Core Collection covers over 5,200 social science publications across 55 disciplines dating back to 1900.

Scopus[23]

Elsevier's Scopus, launched in 2004, is another large abstract and citation database of peer-reviewed literature. Elsevier's Scopus is considered an alternative to the Web of Science and is used in many international rankings of universities, such as the Times Higher Education ranking (Harzing & Alakangas, 2016). With 22,800 titles (including over 21,950 peer-reviewed journals) from more than 5,000 international publishers[24], Scopus delivers the most comprehensive view of the world's research output in the fields of science, technology, medicine, social science, arts, and humanities.

[22] https://clarivate.com/wp-content/uploads/2017/05/d6b7faae-3cc2-4186-8985-a6ecc8cce1ee_Crv_WoS_Upsell_Factbook_A4_FA_LR_edits.pdf Accessed on April 23, 2019

[23] https://www.elsevier.com/__data/assets/pdf_file/0007/69451/0597-Scopus-Content-Coverage-Guide-US-LETTER-v4-HI-singles-no-ticks.pdf Accessed on April 23, 2019

[24] As on August 2017

Scopus currently has over 69 million core records, with the oldest record dating back to 1788. Derived from those 69 core records indexed are 1.4 billion cited references. Each year, approximately 3 million new items (5,500 each day) are added to the database. As of August 2017, Scopus had added over 195 million pre-1996 cited references to 11.5 million articles. The journals' content is obtained from the archives of 60 major publishers. These major publishers include Springer Nature, Wiley Blackwell, Taylor & Francis, IEEE, American Physical Science, and Elsevier.

Scopus coverage focuses on primary document types from serial publications. Primary means that the author is identical to the researcher in charge of the presented findings. Scopus does not include secondary document types, where the author is not identical to the person behind the presented research, such as obituaries and book reviews.

Appendix 2. List of keywords

- FDI, foreign direct investment, foreign investment, inward FDI, inward foreign direct investment (5);
- Location, host country, geography (3);
- Determinant (1);
- Internationalization, international expansion, international diversification, motive, market selection, country selection (6);
- Multinational, MNE (2);
- Institutions, agglomeration, clustering, empirical, literature, review, survey (7);
- Emerging [country/market/economy], developing [country/market/economy]; transition (3);
- Economic, political, culture, policy (4);
- Taxes, tariffs, infrastructure, natural resources, human resources, human capital, labor, legal, law, bureaucracy, corruption, market potential, market size, market growth (14).

Appendix 3. Search protocols

Table A3a. Web of Science search protocol

Search string no	Search strings: Refined by: DOCUMENT TYPES: (ARTICLE OR REVIEW) AND LANGUAGES: (ENGLISH)	Scope	Date range	Date of search	No of entries
1	TS=("inward foreign direct investment"[25] OR "inward fdi")	Title, abstract, keywords	1975-2018	12-Apr-19	442
2	TS="foreign investment" AND TS=(location OR "host countr*[26]")	Title, abstract, keywords	1975-2018	12-Apr-19	324
3	TS=(fdi OR "foreign direct investment") AND TI=location	Title, abstract, keywords	1975-2018	12-Apr-19	402
4	TS=(fdi OR "foreign direct investment") AND TI=determinant	Title, abstract, keywords	1975-2018	12-Apr-19	454
5	TI=location AND TI=determinant	Title	1975-2018	12-Apr-19	201
6	TS=(fdi OR "foreign direct investment") AND TS=location AND TS=determinant	Title, abstract, keywords	1975-2018	12-Apr-19	652
7	TS=(fdi OR "foreign direct investment") AND TS=geograph*	Title, abstract, keywords	1975-2018	12-Apr-19	882
8	TI=(fdi OR "foreign direct investment") AND TI=(multinational OR mne)	Title	1975-2018	12-Apr-19	84
9	TI=location AND TI=(multinational OR mne)	Title	1975-2018	12-Apr-19	119

[25] To search exact phrases [Example: **"** strict dietary restrictions **"**]

[26] To retrieve words with variant zero to many characters [Example: **disease*** will include diseases, diseased, diseasing, diseasedness etc.]

10	TS=(fdi OR "foreign direct investment") AND TS=motiv*	Title, abstract, keywords	1975-2018	12-Apr-19	559
11	TS=internationali?ation[27] AND TS=motiv*	Title, abstract, keywords	1975-2018	12-Apr-19	496
12	TS=internationali?ation AND TS=location	Title, abstract, keywords	1975-2018	12-Apr-19	616
13	TS=("market selection" OR "country selection")	Title, abstract, keywords	1975-2018	12-Apr-19	363
14	TI=("international expansion" OR "international diversification")	Title	1975-2018	12-Apr-19	268
15	TS=internationali?ation AND TI=(emerging OR developing OR transition)	Title, abstract, keywords	1975-2018	12-Apr-19	507
16	TS=(fdi OR "foreign direct investment") AND TI=("emerging countr*" OR "emerging market*" OR "emerging econom*")	Title, abstract, keywords	1975-2018	12-Apr-19	319
17	TS=(fdi OR "foreign direct investment") AND TI=("developing countr*" OR "developing market*" OR "developing econom*")	Title, abstract, keywords	1975-2018	12-Apr-19	302
18	TS=(fdi OR "foreign direct investment") AND TI=transition	Title, abstract, keywords	1975-2018	12-Apr-19	170
19	TI=(fdi OR "foreign direct investment") AND TI=empiric*	Title	1975-2018	12-Apr-19	165
20	TS=(fdi OR "foreign direct investment") AND TI=institution*	Title, abstract, keywords	1975-2018	12-Apr-19	473
21	TS=(fdi OR "foreign direct investment") AND TI=(agglomeration OR cluster*)	Title, abstract, keywords	1975-2018	12-Apr-19	179
22	TS=(fdi OR "foreign direct investment") AND TI=(review OR survey OR literature)	Title, abstract, keywords	1975-2018	12-Apr-19	186

[27] To retrieve words with the replacement of 1 character [Example: **wom?n** includes women, woman]

23	TI=(fdi OR "foreign direct investment") AND TI=(economic* OR politic* OR cultur* OR polic*)	Title	1975-2018	12-Apr-19	567
24	TI=(fdi OR "foreign direct investment") AND TI=(tax OR tariff)	Title	1975-2018	12-Apr-19	94
25	TI=(fdi OR "foreign direct investment") AND TI=infrastructure	Title	1975-2018	12-Apr-19	19
26	TI=(fdi OR "foreign direct investment") AND TI=("natural resourc*" OR "human resourc*" OR "human capital" OR labo$r[28])	Title	1975-2018	12-Apr-19	111
27	TI=(fdi OR "foreign direct investment") AND TI=(legal OR law OR bureaucra* OR corruption)	Title	1975-2018	12-Apr-19	68
28	TI=(fdi OR "foreign direct investment") AND TI=("market potential" OR "market size" OR "market growth")	Title	1975-2018	12-Apr-19	8
	Total number of articles				**9,030**

[28] Retrieves zero or one character [Example: **disease$** includes only diseased, diseases]

Table A3b. Scopus search protocol

Search string no	Search strings: (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (LANGUAGE , "English"))	Scope	Date range	Date of search	No of entries
1	(TITLE-ABS-KEY ("inward foreign direct investment") OR TITLE-ABS-KEY ("inward fdi"))	Title, abstract, keywords	1950-2018	12-Apr-19	618
2	(TITLE-ABS-KEY ("foreign investment") AND TITLE-ABS-KEY (location) OR TITLE-ABS-KEY ("host countr*"))	Title, abstract, keywords	1950-2018	12-Apr-19	597
3	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE (location))	Title, abstract, keywords	1950-2018	12-Apr-19	368
4	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE (determinant))	Title, abstract, keywords	1950-2018	12-Apr-19	633
5	(TITLE (location) AND TITLE (determinant))	Title	1950-2018	12-Apr-19	253
6	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE-ABS-KEY (location) AND TITLE-ABS-KEY (determinant))	Title, abstract, keywords	1950-2018	12-Apr-19	355
7	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE-ABS-KEY (geograph*))	Title, abstract, keywords	1950-2018	12-Apr-19	800
8	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE (multinational) OR TITLE (mne))	Title	1950-2018	12-Apr-19	110
9	(TITLE (location) AND TITLE (multinational) OR TITLE (mne))	Title	1950-2018	12-Apr-19	147
10	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE-ABS-KEY (motiv*))	Title, abstract, keywords	1950-2018	12-Apr-19	694

11	(TITLE-ABS-KEY (internationali?ation) AND TITLE-ABS-KEY (motiv*))	Title, abstract, keywords	1950-2018	12-Apr-19	608
12	(TITLE-ABS-KEY (internationali?ation) AND TITLE-ABS-KEY (location))	Title, abstract, keywords	1950-2018	12-Apr-19	525
13	(TITLE-ABS-KEY ("market selection") OR TITLE-ABS-KEY ("country selection"))	Title, abstract, keywords	1950-2018	12-Apr-19	497
14	(TITLE ("international expansion") OR TITLE ("international diversification"))	Title	1950-2018	12-Apr-19	380
15	(TITLE-ABS-KEY (internationali?ation) AND TITLE (emerging) OR TITLE (developing) OR TITLE (transition))	Title, abstract, keywords	1950-2018	12-Apr-19	570
16	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE ("emerging countr*") OR TITLE ("emerging market*") OR TITLE ("emerging econom*"))	Title, abstract, keywords	1950-2018	12-Apr-19	290
17	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE ("developing countr*") OR TITLE ("developing market*") OR TITLE ("developing econom*"))	Title, abstract, keywords	1950-2018	12-Apr-19	411
18	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE (transition))	Title, abstract, keywords	1950-2018	12-Apr-19	213
19	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE (empiric*))	Title	1950-2018	12-Apr-19	263
20	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE (institution*))	Title, abstract, keywords	1950-2018	12-Apr-19	402
21	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE (agglomeration) OR TITLE (cluster*))	Title, abstract, keywords	1950-2018	12-Apr-19	153

22	(TITLE-ABS-KEY (fdi) OR TITLE-ABS-KEY ("foreign direct investment") AND TITLE (review) OR TITLE (survey) OR TITLE (literature))	Title, abstract, keywords	1950-2018	12-Apr-19	306
23	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE (economic*) OR TITLE (politic*) OR TITLE (cultur*) OR TITLE (polic*))	Title	1950-2018	12-Apr-19	934
24	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE (tax OR tariff))	Title	1950-2018	12-Apr-19	118
25	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE (infrastructure))	Title	1950-2018	12-Apr-19	27
26	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE ("natural resourc*") OR TITLE ("human resourc*") OR TITLE ("human capital") OR TITLE (labo$r))	Title	1950-2018	12-Apr-19	78
27	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE (legal) OR TITLE (law) OR TITLE (bureaucra*) OR TITLE (corruption))	Title	1950-2018	12-Apr-19	95
28	(TITLE (fdi) OR TITLE ("foreign direct investment") AND TITLE ("market potential") OR TITLE ("market size") OR TITLE ("market growth"))	Title	1950-2018	12-Apr-19	9
	Total number of articles				**10,454**

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3. THIRD CHAPTER: EXPLORING THE IMPORTANCE OF LOCATION FACTORS FOR FDI ATTRACTIVENESS IN DEVELOPING COUNTRIES – A META ANALYSIS

EXPLORING THE IMPORTANCE OF LOCATION FACTORS FOR FDI ATTRACTIVENESS IN DEVELOPING COUNTRIES – A META ANALYSIS

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Abstract: This study further extends the systematic literature review and aims to properly aggregate the available empirical evidence to estimate the relative significance of FDI location determinants in developing countries using meta-analytic techniques. The main purpose of this study is to identify the main investment motives[29] in developing countries by building on the Investment Development Path (IDP) framework. This study analyzes the relative importance of FDI location factors not only across different host developing countries and regions but also considers country of origin and industry effects on the FDI location choices of MNEs. This meta-analysis synthesizes 14,546 estimates collected from 308 empirical studies on the relationship between 20 host country-specific FDI determinants and FDI location choice in developing countries. By computing meta-averages, this study provides a more nuanced analysis of the importance of 20 host country-specific FDI location determinants across different geographic regions, investor countries, and sectors. The findings of this study highlight considerable variation in the relative significance of each factor for FDI attractiveness across host regions as well as differences in the FDI location motives of firms from developed and developing investor countries. This study further advances our understanding of the relative significance of 20 FDI location determinants in developing countries and attempts to deduce dominant investment motives into six geographic regions. Findings of this meta-analysis may interest both researchers and policymakers in developing countries as it provides a more contextual and meaningful analysis of the relative importance of different location factors across host countries, industries, and MNEs' home countries.

Keywords: Foreign direct investment (FDI); FDI determinants; FDI motives; Investment Development Path (IDP); Developing countries; Meta-analysis

[29] Here we consider FDI motivation to be resource-seeking, market-seeking, and efficiency-seeking.

3.1. INTRODUCTION

Chapter 2 of this doctoral dissertation systematically examined the multifaceted phenomenon of FDI location decisions by MNEs across developing countries and regions. It summarized the diverse array of 20 host country-specific factors influencing the attraction or deterrence of FDI while emphasizing considerable differences in FDI location motives across countries and geographic regions of the developing world. The SLR methodology, however, did not allow us to gain deeper understanding of the relative significance of FDI location determinants and underlying motives for investment across developing countries and regions due to its qualitative and descriptive nature.

This study builds upon the comprehensive literature review in Chapter 2 and employs more rigorous meta-analytic techniques to explore in detail the relative significance of 20 FDI determinants to identify the main motives for investment in developing countries and regions. When viewed collectively, empirical findings on host country-specific FDI antecedents in developing countries show a lack of consistency due to numerous factors, including data availability, sample selection, geographic focus, time frames, and different theoretical frameworks and econometric models. Aside from this obvious heterogeneity in empirical approaches in the FDI location research stream, most empirical studies present "measurement without theory"(Chakrabarti, 2001). Chakrabarti (2001, p. 90) argued that empirical literature has not yet reached "a consensus on a theoretical framework to guide empirical work on FDI" and only provides *ex post* explanations based on the selection of specific variables picked by the author(s) for statistical modeling. The main difficulty of the above-mentioned “measurement without theory” lies in the identification of these variables. As Faeth (2009, p. 187) summarized in her extensive review of FDI theories, “since there are a variety of theoretical models explaining FDI, there are many factors that were experimented with in empirical studies to determine which factors influence FDI”.

SLR in Chapter 2 was built on Blonigen & Wang's (2005) arguments that factors determining FDI in developed and developing countries are not the same as MNEs’ motivation for investment are different in these two groups of countries. This study goes one step further and addresses an important issue in the FDI location choice literature regarding the moderating role of a country’s level of economic development that determines its engagement in inward and outward FDI. It

builds on the assumption that certain location factors have greater importance for FDI in less developed countries, such as in the African region (i.e., natural resource availability and low-cost labor), while other factors (e.g., human capital quality) have more significance in more advanced CEE transition countries.

The present study seeks to complement the review in Chapter 2 in the following ways. First, it examines the degree to which the economic development stage of host developing countries can serve as an indicator of potential similarities and differences for FDI location by building on the Investment Development Path (IDP) framework (Dunning, 1981; Dunning & Narula, 1996; Narula & Dunning, 2000, 2010). IDP posits that the type of FDI a host country attracts depends on its stage of development, and as a country develops, its location-specific factors change, which, in turn, affects the type of inward FDI it receives. Therefore, IDP supports the idea that the relative importance of host country's location factors and MNEs' motives for investment depend on the country's stage of economic development (Narula & Dunning, 2010). As such, I aim to identify motives for investment across different geographic regions of the developing world by building on the IDP and following Dunning's (1973, 1998) taxonomy of investment motives, classified into market-seeking, resource-seeking, efficiency-seeking, and strategic asset-seeking.

Second, I aim to further explore the moderating role of FDI origin countries and the nature of sectors for MNEs' location decisions across different geographic regions. SLR showed that FDI location literature remains relatively underdeveloped regarding the investigation of such contextual moderations. However, the IDP framework suggests that a country's outward FDI is partly a function of its level of development, meaning that as a country develops, FDI motives of firms originating from this country also change. Narula & Dunning (2010) further emphasize the importance of industry characteristics in addition to host and home country-specific factors when analyzing FDI decisions. Likewise, different industries have varying degrees of capital, labor, and technology intensity that might significantly influence motivation, location preferences, and the ability of firms to engage in international expansion (Bellak, 2001; Durán & Ubeda, 2001).

The goals of this meta-analytic study are as follows. First, to synthesize accumulated findings in the empirical literature on 20 host country-specific FDI determinants using meta-analysis techniques. Although the SLR presented in the previous Chapter provided useful insights on FDI location across developing countries and regions, this study goes further and conducts a meta-

analysis to quantitatively synthesize a large number of empirical studies to assess the relative importance of each determinant in FDI location decisions. As such, this meta-analysis aims to answer the following research questions:

> ***Q1***. What is the relative significance of the host country-specific determinants in FDI location decisions in developing countries?
>
> ***Q2.*** How does the significance of FDI determinants vary across developing countries and regions?

Second, considering the significant variations in previous empirical literature across different developing countries and regions, I aim to further explore the contextual relationship between FDI and selected FDI determinants. In addition to the focus on regions of FDI destination, I investigate the relative importance of 20 FDI determinants across countries of origin (developed vs. developing) and sectors (manufacturing vs. services):

> ***Q3***. What are the country of origin and sector-specific effects on FDI location choice in developing countries?

Finally, this study attempts to identify the dominant motives for investment across different countries and geographic regions by building on the IDP paradigm:

> ***Q4***. What are the dominant motives for investment in various developing countries and regions?

Buckley et al. (2013) argue that meta-analytic techniques are especially valuable in IB and management fields because they are necessary to account for significant contextual variations that characterize IB research. Meta-analysis helps mitigate the problem of insufficient power (i.e., small sample size) in primary empirical studies (Lipsey & Wilson, 2001). This is a very important issue in IB literature in general and in FDI location literature in particular. As the second chapter of this dissertation shows, many studies do not purposefully sample countries due to numerous data limitations. As a result, empirical IB studies often produce context-specific knowledge and, hence, provide largely inconsistent results (Meyer, 2007; Meyer & Sinani, 2009). As in the case with empirical literature on FDI location in developing countries, a meta-analysis can be "a powerful tool to identify the moderating effects of contextual variables and thus to establish the boundary conditions of scientific knowledge" (Meyer & Sinani, 2009, p. 1076). This is important because

boundary conditions relate to boundaries in time, space, and the researcher's values, which describe the limits of a theory's generalizability, i.e., the "who, where, when" aspects of a theory (Whetten, 1989). As such, for business scholars to create a universal theory of FDI location choice, cross-contextual analysis could be useful to validate the generalizability of results (Cheng, 1994).

The findings of this study are threefold. First, this meta-analysis showed that the relative importance of 20 host country-specific determinants varies substantially across different geographic regions. Furthermore, the findings of this study shed more light on the differences in MNEs' motives for investment in each region, which are largely in line with the IDP framework. Second, the results illustrated considerable differences in FDI motives and location preferences between developed and developing home countries. Finally, this study underlines the moderating role played by sector-specific characteristics on MNEs' location choices in developing countries.

This study aims to make several distinct contributions beyond existing reviews and meta-analyses on FDI location determinants in developing countries (Bailey, 2018; Beugelsdijk, Kostova, Kunst, Spadafora, & van Essen, 2018; Kim & Aguilera, 2016; Nielsen, Asmussen, & Weatherall, 2017). First, this study is more comprehensive and detailed compared with recent similar works (Bailey, 2018), as I collect estimates from a large body of previous relevant empirical literature (308 studies), which, to the best of my knowledge, is the first of its kind. Second, this study contributes to the IB literature by helping to explain the significant variation in previous body of research by employing the dynamic IDP approach and focusing on the investment motives of MNEs in developing countries.

The remainder of this Chapter is organized as follows. Section 3.2 discusses the theoretical background of the motives driving FDI location choices across countries and presents hypotheses. Section 3.3 describes meta-analytic methodology, and Section 3.4 presents the empirical results. Section 3.5 summarizes and discusses the empirical findings of this meta-analysis, and the last Section concludes.

3.2. LITERATURE REVIEW

Empirical FDI location choice literature can be broadly classified into two main research streams. The first one focuses on location attractiveness factors and suggests that MNEs invest in foreign locations that possess certain advantageous characteristics (Chakrabarti, 2003; Tahir & Larimo, 2004). Examples of such studies include those building on location theory and institutional environment and arguing that major FDI location antecedents include market size, labor cost, infrastructure, agglomeration, and host country's policies (Head, Ries, & Swenson, 1995; Wei, Liu, Parker, & Vaidya, 1999; Woodward, 1992). The central premise of this perspective is that the profitability of an investment is "a function of several location characteristics" and that a firm chooses a location that maximizes its profit (Shaver, 1998, p. 471).

The second stream posits that the FDI motives of MNEs are driving their location decisions (Benito, 2015; Chung & Alcácer, 2002; Cuervo-Cazzura & Narula, 2015; Dunning, 1988, 1998; Makino, Lau, & Yeh, 2002; Meyer, 2015). The most cited taxonomy of FDI motives of Dunning (1973, 1998), built upon the OLI paradigm (Dunning, 1977, 1979), puts forward four main FDI motives of firms: (1) resource-seeking, (2) market-seeking, (3) efficiency-seeking, and (4) strategic asset-seeking. He further argues that the location choice of MNEs "depends heavily on the motives for their foreign value-added activities", and each FDI type will be attracted by a different set of location (L) advantages (Dunning, 2009, p. 22).

These two streams of FDI location literature are clearly interrelated. As such, the FDI location decision of an MNE is a product of the alignment of its motives for investment and the location advantages of the host country (Nachum, Dunning, & Jones, 2000). Galan, Gonzalez-Benito, & Zuñiga-Vincente (2007) extend this perspective by asserting that FDI motives serve as a fundamental criterion for location choice, as MNEs make informed decisions by finding a nexus between FDI destination characteristics and their specific motives. The previous Chapter of this dissertation clearly illustrated that some FDI determinants are more important in certain geographic regions than others and pointed to the largely different motivations of MNEs across the studied countries and regions.

Many scholars call for a systemic treatment of FDI motives (Blonigen, 2005; Dunning, 2009; Franco, Rentocchini, & Vittucci Marzetti, 2010). First, FDI determinants are "the fundamental factors that drive FDI behavior" (Blonigen, 2005, p. 383). Second, investment motives influence

FDI inflows and outflows in both home and host countries. These motives affect the magnitudes and patterns of international trade, the contributions of FDI to overall economic development, and the amount and direction of FDI spillovers (Franco et al., 2010).

The theoretical underpinnings of the IB approach to FDI motives build on the OLI paradigm (Dunning, 1977, 1979, 1993b). Dunning (1977, 1979) synthesized the predominant imperfect market-based theories (i.e., oligopolistic and internalization theories) to explain why firms establish subsidiaries abroad. Consequently, the OLI framework explains FDI through three types of specific advantages that MNEs have: ownership (O), location (L), and internalization (I) advantages.

The ownership (O) dimension refers to the unique advantages or assets that an MNE possesses, ensuring a competitive advantage over other firms. These advantages can include intangible assets like technological know-how, brands, reputation, managerial skills, or patents. In essence, the O dimension implies that firms engage in FDI when they have distinct firm-specific advantages that can be transferred or leveraged in a foreign market.

The location (L) dimension pertains to the geographical aspects of FDI, focusing on why a firm chooses a particular foreign location for its operations. It takes into account various factors such as market size, resource availability, labor and transport costs, infrastructure, lower risks, and a favorable structure of competition. Overall, the L dimension implies that firms select host countries or regions based on their suitability to exploit the ownership advantages, seeking the optimal environment to maximize returns and minimize risks.

Finally, the internalization (I) dimension addresses the question of how MNEs choose to enter a foreign market and whether they prefer to engage in their foreign operations through market transactions (e.g., licensing or exporting) or by establishing affiliates and subsidiaries (FDI). The I dimension implies that firms opt for FDI when the costs of conducting transactions within the firm (internal) are lower than the costs associated with external market transactions. It underscores the idea that firms internalize their activities when they can manage them more efficiently and effectively.

In summary, the OLI paradigm provides a comprehensive framework for understanding the motivations behind firms' decisions to engage in FDI. It emphasizes the importance of ownership-specific competitive advantages, the choice of location based on host country-specific characteristics, and the internalization of activities to leverage these advantages in foreign markets. The fundamental tenet of the OLI paradigm stipulates that FDI occurs only when all three conditions are satisfied. This framework has been instrumental in explaining the complex dynamics of international business and FDI activities (Altomonte, 2000; Batschauer da Cruz, Eliete Floriani, & Amal, 2022; C. Chen, 2015; Godinez & Liu, 2015; Roberts & Almahmood, 2009).

3.2.1. FDI Motives

Since the introduction of the OLI paradigm (Dunning, 1977, 1979, 1993b), scholars have recognized that FDI location decisions of MNEs depend on different motivations and offered several alternative classifications. For example, Nachum & Zaheer (2002) proposed to recategorize Dunning's (1993a) set of FDI motives of MNEs in digital economy[30] into market-seeking, efficiency-seeking, knowledge-seeking, and competitive positioning-seeking. Franco et al. (2010) also build on Dunning's work and classifies FDI motives into market-seeking, resource-seeking, and non-marketable asset-seeking FDI. Economic FDI and trade literature proposes four different types of FDI, including horizontal, vertical, export-platform, and complex vertical (Baltagi, Egger, & Pfaffermayr, 2007; Ekholm, Forslid, & Markusen, 2007; Helpman, 1984; Markusen, 1984). Notwithstanding, Dunning's (1973, 1998) taxonomy of four motives remains the most widely used by scholars in the IB field. Table 3.1 below summarizes the FDI motives and their evolution in the 1970s and early 2000s.

3.2.1.1. Resource-seeking FDI

MNEs pursue this investment motive when they need stable access to low-cost and high-quality resources or raw materials, which are necessary for their production process but unavailable at home (or available at a higher cost). As such, resource-seeking MNEs prefer to locate in countries, which enable them to secure and exploit these resources. Therefore, firms search for resource-

[30] The term "digital economy" means parts of the economy that are composed of goods that can be ordered, paid for, processed, and delivered digitally (see Nachum & Zaheer (2002)).

Table 3.1. How MNE motives have evolved over 30 years

FDI type	In the 1970s	In the 2000s
A. Resource-seeking	1. Availability, price, and quality of natural resources. 2. Infrastructure to enable resources to be exploited, and products arising from them to be exported. 3. Government restrictions on FDI and/or on capital and dividend remissions. 4. Investment incentives, e.g., tax holidays.	1. As in the 1970s, but local opportunities for upgrading quality of resources and the processing and transportation of their output is a more important locational incentive. 2. Availability of local partners to promote jointly knowledge and/or capital-intensive resource exploitation. 3. Entrepreneurship, trustworthiness, and honesty of local partners. 4. Extent and quality of national or regional enforcement mechanisms.
B. Market-seeking	1. Mainly domestic, and occasionally (e.g., in Europe) adjacent regional markets. 2. Real wage costs; material costs. 3. Transport costs; tariff and non-tariff trade barriers. 4. As A3 above, but also (where relevant) privileged access to import licenses.	1. Mostly large and growing domestic markets, and adjacent regional markets (e.g., NAFTA, EU, etc.). 2. Availability and price of skilled and professional labor. 3. Presence and competitiveness of related firms, e.g., leading industrial suppliers. 4. Quality of national and local infrastructure, and institutional competence. 5. Less spatially related market distortions, but increased role of agglomerative spatial economies and local service support facilities. 6. Macroeconomic and macro-organizational policies as pursued by host governments. 7. Quality of local norms and standards, and social capital. 8. Growing importance of promotional activities by regional or local development agencies.
C. Efficiency-seeking	1. Mainly production cost related (e.g., labor, materials, machinery, etc.).	1. As in the 1970s, but more emphasis placed on B2, 3, 4, 5 and 7 above, especially for knowledge-intensive and

	2. Freedom to engage in trade in intermediate and final products. 3. Presence of agglomerative economies, e.g., export processing zones. 4. Investment incentives, e.g., tax breaks, accelerated depreciation, grants, subsidized land.	integrated MNE activities, e.g. R&D and some office functions. 2. Increased role of governments in removing obstacles to restructuring economic activity, and facilitating the upgrading of human resources by appropriate educational and training programs. 3. Availability of specialized spatial clusters, e.g., science and industrial parks, service support systems, etc. and of specialized factor inputs. Opportunities for new initiatives by investing firms; an entrepreneurial environment, and one that encourages competitiveness enhancing cooperation within and between firms. 4. Ability of locations to offer trust-intensive, covenantal relations of an interpersonal, inter-firm, and firm/government kind.
D. Strategic asset-seeking	1. Availability of knowledge-related assets and markets necessary to protect or enhance O-specific advantages of investing firms - and at the right price. 2. Institutional and other variables influencing ease or difficulty at which such assets can be acquired by foreign firms.	1. As in the 1970s, but growing geographical dispersion of knowledge-based assets, and need of firms to harness such assets from foreign locations, makes this a more important motive for FDI. 2. The price and availability of "synergistic" assets to foreign investors. 3. Opportunities offered (often by particular subnational spatial units) for exchange of localized tacit knowledge, ideas and interactive learning. 4. Access to different cultures, institutions, and value systems; and different consumer demands and preferences. 5. Ability to form productive relationships with acquired firms.

Source: Narula & Dunning (2010, pp. 279–280)

abundant countries (e.g., oil and gas, minerals, metals, forestry, or agricultural commodities) with less expensive labor (unskilled or semiskilled), access to physical infrastructure (water and energy, roads and railways, communication, ports, etc.), and favorable institutional environment in the host country (Dunning, 1998; Franco et al., 2010). Resource-seeking FDI is common in extractive industries and primary sectors and can be pursued by firms that aim to control their vertical supply chains of essential resources (Benito, 2015).

Although it is argued that this type of FDI has decreased at a global scale (Nunnenkamp & Spatz, 2002) Dunning (2009, p. 26) expected "a continued renaissance in all kinds of natural-resource-seeking FDI (notably in oil and hard minerals in sub-Saharan Africa), and particularly so by the larger industrializing economies, for example, China and India". The results of SLR in the previous Chapter largely corroborate the above argument, as natural resource availability was found to be important for determining FDI in Arab (Al-Shammari, Al-Halaq, & Al-Shammari, 2016; Aziz, 2018; Mina, 2009) and African economies (Cleeve, Debrah, & Yiheyis, 2015; Emudainohwo, Boateng, Brahma, & Ngwu, 2018; Mhlanga, Blalock, & Christy, 2010). Moreover, the review also showed that Chinese investors prefer locations with abundant natural resources (Chen, Dollar, & Tang, 2018; Cheung, De Haan, Qian, & Yu, 2012; Dong & Fan, 2017; Kang & Jiang, 2012; Lin, 2015).

3.2.1.2. Market-seeking FDI

Market-seeking investment occurs when MNEs aim to exploit or promote new markets (i.e., the host country or their closest neighbors) with the purpose of serving the host market directly by establishing local production and distribution. Typically, firms engage in market-seeking FDI to avoid the costs of serving a foreign market from a distance and circumvent high import fees (Franco et al., 2010). Market-seeking motives usually push MNEs to internationalize their consumer products and services in industries where consumer preferences and tastes directly influence firms' offers and business strategies (Benito, 2015).

Market-seeking investment is primarily driven by the size, growth, and structure of foreign markets as well as consumer preferences in the host country. This type of investment is also known as "tariff jumping", as MNEs invest in local production in the host country's market to avoid regulations, tariffs, or other trade barriers to save on transaction and transportation costs. Among other host

country characteristics that attract market-seeking FDI are the costs of skilled and unskilled labor as well as the costs of raw materials or resources necessary for local production facilities in the host market. Additionally, market-seeking MNEs prefer locations with developed infrastructure, which enables distribution of the output produced and communication; agglomeration economies that provide access to a network of suppliers, consumers, and competitors; and sound business policies as well as a favorable institutional environment.

3.2.1.3. Efficiency-seeking FDI

This type of FDI arises when MNEs want to take advantage of (1) the economies of scale and scope and (2) the "differences in the availability and costs of traditional factor endowments in different countries" (Dunning, 1993a, p. 60). Efficiency-seeking FDI is generally associated with traditional manufacturing industries where MNEs relocate part of their production abroad to benefit from cost differentials (i.e., labor and materials) and their accessibility in different countries, especially in developing economies like China, Mexico, or India. Aside from differences in input costs, efficiency-seeking MNEs are attracted to countries with policies towards openness in international trade of final and intermediate goods, the availability of incentives (free trade and export-processing zones, various fiscal incentives), and the presence of agglomeration economies. In addition, the availability of skilled labor, adequate transport infrastructure, and institutional quality in the host country also play a role in driving this type of investment.

3.2.1.4. Strategic asset-seeking FDI

Lastly, strategic asset-seeking FDI pursues different long-term strategic objectives, such as enhancing firms' competitiveness in global markets (Cui, Meyer, & Hu, 2014). Dunning (1991, p. 135) defines the asset-seeking motive for investment as "to create or gain access to resources and capabilities that complement their existing core competencies". This motive is usually associated with innovation and R&D-oriented activities in different high-tech industries (such as computer technology or pharmaceuticals) (Benito, 2015).

Strategic asset-seeking motive is widely criticized in the IB literature primarily because this concept is seen as blurred and confusing (see, for example, Table 2 in Meyer (2015, pp. 61–62) with a dozen definitions provided by different authors). Furthermore, Rugman & Nguyen (2014, p. 54) call this motive "inconsistent with the OLI framework, which builds upon MNEs developing

firm-specific advantages (FSAs) based on their home country where home country-specific advantages (CSAs) matter".

Dunning (1980) also suggested that FDI type is determined depending on the initial or sequential FDI undertaken by MNEs. A such, resource- and market-seeking investments typically occur as initial investments in a particular host country, whereas efficiency- and strategic asset-seeking FDI are usually sequential investment. Dunning (1988) further argued that the combination of OLI advantages varies significantly depending on the development level of countries (developed or developing), size of countries (large or small), industry type (high or low technological intensity), production type (processing or assembly), market positioning (competitive or monopolistic), size of the firm, etc.

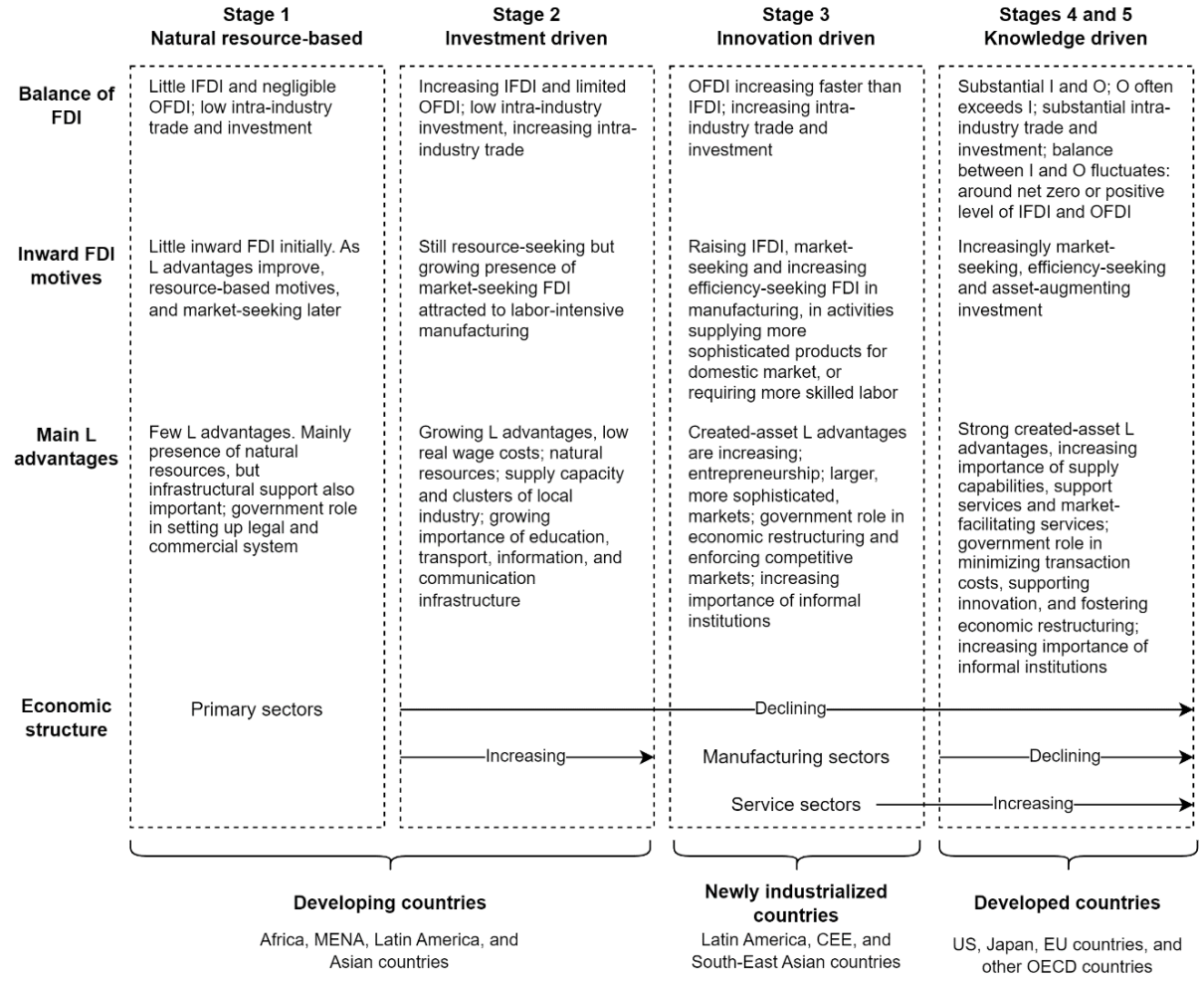
However, the taxonomy of FDI motives is more focused on explaining the motives themselves rather than their evolution driven by MNEs' accumulated investment experience (Chen & Yeh, 2012). FDI motives remain important in the IB literature because they serve as indicators of the possible outcomes stemming from the actions of multinational firms (Narula & Dunning, 2010) and are useful for theory building (Benito, 2015). In this respect, the investment development path (IDP) framework (Dunning, 1981; Dunning & Narula, 1996; Narula & Dunning, 2000, 2010) presents a more dynamic nature of the relationships between MNE's main motives for FDI and the changing location (L) advantages of the host location over time (Narula & Dunning, 2010). According to Nayak & Choudhury (2014, p. 11), "the basic hypothesis is that when a country develops, the conditions encountered by foreign and local firms change. This will affect the flows of inward and outward FDI. This, in turn, will have an impact on the economic structure of the country. Thus, there is a dynamic interaction between the two".

3.2.2. Investment development path (IDP)

The IDP framework (Dunning, 1981; Dunning & Narula, 1996; Narula & Dunning, 2000, 2010) aims to "incorporate the dynamic element into the theory of international production" (Dunning & Lundan, 2008, p. 330). This dynamic and integrative perspective suggests that a country's ability to attract a particular type of FDI depends on its level of economic development (Dunning & Narula, 1996; Narula & Dunning, 2000). The main assumption of IDP is that there is a systematic relationship between FDI activities in a particular location and the economic structure of that location, which is linked with its level of economic development (Narula & Dunning, 2010). This

relationship can be categorized into five stages that reflect the evolution through which all countries generally go in their industrial development path (i.e., evolving from less developing countries with agriculture- and resource-based economies to developed industrialized economies with strong service sectors). Fig. 3.1 below depicts the stages of IDP.

Figure 3.1. Stages of IDP



Source: Narula & Dunning (2010, pp. 267–268) and Galan et al. (2007, p. 979)

In stage 1, countries typically do not attract much inward FDI due to their week L advantages, nor do they engage in outward FDI because their domestic firms lack O advantages. The main comparative advantage of a country at this stage is its possession of some kind of natural resource. As such, a country typically attracts natural resource-seeking FDI in primary sectors and market-seeking FDI in labor-intensive manufacturing industries producing unsophisticated consumer products for sale at the host country's market (Dunning & Lundan, 2008; Narula & Dunning, 2000,

2010). Outward FDI activity is very small and is either of an export-supporting or resource-seeking nature (Dunning & Lundan, 2008).

In stage 2, as countries advance in their industrial development (usually by expanding their labor-intensive industries) and increase their domestic markets, they start to attract more FDI. At this stage, inward FDI is still resource-seeking, but investment shifts towards more capital-intensive sectors that exploit low-cost labor and aim to serve domestic market (Dunning & Lundan, 2008; Narula & Dunning, 2000, 2010). At the same time, domestic firms accumulate their own O advantages and begin to engage in resource- and market-seeking FDI in other nearby developing countries, albeit in limited amounts (Dunning & Lundan, 2008).

In stage 3, countries enhance their domestic technological capabilities, domestic consumers demand for higher-quality products increases, and their comparative advantages in labor-intensive industries start fading away. At this stage, most countries are either industrialized or have a mixed economic structure, and their per capita income levels gradually catch up with those of developed nations (Dunning & Lundan, 2008; Narula & Dunning, 2000, 2010). Governments begin to increase expenses in the education and telecommunication sectors, which leads to the creation of new L advantages (Dunning & Lundan, 2008; Narula & Dunning, 2000). Domestic firms, in turn, enhance their managerial and organizational competences and do not exploit only their rich natural resource endowment. At this stage, countries still have comparative O disadvantages vis-à-vis MNEs and encourage inward FDI that could potentially provide certain O-specific assets (Dunning & Lundan, 2008). Countries continue to attract market-seeking FDI that supplies more sophisticated products for domestic markets and start to drive efficiency-seeking FDI in manufacturing sectors (Narula & Dunning, 2000). At this stage, MNEs engage in all kinds of outward FDI, including efficiency-seeking and strategic asset-seeking, mostly still on the regional scale (Dunning & Lundan, 2008). As the economic structure of countries at stage 3 begins to resemble that of developed economies, optimal government policies and well-established institutions become critically important for MNEs' operations as they increase transaction costs associated with IFDI.

Finally, Stages 4 and 5 include developed industrialized economies, which attract all types of FDI in Dunning's (1973, 1998) taxonomy except for resource-seeking FDI. Developed countries at these stages are the main source of OFDI globally and engage in all kinds of investment, including

increasingly efficiency- and asset-seeking FDI at regional and global scales. As such, during these stages, the IFDI and OFDI of countries become more balanced (Narula & Dunning, 2000, 2010).

In summary, countries at stages 1 and 2 of IDP are predominantly less developed countries that are likely to attract mostly resource-seeking FDI as well as some market-seeking investment in labor-intensive manufacturing. According to IDP, African and MENA countries, as well as many LAC and Asian countries are currently at stages 1 and 2 (Galan et al., 2007). Countries at stage 3 are emerging or newly industrialized economies where investors pursue mostly efficiency- and market-seeking motives. This stage includes most Central and Eastern European countries, certain Latin American countries (Brazil, Mexico) and South-East Asian countries (China, Malaysia, Indonesia, etc.) (Galan et al., 2007). Finally, countries at stages 4 and 5 are wealthy developed countries (US, EU, Japan, etc.) that attract market-, efficiency-, and strategic asset-seeking FDI.

Empirical IB literature using the IDP approach to explore FDI location choices commonly finds support in favor of the argument that the relative importance of host country-specific location factors depends on the host country's stage of economic development within the IDP framework. Galan et al. (2007) examined the location of Spanish FDI in Latin America and EU countries and found that Spanish MNE managers assign different relative importance to a set of location factors based on their development stage in the IDP. The authors argue that Spanish firms favor locations with good infrastructure and technological development in the EU. Alternatively, Spanish FDI exhibits a significant preference for socially and culturally similar Latin American economies, thus manifesting the importance of historic and cultural links between home and host countries. Chen & Yeh (2012) demonstrated that the preferences for FDI location antecedents of Taiwanese firms in China evolved during the period 1997-2007. At the early stages, Taiwanese FDI favored locations with a large market, low-cost labor, developed infrastructure, and openness to trade, whereas at the later stages firms preferred locations with a productive and educated labor force along with advanced R&D capabilities. Similarly, Zheng (2013) found support the IDP's theoretical assertion that the motivations behind FDI in India have evolved over time, transitioning from primarily market- and resource-seeking to more efficiency-seeking FDI. He further argues that the patterns of Indian IFDI depend on the country of origin, where developed countries mostly pursue efficiency- and resource-seeking motives while developing countries' FDI is more likely to be market-seeking. Lastly, Ramírez-Alesón & Fleta-Asín (2016) established that the importance of

host country location factors is moderated by the host country's stage of development using a large panel of 117 countries over the period 2006–2013. Specifically, authors argue that market-seeking investment is largely attracted by countries at early stages of development (i.e., less developed countries), while an educated and productive labor force drives FDI in more industrialized developing countries. Ramírez-Alesón & Fleta-Asín (2016) further highlight specific regional patterns as countries located in the same region are more likely to share similar characteristics with their neighbors and often face similar conditions (i.e., natural resources, history, social, and cultural environment).

Overall, the IDP approach is a suitable theoretical framework to analyze the relative significance of host country-specific location factors for FDI location decisions across developing countries that largely depend on the host country's stage of economic development.

3.2.3. Hypotheses

According to the IDP framework, an MNE can invest either in developing countries (in stages 1, 2, and 3) or developed countries (in stages 4 and 5). FDI location choice between one or another group of countries depends on MNE's motivation for investment, i.e., resource-, market-, efficiency-, and/or strategic asset-seeking. Finally, the choice of a particular location among both groups of potential host countries depends on their specific location (L) advantages. Given the focus of this dissertation on developing countries, I do not consider stages 4 and 5 of the IDP, which consist of developed economies, as the strategic asset-seeking FDI motive, which is primarily aimed at developed host countries.

The findings of SLR pointed to the varying degree of importance of 20 selected FDI determinants for FDI location across different geographic regions of the developing world. The outcomes of the review further suggest that the motives for investment are largely different across countries and regions. As such, SLR points to resource-seeking motives in Africa, MENA, and LAC countries; market-seeking in Africa, MENA, LAC, CEE, and Asia (including China); and efficiency-seeking in CEE and Asian countries (including China). These findings of the systematic review were largely in line with the IDP framework and expected FDI motives depending on host countries' stages of development.

First, this study extends the SLR results by empirically estimating the relative importance of 20 host country-specific FDI determinants on the host country's economic development stage. The SLR methodology is not suitable for this purpose as it provides only a qualitative analysis of the empirical evidence. This meta-analytic study goes beyond qualitative synthesis by statistically combining the results of multiple empirical studies, providing a more precise estimate of the effect size and statistical significance of host country-specific location factors for FDI location in developing countries. Hence, I put forward investment motivation hypotheses according to the development stages of six geographic regions of the developing world, according to IDP. Therefore:

Hypothesis 1a: *African developing countries are currently at stages 1 and 2 of IDP and mostly attract natural resource- and market-seeking FDI.*

Hypothesis 1b: *MENA developing countries are currently at stages 1 and 2 of IDP and mostly attract natural resource- and market-seeking FDI.*

Hypothesis 1c: *LAC developing countries are currently at stages 1, 2, and 3 of IDP and attract natural resource-, market-, and efficiency-seeking FDI.*

Hypothesis 1d: *Asian developing countries are currently at stages 1, 2, and 3 of IDP and attract natural resource-, market-, and efficiency-seeking FDI.*

Hypothesis 1e: *CEE developing countries are currently at stage 3 of IDP and mostly attract market- and efficiency-seeking FDI.*

Hypothesis 1f: *China is currently at stage 3 of IDP and mostly attracts market- and efficiency-seeking FDI.*

Further, the IPD framework suggests that the development stage of the FDI origin country affects the O advantages of MNEs and, as a result, affects the motives of outward FDI of firms from this country. Therefore, I aim to investigate whether the relative importance of FDI location factors in developing countries differs between developed and developing FDI origin countries, as predicted by the IDP:

Hypothesis 2a*: FDI from developed countries of origin mostly pursues efficiency- and market-seeking motives in host developing countries.*

Hypothesis 2b*: FDI from developing countries of origin mostly pursues resource- and market-seeking motives in host developing countries.*

In addition, I am to explore to what extent the nature of the sector plays a role in moderating the relative importance of the host country-specific location factors for sector-specific FDI:

Hypothesis 3: *Sector nature (manufacturing vs. services) affects the relative significance of host country-specific location FDI determinants across developing countries and regions.*

3.3. METHODOLOGY

In this subsection, I describe the study selection process, overview the sample chosen, and present the methodology for estimation of effect sizes in this meta-analysis.

3.3.1. Selection of studies

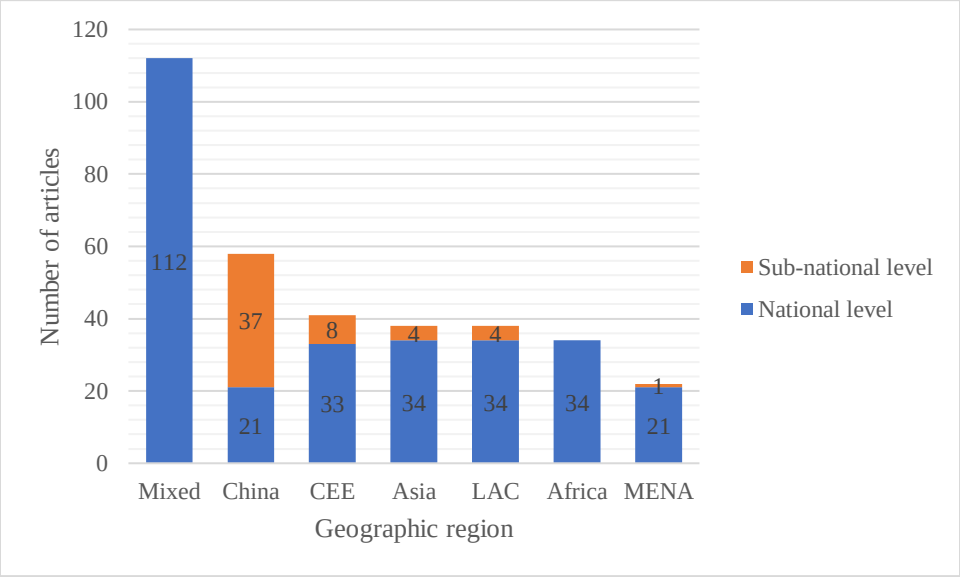
As this Chapter extends the previous one by statistically examining the relationship between each of the 20 selected host country-specific FDI location factors, I rely on the sample selected for the SLR study. In accordance with the method of literature selection described in detail in Section 2.2 of previous Chapter 2, I selected 416 empirical studies for systematic literature review.

As meta-analysis involves the aggregation of effect sizes across independent empirical studies, I included only those out of 416 studies that contained the necessary statistics for computing effect sizes for the relationship between FDI and one or more out of 20 FDI location determinants. First, I removed 65 studies that adopt binary dependent variables with probit or logit estimators, in which the explanatory variables' effect sizes are not comparable to those of linear regression models (Stanley & Doucouliagos, 2012). Second, I excluded 43 studies that do not report exact values of t-statistics, estimated coefficients, standard errors, number of observations, or other necessary statistics for effect size calculations. As a result, the sample size was reduced, and a total of 308 empirical studies on FDI location in developing countries from 106 academic journals that provided the most complete statistical information were selected for this meta-analysis. The complete list of empirical articles included in this meta-analysis is provided at the end of this study.

Fig. 3.2 shows the distribution of 308 empirical studies across different geographic regions. These 308 empirical studies have tested at least one out of 20 FDI determinants for FDI location across 343 different samples of developing economies. Out of 308 studies, 255 (83%) use aggregate national level data, whereas 53 (17%) employ subnational level data. The sample of studies selected for meta-analysis includes 112 studies focusing on a panel of various developing countries (i.e., "mixed" sample studies). The majority of excluded studies from this meta-analysis sample focused on China and the CEE region, where authors often opted for binary logistic study designs, especially at the subnational level (e.g., (Du, Lu, & Tao, 2008b, 2012; Hilber & Voicu, 2010; Majocchi & Strange, 2007; Smarzynska Javorcik, 2004)). As a result, 58 studies investigate FDI location determinants in China, and 41 employ samples composed of CEE countries. Asian and

LAC regions were studied by 38 papers each, whereas Africa and MENA countries received attention by 43 and 25 studies, respectively.

Figure 3.2. Geographic coverage of studies by regions



From these 308 studies, I extracted a total of 14,546 estimates related to 20 host country-specific FDI location determinants in developing countries. Table 3.2 below provides a breakdown of the collected estimates for each of the 20 FDI determinants.

Table 3.2. Overview of collected estimates

No.	FDI determinant	No. of studies	Estimation period covered	No. of estimates (K)	Average no. of estimates per study
1	Market size	249	1954-2015	2631	10,57
2	Market growth	125	1954-2015	1172	9,38
3	Market potential	14	1970-2014	186	13,29
4	Labor cost	103	1960-2015	710	6,89
5	Human capital	100	1960-2015	818	8,18
6	Infrastructure	110	1960-2015	1140	10,36
7	Agglomeration	120	1960-2015	1233	10,28
8	Natural resources	57	1960-2014	602	10,56
9	Inflation	87	1960-2015	736	8,46
10	Trade openness	167	1960-2015	1338	8,01
11	Tax burden	36	1960-2015	292	8,11
12	Tax incentives	15	1965-2008	114	7,60

13	SEZs	23	1980-2011	226	9,83
14	Geographic distance	51	1970-2014	363	7,12
15	Political instability	78	1954-2015	666	8,54
16	Corruption	64	1970-2015	415	6,48
17	Democracy	61	1960-2015	535	8,77
18	Rule of law	70	1970-2015	413	5,90
19	Regulatory quality	95	1966-2015	702	7,39
20	Cultural distance	29	1980-2012	254	8,76

In the following subsection, I outline the meta-analysis methodology to be conducted.

3.3.2. Meta-analytic procedures

Since the 1970s, meta-analysis has become a common way of summarizing and integrating studies in the social sciences. Nowadays, meta-analysis is a widely used method in many disciplines, including medical research, economics, and management, as a significant complementary approach to reviewing the extant literature (Bohlin, 2012). Recently, IB and management researchers have also started to adopt meta-analytic methodologies (Buckley et al., 2013; Duran, Kammerlander, Van Essen, & Zellweger, 2016; Kirca & Yaprak, 2010; Wan, Sousa, Lengler, & Tan, 2023). Like systematic literature reviews, meta-analysis offers an approach to systematically reviewing the literature by statistically integrating and analyzing the empirical findings of many existing studies on a specific topic in a single study (Glass, 1976; Lipsey & Wilson, 2001). Broadly speaking, meta-analysis aggregates the "effect sizes" collected from a sample of studies that concern the same relationship (e.g., market growth-FDI nexus).

Meta-analysis refers to a statistical methodology of surveying the empirical literature using standardized procedures for deriving scientific conclusions (Hunter & Schmidt, 2004; Stanley & Doucouliagos, 2012). In meta-analyses, estimates and standard errors are seen as individual data points and the data are drawn from a large number of studies that examine the same focal relationship. Through statistical analysis of the relationship between estimates and standard errors, a researcher may make inferences about the underlying effect and identify the presence of publication biases. I conduct a meta-analytic study following the current guidelines for management and economic research (Buckley et al., 2013; Geyskens, Krishnan, Steenkamp, & Cunha, 2009; Kirca & Yaprak, 2010; Stanley & Doucouliagos, 2012; Stanley et al., 2013).

To evaluate the relative importance of different FDI determinants, I need to compute standardized effect sizes, which are usually adopted as the unit of analysis in meta-analyses (Lipsey & Wilson, 2001). There are several ways to choose effect sizes, including the partial correlation coefficient, t-statistic, elasticity, or semi-elasticity (Stanley & Doucouliagos, 2012). The partial correlation coefficient (PCC) is a commonly used metric in economic and IB meta-analysis (Bailey, 2018; Beugelsdijk et al., 2018; Doucouliagos & Ulubasoglu, 2006; Guo, He, & Lin, 2023; Iwasaki & Tokunaga, 2014; Stanley & Doucouliagos, 2012). The following paragraphs briefly describe how each estimated coefficient extracted from primary empirical studies is converted into the PCC.

Taking K as the number of independent estimates, I calculate the PCC of each of the K estimates. The PCC is a measure of the association between the dependent variable (FDI) and the independent variable (for example, market size), when other variables are held constant. The PCC (r_k) is calculated as in the following equation:

$$r_k = \frac{t^k}{\sqrt{t_k^2 + df_k}}, k = 1, 2, \dots, K \quad (1)$$

where t_k and df_k denote the t-value and the degrees of freedom of the kth estimate, respectively. K denotes the total number of collected estimates (k = 1, 2, ..., K). The standard error, SE_k of r_k is calculated as in the following equation:

$$SE_k = \sqrt{\frac{(1 - r_k^2)}{df_k}} \quad (2)$$

The use of PCCs as effect sizes is preferred over the others for two main reasons: (1) they are scale-free measures of linear association, i.e., like an elasticity, they do not depend on the particular scale (units) used to measure the dependent and independent variables, and (2) they are easy to interpret (Geyskens et al., 2009). As a correlation, it takes values between -1 and 1, with the existing guidelines helpful to interpret the effect sizes in terms of “small”, “moderate”, and “large” effects (Doucouliagos, 2011).

In this meta-analysis, I transform the PCCs using Fisher’s z-to-r transformation. It is a widely employed technique in meta-analytical literature due to its ability to mitigate several statistical challenges related to the normal distribution and stabilization of PCC variances, which can cause

an asymmetry (Bijmolt & Pieters, 2001; Rosenthal, 1994; Stanley & Doucouliagos, 2012). Fisher z-transformed correlation effect size is computed as follows:

$$z = \frac{1}{2} ln\left(\frac{1+r}{1-r}\right) \quad (3)$$

One of the difficulties for meta-analysis regarding the effects of 20 selected FDI determinants on FDI location in developing countries is the presence of several regression analyses and multiple estimates produced by each study. Monte Carlo simulations demonstrate that approaches using the entire set of measurements outperform those that pick a single value in parameter significance testing and estimation accuracy (Bijmolt & Pieters, 2001). For this reason, I do not limit the selection to one estimate per study and collect the complete set of estimates provided by each study. Moreover, it is not clear how to choose one estimate as "preferred" for each study (Jeppesen, List, & Folmer, 2002).

However, the pairs of PCCs and standard errors are not independent within studies, and it is necessary to address the potential dependency within one study by clustering standard errors for each study (Beugelsdijk et al., 2018; Bruno & Cipollina, 2018; Duran et al., 2016; Heimberger, 2022). To limit the sensitivity of the findings of previous studies, I rely on the minimum number of effect sizes (k=6) collected from at least 3 studies. A 95% confidence interval (CI) is used to test the statistical significance of the effect size estimates.

In empirical literature, the unweighted average (i.e., mean) is usually used to summarize a sample. Meta-analytic procedures, however, compute the weighted average effect size (i.e., the meta-average of effect sizes) that represents cumulative findings across the sample of individual studies. To investigate the meta-averages of estimates collected for 20 FDI determinants, I need to distinguish between fixed effects (FE) and random effects (RE) estimates (Hedges & Vevea, 1998; Stanley & Doucouliagos, 2012). These estimators, however, are not related to the panel data estimators with the same name. In meta-analyses, FE and RE estimators correspond to whether the estimated underlying effect is homogenous or heterogenous across sample studies.

FE estimator assumes that the differences across studies arise only due to within-study variation and that the effect size in the population is the same across studies (i.e., homogeneity assumption). One "true" effect is calculated as a weighted average of all individual estimates, and weights are

inversely proportional to the square of the standard errors ($1/SE^2$), meaning that studies with smaller SE receive greater weight than studies with larger errors (Higgins & Thompson, 2002). RE, on the other hand, assumes that studies represent a random sample from the universe of all possible studies and that each study has a different effect size (heterogeneity assumption). Under RE, studies do not estimate a single "true" effect, and effects in each study are sampled from a normal distribution of effects with a mean of 0 and a variance of τ^2. Consequently, weights incorporate an estimate of between-study heterogeneity, τ^2, and are equal to $1/(SE^2+ \tau^2)$.

Consider a simple example of meta-analysis, which consists of two studies. Study A reports one estimate, and study B reports ten estimates. In FE meta-analysis, it is assumed that both studies are estimating the same "true" effect size and variation in the estimates exists only because of sampling error. As such, FE estimator gives equal weight to study A's single estimate and each of the ten estimates from study B. In RE meta-analysis, it is assumed that variability arises not only due to sampling error but also due to genuine differences in effect sizes across studies. In this case, RE estimator would assign equal weights to each study's estimates based on both their within-study variance and the estimated between-study variance. Theoretically, if all effects are estimated precisely, FE and RE estimators would give equal weight to every standardized estimate.

In this study, I use random-effects estimation methods to investigate the meta-averages of 20 FDI location determinants in developing countries. I follow widely accepted practices in meta-analytic management research (Geyskens et al., 2009) and recent meta-analytic studies (Beugelsdijk et al., 2018; Giachetti, Manzi, & Colapinto, 2019; Meyer & Sinani, 2009). First, I treat the sample of 308 studies as a panel and estimate the RE model, which prevents the meta-analysis results from being dominated by small number of studies with many observations (Havranek & Irsova, 2010). Second, the assumption of fixed effect sizes in meta-analysis lacks justification for nearly all real-world data, whereas random effects estimation more realistically posits that each study has a different effect size (Field, 2003). Finally, since sample studies were conducted in multiple contexts, under different settings, with different methods, and by other people, "it would be unlikely that all the studies were functionally equivalent" (Borenstein, Hedges, & Rothstein, 2007, p. 29). The last argument is vividly illustrated in the SLR, where the heterogeneity of sample studies is discussed in detail.

While it is generally acknowledged that heterogeneity in estimated effects is better represented by RE estimators, some argue that in the presence of publication bias, FE estimator is more suitable (Doucouliagos & Paldam, 2013; Stanley & Doucouliagos, 2012). Reed (2015), on the other hand, points out that, while this is generally true, RE estimators can be efficient in some settings. Given that this topic is still open for debate, this study also reports FE estimator results as well as Q test statistics.

Under the hypothesis of homogeneity among the effect sizes (i.e., FE estimator assumptions), the Q statistic follows a chi-square distribution with k-1 degrees of freedom. If the Q test is not statistically significant, it suggests that there is no significant heterogeneity among the studies. Alternatively, if Q is significant, it suggests that the effect size should be interpreted as an average rather than a "true" correlation value (Hedges & Olkin, 2014). However, the Q statistic performs poorly in detecting true heterogeneity when meta-analysis includes a small number of studies (Huedo-Medina, Sánchez-Meca, Marín-Martínez, & Botella, 2006).

This meta-analysis was conducted using Comprehensive Meta-Analysis (CMA) software version 3.0, developed by Biostat (Borenstein, 2022). CMA is designed for conducting meta-analyses, specifically tailored for researchers in the fields of medicine, healthcare, and social sciences. CMA produces results identical to those of STATA and other software for meta-analyses (such as RevMan, for example), in addition to its usability and large set of analytical features (Bax, Yu, Ikeda, & Moons, 2007).

3.3.3. Publication bias

Although meta-averages may provide valuable insights into the general effects of 20 host country-specific factors on FDI location in developing countries, such estimates could be seriously biased. This is especially the case of the RE estimator (Stanley & Doucouliagos, 2017), and it is necessary to control for publication-selection bias.

Publication bias is a very serious concern in meta-analyses because if some estimates are more likely to be selected for publication than others, the estimates derived from the literature will be distorted, and the meta-analysis will be as well. Publication selection bias in FDI location choice literature has two potential sources. First, researchers and academic journals may prefer to publish studies producing statistically significant results and avoid publishing articles with insignificant

estimates (Stanley, 2005). Second, researchers may be tempted to publish results that correspond to a particular theory and ignore results that are inconsistent with that theory (Gunby, Jin, & Reed, 2017). For example, during the 1990s there was a strong consensus that FDI in developing countries is largely attracted by cheap or abundant factor inputs (such as natural resources, labor costs, etc.), as outlined in early theoretical frameworks (Dunning, 1998; Dunning & Narula, 1996; Helpman, 1984; Markusen, 1984). In such cases, researchers could use this intuition instead of specification checks (Iršová & Havránek, 2013).

A conventional test to graphically investigate the presence or absence of publication bias is a funnel plot (Egger, Smith, Schneider, & Minder, 1997; Stanley & Doucouliagos, 2010). The funnel plot is a scatter diagram that illustrates the relationship between the effect sizes of individual studies on the horizontal axis, and precision, measured as the inverse of the standard errors, on the vertical axis. In the absence of publication-selection bias, effect sizes reported by independent studies should vary randomly and symmetrically around the true effect. Moreover, statistical theory suggests that the dispersion of effect sizes is negatively correlated with the precision of the estimate. Therefore, studies with small samples should lead to less precise estimates, i.e., larger standard errors (and vice versa). As such, less precise estimates are at the bottom of the graph and are dispersed more widely than more precise estimates at the top of the graph. Therefore, if a scatter plot looks like a symmetric inverted funnel, it indicates the absence of publication-selection bias. If the funnel plot is asymmetrical and skewed to one side, then publication bias is suspected in the sense that estimates in favor of a specific conclusion (i.e., estimates with the "expected" sign) are published more frequently (type I publication-selection bias).

Fig. 3.3 below depicts the funnel plots of Fisher z-transformed PCCs for 20 FDI determinants outlined above across 308 studies. The expected funnel shape is observed for several determinants, including market growth (2), labor costs (4), human capital (5), infrastructure (6), inflation (9), trade openness (10), political instability (15), and democracy (17). In the case of market size (1), surrounding market potential (3), natural resource availability (8), agglomeration (7), rule of law (18), and regulatory quality (19), the funnel is slightly skewed to the right, i.e., positive values could be overreported, which may point to bias. Alternatively, the left part of the funnels for tax burden (11), corruption (16), geographic (14) and cultural (20) distances is a little heavier than the right one, indicating the overstatement of negative results. Funnel plots for the two remaining

determinants – tax incentives (12) and SEZs (13) – indicate the presence of publication bias in collected estimates as the shape is not symmetric, and estimates are not normally dispersed. This issue clearly comes from a lack of available studies that empirically tested the effect of these location determinants on FDI in developing countries (only 15 and 23 studies, respectively). In any case, most funnel plots reported in Fig. 3.3 show similar symmetry to the plots reported in other recent meta-analyses (Demena & van Bergeijk, 2017; Gunby et al., 2017; Kastratović, 2020; Wu, Fan, & Chen, 2022).

Figure 3.3. Funnel plots of precision by Fisher's Z of FDI determinants

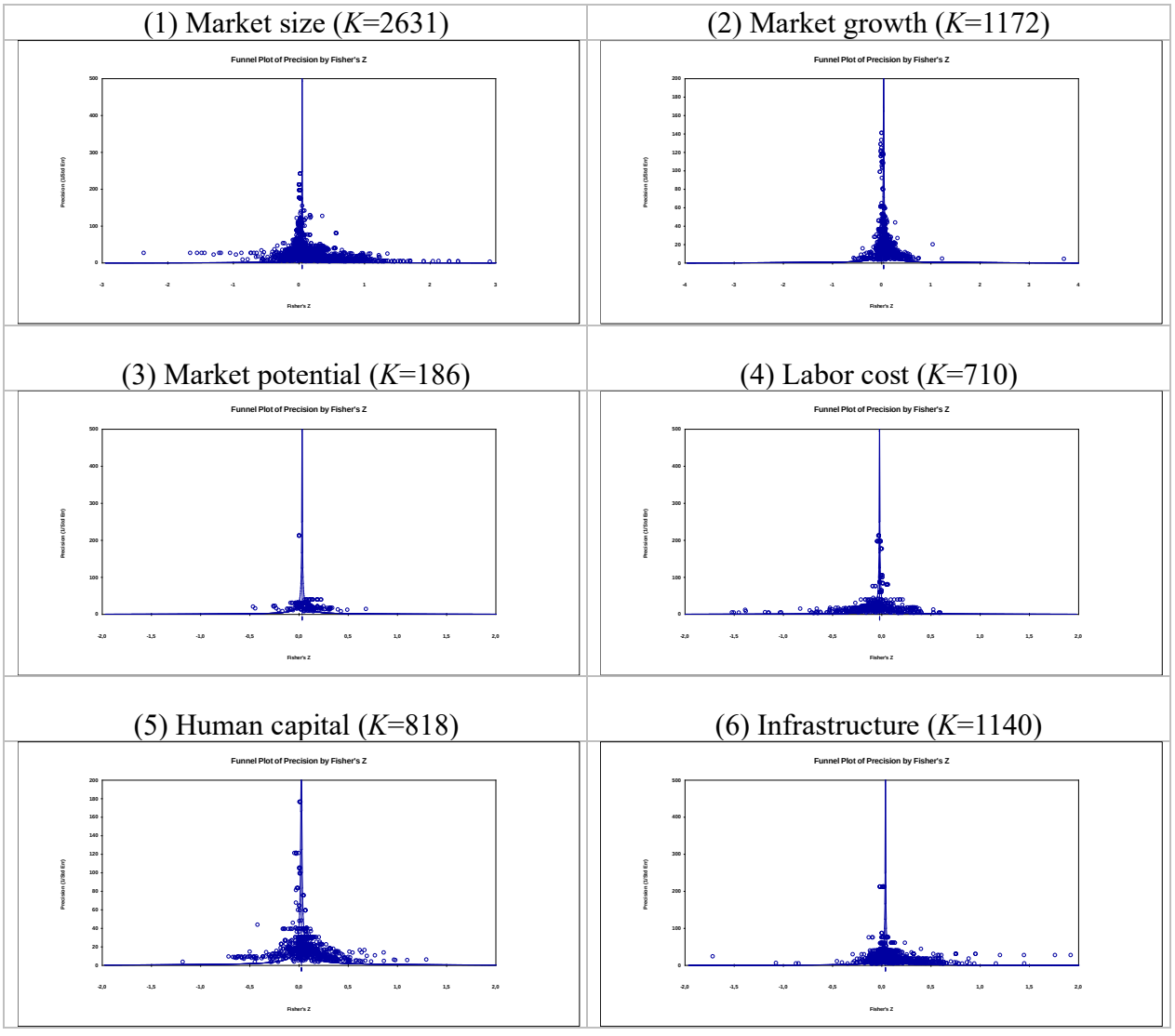
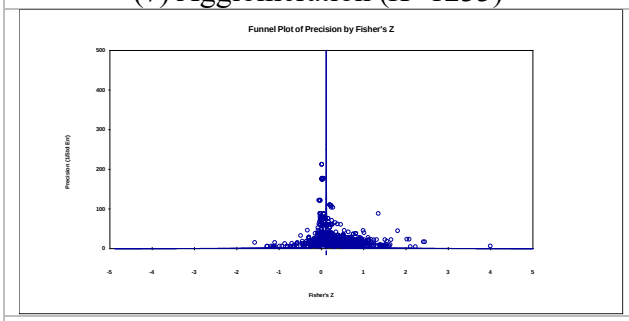
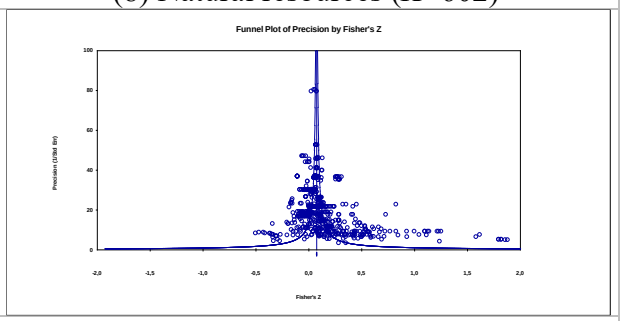


Figure 3.3. Funnel plots of precision by Fisher's Z of FDI determinants (cont.)

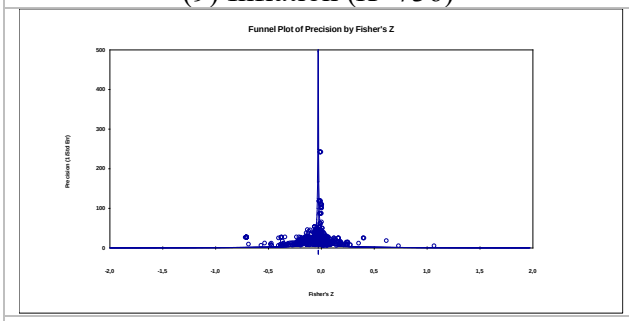
(7) Agglomeration (*K*=1233)



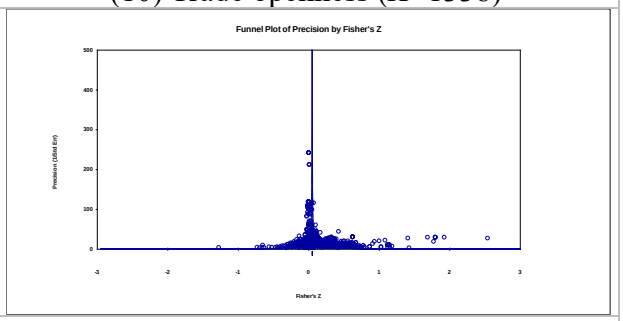
(8) Natural resources (*K*=602)



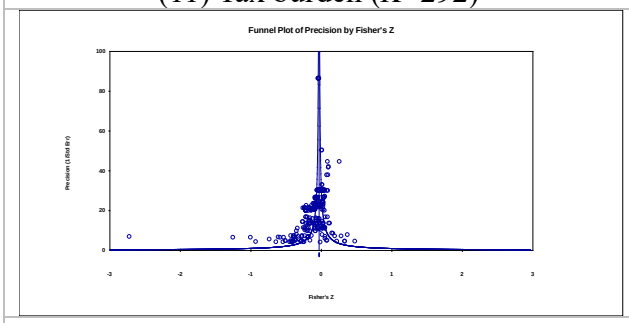
(9) Inflation (*K*=736)



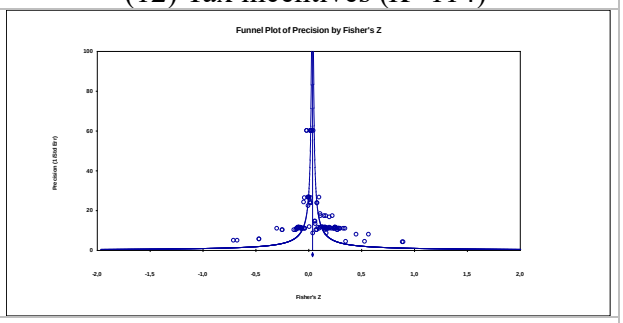
(10) Trade openness (*K*=1338)



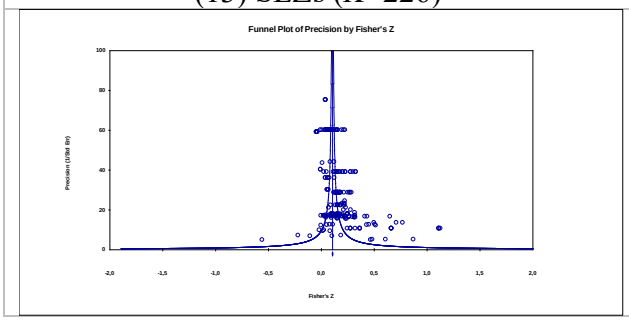
(11) Tax burden (*K*=292)



(12) Tax incentives (*K*=114)



(13) SEZs (*K*=226)



(14) Geographic distance (*K*=363)

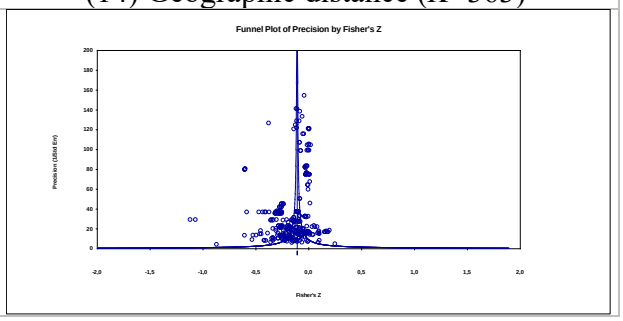
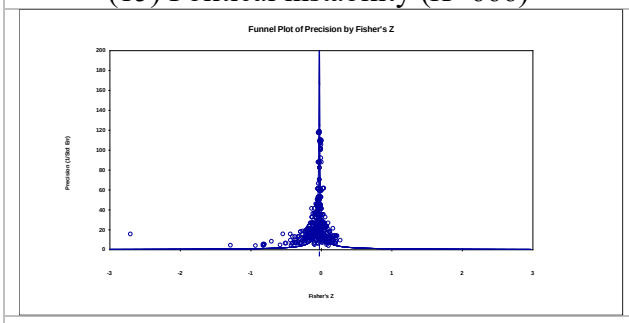
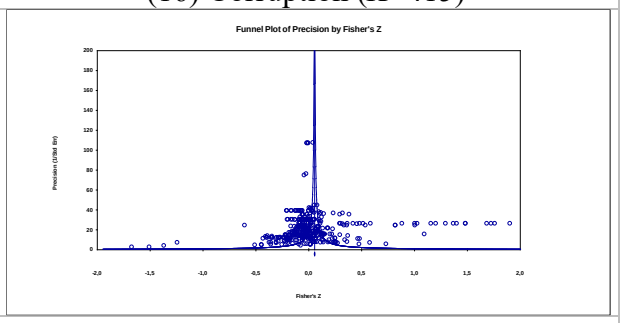


Figure 3.3. Funnel plots of precision by Fisher's Z of FDI determinants (cont.)

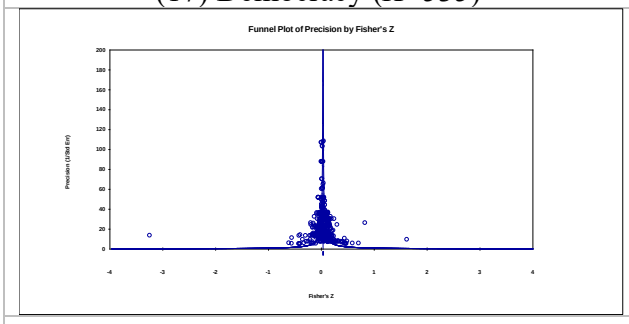
(15) Political instability (*K*=666)



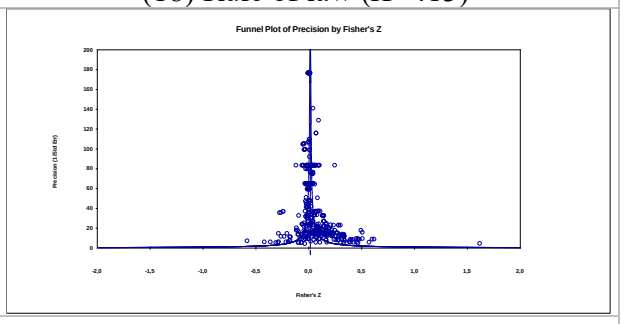
(16) Corruption (*K*=415)



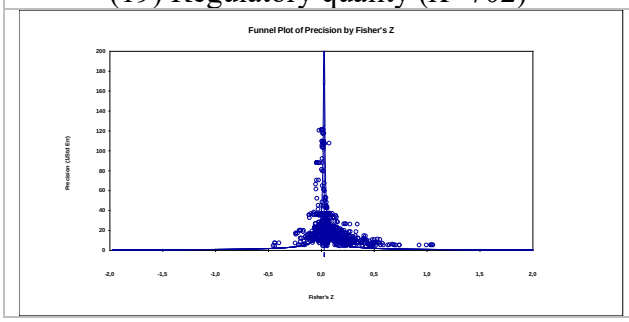
(17) Democracy (*K*=535)



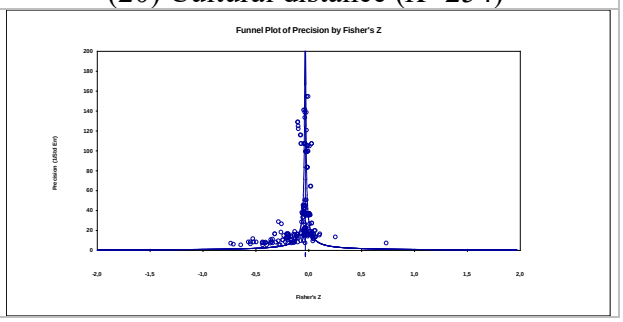
(18) Rule of law (*K*=413)



(19) Regulatory quality (*K*=702)



(20) Cultural distance (*K*=254)



3.4. RESULTS

Table 3.3 presents meta-analysis results of effect sizes and corresponding statistics for 20 FDI location determinants in developing countries calculated using RE estimator. Table 3.4 provides results for six FDI destination regions and Table 3.5 – for country of origin (developed vs developing countries). Finally, Table 3.6 gives results by industry (manufacturing vs services). Tables 3.7-3.22 in the Appendix provide detailed results including FE estimates. As can be seen in Tables 3.7-3.22 that report both FE and RE estimators, FE estimates differ dramatically from RE ones. As shown in Table 3.7, FE estimates are twice as small as RE for market growth, natural resources, inflation, trade openness, and cultural distance among others. In the case of market size and labor costs, for example, FE estimates are approximately five times smaller than respective RE values. This significant difference between FE and RE estimates points to the prevalence of between-study heterogeneity. Therefore, this Section presents and discusses only RE estimates.

For effect sizes interpretation, I follow the guidelines proposed by Doucouliagos (2011). He collected more than 22,000 PCCs from diverse economic literature and found that the median absolute PCC is 0.173. Doucouliagos (2011) categorized the sizes of PCCs as "small", "moderate", and "large" relative to the 25th, 50th, and 75th percentile values of the full sample of PCC values. The corresponding PCC values for z-transformed PCCs employed in this study are 0.070 (0.068 to 0.072), 0.175 (0.171 to 0.178), and 0.338 (0.333 to 0.344) (Doucouliagos, 2011, p. 11).

As can be seen from Table 3.3, aggregate effect sizes are all statistically significant and most of them fall into "moderate" effect size category according to Doucouliagos (2011). The top five largest effect sizes among 20 FDI determinants are received by agglomeration economies (0.234), market size (0.200), trade openness (0.180), large geographic distance (-0.160), and natural resource availability (0.146). Alternatively, FDI determinants with smallest PPCs (i.e., the ones below 0.070) are democracy (0.026), inflation (-0.058), market potential (0.061), corruption (-0.062), and cultural distance (-0.069). The absolute value of the remaining PCCs varies between 0.071 and 0.141. The signs of all 20 FDI determinants' PCCs are in line with theoretical literature and hypotheses outlined earlier in the systematic literature review.

The remainder of this section is dedicated to presentation of meta-analysis results for 20 FDI determinants across different geographic regions, country of origin, and industries.

Table 3.3. Synthesis of meta-analysis estimates (RE): Aggregate results for developing countries

No	FDI determinant	No. of studies	No. of estimates (K)	Mean PCC		z value
1	Market size	249	2631	0,200	***	26,691
2	Market growth	125	1172	0,086	***	14,631
3	Market potential	14	186	0,061	***	2,921
4	Labor cost	103	710	-0,083	***	-11,416
5	Human capital	100	818	0,071	***	8,093
6	Infrastructure	110	1140	0,126	***	13,475
7	Agglomeration	120	1233	0,234	***	15,276
8	Natural resources	57	602	0,146	***	8,596
9	Inflation	87	736	-0,058	***	-5,619
10	Trade openness	167	1338	0,180	***	16,055
11	Tax burden	36	292	-0,106	***	-6,833
12	Tax incentives	15	114	0,079	***	3,225
13	SEZ	23	226	0,141	***	7,358
14	Geographic distance	51	363	-0,160	***	-7,420
15	Political instability	78	666	-0,090	***	-12,896
16	Corruption	64	415	-0,062	**	-1,974
17	Democracy	61	535	0,026	***	3,040
18	Rule of law	70	413	0,072	***	10,404
19	Regulatory quality	95	702	0,096	***	14,602
20	Cultural distance	29	254	-0,069	***	-8,001

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.4. Synthesis of meta-analysis estimates (RE): Regions

Region		Africa					MENA				
No	**FDI determinant**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**
1	Market size	25	250	0,179	***	4,005	14	107	0,208	***	2,700
2	Market growth	17	117	0,172	***	5,139	8	63	0,076	***	3,045
3	Market potential	-	-	-	-	-	-	-	-	-	-
4	Labor cost	6	16	-0,377	***	-3,958	-	-	-	-	-
5	Human capital	13	67	0,148	***	4,805	7	74	-0,039		-0,371
6	Infrastructure	17	123	0,090	***	5,224	5	46	0,223	***	2,814
7	Agglomeration	13	96	0,248	***	2,585	11	90	0,192	**	2,563
8	Natural resources	18	191	0,209	***	6,399	8	103	0,170	*	1,717
9	Inflation	15	93	-0,061		-0,907	9	99	-0,078	***	-2,611
10	Trade openness	22	150	0,153	***	5,772	18	167	0,209		6,275
11	Tax burden	4	17	-0,135		-1,636	-	-	-	-	-
12	Tax incentives	4	73	0,026		0,321	-	-	-	-	-
13	SEZ	-	-	-	-	-	-	-	-	-	-
14	Geographic distance	-	-	-	-	-	-	-	-	-	-
15	Political instability	8	40	-0,225	***	-3,413	9	53	-0,072	***	-2,723
16	Corruption	12	80	0,053		0,373	9	40	0,040		0,696
17	Democracy	10	57	0,044		1,480	6	24	0,054		0,599
18	Rule of law	6	21	0,039		0,472	11	48	0,118	***	2,711
19	Regulatory quality	8	38	0,142	***	4,283	11	67	0,170	***	7,289
20	Cultural distance	-	-	-	-	-	-	-	-	-	-

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.4. Synthesis of meta-analysis estimates (RE): Regions (cont.)

Region		CEE					LAC				
No	**FDI determinant**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**
1	Market size	37	344	0,327	***	10,243	33	264	0,141	***	10,017
2	Market growth	12	80	0,054	***	3,403	11	80	0,070	***	4,245
3	Market potential	3	54	0,066		1,149	-	-	-	-	-
4	Labor cost	20	145	-0,061	***	-2,956	7	47	-0,064	***	-4,528
5	Human capital	10	99	0,070	***	3,505	11	84	0,050	***	4,175
6	Infrastructure	11	216	0,093	***	2,713	9	78	0,163	***	4,519
7	Agglomeration	13	131	0,240	***	4,824	15	124	0,098	***	4,911
8	Natural resources	8	79	0,143	***	2,755	5	80	0,019		0,777
9	Inflation	11	82	-0,096	***	-4,164	14	85	-0,004		-0,128
10	Trade openness	18	95	0,129	***	4,615	17	141	0,063	***	3,529
11	Tax burden	11	106	-0,075	***	-2,594	5	22	-0,058		-1,396
12	Tax incentives	-	-	-	-	-	-	-	-	-	-
13	SEZ	-	-	-	-	-	-	-	-	-	-
14	Geographic distance	16	165	-0,230	***	-4,213	6	32	-0,084	***	-4,903
15	Political instability	4	19	-0,079	*	-1,889	11	80	-0,067	**	-2,508
16	Corruption	11	83	-0,020		-0,500	6	51	-0,017		-0,960
17	Democracy	3	51	0,078	***	5,686	7	51	0,025		1,086
18	Rule of law	9	32	0,071	*	1,742	11	165	0,037	***	3,935
19	Regulatory quality	8	64	0,011		0,488	17	114	0,081	***	3,878
20	Cultural distance	4	99	-0,053	***	-2,699	5	18	-0,002		-0,237

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.4. Synthesis of meta-analysis estimates (RE): Regions (cont.)

Region		Asia					China				
No	**FDI determinant**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**
1	Market size	26	107	0,197	***	4,916	47	408	0,220	***	13,325
2	Market growth	12	82	0,152	***	6,349	12	66	0,135	***	3,111
3	Market potential	-	-	-	-	-	5	77	0,126	***	2,807
4	Labor cost	11	54	-0,100	***	-2,739	45	312	-0,073	***	-4,984
5	Human capital	6	19	0,119	**	2,264	27	230	0,074	***	3,349
6	Infrastructure	10	54	0,177	***	4,634	33	354	0,131	***	9,589
7	Agglomeration	10	25	0,476	***	5,109	27	319	0,208	***	10,638
8	Natural resources	-	-	-	-	-	-	-	-	-	-
9	Inflation	5	10	-0,172	*	-1,663	-	-	-	-	-
10	Trade openness	17	82	0,238	***	7,563	20	134	0,195	***	5,241
11	Tax burden	4	7	-0,233		-1,363	-	-	-	-	-
12	Tax incentives	-	-	-	-	-	6	19	0,241	***	3,428
13	SEZ	-	-	-	-	-	19	205	0,169	***	9,129
14	Geographic distance	7	18	-0,176	***	-4,141	9	44	-0,064	*	-1,889
15	Political instability	-	-	-	-	-	7	27	-0,243	***	-5,096
16	Corruption	-	-	-	-	-	-	-	-	-	-
17	Democracy	-	-	-	-	-	-	-	-	-	-
18	Rule of law	-	-	-	-	-	4	13	0,209	**	2,495
19	Regulatory quality	6	19	0,176	***	3,301	-	-	-	-	-
20	Cultural distance	5	18	-0,029		-0,408	7	44	-0,190	***	-3,383

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.5. Synthesis of meta-analysis estimates (RE): Country-of-origin

FDI source country		Developed source countries					Developing source countries				
No	**FDI determinant**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**
1	Market size	76	617	0,239	***	16,337	25	207	0,133	***	7,556
2	Market growth	27	207	0,065	***	3,789	8	57	0,085	***	2,703
3	Market potential	7	70	0,027		0,771	3	28	0,081	**	2,001
4	Labor cost	34	183	-0,112	***	-6,514	18	48	-0,184	***	-5,643
5	Human capital	24	139	0,098	***	4,353	10	53	-0,092	*	1,802
6	Infrastructure	26	205	0,097	***	5,145	9	75	0,090	***	3,847
7	Agglomeration	25	239	0,161	***	3,860	8	73	0,158		1,472
8	Natural resources	12	95	0,120	***	3,106	11	132	0,168	***	4,700
9	Inflation	12	67	-0,053	***	-3,519	4	15	0,021		0,376
10	Trade openness	38	237	0,101	***	8,915	15	125	0,096	***	5,916
11	Tax burden	12	101	-0,105	***	-4,502	-	-	-	-	-
12	Tax incentives	4	11	0,243	**	2,192	-	-	-	-	-
13	SEZ	6	64	0,140	***	6,209	6	30	0,146	***	4,803
14	Geographic distance	27	131	-0,136	***	-6,437	7	13	-0,097	***	-3,035
15	Political instability	23	111	-0,158	***	-7,835	7	15	-0,311	***	-3,324
16	Corruption	12	68	0,003		0,101	7	37	0,038		0,870
17	Democracy	14	159	0,027	***	3,060	3	20	0,059	**	2,134
18	Rule of law	12	41	0,084	***	3,624	7	22	0,037		1,405
19	Regulatory quality	20	115	0,089	***	5,059	6	12	0,007		0,181
20	Cultural distance	13	72	-0,042	***	-2,625	5	11	-0,071		-0,557

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.6. Synthesis of meta-analysis estimates (RE): Sector

Sector		Manufacturing					Services				
No	**FDI determinant**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**	**No. of studies**	**No. of estimates (K)**	**Mean PCC**		**z value**
1	Market size	29	247	0,228	***	12,433	13	72	0,264	***	5,898
2	Market growth	11	95	0,222	***	3,904	5	21	0,014		0,525
3	Market potential	4	70	0,119	**	2,364	-	-	-	-	-
4	Labor cost	22	154	-0,059	***	-3,944	4	10	-0,105	***	-2,854
5	Human capital	10	65	0,119	***	3,789	4	13	0,155	***	2,942
6	Infrastructure	12	115	0,084	***	6,703	-	-	-	-	-
7	Agglomeration	21	193	0,188	***	8,969	10	35	0,257	***	5,857
8	Natural resources	-	-	-	-	-	-	-	-	-	-
9	Inflation	3	6	0,002		0,047	3	6	0,043		0,294
10	Trade openness	13	76	0,099	***	3,852	6	19	0,031		1,277
11	Tax burden	4	21	-0,080	*	-1,683	-	-	-	-	-
12	Tax incentives	-	-	-	-	-	-	-	-	-	-
13	SEZ	8	70	0,157	***	4,824	-	-	-	-	-
14	Geographic distance	-	-	-	-	-	-	-	-	-	-
15	Political instability	7	23	-0,153	***	-3,111	-	-	-	-	-
16	Corruption	3	24	-0,070	**	-2,046	-	-	-	-	-
17	Democracy	-	-	-	-	-	-	-	-	-	-
18	Rule of law	7	29	0,031		1,143	4	59	0,079	**	2,159
19	Regulatory quality	4	24	0,146		1,457	5	17	0,215	***	3,250
20	Cultural distance	-	-	-	-	-	-	-	-	-	-

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

3.4.1. Economic factors

3.4.1.1. Market size

The average effect size of market size retrieved from 249 studies (k=2631) included in this meta-analysis equals 0.200 (z-value = 26.69) which clearly signals that larger market size (usually proxied either by GDP, GDP per capita, or simply population size) is among the most important reasons for investment in developing countries. The effect size of the most utilized measures of market size on FDI is positive, but the relative importance of proxies like GDP, GDP per capita, and population largely varies. Overall, GDP has the strongest effect size (r=0.267***) compared with the effects of GDP per capita and population (0.140*** and 0.092***, respectively).

Although FDI inflows are significantly and positively affected by a host country's market size across developing economies, the relative importance of market size varies across regions. FDI in CEE region is found to be particularly sensitive to the size of the host country's domestic market (0.327***), especially when proxied by GDP (0.416***) or population (0.239***). Likewise, the effect size of market size is found to be rather strong in China (0.220***) where foreign investment is attracted either by high GDP (0.320***) or GDP per capita (0.184***). It is not surprising that population size has no impact on FDI in China and the mean effect size is statistically insignificant and even has a negative direction (Liang, 2015; McDonald, Buckley, Voss, Cross, & Chen, 2018; Sharma, Wang, & Wong, 2014; Tung & Cho, 2001). In other Asian countries, foreign investors prefer to locate their capital in countries with high GDP (0.369***) and effect sizes of other proxies turned out to be statistically insignificant, albeit also positive.

LAC countries with high GDP and GDP per capita tend to exhibit a positive correlation with higher inflows of FDI (0.186*** and 0.114***, respectively). FDI in Africa is attracted by countries with large population size and higher income per capita (0.183*** and 0.179***, respectively) than by country's GDP (0.100***). In MENA countries, market size is significantly positive (0.208***), but the results for different proxies are not statistically significant in this meta-analysis due to the smaller number of estimates as compared to other regions.

Market size is an important FDI determinant for investors from both developed and developing countries. Developed countries' MNEs tend to locate their investments in developing countries with larger markets than firms from developing countries (0.239*** and 0.133***,

respectively). Interestingly, MNEs from developing countries do not pay much attention to the GDP per capita and population size of host countries, whereas the effect sizes of GDP for both groups of countries are comparable. US firms are particularly prone to invest in countries with high GDP and GDP per capita levels (0.459*** and 0.308***, respectively), while population size has no statistically significant effect on US FDI. On the contrary, Chinese firms look for countries with large GDP (0.128***), but GDP per capita does not influence their location decisions (Cheung & Qian, 2009; Dong & Fan, 2017). However, most papers focus on FDI from China in Africa, so this conclusion might be true only in the context of Chinese FDI in Africa as GDP per capita is generally low across the continent.

Market size has a large positive effect on FDI inflows for manufacturing and services (0.228*** and 0.264***, respectively). Interestingly, the effect size of GDP as a proxy for market size is substantially larger for manufacturing FDI (0.391***) than for service FDI (0.276***), whereas the effect size of GDP per capita is larger for service FDI than for manufacturing (0.212*** and 0.184***, respectively).

3.4.1.2. Market growth

The average effect size of 125 studies (k=1172) included in the meta-analysis equals 0.086 (z-value = 14.63). The effect size is rather small compared to the one of market size, meaning that the pace of economic growth in developing countries does not have a very strong effect on aggregate FDI inflows.

FDI inflows are significantly positively affected by the market growth of the host country across all regions. In Africa (0.172***), Asia (0.152***), and China (0.135***), market growth has a larger positive effect on FDI than in other regions. Interestingly, Africa turned out to be the only region where the effect sizes of market size and market growth are nearly the same. As such, potential future growth prospects in African countries are as important for foreign investors as their current market power. On the other hand, market growth in CEE countries (0.054***) is less important for investors than in other regions.

FDI inflows from developed and developing countries are significantly and positively affected by the economic growth of the host country. The effect sizes for both developed and developing countries are largely comparable and have a small influence on FDI inflows (0.065*** and 0.085***, respectively). Interestingly, evidence shows that Chinese investments are not affected by the rate of growth in the FDI host countries in Africa (Cheung et al., 2012; Cheung & Qian,

2009; Dong & Fan, 2017) and in South-East Asia (Kang & Jiang, 2012). However, the number of studies testing for the effect of host country market growth on Chinese FDI is rather limited (n=4, k=47). In addition, the effect size of market growth on manufacturing FDI is positive and rather strong (0.222***) but insignificant for service FDI.

3.4.1.3. Market potential of surrounding countries and regions

The average effect size of 186 estimates collected from 14 studies included in this meta-analysis equals to 0.061 (z-value = 2.92). The effect of market potential on FDI was mostly tested in the context of China on the provincial level and in CEE countries on both national and sub-national levels. The average effect size of 5 studies (k=77) that tested the effect of the market potential of surrounding provinces on FDI inflows in China equals 0.126***, meaning that foreign investors take neighboring provinces into consideration when making FDI location decisions. The effect size of market potential in the CEE region turned out to be statistically insignificant, probably due to the small number of collected estimates (n=3, k=54).

Meta-analysis shows that the effect of market potential is statistically significant only for FDI from developing countries but not for developed countries' MNEs. Finally, manufacturing FDI responds positively to the larger surrounding market potential (0.119***).

3.4.1.4. Labor cost

The average effect size of 103 studies (k=710) included in the meta-analysis equals -0.083 (z-value = -11.42). High labor costs have nearly twice as large a negative effect on FDI flows on a national level (-0.125***, n=60, k=389) as they do on a sub-national scale (-0.049***, n=43, k=321). This outcome indicates that labor costs in a given developing country are relatively important for FDI inflows at the macro level but somehow less important when choosing a particular region in this country.

High labor costs have a deterring effect on FDI in all regions (except MENA countries due to the lack of collected estimates). High labor costs have the strongest negative impact on FDI inflows in Africa (-0.377***, k=16). The effect size for the African region is on average five times larger than in other developing regions. However, due to the small number of studies, this result should not be interpreted straightforwardly. High cost of labor has a considerable negative effect on FDI across Asian countries (-0.100***). The effect sizes of labor costs for CEE, China, and LAC countries are largely comparable and vary from -0.073*** and -0.061***.

High labor costs deter FDI inflows from both developed and developing countries; however, the negative effect is more strongly pronounced for investors from developing countries than for MNEs from developed countries (-0.184*** and -0.112***, respectively). Among developed countries, the highest negative effect is found for Japanese FDI (-0.153***), followed by US investors (-0.119***), while empirical evidence indicates that EU firms do not regard high labor costs as an impediment to their investment (0.027, k=25).

High labor costs exert a significant negative effect on both sectors. Findings suggest that the negative effect of the cost of labor is more pronounced for investment in services than for manufacturing FDI (-0.105*** and -0.059***, respectively). This may be caused by the need to hire highly qualified personnel to perform complex, specialized tasks when compared to the educational level required in most labor-intensive industries.

3.4.1.5. Human capital

The average effect size of 100 studies (k=818) included in this meta-analysis equals 0.071 (z-value = 8.09). However, researchers use diverse measurements for the quality of human capital, which could produce divergent and even puzzling results. For example, primary education, commonly proxied as literacy rate or elementary school enrollment, has the strongest effect size (0.132***) when compared to secondary or tertiary education levels in the host developing country. Interestingly, the effect size of human capital proxied by secondary education is found to be considerably smaller and is only marginally significant (0.045*).

Human capital has a significantly positive effect in all regions except MENA countries. In Africa and Asia, the quality of human capital was consistently found to attract FDI inflows (0.148*** and 0.119**, respectively). The effect sizes of human capital in China and CEE countries are nearly the same (0.074*** and 0.070***). However, in the case of China, studies that found a positive connection between the level of primary education and FDI mostly use data from the 1990s (Broadman & Sun, 1997; Coughlin & Segev, 2000; Dean, Lovely, & Wang, 2009; Gao, 2005; Hsiao & Shen, 2003), and some of these results are probably outdated in the current Chinese context. The effect size of human capital on FDI in LAC countries is relatively small compared to other regions (0.050***).

Developed FDI home countries prefer to locate their investment in developing countries with a better quality of human capital (0.098***). The positive effect of human capital quality is particularly pronounced for Japanese FDI (0.287***, k=8) (Cassidy & Andreosso-O'Callaghan,

2006; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, & Siu, 2003, 2004; Gao, Wang, & Che, 2018; Horn & Cross, 2016; Kumar, 2001) as well as for US FDI (0.173***, k=66) (Belkhodja, Mohiuddin, & Karuranga, 2017; Du, Lu, & Tao, 2008a; Du et al., 2008b; Fung et al., 2002; Kumar, 2001; Lall, Norman, & Featherstone, 2003; Nunnenkamp & Spatz, 2002; Nwaogu & Ryan, 2014). On the other hand, investors from developing countries give much less importance to the quality of human capital in other developing countries, as the effect size turned out to be only marginally significant with a negative sign (-0.092*) (Bessonova & Gonchar, 2015; Chen & Yeh, 2012; Debaere, Lee, & Paik, 2010; Gao, 2005; Hong & Chin, 2007; Huang & Cantwell, 2017; Mina, 2009; Wang, Clegg, & Kafouros, 2009; Wood, Mazouz, Yin, & Cheah, 2014).

Like labor costs, the quality of human capital has a statistically significant positive effect on both manufacturing and service FDI, with a slightly stronger impact on the service sector than on manufacturing (0.119*** and 0.155***, respectively). These findings are in line with the above results for the relative importance of high labor costs in service industries that might require a skilled or specialized workforce.

3.4.1.6. Infrastructure

The average effect size of 110 studies (k=1140) included in the meta-analysis equals 0.126 (z-value = 13.48). The quality of primary infrastructure (usually proxied by electricity generation or consumption) has the strongest effect size among other proxies (0.176**), followed by telecommunication and transport infrastructure (0.140*** and 0.102***, respectively).

The quality of infrastructure has a positive effect on FDI inflows in all regions. This effect is particularly strong in MENA countries (0.223***), followed by Asia (0.177***), LAC (0.163***), and China (0.131***). Interestingly, the effect sizes of infrastructure are substantially smaller in African and CEE countries than in other regions (0.090*** and 0.093***, respectively). These results corroborate the results of SLR, indicating that in CEE countries, infrastructure is generally well developed compared with other developing regions, whereas absence of infrastructure in Africa may not be seen as an impediment to FDI. For example, Shan, Lin, Li, & Zeng (2018) found a negative relationship between infrastructure and Chinese FDI in Africa, suggesting that much of Chinese investment goes to infrastructure development projects.

Investment from both developed and developing countries is positively and almost equally affected by host country infrastructure development (0.097*** and 0.090***, respectively).

The positive relationship between US FDI and good infrastructure in the host country is slightly stronger than in the case of Japanese or Western European FDI (0.125***, 0.101***, and 0.084***, respectively). Additionally, good quality of infrastructure in developing countries has a statistically significant positive correlation with manufacturing FDI (0.084***).

3.4.1.7. Agglomeration

The average effect size of 120 articles (k=1233) included in this meta-analysis equals 0.234 (z-value = 15.28) and is the strongest among all 20 FDI determinants discussed in this study. The effect size of 101 studies that investigated the effect of foreign agglomeration on FDI is stronger than the average effect size of other measures of agglomeration (0.278***). This result echoes previous assumptions that the agglomeration economies of foreign firms might help to overcome the liability of foreignness in developing countries and provide positive spillovers across engaged firms (Zaheer & Mosakowski, 1997). Urbanization agglomeration (also known as localization economies, proxied as population density of a particular area) barely yields a positive support (0.018**) and the effect size of domestic agglomeration is not statistically significant and even has a negative coefficient (-0.013).

The positive relationship between agglomeration and FDI inflows is statistically significant in all regions, and the effect size coefficients are rather large compared to other FDI determinants discussed in this Chapter. Agglomeration is an important FDI driver in Asia (0.476***), followed by Africa, CEE, China, and MENA with rather similar effect sizes (0.222*** on average).

Overall, developed countries' FDI is attracted by agglomeration economies (0.161***), whereas developing countries' investors seem to give it much less importance as the result of the meta-analysis is not statistically significant for the latter. Interestingly, only Japanese FDI is attracted by agglomeration in the host country, while US and Western European FDI do not yield statistically significant results. These results, however, should be interpreted with caution, as the number of studies included in the meta-analysis is rather limited, especially in the case of Western European countries of origin.

Findings suggest that agglomerated regions attract FDI in both the manufacturing and service industries. However, evidence shows that service FDI is particularly attracted by agglomeration economies in a host developing country (0.257***) compared to manufacturing FDI (0.188***).

3.4.1.8. Natural resources

The average effect size of 57 studies (k=602) included in this meta-analysis equals 0.146 (z-value =8.60). Country's exports or rents of oil and gas are found to be more attractive for FDI than the total portfolio of the host country's natural resources (0.167*** and 0.126***, respectively). This suggests that FDI is attracted more by a specific type of natural resource than by the abundance of a great variety of natural endowments.

As expected, the highest positive impact on FDI natural resources is found in Africa (0.209***), which have attracted much resource-seeking FDI in the past two decades (Asiedu, 2006; Bokpin, Mensah, & Asamoah, 2015; Brafu-Insaidoo & Biekpe, 2014; Chen et al., 2018; Cheung et al., 2012; Cleeve et al., 2015; Dong & Fan, 2017; Emudainohwo et al., 2018; Khadaroo & Seetanah, 2009; Mhlanga et al., 2010). The effect size of MENA countries is also rather strong, albeit significant at only 10% (0.170*) (Al-Shammari et al., 2016; Aziz, 2018; Méon & Sekkat, 2004; Mina, 2009, 2012; Siddiqui & Iqbal, 2018). CEE countries' natural resource abundance also has strong positive influence on FDI location (0.143***) (Bellos & Subasat, 2012b; Edmiston, Mudd, & Valev, 2003; Estrin & Uvalic, 2014; Garibaldi, Mora, Sahay, & Zettelmeyer, 2001; Gonchar & Marek, 2014; Ledyaeva, 2009). Meta-analysis results suggest that natural resource endowments have no significant impact on FDI location in LAC countries, while scholars have nearly never explored the influence of this factor in the context of Asian countries (including China).

The evidence also shows that the natural resource abundance of the host country is more important for FDI inflows from developing countries than for developed countries (0.168*** and 0.120***, respectively). For example, Chinese FDI goes to locations with natural resource availability 2.5 times more frequently than US FDI (0.144*** and 0.059**, respectively).

3.4.1.9. Inflation

The average effect size of 87 studies (k=736) included in the meta-analysis equals -0.058 (z-value = -5.62). Inflation has a limited negative effect on FDI inflows in most regions; the highest negative effect is found on FDI in the Asian region (-0.172*), albeit the effect size is only marginally significant and the number of collected estimates is low. A statistically significant negative effect on inflation is found in CEE countries (-0.096***) and the MENA region (-0.078***). The effect sizes of inflation in Africa and LAC are negative but statistically insignificant.

Results suggest that inflation deters FDI from advanced home countries (-0.053***), including US FDI (-0.062**). Chinese FDI, on the other hand, is not affected by inflation in Africa (Mourao, 2018; Shan et al., 2018), Asia (Kang & Jiang, 2012), or across different developing countries in general (Kolstad & Wiig, 2012).

3.4.1.10. Trade openness

The average effect size of 167 papers (k=1338) included in this meta-analysis equals 0.180 (z-value = 16.06). Total trade (proxied as the sum of exports and imports) and the volume of exports from the host country significantly and positively affect FDI inflows into host developing countries (0.207***, on average). Another common trade openness proxy—imports to the host country—gained the least support (0.073***).

Trade openness has a statistically significant positive influence on FDI location across all regions. Openness to trade is particularly important for FDI location in Asia (0.238***), MENA (0.209***), and China (0.195***). Interestingly, the positive effect of exports from China is especially strongly pronounced on FDI location into China (0.302***) than the effects of total trade volume or imports. Such results mirror the conventional image of China as the "world's factory". Trade openness is also an important FDI determinant in Africa and CEE (0.153*** and 0.129***, respectively) and is less important in LAC countries to a certain extent (0.063***).

Trade openness is equally important for investors from both developed and developing countries (0.101** and 0.096***, respectively). However, the positive influence of trade openness on US FDI is stronger than on average (0.142***), implying that US firms are more likely to engage in trade than firms from other triad countries, as well as Chinese MNEs (0.072***). Interestingly, export intensity from the host developing country has a significant positive relationship with developed countries' FDI (0.231***), whereas developing countries' MNEs prefer host countries with fewer import restrictions (0.097***).

Trade openness attracts manufacturing FDI (0.099***), while the effect of trade openness on service FDI is not statistically significant, although also positive (Blanton & Blanton, 2009; Donaubauer, Meyer, & Nunnenkamp, 2016; Hecock & Jepsen, 2014; Mariscal, Zhang, & Pascual, 2012).

3.4.1.11. Tax burden

The average effect size of 36 papers (k=292) included in the meta-analysis equals -0.106 (z-value = -6.83). Tax burden in the host developing countries has a deterring effect on FDI in the CEE region only (-0.075***), whereas results for other regions are either insignificant or lack the estimates for the meta-analysis. In addition, high taxes have a deterring effect on investment from developed countries (-0.105***) and on manufacturing FDI (-0.080*).

3.4.1.12. Tax incentives and SEZs

The number of empirical papers that explored the relationship between FDI in developing countries and various types of incentives such as tax concessions, tax holiday, and the availability of special economic development zones, is rather limited. The average effect size of various tax incentives collected from 15 studies (k=114) equals 0.079 (z-value = 3.23), whereas the average effect size of SEZs obtained from 23 studies (k=226) is nearly twice as large and equals 0.141 (z-value = 7.36). Moreover, these two determinants were mostly studied in China on both national (Li & Hu, 2002; Luo, Luo, & Liu, 2008) and subnational levels (Sharma et al., 2014; Tung & Cho, 2001), as well as for developed FDI origin countries (Fung et al., 2003, 2004; Gao, 2005). Meta-analysis results show that tax incentives have a significant positive effect on FDI in China (0.241***) along with the success of special economic zones (SEZs) in driving FDI in China (0.169***). It is not surprising that SEZs in China are particularly attractive for manufacturing FDI (0.157***). These results, however, should be interpreted very carefully, as funnel plots illustrate the presence of publication bias in the collected estimates for these two host country-specific factors.

3.4.1.13. Geographic distance

The average effect size of 51 studies (k=363) included in this study equals -0.160 (z-value = -7.42). Larger geographic distances between home and host countries affects FDI negatively in all regions except MENA and Africa due to the lack of empirical studies exploring this factor. Large bilateral distance deters FDI inflows from CEE countries (-0.230***), followed by the Asian region (-0.176***). Large distance also has a negative effect on FDI in LAC countries and China, albeit with smaller coefficients (-0.084*** and -0.064*).

The findings of this meta-analysis point to some differences in the FDI location behavior of investors from developed and developing countries. Developed countries' MNEs prefer

proximate locations for their investments when compared with developing countries (-0.136*** and -0.097***, respectively). European and US FDI is particularly negatively affected by the larger distance to the host FDI country (-0.238*** and -0.202***, respectively).

3.4.2. Institutional factors

3.4.2.1. Political instability

The average effect size of 78 studies (k=666) included in the meta-analysis equals -0.090 (z-value = -12.90). Political instability deters FDI inflows in all regions, excluding Asia, which lacks the available empirical evidence. MNEs are particularly concerned by the stable political environment when investing in China (-0.243***) and Africa (-0.225***). The negative influence of the host country's political instability is much smaller and comparable across CEE (-0.079*), MENA (-0.072***), and LAC countries (-0.067**).

Results suggest that political instability deters FDI from both developed and developing home countries (corresponding effect sizes equal -0.158*** and -0.311***, respectively). Surprisingly, the negative effect size of political instability is nearly twice as large for developing investor countries as for developed ones. Such an unexpected outcome is likely due to the small number of effect sizes for developing FDI source countries possible for observation (k=15). Moreover, there are considerable differences in the results among various developed countries. For example, meta-analysis results suggest that US FDI is more sensitive to political instability in developing host countries (-0.325***, k=47) than Japanese FDI (-0.060, k=19). Finally, an unstable political environment deters FDI from manufacturing industries (-0.153***).

3.4.2.2. Corruption

The average effect size of corruption on FDI of 64 studies (k=415) included in this meta-analysis equals -0.062 (z-value = -1.97). Prior empirical evidence produces rather inconclusive results for the relationship between FDI and corruption across regions. First, meta-analysis finds no statistically significant effect of corruption on FDI in any of the regions except for China and Asia, which lack the collected estimates. As such, meta-analysis results support the "helping hand" hypothesis in African and MENA regions as the effect sizes are positive, albeit statistically insignificant (0.053 and 0.040, respectively). In the CEE and LAC regions, the effect of corruption on FDI is negative but not statistically significant (-0.020 and -0.017,

respectively). Available research suggests that the negative influence of corruption on FDI was pronounced only in Russia on the regional level over the period from 1995 to 2012, and its effect size is very small (-0.040***, k=42) (Baccini, Li, & Mirkina, 2014; Kuzmina, Volchkova, & Zueva, 2014; Ledyaeva, Karhunen, & Kosonen, 2013).

Overall, empirical evidence points out that corruption is not a deterrent factor for FDI, neither from developed nor developing FDI home countries, as effect sizes are not statistically significant for both groups of countries. This contradicts the earlier arguments that FDI from low corruption home countries tends to avoid locations with high corruption while investors from high corruption home countries may sometimes prefer such locations (Cuervo-Cazurra, 2006; Godinez & Liu, 2015; Ledyaeva et al., 2013). This, however, does not mean that researchers did not find any differences in the behavior of foreign firms depending on their development stage or country of origin. For example, Ledyaeva et al. (2013) found that foreign investors choose Russian regions that are similar to their host countries in terms of corruption and democracy. Similarly, Godinez & Liu (2015) argue that corruption distance is negatively associated with FDI flows in Latin America when home countries have a lower level of corruption than host countries. Firms from countries with lower corruption are also less likely to invest in conflict developing countries (Driffield, Jones, & Crotty, 2013) and in agriculture sector (Lay & Nolte, 2018). Additionally, findings indicate that FDI in manufacturing industries is negatively affected by corruption, but the coefficient and the number of collected estimates are small (-0.070**, k=24).

Interestingly, high corruption has a stronger negative effect on absolute FDI inflows (-0.118***, k=116) but not on the FDI inflows scaled by GDP or on FDI stock (-0.072, k=204 and 0.019, k=34, respectively). This corroborates the earlier findings of Graf Lambsdorff (2005), who argued that if corruption affects investment productivity then the host country's total output (i.e., GDP) drops in relation to the capital stock, meaning that the ratio of investment to GDP is likely to increase in reaction to additional costs associated with corruption. As a result, studies that use the ratio of FDI to GDP as a dependent variable might underestimate the total adverse impact of corruption on investment.

3.4.2.3. Democracy

The average effect size of 64 studies (k=535) included in this meta-analysis is the smallest among all 20 determinants studied and equals 0.026 (z-value = 3.04). Interestingly, civil

liberties and political liberties do not affect FDI in the same way. While more political liberties in the host country are associated with higher FDI (0.089***), civil liberties have an insignificant effect on FDI inflows. Adam & Filippaios (2007) found that the repression of civil liberties (i.e., suppressing the activity of labor unions, interest groups, etc.) had a positive relationship with US FDI, suggesting that US investors have primarily an efficiency-seeking motive for FDI.

In terms of regional coverage, democracy is found to positively influence FDI inflows in the CEE region only (0.078***). However, due to scant empirical evidence and a variety of measurements used to proxy democracy, none of the effect sizes for other regions (namely Africa, MENA, and LAC) are found to be statistically significant. By and large, the findings on the relationship between FDI and democratic institutions in developing countries remain mixed and might require further research.

Democratic institutions help to attract FDI from both developed and developing source countries (0.027*** and 0.059**, respectively). However, the effect of democracy on FDI was mainly studied in the context of developed FDI home countries, where it was found positive by most researchers (Globerman & Shapiro, 2003; Guerin & Manzocchi, 2009; Ledyaeva et al., 2013). Nonetheless, the effect sizes are very small, implying that democratic institutions have only marginal positive influence on MNEs' location decisions in developing countries.

3.4.2.4. Rule of law

The average effect size of 70 studies (k=413) included in the meta-analysis equals 0.072 (z-value = 10.40). The effect size of IPR protection, the most commonly used proxy of the rule of law, provides a similar result to the aggregate effect size of the rule of law determinant in developing countries (0.062***). Better IPR protection and contract enforcement are vital for FDI inflows in China (0.209**). Similarly, a stronger rule of law in MENA countries is also an important factor for FDI inflows (0.118***). In CEE countries, the effect size of the rule of law is only marginally significant (0.071*), while in LAC countries, the coefficient is modest (0.037***). Interestingly, as in the case of corruption, FDI in Africa is not deterred by weak rule of law as its effect size turns insignificant.

Overall, FDI from developed countries tends to avoid locations with weak rule of law (0.084***), whereas the relationship between FDI from developing countries and stronger legal protection is insignificant. Additionally, Chinese investors do not consider the absence of a

strong rule of law as an impediment for FDI, as the effect size is insignificant and even turns negative (-0.095, k=11) (Cheung et al., 2012; Kolstad & Wiig, 2012; Lin, 2015). Additionally, service FDI is attracted by a stronger rule of law (0.079**), while the effect size for manufacturing FDI is not statistically significant.

3.4.2.5. Regulatory quality

The average effect size of 95 studies (k=702) is the largest among all six institutional determinants studied in this meta-analysis and equals 0.096 (z-value = 14.60). Amongst various proxies of regulatory quality used in the context of developing countries, the level of *economic freedom* clearly has the strongest impact on FDI inflows (0.141***), followed by the host country's *investment climate* (0.102***). The absence of inefficient *bureaucracy* and red tape as well as the host country's *openness to foreign capital flows* also have a statistically positive effect on FDI inflows (0.089*** and 0.067**, respectively).

The quality of both investment (i.e., openness to capital flows and investment climate) and business regulations (i.e., economic freedom and bureaucratic quality) has a positive effect on FDI in all regions, excluding CEE countries. In Asian and MENA countries, the positive relationship between FDI and regulations is particularly strong (0.176*** and 0.170***, respectively). In the MENA region, FDI is attracted by a good investment climate (0.171***) and the absence of bureaucratic red tape (0.144***). Likewise, there is a strong positive relationship between high regulatory quality and FDI in Africa (0.142***). More specifically, results show that a favorable investment climate and the absence of expropriation risks (0.378***) are among the key institutional drivers for FDI location in Africa. The positive effect of good regulations on FDI in Latin America is also rather strong (0.081***). Results further suggest that FDI in LAC countries is mostly driven by the absence of capital controls and entry restrictions (0.090**).

FDI from developed countries prefers to locate in developing countries with good quality regulations (0.089***), especially with good bureaucratic quality (0.279***). In particular, US firms are driven by favorable regulatory environment in developing countries (0.149***). This meta-analysis did not find a statistically significant effect of good regulatory quality on FDI from developing countries, albeit there is a lack of collected estimates (0.007, k=12). Moreover, findings further suggest that good regulatory quality significantly favors FDI in service sectors (0.215***), whereas the effect size for manufacturing industries is not significant.

3.4.2.6. Cultural distance

Finally, the average effect size of 29 studies (k=254) included in this meta-analysis equals -0.069 (z-value = -8.00). Results suggest that common language spoken in FDI source and host countries has slightly more positive effect on FDI than common past colonial history (0.050*** and 0.032***, respectively). Greater cultural distance between FDI source and host countries has a negative influence on investment location decisions in China and CEE countries (-0.190*** and -0.053***, respectively). Due to the limited number of studies that test the relationship between cultural distance and FDI in other regions, effect sizes for Asian and LAC countries lack significance.

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To sum up, the results of this meta-analysis presented in this Section show that the relative importance of host country-specific location determinants substantially varies across developing countries and regions. Moreover, the above analysis suggests that FDI source country and sector specificity have a large influence on FDI location decisions in host developing countries. The next Section summarizes and discusses the key empirical findings in relation to the three hypotheses outlined in Section 2.2 of this study.

3.5. HYPOTHESES TESTING AND DISCUSSION

The results presented in the previous Section clearly illustrate that the relative significance of 20 FDI determinants varies considerably across different countries and regions, thus highlighting divergent motives for FDI location across different locations of the developing world. While some of the host country-specific factors are common predictors of FDI in developing economies (i.e., agglomeration, market size, or infrastructure), others are specific to a particular region (i.e., natural resources in Africa and MENA regions or SEZs and tax incentives in China). Fig. 3.4 below provides a summary of the findings of this meta-analysis regarding the relative importance of 20 hot country-specific FDI determinants across various geographic regions. The next paragraphs are dedicated to (1) the discussion of investment motivation Hypotheses 1a-1f for six geographic regions of the developing world according to the IDP, as well as the moderating role played by (2) country of origin (Hypothesis 2a and 2b) and (3) sector (Hypothesis 3).

3.5.1. Geographic regions

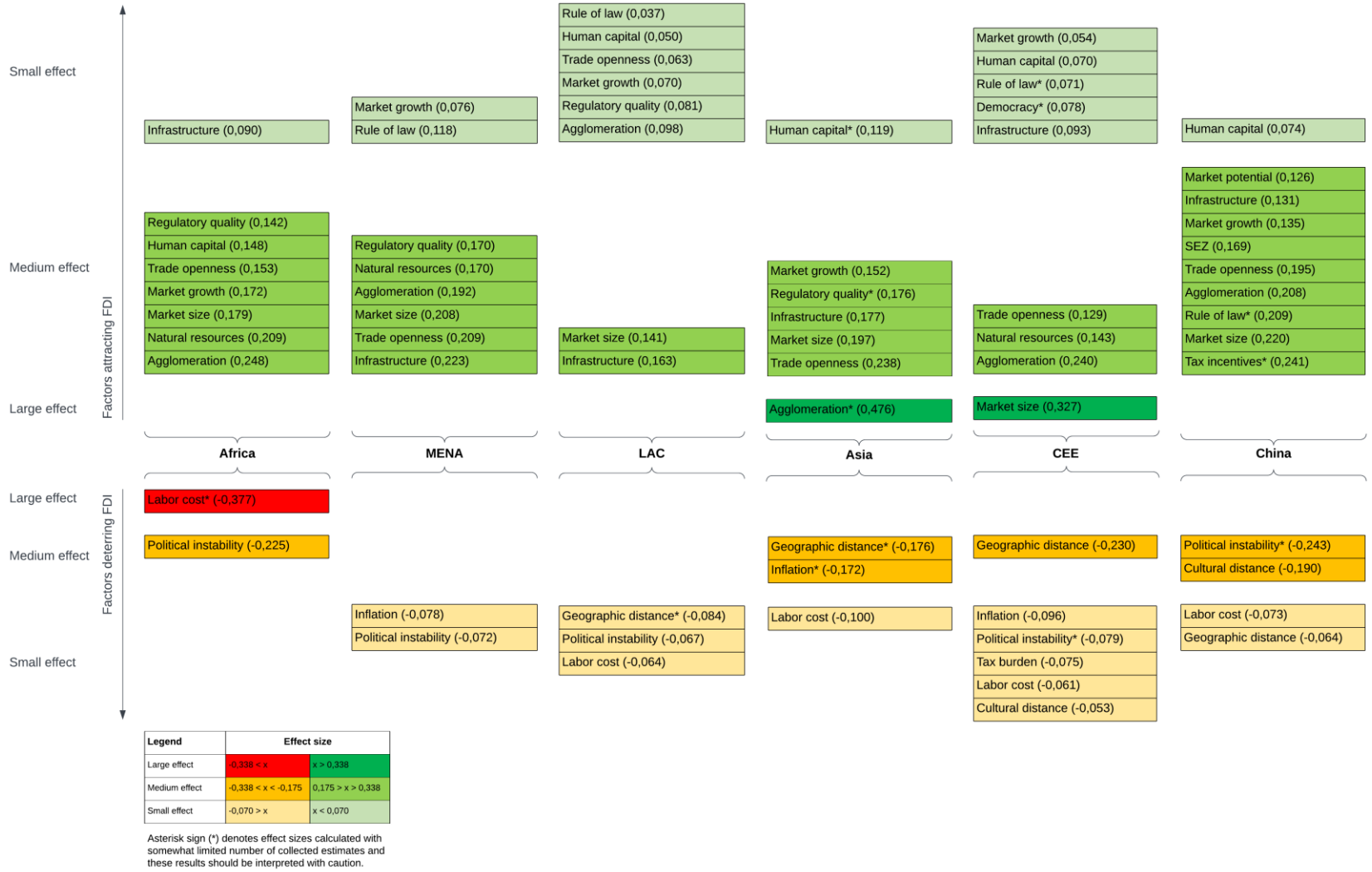
3.5.1.1. Africa and MENA (Hypotheses 1a and 1b)

In Africa, foreign investors prefer to locate their capital in countries with low labor costs, presence of agglomeration economies, absence of political instability, availability of natural resources, a large market size (especially in terms of population size and GDP per capita), and fast market growth. Openness to international trade, high quality of human capital, favorable regulations towards foreign investments, and established infrastructure are also among the important factors for FDI inflows in developing African countries.

In the MENA region, FDI is attracted to countries with well-developed infrastructure, trade openness, market size (measured as GDP or GDP per capita), agglomeration, natural resource availability (especially fuel resources such as oil and gas), a good investment climate, and strong rule of law. MNEs seem to avoid countries with rampant inflation, political instability, and slow economic growth.

Empirical findings of this meta-analysis point out that both African and MENA countries attract much of the resource-seeking investment given the magnitude of effect sizes of natural resource abundance on the influx of FDI (0.209*** and 0.170*, respectively). However, natural resource-seeking motivation is more pronounced in Africa, where foreign investors look for oil and gas, ores, and minerals, whereas in MENA countries, FDI is driven mainly by oil and gas

Figure 3.4. Summary of findings for 20 host country-specific FDI determinants



reserves or production. Furthermore, the cheap cost of labor is one of the most important factors for FDI location in African countries (-0.377***), although this large effect size should be interpreted with caution due to the limited number of estimates collected from previous literature. Interestingly, the relationship between labor costs and FDI inflows across MENA countries has not been well investigated by the studies included in the sample for this meta-analysis. Among sample studies, this relationship was only explored in the context of Türkiye (Bilgili, Tülüce, & Doğan, 2012; Durmaz, 2017; Yavan, 2010), where empirical findings regarding the focal relationship are not clear-cut. The relative significance of other cost-related factors, which theoretically are important for resource-seeking FDI, such as tax rate levels and incentives, is not conclusive because of the lack of collected estimates from previous empirical literature.

Other important factors pointing to resource-seeking motivation in both regions include the relative importance of infrastructure development necessary for transporting resources efficiently to ports for export and openness to trade, which enables firms to export materials for further processing in MNE's home country or in third countries. Furthermore, MNEs avoid locating their capital in countries with high risks of political turmoil, especially on the African continent, and prefer countries with favorable investment regulations and the absence of expropriation risk for foreign investors.

The co-location of domestic and foreign firms also promotes this type of FDI in African and MENA countries, as it brings multiple benefits to foreign firms. First, location in agglomerated regions allows MNEs to lower transportation costs as multiple mining firms can share the costs of construction or maintenance of transportation and logistics networks. Second, it provides access to a skilled pool of labor with experience in resource-related activities and enables the transfer of best practices and technology among firms in extractive industries. Finally, location in clusters may help to mitigate risks related to regulatory uncertainties and enhance investors' confidence in often ambiguous institutional environments in many African and MENA countries.

In addition to the resource-driven objectives of MNEs behind the investment in both regions, market-seeking motivation is also evident, as market size and growth have a significant positive impact on FDI inflows. The size of the local market is among the top 3 most important factors determining FDI inflows in the MENA region, as foreign investors prefer to locate their capital in countries with high GDP and GDP per capita. Further, this meta-analysis shows that market growth

has a rather small effect on FDI inflows in MENA countries (0.076***), whereas in the SLR presented in Chapter 2, this FDI determinant was found to be one of the most important drivers of FDI in this region. This study shows that the relative importance of existing market size has a significantly larger impact on FDI inflows in MENA countries than promising future growth prospects. In Africa, however, economic growth has a much stronger impact on FDI location decisions, as the effect sizes of the current local market and growth are nearly the same (0.179*** and 0.172***, respectively). Overall, FDI is flowing into densely populated African countries characterized by substantial per capita disposable income and fast economic growth.

According to the list of relevant host country location factors outlined in Table 3.1 in Section 3.2 of this study, market-seeking motivation is supported by other factors including infrastructure, agglomeration economies, human capital development, and sound institutions favoring investment-friendly and market-oriented environments. This meta-analysis produced another interesting observation concerning the relative importance of human capital quality in African and MENA countries. The findings show that an educated workforce has a positive impact on FDI location decisions in Africa, where the quality of human capital is usually proxied by primary or secondary levels of educational attainment (Asiedu, 2006; Cleeve, 2012; Naudé & Krugell, 2007; Okafor, Piesse, & Webster, 2015). In the context of MENA countries, existing empirical studies employed either secondary school or tertiary education enrollment data, where studies using the former proxy found a negative effect on FDI (Helmy, 2013; Mina, 2007, 2009) while the latter observed a positive effect (Aziz, 2018; Moosa, 2009; Yavan, 2010). As a result of such variations in estimates across sample studies, this meta-analysis did not yield a statistically significant effect of human capital on FDI in this region.

These mixed findings regarding the impact of human capital quality on FDI still imply that an educated workforce is one of the important antecedents of FDI in both regions. However, in Africa, foreign investors may prioritize a workforce with basic skills and knowledge, while in the MENA region, they may require more specialized or advanced skills provided by tertiary education. These outcomes are in line with the IDP, which suggests that countries in stages 1 and 2 mostly attract market-seeking FDI in labor-intensive manufacturing industries that produce simple consumer goods to serve a large population in the domestic market. Thus, primary and secondary education

may be prioritized. Likewise, if FDI in the MENA region is focused on providing specialized products to a smaller but more developed market, tertiary education might be more critical.

Overall, findings of this meta-analysis support Hypotheses 1a and 1b, which stated that African and MENA countries are at stages 1 and 2 of the IDP and mostly attract natural resource-seeking FDI and market-seeking FDI in labor-intensive manufacturing sectors.

3.5.1.2. LAC and Asia (Hypotheses 1c and 1d)

In the LAC region, foreign investors are attracted to countries with established infrastructure, large market size (proxied either by GDP or per capita GDP), presence of agglomeration economies, favorable regulatory environment for foreign investors, decent pace of economic growth rate, and countries located in geographic proximity to the FDI home country. Other factors such as political instability, cost of labor, openness to trade, quality of human capital, and strong rule of law are also among the factors determining FDI across LAC countries. It should be noted, however, that the effect sizes of FDI determinants for the LAC region turned out to be smaller than in other geographic regions, and only the effect sizes of infrastructure and market size are close to the medium effect sizes as outlined by Doucouliagos (2011).

In Asian countries (excluding China), foreign investors prefer countries with the presence of agglomeration economies, openness to international trade, large markets, well-developed infrastructure, regulations favoring liberalization of investment flows and economic freedom, decent market growth prospects, and educated labor force. Large geographic distances between home and host countries, high inflation, as well as high cost of labor, hamper FDI in Asian countries.

Meta-analysis results do not support resource-seeking motivations for Latin American and Asian countries, as predicted by Hypotheses 1c and 1d. Natural resource endowment was found statistically insignificant for FDI in the LAC region, albeit the effect size was calculated based on a limited number of estimates (n=5, k=80). In Asian context, only Kang & Jiang (2012) investigated the relationship between Chinese FDI stock and natural resources (proxied as the ratio of ore and metal exports to merchandise exports) in four South-East Asian countries, where the authors found that natural resource abundance stimulates IFDI. As such, there is a lack of available empirical

evidence that could potentially support the resource-seeking strategies of MNEs in Latin American and Asian countries, which are assumed to be at stages 1-3 within the IDP.

In contrast, the LAC region seems to attract mostly market-seeking investment given the strong significance of the host country's GDP and per capita income levels, as well as the importance of infrastructure necessary for effective distribution of goods and services. The relative significance of other factors such as agglomeration economies, market growth, availability of less expensive skilled or unskilled labor, and political stability have a considerably smaller influence on FDI location decisions.

Findings of this meta-analysis suggest that many foreign investors are also driven by market-seeking motives across Asian countries. Market factors play an important role in attracting FDI in this region, where MNEs prefer countries with a large market size (0.197***), especially measured by GDP (0.369***), and market growth rate (0.152***). GDP per capita, on the other hand, did not appear to be an important factor for FDI. This may signal that MNEs aim to achieve economies of scale in Asian markets rather than targeting high-income consumers only. Moreover, FDI has a long-term perspective by definition, and even if GDP per capita is not a significant location factor yet, it may become more relevant, especially given the promising trends of rising income levels across many Asian economies as well as their huge potential consumer base.

The results of effect sizes for other location factors such as transport and communication infrastructure, quality of investment and business regulations, low labor costs, and human capital quality corroborate the market-seeking motives in the Asian region. Furthermore, the findings of this meta-analysis shed more light on the conflicting results of the SLR regarding the relative importance of low labor costs for IFDI in Asian countries. The literature review presented in Chapter 2 showed that only 8 out of 22 studies (36%) found a statistically significant negative relationship between the high cost of labor and FDI location across different Asian countries, which was caused by aggregating the studies using different levels of analysis (i.e., national or subnational level). In this study, the effect size of the labor cost variable is found to be statistically significant with a negative direction (-0.100***) based on estimates collected from 11 studies, of which 9 employed a country-level perspective. Consequently, this meta-analysis supports the earlier observation that high labor costs have a much more pronounced negative effect on FDI location at

the national level and are less relevant for MNEs when making location decisions at the subnational level.

This meta-analysis shows that agglomeration is one of the most important factors for FDI location in Asian countries, with a large effect size of 0.476***, albeit this effect size was computed using a limited number of estimates. The effect size of foreign agglomeration, usually proxied as the amount of previous FDI inflows in a particular country or region, becomes even larger (0.582***), thus highlighting the critical importance of co-location of firms in industrial clusters and urban centers in Asian countries. Agglomerative economies allow foreign firms to benefit from easier access to suppliers and specialized services, as well as large and concentrated consumer markets. Firms' agglomeration in particular locations tends to enhance product innovation (Jang, Kim, & von Zedtwitz, 2017) and spawn innovative enterprises (Capozza, Salomone, & Somma, 2018) which, in turn, helps firms develop and maintain their competitive advantages vis-à-vis competitive pressure. Moreover, agglomerated regions often have developed transportation networks and logistics services, which can reduce operational costs and improve market penetration by ensuring efficient distribution of goods.

Finally, market-seeking MNEs avoid countries with high inflation as it erodes the purchasing power of consumers, increases production and operational costs due to rising input prices, and can lead to economic instability and uncertainty, making it riskier for foreign investors to enter or expand in a host country market. These results, however, should be treated with caution due to the limited number of collected estimates for the calculation of agglomeration and inflation effect sizes.

The findings of this study also point to the efficiency-seeking motives of foreign firms in developing Asian countries, as manifested by the relative importance of production cost related factors (e.g., wages), availability of skilled workforce, developed infrastructure, agglomerative economies, and stable macroeconomic environment. In addition to the above, efficiency-seeking firms pay critical attention to transport costs and trade barriers, as this type of FDI aims to capitalize on cost advantages in developing countries, optimize supply chains, and improve operational efficiency. Findings show that foreign investment in Asian countries is hampered by a large geographic distance between FDI source and recipient countries (-0.176***) and is attracted to locations with liberalized trade regimes (0.238***), especially in terms of export-oriented policies (0.264***). Physical proximity of the FDI host country allows MNEs to significantly reduce

transportation costs, which is a key consideration for efficiency-seeking FDI. Moreover, being geographically close to the host location allows MNEs to maintain better control over their overseas operations by ensuring efficient coordination and communication, thus minimizing transaction costs. On the other hand, openness to international trade in the host location facilitates efficient supply chain management, as efficiency-seeking firms often need to import raw materials or intermediate goods from their home countries or third countries. Moreover, it enables MNEs to achieve economies of scale by producing in a particular Asian developing country and then exporting output to global markets.

Findings of this study also point to the existence of efficiency-seeking motives in LAC countries since FDI decreases with the larger distance to the host country and increases if a host country favors an open trade regime with global markets. However, the effect sizes are rather small, and the available empirical evidence mostly points to the dominance of market-seeking motives in this region.

Overall, the results of this study only partly support Hypotheses 1c and 1d, which stated that LAC and Asian countries are at stages 1, 2, and 3 of the IDP and mostly attract resource-, market-, and efficiency-seeking FDI. Available evidence suggests that LAC countries attract predominantly market-seeking FDI and, most likely, some of the efficiency-seeking FDI in such countries as Mexico, for example. US firms may choose to invest in Mexico to take advantage of lower production and labor costs, geographical proximity, and the large NAFTA market to sell the output produced. In Asian countries, FDI pursues both market- and efficiency-seeking motives. However, there is a lack of collected estimates to make meaningful conclusions regarding the extent of the presence of resource-seeking MNEs in both regions.

3.5.1.3. CEE and China (Hypotheses 1e and 1f)

In the CEE region, the large market of host countries is the main driver of FDI. Foreign investors prefer countries with agglomeration economies that are located in geographic proximity to their home country, rich in natural endowments, and open to international trade. MNEs also tend to locate their FDI in countries with developed infrastructure, democratic institutions, strong rule of law, and educated human capital. At the same time, MNEs avoid countries with high inflation, political instability, and high tax rates. Factors like labor costs, market growth rate, and the cultural

distance between FDI home and host countries have a small effect on FDI location decisions across CEE economies.

In China, MNEs consider a variety of host location-specific factors when making investment decisions. Tax incentives, large market (in terms of GDP and GDP per capita), strong rule of law, agglomeration economies, openness to trade, availability of SEZs, market growth, developed infrastructure, market potential of surrounding provinces, as well as human capital quality, are among the key drivers of FDI in China. On the other hand, political instability, a large cultural distance to the FDI origin country, and the high cost of labor deter foreign investors. The large geographic distance to MNE's home country has a limited negative effect on FDI location in China.

Results of this study demonstrate the dominance of market-seeking strategies of MNEs in CEE countries, where foreign investors locate their FDI in countries with large GDP (0.416***), population size (0.239***), and GDP per capita (0.116***). On the other hand, the market growth of a particular CEE country has a limited effect on MNEs' location decisions. The market potential of surrounding countries did not turn out to be statistically significant due to the small number of studies that explored the effect of this location determinant on FDI inflows in the CEE region. Market-seeking motives in CEE countries are also supported by the relative importance of agglomeration economies, stable macroeconomic policies preventing high inflation, and the availability of well-established infrastructure, especially transportation networks (0.125**), that enable the distribution of produced goods across Eastern and Central Europe.

This study further points to the presence of efficiency-seeking FDI in the CEE region. Results show that MNEs favor production cost-related factors, including lower taxes and the cost of skilled or unskilled labor, as well as transportation cost-related factors such as openness to international trade, adequate transportation infrastructure, and geographic proximity to the home country. The large geographic distance between home and host countries has the strongest deterring effect on IFDI in the CEE region (-0.230***) compared to other regions studied in this meta-analysis. This may be caused by the limitations of FDI data, as many empirical studies employ widely available Western-Eastern European investment flows data (e.g., Resmini (2000), Jiménez, Palmero, & Jiménez (2014)) or OECD data, which usually includes the majority of Western European countries (e.g., Janicki & Wunnava (2004), Iwasaki & Suganuma (2009)).

Additionally, the findings indicate the presence of resource-seeking FDI in the CEE region given the medium relative importance of natural resource endowment (0.143***). Natural resources seemed to be an important location factor between the 1990s and 2010s for MNEs in several resource-rich Eastern European countries, such as Bulgaria and Poland (Bellos & Subasat, 2012b; Estrin & Uvalic, 2014), and CIS countries, including Russia, Ukraine, Azerbaijan, etc. (Garibaldi et al., 2001; Ledyaeva, 2009). These results corroborate the earlier findings of Nachum (2000), highlighting considerable differences among countries in this region in terms of their market size or abundance of natural resources, which affect firms motives for investment.

Finally, the results of this meta-analysis provide strong empirical support for market- and efficiency-seeking FDI in China. Efficiency-seeking FDI in China is primarily driven by various kinds of tax incentives, the availability of special economic and export processing zones, and the presence of agglomerative economies, which also attract many other foreign enterprises (0.270***). China's openness to trade is also critically important for efficiency-seeking firms, especially its export intensity (0.302***), and findings indicate that foreign firms prefer to locate their activities in proximity to seaports (0.136***). Low labor costs and high quality of human capital have rather small effects on FDI location decisions. However, a more detailed examination shows that high labor costs have a stronger negative effect on FDI at the country level (-0.105**, n=13, k=51) than at the provincial level (-0.057***, n=32, k=261). Physical proximity of MNEs' home countries to China does not look like an obstacle for IFDI, probably due to the other multiple location advantages that China could potentially offer to foreign investors.

Market-seeking FDI in China is attracted by its huge GDP (0.320**) and, to a lesser extent, by its high per capita income level (0.184***). Economic growth in China (or across its provinces) is also a significant antecedent of FDI location. Foreign investors prefer to locate their capital in Chinese provinces with good infrastructure, especially well-developed telecommunication and transportation networks. Moreover, the market potential of surrounding provinces strongly and positively affects IFDI in a particular province, further supporting the desire of MNEs to serve a large pool of local Chinese customers.

Furthermore, empirical literature on FDI location in China shows a substantial interest of scholars in exploring the relationship between institutional environment and FDI. Findings show that political instability, large cultural distance between China and the FDI origin country, weak rule of

law concerning IPR protection (Awokuse & Yin, 2010), contract enforcement (Wang, Xu, & Zhu, 2012), or government expenditures on legal systems (He, Wang, & Cheng, 2011; Li & Park, 2006) considerably hamper FDI inflows in China. Nonetheless, the favorable institutional environment in China and its provinces is likely to benefit both market- and efficiency-seeking MNEs.

Overall, I hypothesized that CEE countries and China are currently at stage 3 of the IDP and largely attract market- and efficiency-seeking FDI. Empirical findings for the CEE region largely support market- and efficiency-seeking motives of foreign investors; however, findings also suggest the presence of some resource-seeking FDI in some economies of Eastern Europe and the former Soviet Union. As such, Hypothesis 1e is supported only partially, as evidently some of the countries included in this geographic region might be at stage 2 within the IDP. Finally, the results of this meta-analysis show strong support for market- and efficiency-seeking investment motivations in China (Hypothesis 1f).

3.5.2. Country of origin

3.5.2.1. Developed FDI source countries

Developed and developing FDI origin countries are significantly different in their location decisions across developing host countries. Factors that are found to be important for developed countries' MNEs include the large market size of the host country, especially in terms of GDP and GDP per capita, agglomeration economies, political stability, the availability of various kinds of tax incentives and special economic zones, as well as the shorter geographic distance between home and host countries.

Findings show that other FDI determinants such as the availability of natural resources (especially oil and gas), labor costs, tax rates, trade openness, human capital quality, infrastructure, quality of investment and business regulations, and rule of law also affect the location decisions of MNEs, but to a relatively lesser extent. Here, however, some interesting findings have emerged. First, developed countries' MNEs are more inclined to invest in countries with a highly educated workforce with complete tertiary education (0.202***), whereas effect sizes for primary and secondary levels of educational attainment are not significant. Second, while the effect size of trade openness turned out to be rather small (0.101**), developing host countries' export intensity is twice as strong a FDI location driving factor as the sum of total trade (0.231***), while openness

to imports to the host country is not statistically significant. This points to the focus of developed country MNEs on export-oriented host countries that aim to take advantage of cheap and/or abundant factor endowments (i.e., lower production costs or necessary natural resources) in developing countries and sell elsewhere the output produced. Third, IPR protection (a component of the rule of law) is not a significant FDI determinant for firms from developed economies. The plausible explanation of such a result may indicate a variation by industry, as some industries, such as technology and pharmaceuticals, may rely heavily on strong patent protection, whereas manufacturing or service industries may prioritize other factors. The latter should be interpreted with caution, however, as there is a lack of empirical studies employing specific industry data that could provide empirical support for the importance of property rights protection in developing countries.

Interestingly, among the 20 FDI determinants included in this meta-analysis, the effect sizes of the market potential of surrounding countries and corruption turned out to be statistically insignificant. Moreover, the coefficient of corruption is positive, albeit insignificant, indicating that firms from developed countries do not consider the presence of corruption in developing countries as a serious impediment to their investment. Remaining factors (market growth, inflation, cultural distance, and democracy) have very small effect sizes (i.e., smaller than 0.070) and do not exert a strong influence on the location decisions of firms from developed countries.

3.5.2.2. Developing FDI source countries

Developing countries' MNEs prefer to invest in other developing countries with politically stable environments, a low cost of labor, the availability of natural resources (especially oil and gas), a large market size, and the presence of SEZs. Interestingly, MNEs from developing countries are attracted to locations with high GDP, whereas GDP per capita and local population size do not affect their FDI decisions. Other factors determining FDI location include shorter geographic distance between home and host countries, openness to international trade, infrastructure, market growth, and the potential of surrounding regions within large countries like China.

Surprisingly, the effect size of human capital quality has a negative sign, albeit only marginally significant at the 10% level (-0.092*), pointing towards a larger preference for less expensive labor than a highly educated workforce. This observation highlights the more cost-driven considerations

of firms from developing countries when compared to the behavior of MNEs from developed countries.

Another interesting result produced by this meta-analysis is the statistical insignificance of agglomeration economies for developing FDI source countries. Such an outcome may be explained by the lack of studies and the choice of measurements used by researchers to proxy agglomeration. The effect size of foreign agglomeration (usually proxied as accumulated FDI or the number of foreign firms in a particular location) is rather strong, albeit only marginally significant (0.268*). Overall, findings suggest that agglomeration economies play an important role in the FDI location decisions of developing countries' MNEs.

Due to the lack of studies employing OFDI data from developing countries, this meta-analysis could not find any statistically significant effects for several economic and most institutional determinants. As such, inflation, corruption, rule of law, regulatory quality, and cultural distance turned out to be insignificant for the location decisions of MNEs from developing countries.

Overall, the findings of the meta-analysis support Hypothesis 2a, which stated that MNEs from developed countries mostly pursue efficiency- and market-seeking motives. Similarly, Hypothesis 2b, which stated that MNEs from developing countries often engage in resource- and market-seeking FDI in other developing countries is also confirmed by the findings of this study.

First, empirical evidence suggests that firms from both groups of countries pursue resource-seeking motives in developing countries, given the relative significance of natural resource availability, low-cost labor, and other factor endowments. However, developing countries' MNEs seem to be more inclined to engage in this type of FDI, as manifested by the larger effect sizes of natural resources and labor costs, as well as the strong importance of a politically stable environment, which enhances the efficiency of resource exploitation in Africa, for example. In addition, the negative coefficient of human capital quality indirectly supports this line of reasoning, as it may imply that developing countries do not engage in high-tech industries in developing countries and, therefore, may prefer locations with the basic education of the local labor force.

Second, MNEs from both developed and developing countries pursue market-seeking motives, as they prefer to invest in richer countries in terms of GDP and high economic growth. However, the findings of this study suggest that only firms from developed countries target developing countries

with high GDP per capita, as such markets can provide opportunities for selling more sophisticated, higher-value products and services. Developing country MNEs may prioritize larger markets (measured by GDP) over GDP per capita because their output may serve a broader spectrum of consumers, including those with lower incomes. Moreover, if developing country firms invest in another developing country primarily to secure access to natural resources, lower production costs, or specific industries, GDP per capita may not be as relevant as the overall economic size of the host location.

Third, findings indicate that developed country MNEs are more likely to engage in efficiency-seeking FDI than developing country firms. Developed country firms respond positively to lower production cost-related factors in foreign markets (e.g., labor, taxes, incentives, and SEZs of various kinds), the presence of agglomerative economies that provide access to suppliers and support services, and the freedom to engage in trade of intermediate and final goods. Openness to international trade, particularly high export intensity, can be beneficial for MNEs pursuing efficiency-seeking motives because they can benefit from existing distribution networks to either integrate local suppliers in their global supply chains or to gain easier access to international customers. Additionally, the relatively strong significance of other factors such as preference for skilled labor, developed infrastructure, and a favorable institutional environment also points toward the efficiency-seeking motivations of developed countries' MNEs. The findings of this study largely reject the efficiency-seeking nature of FDI from developing countries in other developing countries. This, however, should not be interpreted straightforwardly, as the number of studies and collected estimates using developing countries' OFDI data is rather limited[31].

Finally, it is important to note that the behavior of specific FDI origin countries classified as either developed or developing also differs significantly. These findings further highlight the moderating role of the country's economic stage of development as well as the heterogeneity of home country characteristics that affect OFDI from that country.

As such, US investors generally pursue market-seeking motives in host developing countries given the strong effect sizes of market size in host countries (proxied both by GDP (0.459***) and per

[31] The total number of estimates collected for this meta-analysis from studies employing developed countries' FDI data is three times higher than the number of estimates collected from studies using developing countries' OFDI data (see Table 6).

capita GDP (0.308***)). Likewise, efficiency-seeking motives are also quite common, as US FDI prefers locations with skilled but less expensive labor, low tax rates, open trade regimes, stable political and favorable investment environment, and located close to the USA. It is interesting to note, however, that US FDI is not attracted to agglomerated developing regions. Possibly, this indicates that market-seeking US MNEs might avoid extensive competitive pressure in foreign markets. On the other hand, efficiency-seeking FDI may favor locations in proximate countries like Mexico or other nearby LAC countries, which could reduce its dependence on agglomerative economies abroad. Finally, it seems that resource-seeking motives are not a priority for US FDI abroad, and rich natural endowments may be seen as an additional location advantage for efficiency-seeking firms.

Like the US MNEs, Japanese firms pursue both market- and efficiency-seeking strategies in developing countries. They tend to invest in countries with high GDP and economic growth rates, well-educated human capital at a relatively low cost, the presence of agglomerative economies and SEZs, as well as established infrastructure. The very small effect size of trade openness is particularly puzzling, as freedom to engage in trade in intermediate and final products is one of the key antecedents of efficiency-seeking FDI. This result could be explained by the limited number and heterogeneity of studies that mostly used data for the 1980-2000 period (Azémar, Desbordes, & Mucchielli, 2007; Kumar, 2001; Tuman & Emmert, 1999; Xing, 2006; Xing & Wan, 2006; Zhou, Delios, & Yang, 2002).

Results of this study suggest that Chinese MNEs mostly pursue resource-seeking motives as they prefer countries with rich natural endowments (0.144***), large GDP, and open trade regimes enabling exports from the host country. Findings also suggest that Chinese FDI avoids corrupt countries in Africa (Cheung et al., 2012; Mourao, 2018; Wood et al., 2014) and Latin American mining industries (Lin, 2015). This result, however, is based on a very small number of estimates (k=11) and is significant at the 10% level only and, therefore, should be interpreted critically.

As a final point, limited available evidence suggests that Western European MNEs pursue largely market-seeking motives in proximate countries with high GDP and developed infrastructure.

3.5.3. Sectors

Finally, I turn to the role played by different sectors (manufacturing vs. services) in moderating the relative importance of host country-specific location factors in developing countries. It is important to note that the number of collected estimates for the manufacturing sector is approximately five times greater than that for the service sector (k=1212 and 252, respectively). Consequently, the following paragraphs mostly discuss location factors driving manufacturing FDI in developing countries.

MNEs locate their manufacturing FDI in countries with a large population and high GDP, whereas the effect of GDP per capita is nearly twice as small as the one of GDP. This largely points to the importance of economies of scale and a large potential consumer base for labor- and capital-intensive manufacturing MNEs. On the other hand, service FDI also prefers countries with high GDP, but the per capita income level in the host country is more important for foreign investment in services than in manufacturing industries (0.212*** and 0.184***, respectively). Interestingly, the rate of economic growth does not concern service FDI but is very important for the location decisions of manufacturing MNEs (0.222***). Overall, market factors including GDP, population size, and market growth significantly affect manufacturing FDI, whereas service FDI primarily looks for markets with high purchasing power.

Both manufacturing and service FDI are attracted to locations with less expensive labor and well-educated human capital, although findings point out that service MNEs are more responsive to the cost of labor and availability of skilled labor in developing countries than manufacturing MNEs. Likewise, both types of FDI prefer locations in agglomerated regions to take advantage of easier access to suppliers and customers, a large pool of skilled workers, more developed infrastructure, etc.

Further, manufacturing FDI is attracted to countries and regions with politically stable environment, availability of special economic zones, liberalized trade regimes enabling import of components and export of finished goods, as well as developed infrastructure. Interestingly, findings show that corruption in the host country negatively affects the inflows of foreign investment, albeit the effect size is very small and nearly equals zero. Overall, the institutional variables seem to affect manufacturing and service FDI differently. As such, service FDI prefer locations with favorable regulatory environment towards foreign investors and strong rule of law,

whereas these factors do not largely affect the decisions of manufacturing MNEs. To sum up, the above results support Hypothesis 3, which stated that nature of the sector in which an MNE operates significantly affects the relative significance of host country-specific location FDI determinants across developing countries and regions.

3.6. CONCLUSION

The main objectives of this meta-analytic study have been (1) to identify the relative importance of 20 host country-specific location factors for FDI location decisions and (2) to distinguish between firms' motives for investment across different developing countries and regions. In this study, I applied the Investment Development Path (IDP) theoretical framework to 20 host country location factors, which posits that the relative importance of these factors, to a major extent, depends on the host country's stage of economic development.

By providing solid theoretical reasoning and synthesizing estimates collected from 308 empirical studies focusing on FDI location determinants in developing countries, this research addressed several relatively unexplored issues in the empirical literature. First, this meta-analytic study showed that the relative significance of 20 host country-specific determinants varies substantially for FDI location decisions across developing countries and regions. In line with the IDP predictions, this study found that the type of FDI a host country attracts largely depends on its stage of development within the IDP framework. The findings suggest that African and MENA countries are currently at stages 1 and 2 and mostly attract natural resource-seeking and some market-seeking investment. Latin American countries receive substantial amounts of market-seeking FDI and, most likely, some efficiency-seeking investment, whereas in Asia, FDI pursues both market- and efficiency-seeking motives. These results correspond to stages 2 and 3 of the IDP; however, the presence of natural resource-seeking motivations was not confirmed in these two regions, as predicted by the IDP. Finally, CEE countries and China are currently at stage 3 and attract substantial amounts of efficiency- and market-seeking FDI. Findings further suggest that MNEs still engage in natural resource-seeking investment in several resource-rich CEE countries, implying that some economies in this region are still at earlier stages of development than predicted by the IDP.

Second, this study examined to what extent the economic development stage of FDI source countries affects outward investment motives. Results illustrated considerably different preferences of developed and developing home countries to the relative importance of host country-specific location factors in developing countries. These findings are also in line with the IDP propositions that firms from developed source countries mostly engage in efficiency- and market-seeking

investment, whereas MNEs from developing countries locate their FDI in other developing countries primarily for resource- and market-seeking strategies.

Third, this meta-analysis found considerable differences in the relative importance of location factors between the manufacturing and service sectors. These results further underline the moderating role played by industry-specific characteristics on MNEs' location choices in developing countries. Overall, the findings of this study highlight that location factors play a decisive role not only in attracting FDI in the host country but also that their relative importance is moderated by the developmental stages of the host and home countries, as well as the nature of the industry.

Overall, the findings of this meta-analysis shed more light on the complex phenomenon of FDI location decisions across developing countries and regions, which have significant implications across multiple domains. First, the use of the IDP framework has proven to be a plausible approach to explaining the inward and outward FDI activities of countries based on their economic development stage. The results of this meta-analysis largely confirm the predictions of the IDP and encourage further exploration and theoretical refinements by incorporating economic development considerations into FDI location theories. Moreover, significant variations in the relative importance of FDI location factors across different regions underline the need for more nuanced and context-specific approaches in the empirical FDI location literature, as substantial regional disparities might affect firms' FDI strategies.

Second, policymakers in developing countries might find this study useful as it highlights considerable differences in the relative importance of various location factors and dominant investment motives driving FDI inflows across specific regions. As such, this study may assist developing countries' governments in tailoring their FDI attraction strategies to align with the specific needs and priorities of their respective economies. For example, host countries that wish to attract market-seeking MNEs may emphasize market access or potential consumer base expansion.

Finally, the results of this study may guide MNEs in making informed decisions regarding entry and expansion strategies in host developing countries in accordance with the dominant motives for FDI in a specific host region.

This meta-analysis, like any empirical work, has a number of limitations. First, meta-analytic studies experience file drawer problem (Rosenthal, 1979), stemming from their reliance on published studies and ignoring unpublished works. Given that studies producing statistically insignificant results might never get published, such bias may lead to weaker results in reality than suggested by the results of this study. Future research may conduct similar meta-analyses to check the robustness of the findings of this study.

Second, this meta-analysis is subject to limitations inherent in the primary studies included in the sample. Hence, potential limitations in previous empirical studies' design might distort the findings of this meta-analysis. This may partially explain that the effect sizes produced by this study are modest at best, yet they are in line with results reported in other recent similar studies (see Bailey (2018), for example).

Third, the 308 empirical studies selected for this meta-analysis are highly heterogeneous and have used different methodologies, data sources, and definitions of FDI location determinants. Therefore, this substantial heterogeneity can affect the comparability and consistency of results. Some unreported results of this meta-analysis point to the presence of temporal bias, as economic conditions and policies in host developing countries that might affect the relative importance of FDI location determinants can change over time. For example, the relative importance of certain factors, such as market size, gradually decreases over time: from 0.256*** (n=40, k=418) during the 1980s, to 0.188*** (n=73, k=600) in the 1990s, and further to 0.150*** (n=82, k=814) during the 2000s. Alternatively, the relative importance of agglomeration economies remained largely the same across these three periods, whereas the relative importance of other factors like labor costs and human capital did not show any meaningful trends.

The same line of reasoning applies to other methodological choices in previous literature, including the level of analysis (country or subnational level) and the definition of the dependent variable (flows or stock data). As was already mentioned in this study, the high labor costs have a much larger negative effect on FDI flows on a national level (-0.125***, n=60, k=389) than on a sub-national level (-0.049***, n=43, k=321). Similarly, the relative importance of some factors depends on the choice of dependent variable. For example, high corruption has a stronger negative effect on absolute FDI inflows (-0.118***, k=116) but not on the FDI inflows scaled by GDP or on FDI stock (-0.072, k=204 and 0.019, k=34, respectively). Therefore, this might be a fruitful area for

more empirical work, and future research might conduct more fine-grained analyses by taking into account more context-related factors beyond host and home countries or industries.

Finally, as SLR, this meta-analysis was coded and conducted by a single author, which may signal the presence of bias or errors associated with a single author.

In conclusion, this meta-analysis provided many valuable insights into the complex FDI location phenomenon in developing countries and regions. This study highlights regional and sectoral variations and further advances our understanding of how host country-specific factors shape FDI motives. I hope that this meta-analysis will motivate future research and provide a foundation that can help policymakers in developing countries tailor their policies and foster their economic development.

LIST OF SAMPLE ARTICLES

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APPENDIX

Table 3.7. Synthesis of meta-analysis estimates: Aggregate results for developing countries

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	249	2631	FE	0,048	99,21	0,001	47953***
				RE	0,200	26,69	0,007	
1a	*GDP*	*131*	*1016*	*FE*	*0,097*	*120,36*	*0,001*	*32404****
				RE	*0,267*	*19,31*	*0,013*	
1b	*GDP per capita*	*120*	*1012*	*FE*	*0,036*	*35,19*	*0,001*	*12653****
				RE	*0,140*	*11,98*	*0,012*	
1c	*Population*	*54*	*408*	*FE*	*0,002*	*2,21*	*0,001*	*3659****
				RE	*0,092*	*8,57*	*0,011*	
2	Market growth	125	1172	FE	0,040	40,50	0,001	3033***
				RE	0,086	14,63	0,006	
3	Market potential	14	186	FE	0,032	16,90	0,002	896***
				RE	0,061	2,92	0,021	
4	Labor cost	103	710	FE	-0,022	-26,55	0,001	3382***
				RE	-0,083	-11,42	0,007	
5	Human capital	100	818	FE	0,024	19,70	0,001	3805***
				RE	0,071	8,09	0,009	
5a	*Primary education*	*25*	*153*	*FE*	*0,061*	*11,97*	*0,005*	*527****
				RE	*0,132*	*4,65*	*0,028*	
5b	*Secondary education*	*28*	*222*	*FE*	*0,037*	*10,09*	*0,004*	*1205****
				RE	*0,045*	*1,67*	*0,027*	
5c	*Tertiary education*	*33*	*244*	*FE*	*0,017*	*8,21*	*0,002*	*1504****
				RE	*0,090*	*5,25*	*0,017*	
6	Infrastructure	110	1140	FE	0,038	51,44	0,001	9852***
				RE	0,126	13,48	0,009	
6a	*Primary infrastructure*	*15*	*90*	*FE*	*0,085*	*16,06*	*0,005*	*2240****
				RE	*0,176*	*2,41*	*0,071*	
6b	*Telecom infrastructure*	*57*	*375*	*FE*	*0,058*	*25,16*	*0,002*	*2321****
				RE	*0,140*	*8,65*	*0,016*	
6c	*Transport infrastructure*	*48*	*527*	*FE*	*0,029*	*36,46*	*0,001*	*3668****
				RE	*0,102*	*9,29*	*0,011*	
6c1	*Roads and highways*	*18*	*101*	*FE*	*0,043*	*13,17*	*0,003*	*441****
				RE	*0,091*	*4,72*	*0,019*	
6c2	*Railways*	*7*	*75*	*FE*	*0,021*	*12,52*	*0,002*	*161****
				RE	*0,029*	*1,81*	*0,016*	

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
6c3	*Seaports*	*19*	*162*	*FE*	*0,025*	*20,67*	*0,001*	*472****
				RE	*0,099*	*8,01*	*0,012*	
6c4	*Airways*	*7*	*29*	*FE*	*0,015*	*2,65*	*0,005*	*91****
				RE	*0,039*	*1,04*	*0,037*	
7	Agglomeration	120	1233	FE	0,150	194,38	0,001	191275***
				RE	0,234	15,28	0,030	
7a	*Foreign agglomeration*	*101*	*913*	*FE*	*0,206*	*220,20*	*0,001*	*180367****
				RE	*0,278*	*7,50*	*0,038*	
7b	*Urbanization agglomeration*	*17*	*94*	*FE*	*0,030*	*15,92*	*0,002*	*88****
				RE	*0,018*	*2,17*	*0,008*	
7c	*Domestic agglomeration*	*4*	*30*	*FE*	*0,077*	*14,73*	*0,005*	*137****
				RE	*-0,013*	*-0,27*	*0,050*	
8	Natural resources	57	602	FE	0,074	42,46	0,002	4608***
				RE	0,146	8,60	0,017	
8a	*Total natural resources rents*	*36*	*313*	*FE*	*0,074*	*37,49*	*0,002*	*2658****
				RE	*0,126*	*6,58*	*0,019*	
8b	*Fuel rents*	*24*	*209*	*FE*	*0,068*	*15,20*	*0,005*	*1875****
				RE	*0,167*	*3,96*	*0,041*	
9	Inflation	87	736	FE	-0,029	-28,50	0,001	5628***
				RE	-0,058	-5,62	0,010	
10	Trade openness	167	1338	FE	0,075	90,24	0,001	86239***
				RE	0,180	16,06	0,020	
10a	*Sum of exports and imports*	*115*	*975*	*FE*	*0,076*	*83,58*	*0,001*	*82920****
				RE	*0,203*	*7,76*	*0,026*	
10b	*Exports*	*30*	*148*	*FE*	*0,129*	*38,57*	*0,003*	*2405****
				RE	*0,211*	*6,01*	*0,034*	
10c	*Imports*	*19*	*147*	*FE*	*0,049*	*12,80*	*0,004*	*246****
				RE	*0,073*	*4,33*	*0,017*	
11	Tax burden	36	292	FE	-0,032	-13,35	0,002	1011***
				RE	-0,106	-6,83	0,015	
12	Tax incentives	15	114	FE	0,036	7,99	0,005	176***
				RE	0,079	3,23	0,024	
13	SEZ	23	226	FE	0,105	54,17	0,002	1627***
				RE	0,141	7,36	0,019	
14	Geographic distance	51	363	FE	-0,109	-96,52	0,001	15863***
				RE	-0,160	-7,42	0,021	
15	Political instability	78	666	FE	-0,028	-26,97	0,001	2325***
				RE	-0,090	-12,90	0,007	
16	Corruption	64	415	FE	0,054	27,69	0,002	14697***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	-0,062	-1,97	0,032	
17	Democracy	61	535	FE	0,032	21,66	0,002	1535***
				RE	0,026	3,04	0,009	
17a	*Civil liberties*	*9*	*40*	*FE*	*0,060*	*6,72*	*0,009*	*76****
				RE	*0,047*	*1,41*	*0,033*	
17b	*Political liberties*	*10*	*41*	*FE*	*0,075*	*11,08*	*0,007*	*29****
				RE	*0,089*	*5,87*	*0,015*	
18	Rule of law	70	413	FE	0,016	17,04	0,001	2198***
				RE	0,072	10,40	0,007	
18a	*IPR*	*20*	*110*	*FE*	*0,031*	*11,36*	*0,003*	*464****
				RE	*0,062*	*3,79*	*0,017*	
19	Regulatory quality	95	702	FE	0,026	23,13	0,001	2162***
				RE	0,096	14,60	0,006	
19a	*Openness to capital flows*	*41*	*279*	*FE*	*0,016*	*10,57*	*0,002*	*959****
				RE	*0,067*	*7,57*	*0,009*	
19b	*Investment climate*	*28*	*128*	*FE*	*0,076*	*21,19*	*0,004*	*279****
				RE	*0,102*	*7,52*	*0,013*	
19c	*Economic freedom*	*19*	*93*	*FE*	*0,027*	*10,16*	*0,003*	*377****
				RE	*0,141*	*6,55*	*0,021*	
19d	*Bureaucratic quality*	*20*	*102*	*FE*	*0,042*	*7,15*	*0,006*	*395****
				RE	*0,089*	*3,05*	*0,029*	
20	Cultural distance	29	254	FE	-0,032	-25,61	0,001	725***
				RE	-0,069	-8,00	0,009	
20a	*Absence of common language*	*16*	*130*	*FE*	*-0,035*	*-22,52*	*0,002*	*423****
				RE	*-0,050*	*-4,72*	*0,011*	
20b	*Absence of colonial ties*	*7*	*64*	*FE*	*-0,030*	*-11,30*	*0,003*	*58****
				RE	*-0,032*	*-3,36*	*0,009*	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.8. Synthesis of meta-analysis estimates by regions: Africa

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	25	250	FE	-0,031	-9,89	0,003	4079***
				RE	0,179	4,01	0,043	
1a	*GDP*	*11*	*47*	*FE*	*0,075*	*10,95*	*0,007*	*100****
				RE	*0,100*	*3,20*	*0,031*	
1b	*GDP per capita*	*17*	*147*	*FE*	*-0,070*	*-17,28*	*0,004*	*3289****
				RE	*0,179*	*2,72*	*0,064*	
1c	*Population*	*6*	*54*	*FE*	*-0,037*	*-5,43*	*0,007*	*337****
				RE	*0,183*	*2,18*	*0,081*	
2	Market growth	17	117	FE	0,070	15,63	0,004	618***
				RE	0,172	5,14	0,033	
4	Labor cost	6	16	FE	-0,188	-8,53	0,021	57***
				RE	-0,377	-3,96	0,085	
5	Human capital	13	67	FE	0,155	18,98	0,008	138***
				RE	0,148	4,81	0,030	
5a	*Primary education*	*8*	*24*	*FE*	*0,142*	*9,58*	*0,024*	*38****
				RE	*0,160*	*4,06*	*0,039*	
5b	*Secondary education*	*6*	*29*	*FE*	*0,195*	*16,21*	*0,011*	*39****
				RE	*0,205*	*5,83*	*0,034*	
6	Infrastructure	17	123	FE	0,063	11,94	0,005	109***
				RE	0,090	5,22	0,017	
6b	*Telecom infrastructure*	*13*	*89*	*FE*	*0,070*	*11,66*	*0,006*	*84****
				RE	*0,083*	*4,03*	*0,020*	
7	Agglomeration	13	96	FE	0,508	92,00	0,001	1039***
				RE	0,248	2,59	0,015	
7a	*Foreign agglomeration*	*12*	*86*	*FE*	*0,511*	*96,25*	*0,005*	*565****
				RE	*0,250*	*2,98*	*0,026*	
8	Natural resources	18	191	FE	0,115	28,22	0,004	837***
				RE	0,209	6,40	0,032	
8a	*Total natural resources rents*	*13*	*87*	*FE*	*0,089*	*15,02*	*0,006*	*565****
				RE	*0,189*	*3,69*	*0,050*	
8b	*Fuel rents*	*8*	*51*	*FE*	*0,160*	*17,97*	*0,009*	*363****
				RE	*0,288*	*4,20*	*0,064*	
9	Inflation	15	93	FE	-0,283	-57,00	0,004	1477***
				RE	-0,061	-0,91	0,067	
10	Trade openness	22	150	FE	0,117	28,72	0,003	654***
				RE	0,153	5,77	0,029	
10a		*17*	*155*	*FE*	*0,544*	*167,36*	*0,003*	*40052****

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
	Sum of exports and imports			*RE*	*0,275*	*1,43*	*0,176*	
10b	*Exports*	*4*	*10*	*FE*	*0,125*	*7,38*	*0,017*	*11***
				RE	*0,085*	*1,72*	*0,049*	
11	Tax burden	4	17	FE	0,007	0,34	0,019	40***
				RE	-0,135	-1,64	0,081	
12	Tax incentives	4	73	FE	0,087	8,04	0,011	37***
				RE	0,026	0,32	0,081	
15	Political instability	8	40	FE	-0,080	-7,54	0,011	111***
				RE	-0,225	-3,41	0,063	
16	Corruption	12	80	FE	0,478	96,95	0,004	4346***
				RE	0,053	0,37	0,138	
17	Democracy	10	57	FE	0,064	9,08	0,007	102***
				RE	0,044	1,48	0,030	
18	Rule of law	6	21	FE	0,080	4,75	0,017	99***
				RE	0,039	0,47	0,081	
19	Regulatory quality	8	38	FE	0,109	11,50	0,009	69***
				RE	0,142	4,28	0,033	
19b	*Investment climate*	*4*	*16*	*FE*	*0,205*	*10,03*	*0,020*	*78****
				RE	*0,378*	*3,10*	*0,109*	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.9. Synthesis of meta-analysis estimates by regions: MENA

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	14	107	FE	0,180	17,82	0,010	631***
				RE	0,208	2,70	0,074	
1a	*GDP*	*6*	*61*	*FE*	*0,177*	*14,25*	*0,012*	*488****
				RE	*0,226*	*1,56*	*0,136*	
1b	*GDP per capita*	*6*	*36*	*FE*	*0,185*	*9,58*	*0,019*	*121****
				RE	*0,187*	*1,73*	*0,105*	
2	Market growth	8	63	FE	0,071	13,83	0,005	70***
				RE	0,076	3,05	0,025	
5	Human capital	7	74	FE	0,008	1,26	0,006	740***
				RE	-0,039	-0,37	0,103	
6	Infrastructure	5	46	FE	0,011	3,12	0,004	150***
				RE	0,223	2,81	0,076	
7	Agglomeration	11	90	FE	0,118	25,95	0,004	1784***
				RE	0,192	2,56	0,073	
7a	*Foreign agglomeration*	*10*	*82*	*FE*	*0,174*	*28,95*	*0,006*	*1573****
				RE	*0,189*	*2,16*	*0,085*	
8	Natural resources	8	103	FE	0,201	24,47	0,009	698***
				RE	0,170	1,72	0,096	
8b	*Fuel rents*	*7*	*96*	*FE*	*0,208*	*21,57*	*0,009*	*688****
				RE	*0,177*	*1,61*	*0,106*	
9	Inflation	9	99	FE	-0,095	-15,59	0,006	149***
				RE	-0,078	-2,61	0,030	
10	Trade openness	18	167	FE	0,137	23,34	0,006	420***
				RE	0,209	6,28	0,032	
10a	*Sum of exports and imports*	*14*	*111*	*FE*	*0,182*	*25,08*	*0,007*	*185****
				RE	*0,261*	*8,14*	*0,031*	
15	Political instability	9	53	FE	-0,035	-6,90	0,005	122***
				RE	-0,072	-2,72	0,026	
16	Corruption	9	40	FE	0,038	2,44	0,016	100***
				RE	0,040	0,70	0,057	
17	Democracy	6	24	FE	0,053	2,75	0,019	98***
				RE	0,054	0,60	0,088	
18	Rule of law	11	48	FE	0,025	4,28	0,006	164***
				RE	0,118	2,71	0,043	
19	Regulatory quality	11	67	FE	0,167	18,41	0,009	55***
				RE	0,170	7,29	0,023	
19b	*Investment climate*	*5*	*17*	*FE*	*0,179*	*10,43*	*0,017*	*11***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	*0,171*	*5,62*	*0,030*	
19d	*Bureaucratic quality*	*5*	*22*	*FE*	*0,178*	*10,83*	*0,016*	*25***
				RE	*0,144*	*3,17*	*0,045*	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.10. Synthesis of meta-analysis estimates by regions: LAC

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	33	264	FE	0,027	20,09	0,002	2325***
				RE	0,141	10,02	0,014	
1a	*GDP*	*16*	*87*	*FE*	*0,058*	*18,03*	*0,003*	*1181****
				RE	*0,186*	*5,41*	*0,033*	
1b	*GDP per capita*	*16*	*105*	*FE*	*0,029*	*8,12*	*0,004*	*1137****
				RE	*0,114*	*2,99*	*0,038*	
1c	*Population*	*6*	*42*	*FE*	*0,015*	*7,31*	*0,002*	*338****
				RE	*0,083*	*4,02*	*0,021*	
2	Market growth	11	80	FE	0,058	11,65	0,005	74***
				RE	0,070	4,25	0,016	
4	Labor cost	7	47	FE	-0,001	-0,69	0,002	153***
				RE	-0,064	-4,53	0,014	
5	Human capital	11	84	FE	0,002	0,93	0,002	284***
				RE	0,050	4,18	0,012	
6	Infrastructure	9	78	FE	0,039	8,20	0,115	364***
				RE	0,163	4,52	0,035	
6b	*Telecom infrastructure*	*7*	*67*	*FE*	*0,035*	*7,15*	*0,005*	*320****
				RE	*0,157*	*3,98*	*0,039*	
7	Agglomeration	15	124	FE	0,023	13,83	0,002	925***
				RE	0,098	4,91	0,020	
7a	*Foreign agglomeration*	*13*	*96*	*FE*	*0,042*	*21,56*	*0,002*	*526****
				RE	*0,113*	*4,32*	*0,026*	
8	Natural resources	5	80	FE	0,024	5,70	0,004	119***
				RE	0,019	0,78	0,024	
8a	*Total natural resources rents*	*5*	*44*	*FE*	*0,037*	*8,10*	*0,005*	*162****
				RE	*0,045*	*1,38*	*0,032*	
9	Inflation	14	85	FE	-0,031	-6,14	0,005	233***
				RE	-0,004	-0,13	0,028	
10	Trade openness	17	141	FE	0,042	13,69	0,003	399***
				RE	0,063	3,53	0,018	
10a	*Sum of exports and imports*	*11*	*92*	*FE*	*0,046*	*10,77*	*0,004*	*285****
				RE	*0,069*	*2,75*	*0,025*	
10b	*Exports*	*5*	*32*	*FE*	*0,040*	*8,21*	*0,006*	*122****
				RE	*0,090*	*2,21*	*0,040*	
11	Tax burden	5	22	FE	-0,041	-2,75	0,015	22***
				RE	-0,058	-1,40	0,041	
14		6	32	FE	-0,004	-1,64	0,002	170***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
	Geographic distance			RE	-0,084	-4,90	0,017	
15	Political instability	11	80	FE	-0,022	-4,11	0,005	196***
				RE	-0,067	-2,51	0,026	
16	Corruption	6	51	FE	-0,044	-5,23	0,008	19***
				RE	-0,017	-0,96	0,084	
17	Democracy	7	51	FE	0,020	2,40	0,008	40***
				RE	0,025	1,09	0,023	
18	Rule of law	11	165	FE	0,008	7,49	0,001	407***
				RE	0,037	3,94	0,009	
18a	*IPR*	*5*	*25*	*FE*	*0,009*	*1,29*	*0,007*	*51***
				RE	*0,022*	*0,52*	*0,042*	
19	Regulatory quality	17	114	FE	0,019	7,10	0,003	327***
				RE	0,081	3,88	0,021	
19a	*Openness to capital flows*	*12*	*55*	*FE*	*0,052*	*6,99*	*0,008*	*191***
				RE	*0,090*	*2,38*	*0,038*	
20	Cultural distance	5	18	FE	-0,007	-2,33	0,003	15***
				RE	-0,002	-0,24	0,010	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.11. Synthesis of meta-analysis estimates by regions: Asia

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	26	107	FE	0,103	15,84	0,006	698***
				RE	0,197	4,92	0,039	
1a	*GDP*	*16*	*58*	*FE*	*0,187*	*19,02*	*0,010*	*456****
				RE	*0,369*	*5,87*	*0,057*	
1b	*GDP per capita*	*6*	*14*	*FE*	*0,009*	*0,57*	*0,016*	*14***
				RE	*0,015*	*0,35*	*0,041*	
2	Market growth	12	82	FE	0,150	14,45	0,010	38***
				RE	0,152	6,35	0,024	
4	Labor cost	11	54	FE	-0,108	-11,52	0,009	84***
				RE	-0,100	-2,74	0,036	
5	Human capital	6	19	FE	0,028	2,69	0,010	52***
				RE	0,119	2,26	0,052	
5c	*Tertiary education*	*4*	*12*	*FE*	*0,048*	*3,77*	*0,013*	*35****
				RE	*0,049*	*0,85*	*0,057*	
6	Infrastructure	10	54	FE	0,029	4,50	0,007	118***
				RE	0,177	4,63	0,037	
6b	*Telecom infrastructure*	*4*	*17*	*FE*	*0,165*	*7,13*	*0,023*	*15****
				RE	*0,221*	*1,93*	*0,109*	
6c	*Transport infrastructure*	*4*	*21*	*FE*	*0,011*	*1,25*	*0,009*	*57****
				RE	*0,165*	*2,82*	*0,057*	
7	Agglomeration	10	25	FE	0,109	9,87	0,011	540***
				RE	0,476	5,11	0,078	
7a	*Foreign agglomeration*	*8*	*21*	*FE*	*0,317*	*15,76*	*0,019*	*386****
				RE	*0,582*	*3,11*	*0,141*	
9	Inflation	5	10	FE	-0,177	-5,96	0,029	29***
				RE	-0,172	-1,66	0,100	
10	Trade openness	17	82	FE	0,150	17,07	0,009	138***
				RE	0,238	7,56	0,030	
10a	*Sum of exports and imports*	*7*	*32*	*FE*	*0,207*	*8,95*	*0,022*	*62****
				RE	*0,249*	*2,21*	*0,106*	
10b	*Exports*	*6*	*18*	*FE*	*0,254*	*15,71*	*0,015*	*34****
				RE	*0,264*	*5,28*	*0,047*	
10c	*Imports*	*4*	*14*	*FE*	*-0,015*	*-0,79*	*0,019*	*14****
				RE	*0,027*	*0,59*	*0,045*	
11	Tax burden	4	7	FE	-0,002	-0,09	0,020	43***
				RE	-0,233	-1,36	0,159	
14	Geographic distance	7	18	FE	-0,154	-12,01	0,013	55***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	-0,176	-4,14	0,042	
19	Regulatory quality	6	19	FE	0,127	7,52	0,017	34***
				RE	0,176	3,30	0,052	
20	Cultural distance	5	18	FE	-0,139	-10,14	0,014	82***
				RE	-0,029	-0,41	0,071	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.12. Synthesis of meta-analysis estimates by regions: CEE

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	37	344	FE	0,196	113,47	0,002	10611***
				RE	0,327	10,24	0,030	
1a	*GDP*	*23*	*166*	*FE*	*0,287*	*125,76*	*0,002*	*6558****
				RE	*0,416*	*9,77*	*0,037*	
1b	*GDP per capita*	*15*	*98*	*FE*	*0,063*	*20,01*	*0,003*	*548****
				RE	*0,116*	*3,13*	*0,036*	
1c	*Population*	*5*	*27*	*FE*	*0,227*	*16,04*	*0,014*	*152****
				RE	*0,239*	*2,64*	*0,085*	
2	Market growth	12	80	FE	0,039	9,88	0,004	75***
				RE	0,054	3,40	0,016	
3	Market potential	3	54	FE	0,039	7,86	0,005	70***
				RE	0,066	1,15	0,057	
4	Labor cost	20	145	FE	-0,021	-7,57	0,003	792***
				RE	-0,061	-2,96	0,021	
5	Human capital	10	99	FE	0,075	17,62	0,004	97***
				RE	0,070	3,51	0,020	
5b	*Secondary education*	*4*	*29*	*FE*	*0,023*	*1,87*	*0,012*	*7**
				RE	*0,020*	*1,30*	*0,021*	
5c	*Tertiary education*	*6*	*65*	*FE*	*0,082*	*18,07*	*0,005*	*63****
				RE	*0,101*	*3,73*	*0,027*	
6	Infrastructure	11	216	FE	0,090	41,15	0,002	1674***
				RE	0,093	2,71	0,034	
6a	*Primary infrastructure*	*4*	*20*	*FE*	*-0,003*	*-0,18*	*0,015*	*12****
				RE	*0,048*	*1,10*	*0,043*	
6c	*Transport infrastructure*	*6*	*152*	*FE*	*0,104*	*43,10*	*0,002*	*1383****
				RE	*0,125*	*2,45*	*0,051*	
7	Agglomeration	13	131	FE	0,141	45,82	0,003	2596***
				RE	0,240	4,82	0,048	
7a	*Foreign agglomeration*	*9*	*51*	*FE*	*0,153*	*41,93*	*0,004*	*2268****
				RE	*0,328*	*4,48*	*0,068*	
7b	*Urbanization agglomeration*	*4*	*33*	*FE*	*-0,004*	*-0,39*	*0,009*	*23****
				RE	*-0,008*	*-0,30*	*0,026*	
8	Natural resources	8	79	FE	0,087	26,40	0,003	1239***
				RE	0,143	2,76	0,051	
8a	*Total natural resources rents*	*6*	*72*	*FE*	*0,085*	*25,88*	*0,003*	*1214****
				RE	*0,109*	*1,84*	*0,058*	
9	Inflation	11	82	FE	-0,031	-9,19	0,003	272***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	-0,096	-4,16	0,023	
10	Trade openness	18	95	FE	0,077	11,61	0,006	177***
				RE	0,129	4,62	0,028	
10a	*Sum of exports and imports*	*8*	*39*	*FE*	*0,060*	*7,48*	*0,008*	*105****
				RE	*0,114*	*2,21*	*0,051*	
11	Tax burden	11	106	FE	-0,026	-8,71	0,003	661***
				RE	-0,075	-2,59	0,029	
14	Geographic distance	16	165	FE	-0,221	-109,57	0,002	9005***
				RE	-0,230	-4,21	0,053	
15	Political instability	4	19	FE	-0,029	-3,33	0,009	10**
				RE	-0,079	-1,89	0,042	
16	Corruption	11	83	FE	0,023	6,50	0,004	808***
				RE	-0,020	-0,50	0,040	
17	Democracy	3	51	FE	0,087	17,29	0,005	5*
				RE	0,078	5,69	0,014	
18	Rule of law	9	32	FE	0,000	0,11	0,004	511***
				RE	0,071	1,74	0,041	
19	Regulatory quality	8	64	FE	0,004	0,94	0,004	79***
				RE	0,011	0,49	0,023	
19a	*Openness to capital flows*	*5*	*45*	*FE*	*0,009*	*2,10*	*0,004*	*27****
				RE	*0,031*	*1,60*	*0,020*	
20	Cultural distance	4	99	FE	-0,019	-6,53	0,003	63***
				RE	-0,053	-2,70	0,019	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.13. Synthesis of meta-analysis estimates by regions: China

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	47	408	FE	0,034	37,56	0,001	6871***
				RE	0,220	13,33	0,016	
1a	*GDP*	*24*	*212*	*FE*	*0,217*	*58,88*	*0,004*	*2263****
				RE	*0,320*	*7,79*	*0,038*	
1b	*GDP per capita*	*13*	*101*	*FE*	*0,059*	*30,54*	*0,002*	*1368****
				RE	*0,184*	*5,35*	*0,033*	
1c	*Population*	*7*	*45*	*FE*	*0,003*	*1,46*	*0,002*	*271****
				RE	*-0,039*	*-1,09*	*0,035*	
2	Market growth	12	66	FE	0,093	10,93	0,008	196***
				RE	0,135	3,11	0,043	
3	Market potential	5	77	FE	0,031	14,66	0,002	703***
				RE	0,126	2,81	0,044	
4	Labor cost	45	312	FE	-0,026	-25,39	0,001	1713***
				RE	-0,073	-4,98	0,015	
5	Human capital	27	230	FE	0,046	15,59	0,003	1134***
				RE	0,074	3,35	0,022	
5a	*Primary education*	*7*	*49*	*FE*	*0,092*	*12,10*	*0,007*	*105****
				RE	*0,130*	*1,79*	*0,071*	
5b	*Secondary education*	*6*	*45*	*FE*	*0,067*	*12,05*	*0,005*	*75****
				RE	*0,054*	*1,82*	*0,030*	
5c	*Tertiary education*	*14*	*110*	*FE*	*0,009*	*1,98*	*0,004*	*816****
				RE	*0,075*	*1,79*	*0,042*	
6	Infrastructure	33	354	FE	0,024	27,00	0,001	2114***
				RE	0,131	9,59	0,014	
6b	*Telecom infrastructure*	*6*	*23*	*FE*	*0,127*	*10,66*	*0,012*	*30****
				RE	*0,155*	*4,80*	*0,032*	
6c	*Transport infrastructure*	*29*	*294*	*FE*	*0,020*	*22,75*	*0,001*	*977****
				RE	*0,096*	*8,70*	*0,011*	
6c1	*Roads and highways*	*8*	*42*	*FE*	*0,032*	*6,22*	*0,005*	*42****
				RE	*0,055*	*3,11*	*0,018*	
6c3	*Seaports*	*14*	*97*	*FE*	*0,026*	*20,22*	*0,001*	*429****
				RE	*0,136*	*7,17*	*0,019*	
7	Agglomeration	27	319	FE	0,068	55,94	-16,819	5152***
				RE	0,208	10,64	0,019	
7a	*Foreign agglomeration*	*19*	*138*	*FE*	*0,100*	*53,57*	*0,002*	*4561****
				RE	*0,270*	*7,78*	*0,033*	
7b		*5*	*40*	*FE*	*0,033*	*16,07*	*0,002*	*31****

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
	Urbanization agglomeration			*RE*	*0,031*	*2,36*	*0,013*	
10	Trade openness	20	134	FE	0,059	27,20	0,002	3004***
				RE	0,195	5,24	0,036	
10a	*Sum of exports and imports*	*7*	*61*	*FE*	*0,024*	*10,28*	*0,002*	*312***
				RE	*0,115*	*4,72*	*0,024*	
10b	*Exports*	*8*	*41*	*FE*	*0,399*	*53,95*	*0,007*	*257***
				RE	*0,302*	*5,53*	*0,051*	
10c	*Imports*	*8*	*31*	*FE*	*0,155*	*12,07*	*0,013*	*41***
				RE	*0,137*	*3,70*	*0,036*	
12	Tax incentives	6	19	FE	0,026	4,47	0,006	75***
				RE	0,241	3,43	0,067	
13	SEZ	19	205	FE	0,124	59,38	0,002	957***
				RE	0,169	9,13	0,018	
14	Geographic distance	9	44	FE	-0,057	-5,45	0,010	75***
				RE	-0,064	-1,89	0,034	
15	Political instability	7	27	FE	-0,159	-11,67	0,014	42***
				RE	-0,243	-5,10	0,046	
18	Rule of law	4	13	FE	0,071	6,30	0,011	107***
				RE	0,209	2,50	0,081	
20	Cultural distance	7	44	FE	-0,166	-12,55	0,013	86***
				RE	-0,190	-3,38	0,055	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.14. Synthesis of meta-analysis estimates by regions: Mixed country samples

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	91	1151	FE	0,041	57,81	0,001	14411***
				RE	0,175	17,72	0,010	
1a	*GDP*	*49*	*385*	*FE*	*0,061*	*64,94*	*0,001*	*11716****
				RE	*0,221*	*13,72*	*0,016*	
1b	*GDP per capita*	*54*	*511*	*FE*	*0,032*	*20,62*	*0,002*	*5263****
				RE	*0,133*	*8,18*	*0,016*	
1c	*Population*	*25*	*224*	*FE*	*-0,011*	*-5,85*	*0,002*	*2140****
				RE	*0,118*	*5,86*	*0,020*	
2	Market growth	64	684	FE	0,034	30,40	0,001	1699***
				RE	0,076	10,96	0,007	
4	Labor cost	16	128	FE	-0,055	-9,61	0,006	290***
				RE	-0,113	-3,88	0,029	
5	Human capital	30	245	FE	0,038	11,29	0,003	728***
				RE	0,079	4,32	0,018	
5a	*Primary education*	*9*	*68*	*FE*	*-0,006*	*-0,78*	*0,008*	*265****
				RE	*0,119*	*2,07*	*0,057*	
5b	*Secondary education*	*7*	*40*	*FE*	*0,050*	*6,30*	*0,008*	*125****
				RE	*0,062*	*1,48*	*0,042*	
5c	*Tertiary education*	*4*	*26*	*FE*	*0,018*	*1,69*	*0,010*	*77****
				RE	*0,092*	*1,63*	*0,056*	
6	Infrastructure	29	269	FE	0,091	36,90	0,003	3988***
				RE	0,121	4,17	0,031	
6b	*Telecom infrastructure*	*21*	*149*	*FE*	*0,064*	*18,47*	*0,003*	*1541****
				RE	*0,149*	*4,60*	*0,032*	
7	Agglomeration	42	448	FE	0,231	151,78	0,002	13620***
				RE	0,255	8,78	0,028	
7a	*Foreign agglomeration*	*39*	*433*	*FE*	*0,235*	*153,09*	*0,002*	*14702****
				RE	*0,285*	*9,05*	*0,030*	
7b	*Urbanization agglomeration*	*4*	*13*	*FE*	*0,014*	*1,19*	*0,011*	*12****
				RE	*0,033*	*1,19*	*0,028*	
8	Natural resources	19	148	FE	0,054	17,66	0,003	1211***
				RE	0,106	3,76	0,028	
8a	*Total natural resources rents*	*12*	*103*	*FE*	*0,077*	*22,71*	*0,003*	*626****
				RE	*0,092*	*3,03*	*0,030*	
8b	*Fuel rents*	*6*	*43*	*FE*	*-0,042*	*-6,31*	*0,007*	*174****
				RE	*0,007*	*0,16*	*0,045*	
9	Inflation	33	349	FE	-0,012	-10,48	0,001	491***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	-0,036	-5,36	0,007	
10	Trade openness	66	569	FE	0,038	37,66	0,001	18982***
				RE	0,189	9,73	0,019	
10a	*Sum of exports and imports*	*53*	*485*	*FE*	*0,040*	*36,85*	*0,001*	*18578****
				RE	*0,198*	*8,58*	*0,022*	
10b	*Exports*	*6*	*29*	*FE*	*0,059*	*9,96*	*0,006*	*144****
				RE	*0,222*	*3,59*	*0,059*	
11	Tax burden	12	126	FE	-0,049	-10,73	0,005	217***
				RE	-0,121	-5,32	0,022	
14	Geographic distance	14	93	FE	-0,094	-52,55	0,002	958***
				RE	-0,126	-6,39	0,020	
15	Political instability	44	441	FE	-0,027	-24,12	0,001	1723***
				RE	-0,076	-9,19	0,008	
16	Corruption	25	131	FE	-0,020	-6,66	0,003	377***
				RE	-0,085	-5,50	0,015	
17	Democracy	35	350	FE	0,025	15,48	0,002	1130***
				RE	0,017	1,59	0,010	
17a	*Civil liberties*	*6*	*27*	*FE*	*0,051*	*4,93*	*0,010*	*58****
				RE	*0,069*	*1,65*	*0,042*	
17b	*Political liberties*	*6*	*25*	*FE*	*0,076*	*10,15*	*0,007*	*22****
				RE	*0,098*	*5,14*	*0,019*	
18	Rule of law	30	132	FE	0,046	21,86	0,002	536***
				RE	0,067	5,76	0,012	
18a	*IPR*	*13*	*73*	*FE*	*0,042*	*12,50*	*0,003*	*301****
				RE	*0,068*	*3,19*	*0,021*	
19	Regulatory quality	51	397	FE	0,025	18,51	0,001	1261***
				RE	0,086	10,62	0,008	
19a	*Openness to capital flows*	*23*	*150*	*FE*	*0,013*	*7,83*	*0,002*	*674****
				RE	*0,062*	*5,54*	*0,011*	
19b	*Investment climate*	*14*	*68*	*FE*	*0,068*	*17,02*	*0,004*	*49****
				RE	*0,072*	*7,70*	*0,009*	
19c	*Economic freedom*	*12*	*57*	*FE*	*0,062*	*11,14*	*0,006*	*149****
				RE	*0,143*	*4,42*	*0,032*	
19d	*Bureaucratic quality*	*8*	*44*	*FE*	*0,070*	*7,36*	*0,009*	*188****
				RE	*0,100*	*1,82*	*0,055*	
20	Cultural distance	10	65	FE	-0,041	-25,01	0,002	210***
				RE	-0,039	-3,50	0,011	
20a	*Absence of common language*	*7*	*49*	*FE*	*-0,050*	*-25,38*	*0,002*	*141****
				RE	*-0,045*	*-3,12*	*0,015*	

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
20b	*Absence of colonial ties*	*5*	*10*	*FE*	*-0,034*	*-9,07*	*0,004*	*43****
				RE	*-0,034*	*-2,07*	*0,016*	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.15. Synthesis of meta-analysis estimates by country of origin: Developed countries

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	76	617	FE	0,070	62,35	0,001	10699***
				RE	0,239	16,34	0,014	
1a	*GDP*	*45*	*289*	*FE*	*0,091*	*60,78*	*0,002*	*7876****
				RE	*0,293*	*13,32*	*0,021*	
1b	*GDP per capita*	*26*	*162*	*FE*	*0,079*	*26,50*	*0,003*	*2870****
				RE	*0,201*	*5,64*	*0,035*	
1c	*Population*	*11*	*56*	*FE*	*0,024*	*4,45*	*0,005*	*1120****
				RE	*0,166*	*2,55*	*0,064*	
2	Market growth	27	207	FE	0,006	2,33	0,003	611**
				RE	0,065	3,79	0,017	
3	Market potential	7	70	FE	0,045	8,07	0,006	192***
				RE	0,027	0,77	0,035	
4	Labor cost	34	183	FE	-0,063	-19,27	0,003	539***
				RE	-0,112	-6,51	0,017	
5	Human capital	24	139	FE	0,068	17,29	0,004	602***
				RE	0,098	4,35	0,022	
5a	*Primary education*	*4*	*22*	*FE*	*0,069*	*6,05*	*0,011*	*125****
				RE	*0,082*	*1,08*	*0,076*	
5b	*Secondary education*	*4*	*25*	*FE*	*-0,068*	*-5,27*	*0,013*	*77****
				RE	*-0,124*	*-1,63*	*0,074*	
5c	*Tertiary education*	*10*	*37*	*FE*	*0,085*	*14,00*	*0,006*	*206****
				RE	*0,202*	*5,77*	*0,034*	
6	Infrastructure	26	205	FE	0,098	39,74	0,003	1119***
				RE	0,097	5,15	0,019	
6a	*Primary infrastructure*	*6*	*37*	*FE*	*0,006*	*0,59*	*0,010*	*35****
				RE	*0,040*	*1,20*	*0,033*	
6b	*Telecom infrastructure*	*10*	*55*	*FE*	*0,067*	*15,84*	*0,004*	*324****
				RE	*0,088*	*2,98*	*0,030*	
6c	*Transport infrastructure*	*13*	*90*	*FE*	*0,129*	*39,39*	*0,003*	*555****
				RE	*0,102*	*3,78*	*0,027*	
7	Agglomeration	25	239	FE	0,169	93,82	0,002	10711***
				RE	0,161	3,86	0,041	
7a	*Foreign agglomeration*	*19*	*177*	*FE*	*0,181*	*95,60*	*0,002*	*11582****
				RE	*0,229*	*4,33*	*0,051*	
8	Natural resources	12	95	FE	0,046	10,23	0,005	663***
				RE	0,120	3,11	0,038	
8a		*10*	*57*	*FE*	*0,045*	*9,01*	*0,005*	*545****

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
	Total natural resources rents			*RE*	*0,072*	*1,64*	*0,044*	
8b	*Fuel rents*	*4*	*25*	*FE*	*0,098*	*7,22*	*0,014*	*138***
				RE	*0,169*	*1,79*	*0,091*	
9	Inflation	12	67	FE	-0,019	-5,41	-0,019	128***
				RE	-0,053	-3,52	0,015	
10	Trade openness	38	237	FE	0,033	16,56	0,002	807***
				RE	0,101	8,92	0,011	
10a	*Sum of exports and imports*	*23*	*165*	*FE*	*0,030*	*13,54*	*0,002*	*493***
				RE	*0,089*	*6,82*	*0,013*	
10b	*Exports*	*9*	*20*	*FE*	*0,076*	*10,20*	*0,007*	*178***
				RE	*0,231*	*4,26*	*0,052*	
10c	*Imports*	*7*	*24*	*FE*	*0,038*	*5,05*	*0,007*	*57***
				RE	*0,051*	*1,47*	*0,035*	
11	Tax burden	12	101	FE	-0,053	-15,48	0,004	328***
				RE	-0,105	-4,50	0,023	
12	Tax incentives	4	11	FE	0,019	3,21	0,006	24***
				RE	0,243	2,19	0,105	
13	SEZ	6	64	FE	0,098	35,02	0,003	54***
				RE	0,140	6,21	0,022	
14	Geographic distance	27	131	FE	-0,108	-47,92	0,002	1649***
				RE	-0,136	-6,44	0,021	
15	Political instability	23	111	FE	-0,021	-11,06	0,002	1383***
				RE	-0,158	-7,84	0,020	
16	Corruption	12	68	FE	0,000	-0,02	0,004	251***
				RE	0,003	0,10	0,026	
17	Democracy	14	159	FE	0,022	10,07	0,002	118***
				RE	0,027	3,06	0,009	
17b	*Political liberties*	*4*	*21*	*FE*	*0,061*	*7,44*	*0,008*	*10***
				RE	*0,076*	*4,25*	*0,018*	
18	Rule of law	12	41	FE	0,057	16,71	0,003	276***
				RE	0,084	3,62	0,023	
18a	*IPR*	*7*	*24*	*FE*	*0,028*	*3,45*	*0,008*	*86***
				RE	*0,006*	*0,16*	*0,040*	
19	Regulatory quality	20	115	FE	0,003	1,46	0,002	583***
				RE	0,089	5,06	0,018	
19a	*Openness to capital flows*	*9*	*66*	*FE*	*-0,023*	*-7,42*	*0,003*	*191***
				RE	*0,039*	*1,35*	*0,029*	
19b	*Investment climate*	*4*	*14*	*FE*	*0,061*	*6,10*	*0,010*	*3*

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	*0,061*	*6,10*	*0,010*	
19d	*Bureaucratic quality*	*4*	*24*	*FE*	*0,164*	*11,95*	*0,014*	*68****
				RE	*0,279*	*3,40*	*0,077*	
20	Cultural distance	13	72	FE	-0,055	-25,00	0,002	315***
				RE	-0,042	-2,63	0,016	
20a	*Absence of common language*	*9*	*49*	*FE*	*-0,077*	*-26,98*	*0,003*	*164****
				RE	*-0,062*	*-3,08*	*0,020*	
20b	*Absence of colonial ties*	*4*	*12*	*FE*	*-0,054*	*-9,96*	*0,005*	*16****
				RE	*-0,039*	*-2,20*	*0,018*	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.16. Synthesis of meta-analysis estimates by country of origin: USA

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	31	224	FE	0,159	45,10	0,004	2629***
				RE	0,353	9,97	0,032	
1a	*GDP*	*16*	*70*	*FE*	*0,238*	*32,10*	*0,007*	*1131****
				RE	*0,459*	*6,59*	*0,059*	
1b	*GDP per capita*	*15*	*99*	*FE*	*0,207*	*42,01*	*0,005*	*1475****
				RE	*0,308*	*5,68*	*0,051*	
1c	*Population*	*7*	*39*	*FE*	*-0,010*	*-1,39*	*0,007*	*895****
				RE	*0,138*	*1,29*	*0,267*	
2	Market growth	15	114	FE	0,001	0,13	0,006	390***
				RE	0,084	2,40	0,035	
3	Market potential	5	42	FE	0,014	1,71	0,008	136***
				RE	0,002	0,03	0,061	
4	Labor cost	11	58	FE	-0,051	-6,20	0,008	117***
				RE	-0,119	-3,27	0,036	
5	Human capital	9	66	FE	0,07	9,14	0,007	199***
				RE	0,173	3,98	0,042	
5a	*Primary education*	*3*	*17*	*FE*	*-0,007*	*-0,52*	*0,014*	*31****
				RE	*0,032*	*0,53*	*0,060*	
6	Infrastructure	12	64	FE	0,069	10,50	0,007	179***
				RE	0,125	4,06	0,030	
6b	*Telecom infrastructure*	*5*	*20*	*FE*	*0,13*	*12,36*	*0,010*	*50****
				RE	*0,139*	*3,27*	*0,042*	
6c	*Transport infrastructure*	*5*	*23*	*FE*	*0,028*	*2,51*	*0,011*	*69****
				RE	*0,071*	*1,43*	*0,049*	
7	Agglomeration	11	90	FE	0,437	70,66	0,005	5527***
				RE	0,212	1,31	0,152	
7a	*Foreign agglomeration*	*10*	*81*	*FE*	*0,456*	*70,66*	*0,006*	*5428****
				RE	*0,203*	*1,13*	*0,168*	
8	Natural resources	6	63	FE	0,043	6,96	0,006	65***
				RE	0,059	2,30	0,026	
8a	*Total natural resources rents*	*5*	*31*	*FE*	*0,052*	*6,94*	*0,007*	*63****
				RE	*0,051*	*1,28*	*0,040*	
9	Inflation	6	37	FE	-0,035	-4,88	0,007	53***
				RE	-0,062	-2,31	0,027	
10	Trade openness	16	106	FE	0,054	11,81	0,005	457***
				RE	0,142	4,40	0,032	
10a		*11*	*86*	*FE*	*0,054*	*8,56*	*0,006*	*337****

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
	Sum of exports and imports			*RE*	*0,102*	*2,63*	*0,039*	
11	Tax burden	3	34	FE	-0,077	-4,17	0,018	10***
				RE	-0,118	-2,31	0,050	
14	Geographic distance	4	18	FE	-0,170	-11,25	0,015	24***
				RE	-0,202	-4,44	0,044	
15	Political instability	11	47	FE	-0,098	-14,65	0,007	1147***
				RE	-0,325	-3,90	0,077	
16	Corruption	7	36	FE	0,033	3,53	0,009	36***
				RE	-0,016	-0,53	0,029	
17	Democracy	8	106	FE	0,027	4,93	0,005	19***
				RE	0,033	2,92	0,011	
18	Rule of law	4	11	FE	0,139	4,37	0,031	23***
				RE	0,048	0,47	0,099	
19	Regulatory quality	10	77	FE	0,084	11,81	0,007	275***
				RE	0,149	3,43	0,043	
19a	*Openness to capital flows*	*6*	*44*	*FE*	*0,042*	*4,47*	*0,009*	*135****
				RE	*0,050*	*0,87*	*0,056*	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.17. Synthesis of meta-analysis estimates by country of origin: Japan

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	13	84	FE	0,052	11,66	0,004	625***
				RE	0,294	5,80	0,048	
1a	*GDP*	*10*	*46*	*FE*	*0,25*	*21,79*	*0,011*	*214****
				RE	*0,355*	*5,86*	*0,055*	
2	Market growth	5	55	FE	0,13	11,77	0,011	18***
				RE	0,125	4,73	0,026	
4	Labor cost	10	48	FE	-0,133	-11,90	0,011	51***
				RE	-0,153	-4,57	0,033	
5	Human capital	6	8	FE	0,212	7,55	0,027	58
				RE	0,287	2,95	0,091	
5c	*Tertiary education*	*5*	*7*	*FE*	*0,251*	*8,40*	*0,029*	*44****
				RE	*0,349*	*3,45*	*0,092*	
6	Infrastructure	8	42	FE	0,113	24,19	0,005	26***
				RE	0,101	4,94	0,020	
6c	*Transport infrastructure*	*6*	*25*	*FE*	*0,115*	*23,73*	*0,005*	*9*
				RE	*0,108*	*5,87*	*0,018*	
7	Agglomeration	5	37	FE	0,175	46,85	0,004	9*
				RE	0,181	11,66	0,015	
7a	*Foreign agglomeration*	*5*	*31*	*FE*	*0,174*	*46,03*	*0,004*	*9**
				RE	*0,174*	*9,76*	*0,017*	
10	Trade openness	6	46	FE	0,029	6,19	0,005	33***
				RE	0,06	2,21	0,027	
10a	*Sum of exports and imports*	*5*	*44*	*FE*	*0,03*	*6,24*	*0,005*	*32****
				RE	*0,07*	*2,34*	*0,030*	
13	SEZ	5	46	FE	0,094	32,52	0,003	10**
				RE	0,112	6,29	0,018	
15	Political instability	4	19	FE	-0,023	-1,89	0,012	15***
				RE	-0,060	-1,48	0,040	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.18. Synthesis of meta-analysis estimates by country of origin: Western Europe

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	13	79	FE	0,048	14,269	0,003	764***
				RE	0,202	5,857	0,033	
1a	*GDP*	*8*	*28*	*FE*	*0,049*	*13,23*	*0,004*	*734****
				RE	*0,191*	*3,909*	*0,048*	
1b	*GDP per capita*	*5*	*34*	*FE*	*0,001*	*0,099*	*0,009*	*181****
				RE	*0,054*	*0,770*	*0,069*	
2	Market growth	3	19	FE	0,017	2,299	0,007	7**
				RE	0,023	0,294	0,021	
4	Labor cost	6	25	FE	-0,026	-6,016	0,004	93***
				RE	0,027	0,071	0,039	
5	Human capital	3	23	FE	0,024	2,667	0,009	95***
				RE	-0,018	-0,268	0,067	
6	Infrastructure	4	36	FE	0,016	2,753	0,006	64***
				RE	0,084	2,313	0,036	
7	Agglomeration	7	52	FE	0,092	23,464	0,004	1111***
				RE	0,064	0,899	0,071	
10	Trade openness	8	29	FE	0,036	4,972	0,007	55***
				RE	0,09	2,535	0,035	
14	Geographic distance	6	33	FE	-0,295	-37,755	0,007	468***
				RE	-0,238	-2,497	0,091	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.19. Synthesis of meta-analysis estimates by country of origin: Developing countries

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	25	207	FE	0,040	21,81	0,002	1391***
				RE	0,133	7,56	0,017	
1a	*GDP*	*13*	*70*	*FE*	*0,091*	*31,47*	*0,003*	*477****
				RE	*0,237*	*7,48*	*0,031*	
1b	*GDP per capita*	*8*	*70*	*FE*	*0,006*	*2,21*	*0,003*	*599****
				RE	*0,042*	*1,18*	*0,036*	
1c	*Population*	*3*	*37*	*FE*	*-0,076*	*-10,36*	*0,007*	*81***
				RE	*0,069*	*0,82*	*0,083*	
2	Market growth	8	57	FE	0,009	2,84	0,003	153***
				RE	0,085	2,70	0,031	
3	Market potential	3	28	FE	0,046	7,31	0,006	66***
				RE	0,081	2,00	0,040	
4	Labor cost	18	48	FE	-0,121	-16,81	0,007	214***
				RE	-0,184	-5,64	0,032	
5	Human capital	10	53	FE	-0,010	-1,89	0,005	571***
				RE	-0,092	1,80	0,051	
5c	*Tertiary education*	*7*	*28*	*FE*	*0,007*	*1,13*	*0,006*	*402****
				RE	*-0,044*	*0,43*	*0,056*	
6	Infrastructure	9	75	FE	0,074	20,62	0,004	240***
				RE	0,090	3,85	0,023	
6c	*Transport infrastructure*	*7*	*60*	*FE*	*0,076*	*17,90*	*0,004*	*170****
				RE	*0,073*	*2,58*	*0,028*	
6c3	*Seaports*	*4*	*30*	*FE*	*0,032*	*5,58*	*0,006*	*37****
				RE	*0,043*	*1,93*	*0,022*	
7	Agglomeration	8	73	FE	0,145	49,79	0,003	6324***
				RE	0,158	1,47	0,104	
7a	*Foreign agglomeration*	*5*	*55*	*FE*	*0,427*	*80,46*	*0,005*	*2268****
				RE	*0,268*	*1,80*	*0,139*	
8	Natural resources	11	132	FE	0,063	17,04	0,004	693***
				RE	0,168	4,70	0,035	
8a	*Total natural resources rents*	*8*	*79*	*FE*	*0,032*	*8,02*	*0,004*	*209****
				RE	*0,084*	*2,98*	*0,028*	
8b	*Fuel rents*	*4*	*40*	*FE*	*0,199*	*19,05*	*0,010*	*237****
				RE	*0,223*	*2,21*	*0,097*	
9	Inflation	4	15	FE	-0,051	-7,34	0,007	7**
				RE	0,021	0,38	0,056	
10	Trade openness	15	125	FE	0,047	15,42	0,003	219***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	0,096	5,92	0,016	
10a	*Sum of exports and imports*	*6*	*48*	*FE*	*0,069*	*13,38*	*0,005*	*48****
				RE	*0,054*	*2,38*	*0,023*	
10b	*Exports*	*8*	*31*	*FE*	*0,026*	*4,90*	*0,005*	*84****
				RE	*0,090*	*3,36*	*0,027*	
10c	*Imports*	*7*	*40*	*FE*	*0,040*	*7,67*	*0,005*	*78****
				RE	*0,097*	*3,85*	*0,025*	
13	SEZ	6	30	FE	0,133	17,66	0,008	63***
				RE	0,146	4,80	0,030	
14	Geographic distance	7	13	FE	-0,094	-29,14	0,003	45***
				RE	-0,097	-3,04	0,032	
15	Political instability	7	15	FE	-0,018	-1,92	0,009	76***
				RE	-0,311	-3,32	0,087	
16	Corruption	7	37	FE	-0,009	-1,55	0,006	210***
				RE	0,038	0,87	0,044	
17	Democracy	3	20	FE	0,062	7,98	0,008	7**
				RE	0,059	2,13	0,028	
18	Rule of law	7	22	FE	0,018	4,37	0,004	99***
				RE	0,037	1,41	0,026	
19	Regulatory quality	6	12	FE	0,020	1,55	0,013	27***
				RE	0,007	0,18	0,038	
20	Cultural distance	5	11	FE	-0,030	-9,23	0,003	69***
				RE	-0,071	-0,56	0,124	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.20. Synthesis of meta-analysis estimates by country of origin: China

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	7	125	FE	-0,006	-1,81	0,004	723***
				RE	0,052	1,01	0,051	
1a	*GDP*	*4*	*31*	*FE*	*0,159*	*25,13*	*0,006*	*39****
				RE	*0,128*	*3,34*	*0,038*	
1b	*GDP per capita*	*5*	*58*	*FE*	*-0,074*	*-14,79*	*0,005*	*122****
				RE	*-0,041*	*-1,08*	*0,038*	
2	Market growth	4	47	FE	0,077	10,71	0,007	21***
				RE	0,063	1,60	0,039	
4	Labor cost	3	7	FE	-0,247	-8,17	0,029	10***
				RE	-0,195	-1,45	0,129	
8	Natural resources	8	93	FE	0,093	20,71	0,004	94***
				RE	0,144	5,89	0,024	
8a	*Total natural resources rents*	*6*	*58*	*FE*	*0,072*	*14,24*	*0,005*	*72****
				RE	*0,145*	*4,68*	*0,031*	
9	Inflation	4	15	FE	-0,051	-7,34	0,007	7**
				RE	0,021	0,38	0,056	
10	Trade openness	7	90	FE	0,045	11,73	0,004	128***
				RE	0,072	2,59	0,028	
10b	*Exports*	*4*	*25*	*FE*	*0,019*	*2,95*	*0,006*	*60****
				RE	*0,085*	*1,76*	*0,048*	
16	Corruption	4	11	FE	0,135	9,12	0,015	44***
				RE	0,128	1,80	0,070	
18	Rule of law	3	11	FE	-0,020	-2,03	0,010	19***
				RE	-0,095	-1,19	0,079	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.21. Synthesis of meta-analysis estimates by sector: Manufacturing

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	29	247	FE	0,029	30,09	0,001	3607***
				RE	0,228	12,43	0,018	
1a	*GDP*	*13*	*88*	*FE*	*0,207*	*41,02*	*0,005*	*724****
				RE	*0,391*	*7,88*	*0,044*	
1b	*GDP per capita*	*12*	*69*	*FE*	*0,055*	*25,63*	*0,002*	*1085****
				RE	*0,184*	*4,38*	*0,041*	
1c	*Population*	*5*	*29*	*FE*	*0,007*	*3,66*	*0,002*	*271****
				RE	*0,243*	*2,30*	*0,101*	
2	Market growth	11	95	FE	0,106	11,56	0,009	334***
				RE	0,222	3,90	0,055	
3	Market potential	4	70	FE	0,030	13,75	0,002	654***
				RE	0,119	2,36	0,050	
4	Labor cost	22	154	FE	-0,025	-24,39	-0,052	511***
				RE	-0,059	-3,94	0,015	
5	Human capital	10	65	FE	0,029	7,07	0,004	342***
				RE	0,119	3,79	0,031	
5c	*Tertiary education*	*6*	*39*	*FE*	*0,003*	*0,55*	*0,005*	*275****
				RE	*0,124*	*2,04*	*0,060*	
6	Infrastructure	12	115	FE	0,014	15,54	0,001	288***
				RE	0,084	6,70	0,013	
6b	*Telecom infrastructure*	*4*	*24*	*FE*	*0,119*	*8,91*	*0,013*	*20****
				RE	*0,151*	*3,98*	*0,037*	
6c	*Transport infrastructure*	*9*	*109*	*FE*	*0,014*	*14,66*	*0,001*	*130****
				RE	*0,046*	*4,46*	*0,010*	
6c3	*Seaports*	*5*	*53*	*FE*	*0,023*	*17,12*	*0,001*	*147****
				RE	*0,072*	*3,23*	*0,022*	
7	Agglomeration	21	193	FE	0,055	40,93	0,001	3384***
				RE	0,188	8,97	0,020	
7a	*Foreign agglomeration*	*16*	*93*	*FE*	*0,073*	*33,45*	*0,002*	*3030****
				RE	*0,260*	*6,33*	*0,039*	
9	Inflation	3	6	FE	0,007	0,35	0,020	13***
				RE	0,002	0,05	0,052	
10	Trade openness	13	76	FE	0,013	5,12	0,003	233***
				RE	0,099	3,85	0,026	
10a	*Sum of exports and imports*	*8*	*52*	*FE*	*0,013*	*4,98*	*0,003*	*46****
				RE	*0,025*	*1,54*	*0,016*	
11	Tax burden	4	21	FE	-0,037	-2,46	0,015	17***

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
				RE	-0,080	-1,68	0,047	
13	SEZ	8	70	FE	0,123	37,08	0,003	543***
				RE	0,157	4,82	0,032	
15	Political instability	7	23	FE	-0,115	-8,64	0,013	67***
				RE	-0,153	-3,11	0,048	
16	Corruption	3	24	FE	-0,085	-14,28	0,006	7**
				RE	-0,070	-2,05	0,037	
18	Rule of law	7	29	FE	-0,001	-0,34	0,004	70***
				RE	0,031	1,14	0,027	
19	Regulatory quality	4	24	FE	0,018	1,10	0,016	84***
				RE	0,146	1,46	0,097	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

Table 3.22. Synthesis of meta-analysis estimates by sector: Services

No	FDI determinant	No. of studies	No. of estimates (K)	Model	PCC			Q statistic
					Mean ρ	z-value	SE	
1	Market size	13	72	FE	0,064	15,763	0,004	1019***
				RE	0,264	5,898	0,043	
1a	*GDP*	*7*	*17*	*FE*	*0,114*	*11,686*	*0,010*	*469****
				RE	*0,276*	*2,969*	*0,088*	
1b	*GDP per capita*	*9*	*35*	*FE*	*0,056*	*11,440*	*0,005*	*408****
				RE	*0,212*	*3,739*	*0,055*	
2	Market growth	5	21	FE	0,013	1,121	0,011	13***
				RE	0,014	0,525	0,026	
4	Labor cost	4	10	FE	-0,076	-5,668	0,014	19***
				RE	-0,105	-2,854	0,036	
5	Human capital	4	13	FE	0,081	4,897	0,017	18***
				RE	0,155	2,942	0,052	
7	Agglomeration	10	35	FE	0,095	21,935	0,004	571***
				RE	0,257	5,857	0,042	
7a	*Foreign agglomeration*	*7*	*22*	*FE*	*0,163*	*20,606*	*0,008*	*296****
				RE	*0,250*	*3,411*	*0,070*	
9	Inflation	3	6	FE	0,070	2,661	0,026	50***
				RE	0,043	0,294	0,142	
10	Trade openness	6	19	FE	0,028	3,409	0,008	24***
				RE	0,031	1,277	0,024	
10a	*Sum of exports and imports*	*4*	*16*	*FE*	*0,027*	*3,202*	*0,008*	*4*
				RE	*0,026*	*2,975*	*0,009*	
18	Rule of law	4	59	FE	0,019	9,699	0,002	71***
				RE	0,079	2,159	0,036	
19	Regulatory quality	5	17	FE	0,105	8,012	0,013	44***
				RE	0,215	3,250	0,064	

*Notes: * p <0.10, ** p <0.05, *** p <0.01*

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4. FOURTH CHAPTER: MOTIVES OF EUROPEAN FDI IN DEVELOPING ASIA: A SPATIAL ECONOMETRIC ANALYSIS

MOTIVES OF EUROPEAN FDI IN DEVELOPING ASIA: A SPATIAL ECONOMETRIC ANALYSIS

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Abstract: This study empirically examines the determinants of European FDI in 21 Asian developing countries over the 2013-2019 period and aims to identify its main motivation[32]. We employ a spatial Durbin model (SDM) to capture spatial linkages across Asian host countries, which are usually overlooked by most existing empirical studies. SDM is a relatively new empirical approach that extends previous spatial methods employed in the FDI location literature. We further refine this approach by addressing recent critiques concerning the construction of the spatial weight matrix and measurements of distance for our spatial model. Our estimation results reveal the existence of spatial interdependence of European FDI across Asian host developing countries. Findings indicate that FDI is largely dominated by the export-platform motives, i.e., European MNEs establish operations in one host country and then use it as a platform to serve nearby markets via exports. Our findings also point to horizontal market-seeking motivation across the sample countries. To the best of our knowledge, it is the only empirical study explicitly focusing on spatial FDI interdependencies across a large sample of Asian developing countries. FDI location researchers may find this study useful as it shows that ignoring spatial linkages in empirical models leads to serious econometric problems, which could potentially question the findings of these studies. The results of this study may also be helpful for policymakers in Asian developing economies if they wish to attract more export-platform and horizontal FDI.

Keywords: Foreign Direct Investment (FDI); FDI motives; spatial econometrics; spatial Durbin model (SDM); Asia

[32] Here we consider FDI motivation to be horizontal, vertical, export-platform, or complex-vertical FDI.

4.1. INTRODUCTION

In recent decades, there has been a dramatic increase in foreign direct investment (FDI) flows across the world, prompting renewed academic interest in analyzing the factors influencing global FDI distribution. FDI is considered to be the most important driver of economic growth of FDI destination countries, especially in the context of developing economies (Borensztein, De Gregorio, & Lee, 1998; Hansen & Rand, 2006; Iamsiraroj, 2016). Foreign direct investment supplements domestic investment (Mody & Murshid, 2005) and helps to develop local industries (Alfaro & Rodriguez-Clare, 2004; Javorcik, 2004). Furthermore, FDI generates technology and knowledge spillovers, enhances human capital quality, creates jobs, and promotes exports (Caves, 1996; De Mello Jr., 1997; Lucas, 1988; Romer, 1986).

This sharp increase in global FDI inflows since the 1900s has drawn the attention of scholars, who have produced a large body of research interested in providing explanations of FDI location choices. Different strands of literature have explored a long list of FDI location determinants in search of the factors that could explain the MNEs' location choices across developed and developing countries. Despite the theoretical consensus reached by scholars on which host location factors attract or deter FDI, much of the extant empirical literature remains largely inconclusive on the matter of *where* FDI goes and *why* (Nielsen, Asmussen, & Weatherall, 2017). Recent research argues that improving our understanding of underlying contextual motives for investment across different environments will enrich FDI location literature and provide more practical advice for policymakers (Bailey, 2018; Nielsen et al., 2017).

Empirical models and tests on FDI location determinants have mostly relied on a two-country framework (also known as gravity model), which assumes that MNEs decide to invest in a particular host country independently of the decision to invest or not to invest in another country (Blonigen, Davies, Waddell, & Naughton, 2007; Regelink & Elhorst, 2015). Additionally, two-country frameworks imply that the distances between alternative locations have no impact on the likelihood of FDI location. Yet the boundaries between countries or regions are often quite arbitrary (Hall & Petroulas, 2008) and mostly represent administrative barriers rather than reflect political-economic reality (Blanc-Brude, Cookson, Piesse, & Strange, 2014). Indeed, neighboring countries typically exhibit more similarities compared to non-neighboring countries, including legislative procedures, bureaucratic organization, work ethics, as well as cultural and social norms.

Furthermore, adjacent countries are more likely to have similar economic structures and may be perceived by investors as less risky for FDI. This results in a situation of spatial dependence in the FDI data, ignoring which can lead to serious estimation and inference problems. While the empirical FDI location literature using these bilateral gravity models has advanced our understanding of how certain home and host country characteristics interact to affect the host's inward FDI, it completely ignores the role played by neighboring countries, otherwise known as third-country effects[33].

From a methodological perspective, ignoring spatial linkages or third-country effects could lead to serious econometric problems in the estimation, such as biased, inconsistent, or inefficient estimates, as well as inaccurate inferences (see Anselin (1988, 2009) for an overview of the econometric problems in the presence of spatial effects). This is a very important problem, as most empirical works on FDI location use a two-country gravity framework, which suffers from specification issues, which could potentially question the findings of these studies (LeSage & Pace, 2009). Econometric problems stemming from relying on two-country models could also explain why uni- and bilateral empirical studies on FDI determinants yield mixed results at best.

There are many theoretical reasons to suspect spatial dependence in FDI location decisions. For example, new economic geography (NEG) literature (Fujita, Krugman, & Venables, 1999; Fujita & Thisse, 1996; Krugman, 1991b) posits that agglomeration effects exist and influence foreign investment location since FDI inflows in a given host country depend not only on its own characteristics but also on those of its neighbors. Moreover, the growing involvement of different countries in the global value chains relies on the global fragmentation of production, which, in turn, strengthens interdependence between MNEs and supply chain partners located across multiple countries (Gereffi, Humphrey, & Sturgeon, 2005). The need to account for third-country effects in analyzing FDI flows stems from the fact that proximity matters, and geographical units located closer to each other must exhibit a higher degree of spatial dependence than those located farther apart. Tobler's (1970, p. 236) First Law of Geography states: "Everything is related to everything else, but near things are more related than distant things". Tobler's First Law (TFL) lies at the core of spatial analysis and modelling, where spatial autocorrelation techniques analyze the correlation relative to distance (Miller, 2004).

[33] These third countries are usually countries in immediate proximity to the host country.

According to the economics literature on FDI location, the determinants underlying the FDI location choice of MNEs' differ depending on the type of FDI (Baltagi, Egger, & Pfaffermayr, 2007; Blonigen et al., 2007; Ekholm, Forslid, & Markusen, 2007). Traditional theoretical models distinguish between horizontal FDI (H FDI), where firms invest in a foreign country to access its market and substitute for exports into this country (Markusen, 1984), and vertical FDI (V FDI), where firms invest in a foreign country to take advantage of cheaper factor inputs and produce goods for export to their home country (Helpman, 1984). Both horizontal and vertical FDI rely on a two-country framework (gravity framework), which accounts for the possibility that FDI depends on the unilateral or bilateral characteristics of host and home countries (Antràs & Yeaple, 2014; Head & Mayer, 2014; Linnemann, 1966).

Recent contributions, however, have integrated the third-country effects into models analyzing FDI determinants. Such multilateral frameworks allow researchers to model FDI relationships between home and host countries as well as third countries. Considering the third countries in such models reveals additional and more complex motivations for investment in a host country: export-platform FDI and complex vertical FDI. In export-platform FDI (EP FDI), an MNE invests in a given host country to produce final goods aimed at exporting to third-country markets (Ekholm et al., 2007; Yeaple, 2003). In complex vertical FDI (CV FDI), an MNE establishes a production chain across multiple host countries to exploit their respective comparative advantages and engages in the trade of intermediate goods between the MNE's subsidiaries (Baltagi et al., 2007). Put more simply, the idea behind the third-country effect pertains to regional integration and implies that an MNE may use a host country as an export-platform to reach another country's market with final products (EP FDI) or intermediate goods aimed for further processing (CV FDI).

Blonigen et al. (2007) proposed an estimation procedure to empirically account for third-country effects to test the theoretical implications of the spatial FDI relationship. They employed the spatial autoregressive (SAR)[34] econometric technique, which introduces two additional spatial variables into the standard empirical analysis of FDI determinants. These variables include (1) a spatial lag of dependent variable (FDI), the estimated coefficient capturing the contemporaneous correlation between a given host country's FDI and FDI of its geographically proximate neighboring countries;

[34] Spatial autoregressive (SAR) method is an econometric technique used to analyze data that exhibits spatial dependencies or interactions.

and (2) the surrounding market potential variable (SMP), the estimated coefficient describing contemporaneous correlation between a given host country's FDI and the distance-weighted market sizes of its geographically proximate neighbor countries (usually measured by GDP). The coefficient signs of spatial lag FDI and SMP help to empirically differentiate among four FDI motives (i.e., pure horizontal/vertical and two complex modes of FDI) (subsection 4.2.3 provides detailed theoretical discussion on FDI types and the empirical approach of Blonigen et al. (2007)).

Many studies followed the approach of Blonigen et al. (2007) in recognizing that FDI decisions are multilateral in nature and accounting for third-country effects. A handful of recent empirical papers employing spatial econometric techniques explored the spatial interdependence of US OFDI across various countries and regions (Baltagi et al., 2007; Blonigen et al., 2007; Nwaogu & Ryan, 2014; Poelhekke & van der Ploeg, 2009; Regelink & Elhorst, 2015; Siddiqui & Iqbal, 2018; Uttama & Peridy, 2009), Chinese OFDI (Chang, 2014; Chou, Chen, & Mai, 2011; He, 2022), and IFDI in Chinese provinces and cities (Blanc-Brude et al., 2014; Coughlin & Segev, 2000; He, Wang, & Cheng, 2011; Jiao & Jian, 2014; Pan, 2016; Sharma, Wang, & Wong, 2014), among others. The common finding of these studies is the presence of spatial FDI interdependence between potential hosts, i.e., FDI in a particular host country or region is affected by the characteristics of its neighboring countries or regions and FDI inflows there.

Although the existence of spatial FDI interdependence is currently acknowledged in economics literature (Blonigen et al., 2007; Garretsen & Peeters, 2009; Gutiérrez-Portilla, Maza, & Villaverde, 2019b; Lemi, Liu, & Wright, 2021; Maza, Gutiérrez-Portilla, & Villaverde, 2020; Regelink & Elhorst, 2015), many studies produce results inconsistent with the theory on MNEs' motives. The possible explanation of these conflicting results is that previous literature on FDI interdependence mostly relies on the spatial autoregressive (SAR) method (Blanco, 2012; Blonigen et al., 2007; Chou et al., 2011; Garretsen & Peeters, 2009; Nwaogu & Ryan, 2014; Poelhekke & van der Ploeg, 2009). SAR methodology, however, has been criticized due to important limitations. Elhorst (2001), LeSage & Pace (2009), Kelejian & Prucha (2010), Regelink & Elhorst (2015), and LeSage (2014) argue that SAR provides inconsistent results due to the use of incorrect spatial weighting procedures using the inverse of row-normalized factors.

IB literature on spatial FDI dependence is rather limited, as the relationship between place and space was mostly studied by economic and economic geography researchers (Beugelsdijk,

Hennart, Slangen, & Smeets, 2010; Beugelsdijk & Mudambi, 2013). Although the geography of FDI is not completely missing in IB literature (Dunning, 2009), the nature of the interaction between place and space as well as the issues of MNEs' strategies within the context of their spatial embeddedness remain largely unaddressed in the IB field (Beugelsdijk, McCann, & Mudambi, 2010). Beugelsdijk & Mudambi (2013) argue that IB scholars' attempts to improve their analyses of spatial variation by adding new distance dimensions have limited theoretical and empirical value because such distance measures are strongly correlated (Berry, Guillen, & Zhou, 2010) and, as a result, it is difficult to unveil their individual effects (Zaheer, Schomaker, & Nachum, 2012).

There are only several papers in the IB field exploring the spatial interdependencies across FDI locations. Villaverde & Maza (2012) and Villaverde & Maza (2015) explored the regional distribution of FDI across Spanish regions and 260 EU NUTS2 regions, respectively. Similarly, Blanc-Brude et al. (2014) searched for spatial dependence of FDI across 224 Chinese prefecture-cities using alternative concepts of distance for spatial weight matrix construction, such as administrative and economic distances based on Ghemawat's (2001) CAGE framework. In addition to the subnational focus of the above-mentioned papers, none of them explicitly explores FDI motivation per se and only takes account of the presence of third-country spatial effects. Finally, Rossi, Santos, & Campos (2016) studied the third-country effects for Brazilian OFDI across 30 host countries but did not find spatial dependence of FDI.

IB literature is often criticized for its limited understanding of the nature of interaction between place and space as well as issues of MNEs' strategies within the context of their spatial embeddedness since these are primarily geographic concepts (Beugelsdijk, McCann, et al., 2010; Beugelsdijk & Mudambi, 2013; McCann & Mudambi, 2005). Head & Mayer (2002) suggest that widely used mean-based measures of geographic distance (based on the great circle distance between two countries' capitals or centroids) are mismeasured and may lead to a systematic overstatement. This mismeasurement of mean-based measures stems from conceptualizing (discrete) border effects and (continuous) distance effects (Beugelsdijk & Mudambi, 2013), which are often used interchangeably in the IB literature (Beugelsdijk & Mudambi, 2013).

Beugelsdijk & Mudambi (2013, p. 414) argue that IB scholars should carefully distinguish "between spatial heterogeneity that arises in the subnational context and spatial discontinuities that arise at national borders" to further develop the general theory of the enterprise in space.

Furthermore, Beugelsdijk & Mudambi (2013, p. 419) highlight that "for IB research to progress, it will be necessary to move from this first-generation distance research to modeling of spatial variation in a manner that carefully distinguishes between border and distance effects" because "it can identify precisely where spatial discontinuities arise" and, thus, "improve our theoretical and empirical understanding of place, space and the way firms organize themselves". One way to do so is to make use of the revised geographic distance measures borrowed from economic geography literature, which distinguish between border and distance effects and include both of them simultaneously, thus providing more precise estimates of the distance-FDI relationship (Iammarino & McCann, 2013).

In the world of globalized trade and interconnected financial markets, a given host country's inward FDI flows are expected to be interrelated across regions. In a regional context, the economic, political, institutional, and social factors of neighboring countries of a given FDI host may exert an important effect on its FDI inflows. Therefore, this study explores the presence of spatial effects of FDI and attempts to identify the dominant motives for investment of 24 European developed countries into 21 developing Asian countries over the period from 2013 to 2019.

To the best of our knowledge, there are only three empirical studies that explicitly focus on testing spatial FDI interdependencies and aim to identify FDI motives across small samples of ASEAN[35] countries (Hoang & Goujon, 2019; Uttama, 2009; Uttama & Peridy, 2009). All these studies found support for the spatial interdependence of FDI across their sample countries. Uttama & Peridy (2009) argued that US outward FDI in 6 ASEAN countries was vertical or complex vertical during 1995-2007 period. Similarly, Hoang & Goujon (2019) suggested that aggregate FDI inflows from all over the world into 9 ASEAN countries over the 1999-2011 period were also complex vertical. However, the available empirical evidence on the dominant motive for investment for intra-ASEAN FDI does not converge. Uttama (2009) found supportive evidence pointing to vertical FDI, whereas Hoang & Goujon (2019) suggested that intra-ASEAN FDI is an export-platform.

Nowadays, Asia accounts for the lion's share of global FDI, and understanding MNEs' motives for investment in this most densely populated and rapidly developing region is of particular interest

[35] The Association of Southeast Asian Nations, or ASEAN, was established in 1967 and now includes 10 member states: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

for academics and developing countries' governments. For example, FDI inflows in Asia reached a record of $662 billion, which accounts for nearly 3/4 of all FDI going to developing economies and more than 50% of global FDI flows (UNCTAD, 2023). Moreover, the motives for investment in developed and developing countries are different (Blonigen & Wang, 2005), and both the traditional FDI determinants and the estimated spatial interdependence are quite sensitive to the sample of countries chosen (Blonigen et al., 2007; Regelink & Elhorst, 2015). Therefore, we narrow down the focus on countries belonging to one geographic region and similar stages of development, as it could potentially provide a clearer understanding of foreign firms' dominant motives for investment.

This study aims to address three issues in the previous empirical FDI location literature related to a lack of understanding of FDI location motives in Asian developing countries, serious methodological limitations, and the criticism of IB scholars for largely overlooking the context of MNEs' spatial embeddedness.

First, we aim to investigate dominant FDI motives across a large set of FDI recipient countries, as our sample of countries is at least twice as large as in any previous empirical paper using spatial econometric methods (Davies & Guillin, 2014; Hoang & Goujon, 2019; Orr, 2008; Uttama, 2009; Uttama & Peridy, 2009). Moreover, much of the current literature on FDI interdependencies and motives relies on outbound FDI either from one investor country such as the US (Baltagi et al., 2007; Blonigen et al., 2007; Poelhekke & van der Ploeg, 2009; Regelink & Elhorst, 2015; Siddiqui & Iqbal, 2018; Uttama & Peridy, 2009) or does not distinguish among countries of origin and uses aggregate FDI inflows from all over the world (Esiyok & Ugur, 2017; Huynh, 2022; Ledyaeva, 2009; Pan, 2016; Sharma et al., 2014; Shepotylo, 2012). As such, previous literature has not yet explored the motivation of European FDI in Asia employing spatial methods, while only two studies employed European outward FDI data to test dominant FDI strategies in the MENA region (Uttama & Peridy, 2010) and at the subnational intra-European level (Casi & Resmini, 2010). Other studies using European outward FDI data do not focus on FDI motives per se and simply look for the presence of spatial dependence of European FDI across various sets of sample countries (Alamá-Sabater, Heid, Jiménez-Fernández, & Márquez-Ramos, 2016; Alamá-Sabater, Heid, Jiménez-Fernández, & Márquez-Ramos, 2017).

Second, our study takes the criticism of the SAR methodology into account and contributes to the empirical literature on FDI location choice by employing the spatial Durbin model (SDM) instead of SAR. We build on the work of Regelink & Elhorst (2015) to test FDI interdependence across a large sample of Asian countries and empirically identify the dominant FDI type in this region. Therefore, we use the spatial weight matrix normalized by eigenvalue and not by the sum of each row (Elhorst, 2001; Kelejian & Prucha, 2010). Moreover, SDM allows for the identification of both endogenous effects (captured by spatially lagged dependent variable), and contextual effects (captured by spatially lagged explanatory variables). As such, SDM extends the SAR model by directly including spatially weighted explanatory variables, whereas SAR limits spatial dependence to FDI but not to its determinants. SDM is a relatively new approach to studying the spatial interdependence of FDI and is now employed by several recent papers (Boly, Coulibaly, & Kéré, 2020; Fonseca & Llamosas-Rosas, 2019; Gutiérrez-Portilla et al., 2019b; Gutiérrez-Portilla, Maza, & Villaverde, 2019a; He, 2022; Huynh, 2022; Krisztin & Piribauer, 2021; Lemi et al., 2021; Maza et al., 2020; Regelink & Elhorst, 2015; Siddiqui & Iqbal, 2018).

Finally, in this study, we answer the call of Beugelsdijk & Mudambi (2013) to enrich [geographic] distance research in the IB field by moving away from the usual practice of analyses based on country means and instead adopting an economic geography perspective on distance measures for the construction of our spatial weighting matrix. We use the distance measure constructed by Mayer & Zignago (2011) with the latitudes, longitudes, and population data of the main agglomerations of countries that accounts for the internal distance between consumers and producers within countries.

The main findings of this study are as follows. First, by applying Blonigen et al.'s (2007) approach and employing a spatial Durbin model (SDM), we discovered the presence of spatial interdependence of European FDI across Asian host countries. The negative sign of the spatial lag of FDI, combined with the positive sign of the surrounding market potential variable, points to the predominantly export-platform motivation of European FDI. Accordingly, most European MNEs seem to establish production in a particular host country and then serve the nearby regional market via exports. Furthermore, findings also point to the horizontal motives of European MNEs across Asian countries.

The remainder of this Chapter is organized as follows. The next two Sections analyze the theoretical background and empirical findings on spatial relationships in FDI, respectively. Section 4.4 states the hypotheses, presents model specification and data. Section 4.6 discusses the empirical findings of this study. The final Section offers concluding remarks and policy implications.

4.2. THEORETICAL BACKGROUND

For decades, FDI location research has been building on the gravity law, which is "one of the most robust empirical facts in economics" (Proost & Thisse, 2019, p. 576). Gravity law links bilateral trade flows to the GDP of countries and to the distance between them: (1) trade rises proportionately with the economic size of countries (i.e., exports increase with the economic size of the destination economy and imports increase in proportion to the size of the origin economy), and (2) trade is inversely proportional to the distance between destination and origin countries (Head & Mayer, 2014). Nowadays, distance and location remain important for the organization of the space-economy, despite the significant reduction of transport and communication costs across the globe (Proost & Thisse, 2019). However, conventional regression models commonly used to analyze cross-section and panel data in trade and FDI literature are based on the assumption that observations (i.e., countries, regions, or provinces) are independent of one another, which produces biased and inconsistent estimates (LeSage & Pace, 2009). The following subsection briefly presents the gravity-type framework widely used in FDI location research and discusses its main weaknesses.

4.2.1. FDI and space

In past decades, theoretical and empirical research on the antecedents and consequences of FDI has been flourishing (Bailey, 2018; Helpman, 2006; Markusen, 2002; Nielsen et al., 2017). Despite the substantial progress achieved, most empirical work on FDI determinants still largely relies on a two-country gravity-type framework (Blonigen et al., 2007), where FDI between home country *i* and host country *j* is determined by *i* and *j*'s characteristics only.

Gravity models were first introduced to international trade analysis (Linnemann, 1966; Pöyhönen, 1963; Tinbergen, 1962) and have demonstrated their usefulness in explaining bilateral FDI flows (Bevan & Estrin, 2004; Brenton, Di Mauro, & Lücke, 1999; Carstensen & Toubal, 2004; Eaton & Tamura, 1994; Wei, 2000). The gravity model explains FDI flows based on the host country's size (GDP and population) and the geographic distance between home and host countries (Linnemann, 1966).

Eq. (4.1) illustrates a typical non-spatial two-country gravity model (for a detailed review of this type of model, see Antràs & Yeaple (2014) or Head & Mayer (2014)) to estimate the determinants

of bilateral FDI stocks or flows from origin country *i* in destination country *j* typically used in the FDI location literature.

Equation 4.1. Non-spatial two-country gravity model

$$FDI_{ij} = \alpha_0 + \alpha_1 GDP_j + \alpha_2 (GDP/POP)_j + \alpha_3 GDP_i + \alpha_4 (GDP/POP)_i + \alpha_5 DIST_{ij} + \varepsilon_{ij};$$

where GDP_i and GDP_j are the GDPs of the origin and destination countries; POP_i and POP_j are the populations in the respective countries; $(GDP/POP)_i$ and $(GDP/POP)_j$ denote the GDP per capita of the origin and destination countries; $DIST_{ij}$ measures the geographical distance between countries *i* and *j*, and ε_{ij} is the error term.

GDP of origin and destination countries is a common proxy for the size of their respective economies, and the larger the economy of a country, the higher its potential for inward and outward FDI. Hence, in Eq. (4.1), the coefficients of GDP of the home and host countries are expected to be positive. GDP per capita of the home country is expected to be positive, as richer countries tend to invest in poorer ones. As GDP per capita is frequently used as a proxy of labor costs, the GDP per capita of the host country (especially if it is a developing country) is expected to be negative, which is in line with the vertical FDI motive when MNEs seek to take advantage of differences in wages between the origin and destination countries. However, a positive coefficient of destination GDP per capita would imply horizontal market-seeking FDI. Finally, the larger distance between the origin and destination countries is expected to have a negative impact on bilateral FDI.

This focus on bilateral frameworks in FDI location research is problematic, as there are many reasons to suspect the presence of spatial dependence in FDI data from a theoretical perspective. As pointed out by Tobler (1970, p. 236), the First Law of Geography states: “Everything is related to everything else, but near things are more related than distant things”. The importance of spatial analysis of FDI comes from the fact that proximity matters, and what happens in a specific region is interrelated with what is happening in neighboring regions.

The choice of FDI location and FDI strategy is one of the most important decisions made by MNEs when venturing abroad. The two-country framework briefly described above, however, assumes that the decision of an MNE to invest in a particular host country is independent of the decision whether (or not) to invest in any other country. In fact, empirical approaches have simply mirrored theoretical developments on the creation of MNEs based on general equilibrium models of

horizontal (Markusen, 1984, 2002) and vertical MNEs (Helpman, 1984; Helpman, Melitz, & Yeaple, 2004). These models also use two-country settings, and the influence of the "rest of the world" (the so-called third-country effect) is largely ignored.

The influence of third countries has been introduced in recent theoretical and empirical contributions to the literature on FDI determinants and motives of MNEs. By relaxing two-country assumptions, scholars have identified new, more complex forms of FDI in addition to the simplistic binary descriptors such as horizontal and vertical motives: export-platform FDI (Ekholm et al., 2007), which can be considered a variation of the horizontal motive, and complex vertical FDI (Baltagi et al., 2007), a variation of the vertical one. For example, Neary (2009) argued that bilateral models fail to explain why, in the era of falling tariffs and trade costs in the 1990s, [horizontal] FDI flows into the European Union have increased dramatically. One way to explain such a phenomenon of empirical FDI motivation is to take third-country effects into account, like in the export-platform models of Ekholm et al. (2007). These models incorporate distance-weighted market sizes of third countries and open the possibility for a country to become the target for FDI because MNEs use it as a base to export produced output to other neighboring markets. Bilateral FDI models simply cannot explain newer FDI models such as export-platform FDI (Ekholm et al., 2007) and complex vertical FDI (Baltagi et al., 2007).

New economic geography (NEG) literature acknowledged long ago that the location decisions of firms could be determined by the location decisions of other firms, thus creating spillover effects (Egger, Gruber, Larch, & Pfaffermayr, 2007; Fujita, Krugman, & Venables, 1999; Fujita & Thisse, 1996; Krugman, 1991b, 1991a). In his seminal work, Krugman (1991a, p. 55) writes: "What is the most striking feature of the geography of economic activity? The short answer is surely concentration ... production is remarkably concentrated in space". This branch of literature points out that FDI could be correlated in space, which means that neighboring regions could affect each other by creating spillover effects, or the so-called third-country (or region) effect. Coughlin & Segev (2000) argue that spatial dependence may arise due to agglomeration effects, which can either result in a positive spillover of FDI to neighboring regions or, conversely, a negative impact if the agglomeration effects are limited to one location. Additionally, Coughlin & Segev (2000) argue that FDI may affect resource costs in neighboring regions, thereby altering the relative desirability of these locations.

Many previous studies have shown the importance of agglomeration economies for FDI location decisions (Baldwin & Okubo, 2006; Egger, Gruber, et al., 2007; Gao, 1999; Hoffmann & Markusen, 2008; Raybaudi-Massilia, 2000). For example, Head, Ries, & Swenson (1995) analyzed the geographic distribution of the Japanese automotive industry's FDI in the US in the 1980s using conditional-logit specifications and observed the interdependence of the location decisions across US states. Their estimates provide evidence of agglomeration effects between neighboring states, and the authors conclude that Japanese industry-specific agglomeration has a strong influence on the location decisions of other firms. In a similar vein, Head & Mayer (2004) explored Japanese FDI patterns in Western Europe using the market potential measure of Harris (1954), which includes not only the host region's GDP but also the GDP of nearby regions weighted by distance to them. Their logit estimations show that regions with higher market potential attract more FDI, and agglomeration measures, as in Head et al. (1995), remain robust.

Although the discrete choice models of Head et al. (1995) and Head & Mayer (2004) allow for the potential interdependence of FDI decisions, they have serious limitations. First, these models assume that the choice probabilities of different locations are independent of each other, which may not be the case in reality due to spatial interactions among different locations (Anselin, 1988). Second, these models examine a discrete measure of FDI choice and not the magnitude of the FDI activity (Blonigen et al., 2007).

Agglomeration externalities and spatial interdependence are two distinct, yet interrelated, factors. The main difference is that spatial interdependence is a broader concept that includes agglomeration economies[36]. FDI location research generally considers agglomeration economies as positive externalities arising from spatial concentration of activities (Guimarães, Figueiredo, & Woodward, 2000), which explain why firms from the same country of origin and/or the same industry often locate in industrial clusters (Baldwin & Okubo, 2006; Chen, 2009; Ekholm & Forslid, 2001; Tan & Meyer, 2011).

Overall, the existence of multilateral decision-making has serious implications for empirical work on FDI location choice, as this means that FDI decisions across various countries are not

[36] See Blomström & Kokko (1998) for a detailed discussion about how agglomeration economies arise in the context of FDI.

independent of one another. The next subsection investigates possible types of spatial FDI interdependence.

4.2.2. Types of interdependence of FDI

As Alamá-Sabater et al. (2017) rightly point out, FDI stocks or flows are georeferenced data, so they could be linked to specific countries on the world map, and previous research tried to investigate whether FDI values across various locations are spatially correlated. The interdependence of bilateral FDI in the literature has been studied from three perspectives:

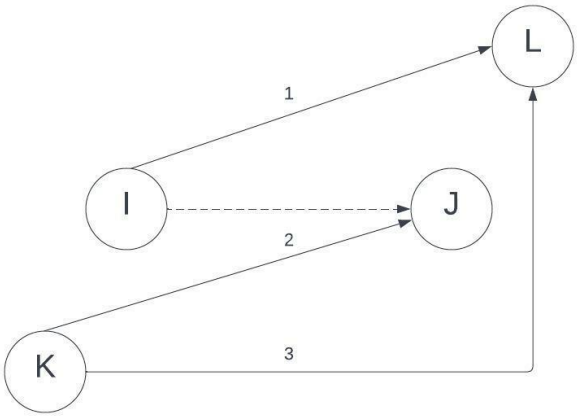
1. Interdependence across destination countries' inward FDI from a given origin country (destination dependence);
2. Interdependence across origin countries' outward FDI in a given destination country (origin dependence); and
3. Interdependence among FDI for a given origin-destination country pair across other third countries (third-country dependence).

To understand the logic behind these possible types of spatial FDI interdependencies, consider Fig. 4.1. It represents four countries: I, J, K, and L. I and K are FDI origin countries, and J and L are FDI destination countries. I and K are neighbors, so are J and L. Non-spatial bilateral models only consider FDI determinants located in both I and J (represented by a dashed arrow). Spatial interaction models also account for three additional arrows:

1. Investment of I to J also depends on investment of I to L (destination dependence);
2. Investment of I to J also depends on investment of K in J (origin dependence); and
3. Investment of I to J also depends on investment of K to L (third-country dependence), due to complex FDI motives and/or general equilibrium effects.

As seen from Fig. 4.1, spatial interaction models analyze dyads of countries rather than individual countries and aim to explain the variation of spatial interactions across geographic space. Spatial models can pay attention to the three types of neighborhood effects illustrated above: those associated with the characteristics of host country neighbors, those associated with the characteristics of home country neighbors, and those that stem from the spatial interactions between home and host country neighbors.

Figure 4.1. Illustration of potential spatial interactions



Source: Alamá-Sabater et al. (2017, p. 392)

4.2.2.1. Destination dependence (spacey hosts)

The FDI destination dependence hypothesis, first articulated by Blonigen et al. (2007), states that FDI from origin country *i* in host country *j* depends not only on FDI in (or characteristics of) destination host country *j* but also on FDI in (characteristics of) other host countries *l*.

This hypothesis is mostly based on theoretical contributions on vertically organized MNEs and export-platform FDI, where FDI location and other decisions of MNEs are interdependent across FDI hosts and also depend on the trade openness of intermediate (Grossman, Helpman, & Szeidl, 2006) and final goods (Baltagi et al., 2007; Ekholm et al., 2007; Yeaple, 2003) across potential host markets. If the MNE pursues horizontal FDI motives with the purpose of serving the host country market only, we can expect that larger neighboring markets of a given host country to reduce MNE activity in this country because the same investments could instead serve a larger neighboring market and generate higher returns there than in the given host. Alternatively, export-platform FDI tends to increase in a particular host country if neighboring countries are larger, in which case foreign affiliates aim to serve not only the host country market but also other surrounding markets.

For example, a US MNE considers investing either in China or Vietnam. The large Chinese market is attractive, yet it comes with high investment costs. Vietnam is smaller, but investing there is cheaper. Besides, Vietnam is close to China and other ASEAN countries, so these markets could be served by exports from subsidiaries located in Vietnam, making the size of Vietnam itself less relevant.

From the empirical point of view, the destination dependence (spacey hosts) hypothesis states that a smaller distance between FDI host countries should lead to stronger interdependence of a given parent country's (outward) FDI across hosts (since it facilitates exports and/or intermediate goods trade of foreign affiliates to other host countries).

4.2.2.2. Origin dependence (spacey parents)

The FDI origin dependence hypothesis proposed by Blonigen et al. (2008) states that FDI from origin country *i* in destination host country *j* depends not only on FDI in (characteristics of) origin country *i* but also on FDI from (characteristics of) other origin countries *k* in host country *j*.

Origin dependence argumentation stems from Blonigen et al. (2008), who illustrated the relationship of bilateral FDI across home countries and discussed three main channels of spatial interdependence across parents. First, if many MNEs locate in a host country and compete for scarce resources, then FDI from a given home country may be crowded out by FDI from other home countries. Alternatively, if FDI from other origin countries could lower the marginal costs of locating FDI by creating positive externalities (technological transfer, information spillover, market linkages, etc.) in a host country, then greater FDI from other origin countries could encourage FDI from a given home country. Furthermore, the presence of many foreign firms may signal good institutional quality and/or an attractive environment for foreign firms (Fan, Morck, Xu, & Yeung, 2009), especially in developing countries (Du, Lu, & Tao, 2008; Globerman & Shapiro, 2002). Finally, interactions among parents could also arise due to competition in output markets.

For example, Japan's investment decision in Vietnam is impacted by the significant presence of MNEs from the USA (and other FDI origin countries). On one hand, the high market density provides a lot of information about investing in Vietnam. This information advantage, however, may be offset by high investment costs such as real estate prices and increased market competition.

From the empirical point of view, the origin dependence (spacey parents) hypothesis states that a smaller distance between origin countries should lead to stronger interdependence of a given host country's (inward) FDI across origins (since gaining knowledge about the host market more likely happens between headquarters in similar and/or neighboring home countries).

4.2.2.3. Third-country dependence (spacey third countries)

In multi-country general equilibrium models of FDI (Egger, Larch, & Pfaffermayr, 2007; Grossman et al., 2006; Yeaple, 2003), complex effects from third countries will arise, resulting in the dependence of (determinants of) FDI for a given home-host country pair on other third-home and host countries. In other words, FDI for a given home-host country pair will also affect and depend on (determinants of and shocks on) FDI between other third-home and host countries. This third mode of interdependence is referred to as the third-country dependence hypothesis.

For example, a positive economic shock in the Indian market will not only impact FDI from or into India but also influence investment decisions made by firms from other countries like the USA or Japan in host countries such as China or Vietnam. Since home and host countries are bound by resource constraints, the investment of US and Japanese firms in Vietnam or China will depend indirectly on the shock to the Indian economy because this shock will alter the relative costs of investing in India compared to other countries.

Modeling spatial interdependence in FDI across host countries (namely, the sign and magnitude of spatial correlation) may provide evidence for or against alternative FDI motives in a particular host country. Overall, the empirical literature is supportive of multi-country models and emphasizes the complexity of MNE integration strategies across the world (see the empirical literature review in Section 4.3 for further details). Recent FDI theory distinguishes four different motives: horizontal (market-seeking) FDI, vertical (efficiency- or resource-seeking) FDI, export-platform FDI, and complex vertical FDI (Baltagi et al., 2007; Blonigen et al., 2007). The next Section discusses the theoretical background of these FDI motivations and the broad empirical strategy used in spatial econometrics to identify the dominant mode of FDI within a country or region.

4.2.3. Types of FDI

Theoretical work on international economics/trade and FDI has traditionally distinguished between two forms of multinational activity in a two-country setting, which are based on two alternative reasons why an MNE might choose to locate its production abroad: (1) access to markets (horizontal FDI) and (2) comparative advantage motives (vertical FDI) (Markusen, 2002, pp. 17–20). Recent theoretical developments and the introduction of spatial empirical approaches allowed scholars to introduce more complex FDI motives: export-platform (EP) and complex vertical (CV)

(Baltagi et al., 2007; Blonigen et al., 2007; Ekholm et al., 2007). This subsection outlines the theoretical background underpinning these four FDI types.

4.2.3.1. Horizontal FDI (H FDI)

Horizontal FDI is driven by market access and aims to serve consumers locally by setting up production plants both at home and in the host country (Markusen, 1984). This type of FDI arises when trade costs between home and foreign countries are high, and firms may prefer setting up production abroad rather than exporting goods there. As such, horizontal FDI is governed by the so-called proximity-concentration trade-off (Brainard, 1997; Horstmann & Markusen, 1992), where proximity to the host market allows a firm to bypass high trade costs but involves the additional fixed cost of building a second production plant in the host country[37].

Horizontal MNEs replicate the same activities in foreign locations as in the home country, so plant-level fixed costs can be high, especially when compared to national exporting firms. As horizontal FDI serves consumers locally in a specific host market, such firms are more likely to choose large markets (to enable the exploitation of economies of scale) with low plant set-up costs and sufficiently high trade costs, which make exports from third countries into the host an unattractive option (Brainard, 1997; Markusen, 1984, 2002; Markusen & Venables, 2000). Moreover, the economic viability of horizontal FDI depends on sufficient trade protection from other markets, like import protection. Therefore, horizontal FDI and trade of goods are substitutes (Egger & Pfaffermayr, 2004).

Horizontal FDI is attracted to host countries based on market size, per capita income or population size, market growth rate, consumer preferences, and obstacles to accessing this market (customs duties and transport costs) (Dunning & Lundan, 2008, pp. 70–71). Theoretically, a horizontal FDI model is not associated with any spatial relationships between the host and its neighboring countries, as an MNE takes independent decisions about how to serve a host country market (i.e., via export or subsidiary). Therefore, the market sizes of neighboring countries, as well as the amount of FDI going there, are irrelevant.

[37] See Brainard (1997) for a detailed discussion on this trade-off in a two-country setting.

4.2.3.2. Vertical FDI (V FDI)

Vertical FDI is driven by access to cheap or rare immobile resources in host countries with the goal of minimizing production costs, where final or intermediate goods are mostly exported back to the home country for further processing or final consumption (Helpman, 1984; Helpman & Krugman, 1985). The parent firm geographically fragments[38] various stages of production and is motivated by cost considerations arising from differences in factor prices between home and host countries. Vertical MNEs are more likely to arise when the home-host factor price difference is large and both trade costs and plant set-up costs are low.

Vertical FDI is attracted to host countries with abundant raw materials, cheap unskilled labor, low trade costs, and developed physical infrastructure (Dunning & Lundan, 2008, pp. 68–69). Previous literature on FDI location suggests that developing economies tend to attract predominantly vertical FDI (Noorbakhsh, Paloni, & Youssef, 2001; Sethi, Guisinger, Phelan, & Berg, 2003). For instance, an MNE from a developed country may locate its affiliate in a developing country to get a comparative advantage in assembly processes.

As the output produced by vertical MNEs in the host country is exported back to the home country (or sold locally), the market sizes of neighboring countries are not important. Additionally, as vertical FDI seeks for the lowest cost location and has no intention to serve foreign markets, it generates competition among potential host countries for this type of FDI as it usually occurs at the expense of other locations in its neighborhood. Thus, if a given host country is chosen as a location for vertical FDI, its neighboring countries would receive less vertical FDI.

Building on research by Markusen (1984) and Helpman (1984), both horizontal and vertical FDI motives have been successfully integrated into the so-called knowledge-capital model (also known as the KC model) (Markusen, 1997; Markusen & Maskus, 2002). This hybrid model, incorporating more realistic assumptions of new trade theory (such as economies of scale and trade costs), attempts to explain how two extreme types of FDI (i.e., horizontal and vertical) can coexist, and the preference for one or the other depends on factor endowments, trade, and investment costs (Blonigen, Davies, & Head, 2003; Carr, Markusen, & Maskus, 2001; Markusen, 2002).

[38] Vertical MNE can create a downstream affiliate that buys goods from the parent firm or an upstream affiliate that supplies intermediate goods to the parent firm. It is different from offshoring, which occurs when an entire part of the production process of the parent firm is relocated overseas.

The knowledge-capital (KC) model predicts that horizontal FDI will dominate between countries that are similar in economic size and relative factor endowments under the conditions of high transport costs and when it is the main motive to access a large foreign market. For example, a retail giant from the US, Walmart, entered India in 2009 to access its huge consumer base. The high transport costs associated with shipping retail goods over long distances also played a role in Walmart's decision to establish its direct presence in India.

Vertical FDI will dominate when the home country is small but has abundant skilled labor under the condition of low trade costs (specifically, trade costs from the host country back to the home country) and when it is the main motive to reduce production costs. For example, MNEs in a fashion industry with their HQs in a small, developed country, such as Italian Gucci, or French Louis Vuitton, setting up clothing manufacturing plants in Bangladesh. Italy's and France's abundance of skilled fashion designers and artisans, combined with low trade costs, especially for clothing exports from Bangladesh, stimulates such firms to establish manufacturing facilities there.

Finally, if the home country is both large and abundant in skilled labor or when the home and host countries are similar in size and relative factor endowments and trade costs are low, FDI will be minimal. For example, Italy and France have similar-sized economies, abundant skilled labor, and benefit from low trade costs due to their geographic proximity and membership in the EU's single market. In such a scenario, the KC model predicts that FDI flows between these countries may be minimal due to their similarity and proximity to one another, which, in turn, decreases the need for significant bilateral FDI flows between them.

Although the KC model was an important contribution to the theoretical framework associated with FDI and multinational activities, it also relies on a bilateral framework, and modeling involves only the FDI origin and destination countries. Nonetheless, the KC model served as a basis for further theoretical and empirical developments, including the augmented KC model by Baltagi et al. (2007), designed to account for third-country effects and to show how bilateral and third-country characteristics matter for complex forms of FDI. In new theoretical settings, more complex FDI strategies besides the pure horizontal and vertical ones modeled in the KC started to emerge: export-platform and complex vertical FDI (Baltagi et al., 2007; Ekholm et al., 2007; Yeaple, 2003). Theoretical and empirical works on export-platform and complex vertical motives for investment posit that location and output decisions of MNEs are interdependent across host markets and

depend on the trade openness of final (Baltagi et al., 2007; Ekholm et al., 2007; Yeaple, 2003) or intermediate (Grossman et al., 2006) goods across potential hosts. This focus on newer, more complex integration strategies has fueled the interest of FDI researchers in the consideration of multilateral decision-making in the analysis of FDI.

Mainstream empirical literature on FDI may suffer from two limitations: a two-country framework and the use of simplistic binary descriptors of FDI, such as horizontal and vertical motives. For example, Yeaple (2003) highlights that the World Investment Report (1998) identifies multinationals that pursue "complex integration strategies" by blurring the lines between traditional motivations. In his study, Yeaple (2003) employs a three-country model to examine the reasons behind the adoption of complex integration strategies by MNEs. He further emphasizes the importance of empirical research that considers the interdependence of complex integration strategies and the characteristics or policies of neighboring countries in determining FDI. Recent studies have relaxed the two-country framework and facilitated the identification of new forms of FDI. These studies suggest that there exists a spatial relationship between FDI in the host country and FDI in its neighboring markets.

4.2.3.3. Export-platform FDI (EP FDI)

Export-platform FDI occurs when MNEs invest in a host country with the purpose of using it as a base to produce and then export goods from this country to the [nearby] third country (or home country market)[39]. In this case, the host is considered a platform for exporting goods to other countries. The seminal work of Ekholm et al. (2007) is a pioneer of the export-platform FDI model, and the authors define export-platform FDI as investment and production in the host country where the goods are largely exported for sale in third markets. Therefore, EP FDI is aimed at serving regions in a way that can either complement or substitute exports. An MNE is likely to engage in

[39] Oyamada (2019) categorizes EP MNEs into horizontal EP and vertical EP. The differences between the two concern the location of production plants and where the final output is sold. Under the horizontal EP motive, an MNE has plants in home and host export-platform countries, and the final output produced in the export-platform country is sold to proximate third countries and not to the home country. Under the vertical EP motive, an MNE has a plant only in the host export-platform country and the final output can be either sold to proximate third countries or shipped back to the home country. As such, the main premise in favor of one or another type of EP motivation mostly depends on trade costs between the home, host export-platform, and other third markets. See Fig. 2 for an illustration of the different types of production patterns discussed in this subsection.

EP FDI if trade and transport costs between the host country of the affiliate and third countries are lower than those between the origin and destination markets. Moreover, if plant fixed set-up costs are high and trade costs are low, an MNE would choose only one preferred host country and use it as a platform to serve the entire region via export. A well-located export-platform subsidiary replaces the need for pure horizontal investments in third countries and, therefore, allows an MNE to save on the trade costs of H FDI and avoid the additional fixed costs of investing in each potential host. Other models of export-platform FDI that rely on a three-country framework include those of Yeaple (2003), Ito (2013), and Oyamada (2019).

Export-platform FDI is attracted to host countries with locational advantages such as raw materials or other resource availability, local government incentives like lower taxes, or favorable import duties on inputs and equipment. Overall, location advantages should make a subsidiary's product price competitive with any locally produced goods in third countries (Siddiqui & Iqbal, 2018). As the final output produced by MNE in a host country is then sold to proximate countries, typically belonging either to a common market (like the EU, for example) or free trade area, the size and potential of neighboring countries of the host export-platform country should increase EP FDI in this host country. Therefore, larger nearby markets will make a host country more attractive to export-platform investment. For EP FDI, investment in one host country will reduce FDI in other neighboring hosts in the same region, as these countries will be served through exports. Like vertical FDI, EP FDI in a host country is done at the expense of FDI in the other proximate countries, as a result of competition for capital flows amongst potential locations. In addition, Altomonte (2007) found that regional economic agreements (RIAs) increase the market potential of participating countries and, in turn, fuel FDI inflows. Empirical evidence suggests that ignoring RIAs or third-country effects in FDI literature can be detrimental, both theoretically and empirically.

4.2.3.4. Complex vertical FDI (CV FDI)

Complex vertical FDI occurs when an MNE vertically fragments its production processes across multiple locations to serve the needs of consumers in either their home country, host country, or a third country. Similar to pure vertical motive, complex vertical FDI exploits factor price differences, which leads to the fragmentation of the value chain (Yeaple, 2003). Baltagi et al. (2007) suggest that this type of FDI is linked to exports of intermediate goods from foreign subsidiaries to

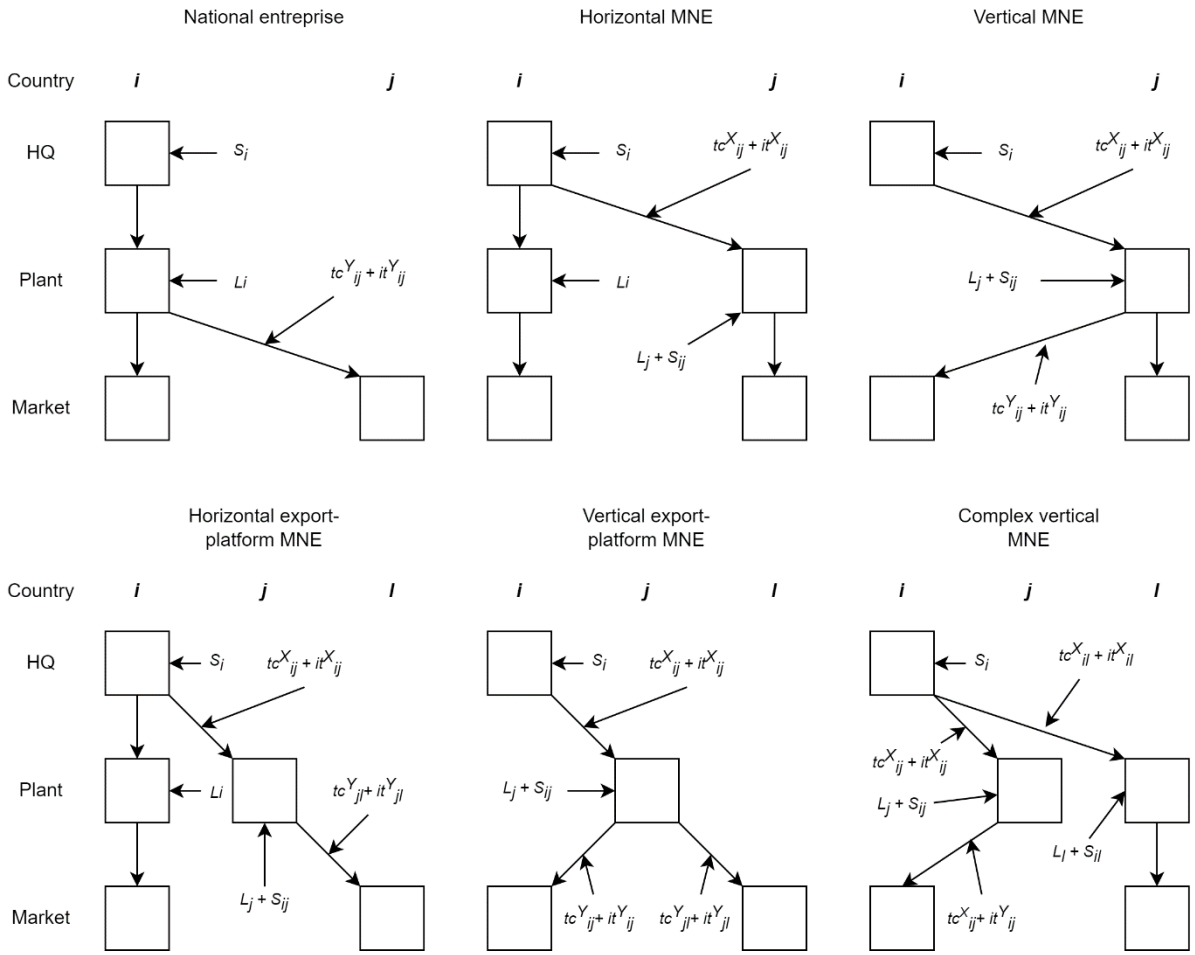
third countries for final processing. In this form of international production, having access to inputs or suppliers in neighboring countries is likely to increase FDI in a particular host country, and geographical clustering of FDI for supply reasons is expected (Baltagi et al., 2007). Yeaple (2003) suggests that this type of FDI largely depends on transport costs and is likely to arise if these costs are low enough to allow the trade of intermediate goods. He further suggests that factor intensity of production, investment costs, and policies of host countries' neighbors are also characteristics of complex FDI. Other models of complex vertical FDI that rely on a three-country framework include Grossman et al. (2006) and Hayakawa & Matsuura (2011).

Complex vertical FDI is also referred to as vertical specialization with agglomeration (Baltagi et al., 2007; Blonigen et al., 2007) due to the possibility of such FDI reaping the agglomeration benefits of immobile resources such as suppliers, labor, natural resources, and infrastructure in proximate countries. This means that FDI in a particular host country and its neighbors will be complementary, as serving markets through both horizontal and vertical FDI simultaneously reduces total investment costs. Unlike EP FDI, complex vertical FDI is complementary in multiple countries; thus, an increase in CV FDI flows in one host country may positively affect FDI in another (nearby) country. The role of surrounding third-country market characteristics for CV FDI is somewhat theoretically ambiguous (Blonigen et al., 2007) and still open for debate (Garretsen & Peeters, 2009). As with a pure vertical FDI motive, the economic size of neighboring countries should not have any effect on CV FDI inflows in a particular host country because this type of FDI aims to exploit factor price differences across multiple locations. However, if proximate countries are large and wealthy, have the potential to develop industrial production, attract vertical suppliers, and create agglomeration externalities, then FDI in surrounding markets can be positively correlated with FDI in a particular host country.

Fig. 4.2 illustrates six possible types of production patterns summarized by Oyamada (2019), including the four main investment motives discussed above. Here, the origin country *i* on the left-hand side is the base of the firm's HQ, and the countries on the right-hand side are the final host country markets (either *j* or *l*). There are two types of fixed costs: *L* is measured in units of unskilled labor, and *S* is measured in units of skilled labor. Both skilled and unskilled labor are assumed to be immobile across borders. The intermediate good (component) *X* is used to produce the final

product *Y* by national enterprises and MNEs. Trade costs are represented by transportation costs (*tc*) and import tariffs (*it*) for the international shipment of *X* and *Y*.

Figure 4.2. Six types of production patterns



Source: adapted from Oyamada (2019, p. 763)

Overall, with the emergence of two complex modes of MNE organization (i.e., EP and CV FDI), it becomes clear that the characteristics of neighbors of a particular host country can also play an important role in attracting FDI into a given host (Baltagi et al., 2007). However, Blonigen et al. (2007) emphasize that firms' motives for investment are hard to deduce from country-level or industry-level data, as the econometric analysis using aggregate data only captures the net effects. They further suggest that it is still possible to capture one dominant form of MNE activity in such data empirically.

Spatial interdependence of MNE investments across locations can be empirically tested by the inclusion of two additional spatially weighted variables: (1) the spatial lag and (2) the surrounding market potential (SMP). Spatial lag (typically measured as the sum of distance-weighted third countries' FDI) controls for the effect of third-country FDI inflows. Surrounding market potential (typically measured as the sum of distance-weighted third countries' GDPs) captures the importance of third-country markets. Drawing on the theoretical works discussed above, Blonigen et al. (2007) summarized four different MNEs' motivations for FDI and linked them to the signs of spatial lag (ρ) and SMP (θ) variables. Table 4.1 summarizes the expected signs for spatially weighted FDI and surrounding market potential (SMP) by FDI motives.

Table 4.1. Summary of hypothesized spatial lag coefficient and surrounding market potential effect for various forms of FDI

FDI motivation	Sign of spatial lag (ρ)	SMP (θ)
Horizontal	0	0
Vertical	-	0
Export-platform	-	+
Complex vertical	+	0/+

Note: 0 denotes non-statistical significance
Source: Blonigen et al. (2007, p. 1308)

Consider a three-country model where an MNE from country *i* considers investing in host countries *j* and *l*. With horizontal FDI, a firm from country *i* can bypass high trade costs by setting up production subsidiaries in countries *j* and *l* rather than exporting to those countries. However, high set-up costs may discourage horizontal FDI. The decision of a firm from country *i* to invest in country *j* has no effect on its decision to invest in country *l*, meaning that the spatial lag is not significant. The spatial lag allows for the fact that FDI from *i* into host *j* is affected by the FDI going from *i* to *l*, taking the distance between *j* and *l* into account. Likewise, the market size of third countries is not significant in this scenario because horizontal FDI is aimed at serving only a particular host country's market. Thus, both the coefficients of spatial lag and the size of surrounding markets are expected to be insignificant for H FDI in Table 4.1.

For vertical FDI, the market potential of surrounding countries is also not relevant, as this type of FDI is driven by factor cost differences between countries and not by market size considerations. Therefore, the surrounding market potential variable is expected to be insignificant for V FDI.

Spatial lag, however, is expected to be negative because vertical FDI from country *i* to country *j* will be at the expense of vertical FDI from home country *i* to host country *l.*

For export-platform FDI, a firm from country *i* may invest in country *j* to use it as a platform to export goods to the market in country *l* (under the assumption that trade costs between potential host countries *j* and *l* are lower than between home country *i* vis-à-vis *j* and *l)*. In this case, the market potential variable is expected to have a positive impact on FDI because the large and proximate market of country *l* makes country *j* a more attractive location for EP FDI. Spatial lag is expected to be negative for export-platform FDI from *i* to host country *j* because serving the combined markets of *j* and *l* is more efficient from a single FDI location. Thus, EP FDI in one host country decreases FDI of this type in neighboring countries, especially if the distance between *j* and *l* is small.

Under the complex vertical FDI motive, a firm divides the production process across multiple countries to find low-cost input factors. If countries *j* and *l* have similar supply characteristics, a firm may find it profitable to set up production in both countries. In this case, FDI from *i* to country *l* can complement FDI from *i* to country *j*, especially if *j* and *l* are neighboring countries. For this type of FDI model, geographical clustering of FDI for supply reasons is expected. The impact of the surrounding market potential in this scenario is not yet well-defined theoretically (Blonigen et al., 2007). If it captures agglomeration effects, a positive sign is expected, but if it only captures demand or market size effects, an insignificant result is expected. This explains the 0/+ sign in Table 4.1. The next Section reviews the empirical literature on spatial dependence of FDI and its main findings.

4.3. EMPIRICAL LITERATURE REVIEW

Currently, the issue of the FDI dependence of proximate regions on one another in the international trade and IB literature is empirically addressed by using market potential models and spatial models. Market potential models, originating from the seminal work of Harris (1954), have been utilized by Krugman (1992), Head & Mayer (2004), Hanson (2005), Altomonte (2007), and others to analyze the geographic concentration of economic activity, building on the NEG literature. Spatial models acknowledge that FDI into a host country is not independent of FDI going to alternative hosts by incorporating third-country characteristics directly into the model to capture this dependency. Many empirical studies use spatial models to explain the main FDI determinants that influence the location choices of MNEs and/or to identify the dominant FDI motive following the taxonomy of Blonigen et al. (2007), as summarized in Table 4.1 in the previous subsection. This Section reviews the empirical literature on FDI determinants and MNE motives for investment that considers spatial dependence by employing spatial models.

The empirical body of literature on FDI and space uses three broad approaches to study FDI spatial linkages across potential host countries or regions. The first approach builds on Blonigen et al.'s (2007) work and employs a spatial autoregressive model (SAR) to capture spatial linkages and identify dominant motives for investment along with factors determining FDI into host locations by including the SMP variable and the variable for the spatial lag of FDI. Studies using this approach adopt both a national perspective (Blanco, 2012; Davies & Guillin, 2014; Garretsen & Peeters, 2009; Martínez-Martín, 2011; Nwaogu & Ryan, 2014; Poelhekke & van der Ploeg, 2009) and a subnational perspective (Escobar Gamboa, 2013; Pan, 2016; Sharma et al., 2014). More recent studies in this strand of literature follow the work of Regelink & Elhorst (2015) and employ Durbin's spatial autoregressive model (SDM), which is considered an extension of SAR and allows including additional spatially weighted explanatory variables to the SAR specification, thus incorporating the characteristics of other regions in determining FDI. Durbin's models were used by Siddiqui & Iqbal (2018), Gutiérrez-Portilla et al. (2019a), and Maza et al. (2020), among others.

Although Blonigen et al.'s (2007) framework is the most commonly used to determine FDI strategy, the second approach utilizes the model proposed by Baltagi et al. (2007) and is employed at the country level only (Hall & Petroulas, 2008; Uttama, 2009; Uttama & Peridy, 2009, 2010). These works use a spatial error model (SEM) and include spatially weighted exogenous variables (i.e.,

the averages of third-country characteristics) as FDI determinants. Unlike SAR, spatial error models capture the spatial correlation in the error term that remains after taking the influence of explanatory variables into account.

Finally, there are studies that account for the presence of spatial effects as potential determinants of FDI and employ various spatial methods but are not focused on ascertaining its motivation. This approach has traditionally been widely accepted by scholars interested in explaining FDI location at the subnational level, where interdependencies between regions or provinces of one country are more pronounced (Blanc-Brude et al., 2014; Casi & Resmini, 2010; Coughlin & Segev, 2000; He et al., 2011; Kayam, Yabrukov, & Hisarciklilar, 2013; Villaverde & Maza, 2012, 2015).

Table 4.2 below provides a comprehensive summary of empirical papers in FDI location research that use spatial methods. For the sake of comparison with our study, it is limited to studies examining spatial linkages on a national level (i.e., when a country is the unit of analysis) and aimed at identifying the main motive(s) for investment across various sample countries. Table 4.2 includes details on the spatial method used, home and host country/region focus, as well as the main findings on FDI motives (listed studies are outlined in chronological order). The remaining part of this Section discusses studies that contributed the most to the FDI spatial dependence literature and then summarizes available empirical evidence on FDI motives across different regions.

The first empirical study that used spatial econometric techniques to examine the spatial interdependence of FDI was Coughlin & Segev (2000)**.** The authors estimated a spatial error model using data on sum of total yearly FDI inflows to each of 29 Chinese provinces over the period 1990-1997. They found evidence of significant spatial dependence (albeit with small coefficients), suggesting that increased FDI in one province has positive effects on FDI in nearby provinces which the authors attributed to agglomeration economies.

Inspired by the modern theory of multinational firms (Carr et al., 2001; Helpman, 1984; Markusen, 1984; Markusen & Maskus, 2002), in their seminal paper, Blonigen et al. (2007) focused on the estimation of the SAR model of bilateral US outbound FDI into 35 host countries for 1983-1998 period. Blonigen et al. (2007) put emphasis on the issue of geography and the appropriateness of pooling observations from developed and developing countries into one sample. Based on earlier arguments by Blonigen & Wang (2005), authors split the sample into OECD, non-OECD, and

Table 4.2. Summary of empirical research on FDI and spatial dependence

No.	Study	Period of study	FDI origin	FDI destination	Model	Spatial variables included in the model, their direction and significance			FDI type/ motive
						FDI	SMP	Other variables	
1	Baltagi, Egger, & Pfaffermayr (2007)	1989-1999	US	51 countries	SEM	x	x	Bilateral size, similarity in size, relative physical capital endowments, relative skilled and unskilled labor endowments, interaction of relative physical capital endowments and bilateral size, interaction of relative endowments and distance	V and CV
2	Blonigen et al. (2007)	1983-1998	US	35 countries	SAR	+	-	x	CV
				20 OECD countries		+/(-)	-/(+)		CV
				15 non-OECD countries		(+)	-		x
				16 European OECD countries		+/(-)	+/(-)		EP
3	Hall & Petroulas (2008)	1994-2004	17 developed countries	29 countries	SEM	x	+	Similarity index, capital ratio, skill difference, trade costs	CV
4	Orr (2008)	1997-2004	US	28 countries	SAR	+	x	x	CV
				17 Latin American countries		+			CV

No.	Study	Period of study	FDI origin	FDI destination	Model	Spatial variables included in the model, their direction and significance			FDI type/ motive
						FDI	SMP	Other variables	
				11 Asian countries		(+)			V and H
5	Garretsen & Peeters (2009)	1984-2004	Netherlands	18 OECD countries	SAR and SEM	+	+	x	CV
				14 European countries		-	+		
				10 Euro area countries		+	+		
6	Poelhekke & van der Ploeg (2009)	1984-1998	US	76 countries	SAR and SEM	+/(+)	-	Accessible surrounding market potential, surrounding investment potential	CV
7	Uttama (2009)	1995-2006	6 ASEAN countries	6 ASEAN countries	SEM	x	x	Variables included in Baltagi et al. (2007)	V
8	Uttama & Peridy (2009)	1995-2007	US	5 ASEAN countries	SEM	x	+	Variables included in Baltagi et al. (2007)	V (CV) and EP
9	Uttama & Peridy (2010)	1995-2008	19 European countries	9 MENA countries	SEM	x	x	Variables included in Baltagi et al. (2007) plus tariffs, real exchange rate and trade openness	EP
10	Guillin (2011)	1983-2007	US	57 countries	SAR	+/(0)	-	x	V and EP
				29 OECD countries		-/(-)	(-)		EP and H
				28 non-OECD countries		+	-		V and CV

No.	Study	Period of study	FDI origin	FDI destination	Model	Spatial variables included in the model, their direction and significance			FDI type/ motive
						FDI	SMP	Other variables	
11	Chou, Chen, & Mai (2011)	1993-2008	China	61 countries	SAR and SEM	+	(-)	x	CV
12	Hultgren, Mariel, & González (2011)	1982-2003	30 OECD countries	30 OECD countries	SAR	-	+	x	EP
13	Martínez-Martín (2011)	1993-2004	Spain	50 countries	SAR and SEM	+	(0)	x	CV
14	Blanco (2012)	1986-2006	World	17 Latin American countries	SAR	(-)	+	x	x
		1987-2005	US	15 Latin American countries		+	+/(+)		CV
15	Shepotylo (2012)	1993-2010	World	25 transition countries	SAR	+	+/(+)	x	CV
				25 CIS countries		+	-		CV
				16 Eastern European countries		+	(+)		EP
16	Chang (2014)	2003-2009	China	138 countries	SAR	+	+	x	CV
				26 developed countries		+	(0)		CV
				112 developing countries		+/(+)	+		EP
				70 petroleum exporting countries		(+)	+		EP

No.	Study	Period of study	FDI origin	FDI destination	Model	Spatial variables included in the model, their direction and significance			FDI type/ motive
						FDI	SMP	Other variables	
				20 African petroleum exporting countries		(-)	+		EP
17	Davies & Guillin (2014)	1983-2007	US	41 countries	SAR	-	-	x	EP
				25 OECD countries		-	+		EP
				17 European countries		-	+		EP
				8 North and South American countries		-	+		EP
				11 Asian countries		-	-		H
18	Leibrecht & Riedl (2014)	1995-2004	7 OECD countries	8 CEE countries	SAR	+	+/(+)	x	CV
19	Nwaogu & Ryan (2014)	1995-2007	US	31 Latin American countries	SAR	+	+/(0)	x	CV
				37 African countries		+	(0)/+/-		CV
20	Regelink & Elhorst (2015)	1999-2008	US	20 European countries	SDM	-	+/(0)	x	EP and V
21	Boubacar (2016)	1999-2009	US	25 OECD countries	SAR	+	(-)/-/+	x	CV
22	Rossi, Santos, & Campos (2016)	2001-2011	Brazil	30 countries	SEM and SAR	(0)/-	(+)/+	x	H
23	Badinger & Egger (2017)	2000	22 OECD countries	22 OECD countries	Spatial FG2SLS	x	+	x	EP and V

No.	Study	Period of study	FDI origin	FDI destination	Model	Spatial variables included in the model, their direction and significance			FDI type/ motive
						FDI	SMP	Other variables	
24	Siddiqui & Iqbal (2018)	2002-2014	US	16 MENA countries	SAR and SDM	(-)	0	Infrastructure (electricity and energy used), bureaucratic quality, political stability	H
25	Gutiérrez-Portilla, Maza, & Villaverde (2019a)	1996-2014	Spain	50 countries	SDM	+/(0)	0	Population, trade costs, human capital, regulatory quality	CV and H
26	Hoang & Goujon (2019)	1999-2011	World	9 ASEAN countries	SEM and SAR	+	0	x	CV
			World excluding ASEAN	9 ASEAN countries		+	0		CV
			9 ASEAN countries	9 ASEAN countries		(+)	+		EP
27	Lemi, Liu, & Wright (2021)	2000-2017	China	39 African countries	SEM, SAR and SDM	+	0	Population, trade costs, labor cost, employment, domestic credit, export, cost of business start- up	CV
			US			(0)/+	(-)/-		H

Source: compiled by authors

European OECD countries because the heterogeneity of countries in the full sample makes it less likely that the spatial terms would identify one form of MNE activity as prevalent. The motivation for splitting the sample between OECD and non-OECD countries is the expectation that horizontal (and perhaps export-platform) motivations for FDI are more likely in the OECD sample, while vertical motivations are more likely in the non-OECD sample. Besides, Blonigen et al. (2007) claim that separating the sample in this way may then provide sharper results with respect to spatial terms included in the analysis.

Blonigen et al. (2007) found evidence for the importance of spatial interdependence through both the spatial lag and surrounding market potential terms. First, empirical results revealed the existence of a significantly positive spatial lag, which is consistent with CV motivations for MNE activity and/or other positive production externalities amongst US foreign affiliates across a full sample of 35 countries and in OECD and European OECD subsamples. Spatial lag also has a positive impact on FDI in non-OECD subsample, albeit it is not statistically significant. Second, SMP had a significant negative coefficient on FDI inflows across a full sample of countries as well as in OECD and non-OECD subsamples, whereas SMP was found to exert a positive and statistically significant effect on FDI inflows across European OECD countries. The authors point out that the negative effect of surrounding market potential is puzzling, as such a result is inconsistent with any of the MNE motivations discussed in the theoretical and empirical literature40. Their estimates are broadly suggestive of export-platform FDI in developed European countries, echoing previous empirical findings, albeit using different data samples and methodologies. As such, Head & Mayer (2004) have also found support for the export-platform behavior of Japanese FDI in nine Western European countries during the period 1984-1995 using two formulations for surrounding market potential as defined by Harris (1954)[41] and Krugman (1992)[42].

[40] For example, Martínez-Martín (2011) suggests that a negative sign of the surrounding market potential variable is the negative competitive impact of firms in these neighboring countries.
[41] Harris' (1954) measure of SMP is the sum of countries' market sizes (i.e., GDP) accessible to a given point over distance to markets from that point.
[42] Krugman's (1992) measure of SMP aggregates the expenditures of all regions, accounting for both regional accessibility and the influence of competition from firms located in other regions, i.e., it takes into account the location of competitors.

Building on the KC model (Carr et al., 2001; Markusen, 2002), Baltagi et al. (2007) developed a model of MNE activity that allows for a variety of MNE motivations and then maps these into the implied spatial interactions that should be associated with each type of MNE motivation. The authors estimated a bilateral three-factor KC model (including physical capital, skilled, and unskilled labor) that allows for spatial correlation of errors using outward US FDI for a panel of 11 manufacturing and non-manufacturing industries into 51 countries over the 1989-1999 period. In their model setting, bilateral FDI not only depends on the bilateral determinants of home and host countries but also on the characteristics of the third markets. Their results find substantial evidence of spatial interactions, though they cannot definitively conclude whether export-platform or complex vertical FDI is more prevalent.

Garretsen & Peeters (2009) explored the existence of spatial linkages for Dutch outbound FDI stocks to 18 OECD countries (14 of which are European countries) over the period 1984-2004. Using SAR and SEM models, their estimation results show that third-country effects are important for Dutch FDI. In most specifications, both spatial lag and surrounding market potential coefficients are significantly positive, although results are sensitive to the sample of countries included in the analysis, as in the case of Blonigen et al. (2007). The authors conclude that the combination of positive spatial lag and positive market potential is in line with the model of complex vertical FDI with agglomeration economies. However, when the studied area is limited to European countries only, spatial lag becomes negative and significant, which, together with the significantly positive SMP variable, points to export-platform FDI in this region.

Garretsen & Peeters (2009) also examined spatial linkages across sectors employing disaggregated data for a reduced sample of 12 developed countries. The SMP coefficient is positive and significant at 1% for both industry and services, but somewhat larger for industry FDI. On the other hand, spatial lag for industry FDI is significant and positive, but not for service FDI[43]. These results imply that sectoral differentiation is also important to understand the role of spatial linkages.

Building upon economic geography and institutional theory and using a panel dataset for annual real gross FDI inflows in 224 prefecture-cities in China over the period 2004-2007, Blanc-Brude et al. (2014) test spatial models including different measures of geographic, economic, and administrative distances. The authors build upon Ghemawat's (2001) CAGE framework but leave

[43] Spatial lag coefficient for services FDI has a negative sign and is only marginally significant at the 10% level.

out cultural distance, as the Chinese population is largely ethnically and culturally homogeneous across prefecture-cities. They conclude that geographic distance measured as either great circle distance in kilometers between cities *i* and *j* or contiguity (the distance is zero if two prefecture-cities share a common border but one otherwise) is not the "best" measure of distance to use. They further provide evidence of spatial dependence between the cities based upon economic distance, with weaker evidence related to administrative distance: cities that are economically and administratively close are likely to experience positive FDI spillovers from their neighbors.

Now we turn to available empirical evidence on spatial interdependence and FDI motives across different developing regions: Asia, Latin America and the Caribbean (LAC), Africa, Central and Eastern Europe (CEE), and the Middle East and North Africa (MENA).

Uttama (2009) and Uttama & Peridy (2009) extend the approach of Baltagi et al. (2007) by including regional integration variables to examine the impact of bilateral and third-country determinants on FDI across small samples of ASEAN countries and using a maximum likelihood estimator with spatially correlated error terms. Uttama (2009) concluded that bilateral intra-ASEAN FDI stocks over the 1995-2006 period are of the vertical nature, whereas Uttama & Peridy (2009) found out that US FDI behavior in ASEAN countries over the same period fits the vertical (or complex vertical) and export-platform motives.

On the other hand, Hoang & Goujon (2019) build on Blonigen et al. (2007) and estimate the SAR model. The authors argue that intra-ASEAN FDI inflows are dominated by EP motives, while extra-ASEAN FDI inflows are predominantly CV. Additionally, studies by Orr (2008) and Davies & Guillin (2014) each include subsamples of various Asian countries, both employing US outward FDI data. Orr (2008) suggests that Asia attracts a combination of horizontal and vertical FDI, whereas Davies & Guillin (2014) conclude that US FDI in the service sector in Asia is predominantly horizontal. As such, all spatial studies found support for the spatial interdependence of FDI across their sample countries.

In search of spatial interdependence, Blanco (2012) analyzed net world and US FDI inflows in 17 Latin American countries for the period 1986-2006. She replicated the approach of Blonigen et al. (2007) in the estimation of the spatial lag model and the construction of an indicator of surrounding market potential. SMP is positive and statistically significant for both world and US investment. As discussed above, such an effect is attributable to the impact of neighboring market potential on

the export-platform of MNEs. The spatially lagged dependent variable has a positive sign but is statistically significant only for US FDI, which is in accordance with CV FDI motivation. The results of Orr (2008) and Nwaogu & Ryan (2014) also strongly support the CV motives of US MNEs in LAC region. In line with Blonigen et al. (2008), Blanco (2012) concludes that the spatial interdependence of FDI in Latin America might be different by origin of investment.

Nwaogu & Ryan (2014) estimated SAR by employing annual US outward FDI data for 37 African countries and 31 Latin American and Caribbean host countries over the 1995-2007 period. The surrounding market potential variable for both regions turned out to be negative and significant, similar to the unexpected and inconsistent results obtained earlier by Blonigen et al. (2007). Nonetheless, Nwaogu & Ryan (2014) show evidence that spatial interdependence exists in both regions (positive and significant spatial lag), although the spatial effect is more pronounced in the LAC region than in Africa. Similar to the Latin American region, the authors conclude that FDI in Africa can also be classified as a complex vertical motive. Lemi et al. (2021), however, argue that US FDI in 39 African countries during 2000-2017 "seems to be market-seeking", whereas Chinese MNEs pursue more complex integration strategies on this continent. Without directly testing for FDI motives, Boly, Coulibaly, & Kéré (2020) also found a positive spatial lag for FDI flowing to Africa, thus supporting the importance of third-country markets for FDI inflow in the host country.

Inspired by Blonigen et al. (2007), Leibrecht & Riedl (2014) used a spatially augmented gravity model with two spatial lags for home and host countries. As such, the authors isolated spatial relationships not only among third countries but also spatial interconnections between FDI origin and destination using a sample of eight FDI destination countries of Central and Eastern Europe (CEE) and seven OECD FDI origin countries during 1995-2004. First, their analysis reveals the significance of spatial interactions across the destination country dimension for FDI. Destination (host country) based spatial lag turned out to be positive and statistically significant, indicating the prevalence of CV FDI in total FDI in CEE countries. Thus, a CEE country experiences an increase in FDI inflows as its neighbor receives more FDI. Second, spatial autocorrelation across FDI origin countries has a weak and negative coefficient of the spatial lag variable, thus supporting the presence of competition effects in home countries. Finally, Leibrecht & Riedl (2014) highlight the growing importance of agglomeration forces for FDI in this region. Shepotylo (2012) tested the relevance of spatial interdependencies in FDI on a broader sample of 25 transition economies and

two smaller samples of CIS and Eastern European countries during the 1993-2010 period. His results point to export-platform motivation in Eastern Europe and complex vertical in the CIS region (Shepotylo, 2012).

Siddiqui & Iqbal (2018) tested FDI interdependencies across 16 MENA countries using US outward FDI data for the period 2002-2014. The authors employed two alternate spatial methodologies (SAR and SDM) and found no effect of surrounding market potential or spatial autocorrelation of FDI. Siddiqui & Iqbal (2018) conclude that US FDI is attracted to the MENA region by purely horizontal motives. The authors have also investigated the spatial effect of other variables such as neighboring countries' inflation, trade costs, infrastructure, natural resource availability, and governance quality on US FDI inflows into a given host country. However, they found strong evidence of spatial effects measured only by the infrastructure in surrounding countries, while the spatial significance of other factors was not confirmed. Earlier findings by Uttama & Peridy (2010) also imply the predominance of horizontal motives in this region. They explored FDI from the EU into 9 MENA countries and found that third-country FDI determinants have a significant influence on European investors making FDI location decisions. Uttama & Peridy (2010) suggest that the dominant motive for investment in MENA from the EU is the export-platform, and European firms engage in FDI in MENA countries as a mean to export not only to the home market but the whole EU.

In summary, empirical literature strongly highlights the presence of spatial interdependence of FDI across various regions and heterogeneous motives for investment of MNEs from different countries of origin. Now we present our hypotheses, spatial model, and data.

4.4. HYPOTHESES, MODEL SPECIFICATION AND DATA

This Section is devoted to (1) formulating the hypotheses to determine four FDI motives and (2) presenting our empirical strategy and data sources. First, we elaborate on the hypotheses derived from theoretical and empirical literature designed to evaluate the dominant motives for investment in the host country. Second, we present the empirical estimation strategy regarding the spatial weight matrix (W), Mayer & Zignago's (2011) distance measure, and the spatial Durbin model. Third, we provide data sources and descriptive statistics.

4.4.1. Hypotheses

This subsection formulates the hypotheses to determine the FDI motives, which is the main purpose of this study. Regarding the spatial lags of the dependent variable (WFDI) and surrounding market potential (also referred to as WGDP), we follow Blonigen et al.'s (2007) paper (see Table 4.1 at the end of subsection 4.2.3). The hypotheses concerning other variables include standard host country gravity-type variables (GDP, distance between the home and host countries, and trade/investment-related variables), as well as measures of labor endowments. These host country-specific location determinants may also help to assess whether some motives dominate over others[44].

4.4.1.1. Market size

Much empirical work on FDI has used the gravity model, which suggests that market size of the host country and distance between home and host country determine FDI (see bilateral gravity type model in subsection 4.2.1). The market size variable (usually proxied by GDP) captures the host country's economic size and overall domestic demand potential and is an important condition for horizontal market-seeking FDI as large markets allow exploiting economies of scale and scope. As vertical MNEs are attracted mostly by cost-saving motives and do not aim to sell the output directly in the host country's market, the size of the host country's local market should not discourage V FDI.

The host country's market size is less important for export-platform FDI than for horizontal FDI, as the MNE is not focused on selling its output directly to consumers in the host country. Instead, foreign firms use the host country as a base for exporting to third countries, and, in this case, the

[44] For example, high trade costs could encourage horizontal FDI but reduce vertical FDI.

size of the host country's market is not as critical as its location, infrastructure, and ease of access to other markets. However, the host country's market size may be important if the MNE aims to sell some of its products in the local market as well. Finally, host country market size is important for complex vertical FDI, as the MNEs are interested in both accessing lower-cost inputs and selling directly to consumers in the host country. The importance of the host country's market size for CV FDI, however, will depend on the relative importance of these two factors for the MNE. Therefore, we expect the host country's market size to be strongly and positively related to H FDI, insignificant for V FDI, and positive (or insignificant) in the case of EP and CV FDI.

4.4.1.2. Geographic distance

Physical distance is important for traditional FDI types (Helpman, 1984; Markusen, 1984), yet it is a crucial factor for complex FDI models (Baltagi et al., 2007; Ekholm et al., 2007) since it serves as a proxy for trade barriers and enables the researcher to determine which third countries matter the most. The significance of physical distance is not yet theoretically grounded, but much of the FDI research agrees with the following lines of reasoning (Carr et al., 2001; Markusen & Maskus, 2002). When the market is distant from the FDI home country, it becomes necessary to serve it locally through horizontal FDI. Large geographic distances may encourage horizontal FDI as a substitute for exports (Egger, 2008). However, it also raises the cost of doing business abroad (Markusen & Maskus, 2002). Alternatively, when a country is distant and has low-cost inputs, the high costs of transporting the output to the home country might decrease vertical FDI. Thus, we would expect the large geographic distance between the home and the host to positively affect pure H FDI and negatively affect V FDI.

The effect of geographic distance between home and host countries on complex modes of FDI is ambiguous, as the output of EP and CV FDI is primarily aimed for sale or processing in proximate third countries (see Fig. 4.2 in subsection 4.2.3), thus implying that a shorter distance from host to third countries would increase FDI of such types. However, the theory remains silent about the role of geographic distance between FDI home and host countries.

4.4.1.3. Trade costs

Trade costs for exporting or importing goods from or to FDI destination countries directly influence the comparative advantages that MNEs may exploit for trading with origin countries or the rest of

the world. The trade cost variable captures barriers that might hamper trade between countries (Carr et al., 2001). As horizontal firms do not engage in trade but produce and sell the output domestically, trade costs are less relevant for this type of FDI. Moreover, higher trade costs lead to more horizontal FDI as they stimulate the tariff-jumping behavior of MNEs (Brainard, 1997), where investment serves as a substitute for exports (Carr et al., 2001; Yeaple, 2003).

The cost of trade is an important consideration for vertical FDI, as an expensive movement of goods and services across borders can erode MNE's comparative advantages. For example, Hanson, Mataloni Jr, & Slaughter (2001) argue that high trade costs discourage V FDI by increasing global production costs. Similarly, trade costs are crucial for export-platform FDI viability, as firms must be able to produce and export goods at a lower cost than they could in their country of origin. Therefore, low trade costs (especially between the export-platform host country and destination markets) are necessary for EP FDI. Finally, complex vertical FDI also largely depends on low trade costs because firms produce both intermediate and final goods abroad, either for export or domestic consumption. We expect high trade costs to encourage pure horizontal FDI and deter other forms of FDI.

4.4.1.4. Labor costs

Other things being equal, lower labor costs in the host country would reduce production costs and prices of finished goods and lead to a greater supply of products. As such, MNEs obtain higher profits when they locate in countries with lower wages, and cheap labor is an attractive factor for any type of FDI. Dunning & Lundan (2008b) consider labor costs an important FDI determinant for both market- and efficiency-seeking considerations, i.e., for both H and V FDI. Prior FDI literature strongly suggests that the cost of labor in developing countries is a very important determinant of FDI, as rich developed countries were simply searching for locations with low production costs relative to their home countries (particularly for export-oriented labor-intensive assembly activities) (Broadman & Sun, 1997; Dees, 1998).

Nonetheless, extant empirical evidence suggests that the influence of labor costs on FDI is not clearcut, as empirical results vary significantly across various subsets of developing countries. Many empirical studies on FDI location in developing Asian countries could not establish the expected negative relationship between FDI inflows and low cost of labor (see, for example, (Elliott & Shimamoto, 2008; Urata & Kawai, 2000; Zheng, 2013)). All things being equal, we expect the

availability of a cheap labor force in the host country to attract all four types of FDI, as it directly impacts the viability of any investment, especially in the case of vertical FDI (Helpman, 1984).

4.4.1.5. Skilled labor

In general, MNEs take advantage of cheap labor in host economies, but the labor quality can also affect the location decisions of foreign investors. The quality of human capital is a key determinant of productivity (Blanc-Brude et al., 2014; Noorbakhsh et al., 2001), and higher labor productivity has a positive effect on FDI inflows (Bellak, Leibrecht, & Riedl, 2008). Recent FDI location literature emphasizes the role of human capital (usually proxied by various forms of educational attainment) and moves away from traditional assumptions that developed countries' motives in developing countries are predominantly looking for cheap labor and resources only (Noorbakhsh et al., 2001; Sethi et al., 2003).

Building on the MNE theory (Helpman, 1984) and KC model (Carr et al., 2001; Markusen, 2002), FDI location research accounts for skilled labor availability as another important factor of endowment to consider. According to the OLI framework (Dunning & Lundan, 2008) and UNCTAD (1999), both unskilled and skilled labor are the main drivers of resource-, efficiency-, and asset-seeking FDI. As in the case with the labor cost variable, it appears that there is a complex relationship between human capital, wage levels, and investment decisions. We expect that holding labor cost constant, skilled workforce availability in the host country should have a positive impact on inward FDI. However, if an MNE invests in a host country for purely vertical motives, i.e., to benefit from low skilled labor abundance, the effect of skilled labor would be negative.

Table 4.3. Summary of hypothesized spatial lag coefficient, SMP, and host country-specific factors effects for various forms of FDI

Explanatory variable	Horizontal	Export-platform	Vertical	Complex vertical
ρWFDI	0	-	-	+
θWGDP	0	+	0	0/+
Market size	+	+/0	0	+/0
Geographic distance	+	?	-	?
Trade costs	+	-	-	-
Labor cost	-	-	-	-
Skilled labor	+	+	-	+

Source: first and second rows based on (Blonigen et al., 2007), the rest compiled by authors

Table 4.3 summarizes the hypothesized directions of spatially weighted and host country variables discussed above for each of the four FDI types.

4.4.2. Model

We use spatial econometrics because it addresses the issue of spatial dependence and because it allows us to test for the presence of spillovers. However, the specification of the weighting matrix is a matter of considerable arbitrariness (Anselin & Bera, 1998), as there is no standard solution to this problem. One answer to this problem lies in the definition of the spatial weight matrix W[45] that must be defined by the researcher. This matrix corresponds to a mathematical representation of the neighborhood relations, which can be binary indicators of the presence of a neighborhood link or a weight reflecting the strength of this relation. We begin by discussing some common methodological choices concerning the weight matrix construction, overview various spatial models, and then present our empirical estimation strategy.

4.4.2.1. Spatial weight matrix (W)

In spatial econometrics, the role of the weight matrix W is important because the parameter estimates and inferences in spatial models depend on the chosen specification of W (Leenders, 2002). The spatial weight matrix W captures the proximity of a specific host to other potential host countries by measuring the distances between them. This matrix is used to construct the spatial lag term WFDI, the surrounding market potential measure WGDP, and other spatially weighted explanatory variables. In the spatial weight matrix W, elements $w_{j,l}$ reflect the strength of the neighborhood relation between observations j and l, which can be a binary indicator or a non-negative intensity depending on the researcher's choices. One of the main weaknesses of spatial econometric models is that W is supposed to represent the theory a researcher has about the structure of the influence processes (Leenders, 2002), which in classical spatial econometric models must be specified in advance. Elhorst (2010) argues that, for this reason, it has become a common practice in the empirical literature to investigate whether the results are robust to the alternative specification of W.

[45] The details of this approach can be found in various works. See, for example, Anselin (1988) and LeSage (1999).

The definition of the weighting matrix raises the issues of determining the closeness of observations between each other and quantifying the spatial interdependence of FDI. In geography, distance is frequently proxied by physical distance, contiguity[46], or travel time. In IB, however, alternative concepts of distance, such as cultural, psychic, or institutional distance, have been proposed as explanations for various aspects of MNE behavior (Berry et al., 2010; Beugelsdijk & Mudambi, 2013; Blanc-Brude et al., 2014). Literature on the spatial interdependence of FDI offers several options for defining the spatial weight matrix W. The next paragraphs consider the most common approaches to matrix construction.

W1: Contiguity-based matrix

A matrix built on contiguity assigns positive weights only to country pairs sharing a common border, i.e**.,** $w_{j,l} = 1$ if j and l share a border; 0 otherwise.

$$w_{j,l} = \begin{cases} 1 \; if \; j \; and \; l \; share \; a \; common \; border \\ 0 \; if \; j \; and \; l \; do \; not \; share \; a \; comon \; border \; or \; j = l \end{cases}$$

However, this type of weighting matrix has a bias in favor of neighbors and assumes that only bordering regions interact, thus potentially excluding other non-neighboring but proximate regions that may have a higher level of interaction than some neighbors. Despite its flaws, the application of weighting matrices based on contiguity is still popular in FDI location research (Coughlin & Segev, 2000; Fonseca & Llamosas-Rosas, 2019; Hoang & Goujon, 2014; Sharma et al., 2014; Shepotylo, 2012).

W2: Geographic distance-based matrix

A second approach for defining the neighborhood is based on the inverse of pairwise geographical distances between all observations. The rationale of this approach is to consider that observations exert strong influence on their neighbors in geographic proximity, while those further away are less influenced. This approach is the most common method in the spatial FDI literature (see Blonigen et al. (2007) and Baltagi et al. (2007)). The weights are determined by the great circle distance $d_{j,l}$ between the capital cities (or countries' centroids) of host countries *j* and *l*. As such, the shortest

[46] Contiguity refers to the state of geographical units (countries, regions, cities, and neighborhoods) being adjacent or near each other without any physical or cultural barriers separating them.

bilateral distance receives a weight of unity, and all other distances receive a weight that declines according to:

$$w(d_{j,l}) = \frac{min\ d_{j,l}}{d_{j,l}}\ for\ all\ j \neq l\ and\ w(d_{j,l}) = 0\ if\ j = l$$

As a result, W is a symmetric matrix where the diagonal elements equal zero, reflecting the common spatial econometric assumption that no observation is its own neighbor. Blonigen et al. (2007), as well as many other studies inspired by their work, use a row-standardized inverse distance weighting matrix where W is normalized to 1 (i.e., each row sums to unity). This normalization breaks the symmetry of the original distance-based weight matrix but has the advantage that spatially lagged variables reflect local averages. For example, the spatial lag of the dependent variable WFDI can be interpreted as the proximity-weighted average of FDI into all neighboring host countries. This approach to spatial matrix construction is nowadays the standard method used in the spatial literature (Blanco, 2012; Ledyaeva, 2009; Nwaogu & Ryan, 2014).

However, the standard row-normalized inverse distance spatial weight matrix described above has been the subject of serious criticism (Elhorst, 2001; Kelejian & Prucha, 2010; LeSage, 2014; LeSage & Pace, 2009; Regelink & Elhorst, 2015). In the case of FDI location research, the main problem is that when the inverse distance matrix is row normalized, it is no longer valid in terms of distance decay (Anselin, 1988; Elhorst, 2001). First, because of row normalization, the inverse distance matrix becomes asymmetric, which means that the impact of country *j* on country *l* is not the same as the impact of country *l* on country *j*. Second, because of row normalization, the information about mutual proportions between elements in the different rows of the inverse distance matrix is distorted. As such, remote and central countries may exert the same impact on the FDI host country (i.e., independent of their relative location).

Following the criterion based on the highest value of the log-likelihood function (Elhorst, 2014, p. 19), some studies define the distance matrix (usually employing geographic distances between capitals' centroids), which is normalized by its largest eigenvalue[47] and not by the sum of each row (Elhorst, 2001, 2014; Kelejian & Prucha, 2010). As mentioned above, the inverse of the weight

[47] In spatial econometrics, an eigenvalue is a scalar value that represents the magnitude of a change in a variable that is caused by a unit change in another variable in a set of spatially correlated data. The largest eigenvalue is often referred to as the "first-order" or "dominant" eigenvalue, and it represents the amount of spatial autocorrelation that is present in the data set.

matrix should not be taken as W becomes asymmetric since the above diagonal distances do not equal the below diagonal distances (Elhorst, 2001, 2014). Kelejian & Prucha (2010, p. 56) point out that "unless theoretical issues suggest a row-normalized weight matrix, this approach will in general lead to a misspecified model". Following recent studies (Gutiérrez-Portilla et al., 2019b; He, 2022; Maza et al., 2020; Regelink & Elhorst, 2015; Siddiqui & Iqbal, 2018), we compute our spatial distance matrix normalized by its largest eigenvalue and do not use the standard row-normalized spatial weight matrix (for which the sum of each row equals one) to avoid the loss of information in terms of distance decay.

4.4.2.2. Distance measures

The issues of a firm's location choice, antecedents and consequences of this location choice have been at the center of attention for researchers across multiple disciplines. For several decades, these strands of literature developed their own approaches to studying the distribution of firms across geographic space, yet their connections between each other are very limited (Beugelsdijk, McCann, et al., 2010; Beugelsdijk & Mudambi, 2013). In general, economic literature studies the relationship between location and its comparative advantages, trade literature focuses on economic activity in different locations, whereas economic geography (EG) and regional science researchers are concerned with relationships between location and space. IB and strategy scholars explore the relationships between location and the organization of economic activities of MNEs across geographic space (Cantwell, 2009), mostly building on the L dimension of the well-known Ownership-Location-Internalization (OLI) paradigm. These questions, however, cannot be answered without addressing the issues of space and distance. Before we turn to the spatial model's specification, we discuss the issues related to the conceptualization of distance and space in the fields of IB and economics.

IB and strategy scholars usually conceptualize spatial variation by the average distance between home and host countries (i.e., distance measures based on country-level means). It is argued that the understanding of place and space in the IB literature still remains underdeveloped since these are primarily geographic concepts (Beugelsdijk, McCann, et al., 2010; McCann & Mudambi, 2005). For example, Beugelsdijk et al. (2010, p. 488) criticize the IB literature for portraying MNEs as "independent units agglomerating in certain locations" in geographical space and not moving beyond new economic geography contributions on MNE activity (Fujita, Krugman, & Venables,

1999; Krugman, 1991b, 1991a). Although the geography of FDI is not completely missing in IB literature (Dunning, 2009), the nature of the interaction between place and space as well as the issues of MNEs' strategies within the context of their spatial embeddedness remain largely unaddressed in the IB field (Beugelsdijk, McCann, et al., 2010).

Aside from geographic distance, IB literature often uses other distance measures such as cultural, institutional, psychic, economic, administrative, and others (Berry et al., 2010; Zaheer et al., 2012). These alternative measures of distances are also measures based on a difference of means between the home and host country: economic distance is often calculated as the difference between the mean GDP per capita of FDI home and host, cultural or psychic distance is measured as the difference between the mean values of home and host countries' populations (based on Hofstede (1980) or Kogut & Singh (1988), for example), etc. Beugelsdijk & Mudambi (2013) argue that IB scholars' attempts to improve their analyses of spatial variation by adding new distance dimensions have limited theoretical and empirical value because such distance measures are strongly correlated (Berry et al., 2010) and, as a result, it is difficult to unveil their individual effects (Zaheer et al., 2012).

Head & Mayer (2002) argue that common mean-based measures of geographic distance (based on distance between capital cities or on the great circle distance between countries' centers), widely used in the FDI literature, are inappropriate measures since they are mismeasured in a way that leads to a systematic overstatement. The reason behind this mismeasurement stems from conceptualizing (discrete) border effects and (continuous) distance effects (Beugelsdijk & Mudambi, 2013). IB literature has traditionally used countries as the unit of analysis and views spatial variation in terms of distance between countries while assuming spatial homogeneity at the subnational level (Beugelsdijk & Mudambi, 2013). As such, mean-based measures do not consider within-country variation and, thus, do not truly distinguish between border and distance effects, which are not the same. The discrete border effect refers to the liability of foreignness as the cost of doing business abroad (Eden & Miller, 2004; Hymer, 1976), whereas distance is the continuous measure by definition.

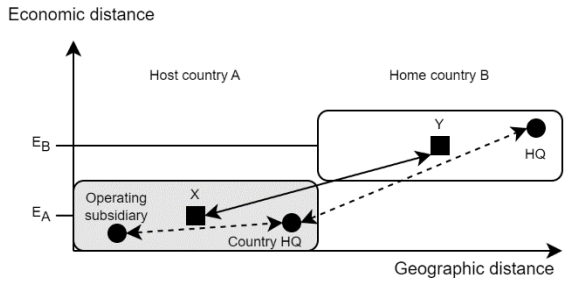
However, in IB literature, concepts of liability of foreignness and distance are often used interchangeably (Beugelsdijk & Mudambi, 2013), and distance measures capture the extent of

discontinuity[48] (Schotter & Beamish, 2013), which arises at the national borders where spatial transaction costs increase substantially (Beugelsdijk, McCann, et al., 2010; McCallum, 1995). Thus, to capture the actual spatial distance, the measure has to include within-country spatial variation (Goerzen, Asmussen, & Nielsen, 2013), as studies using mean-based international distances between countries consider only the border effect and not the distance effect (Beugelsdijk & Mudambi, 2013).

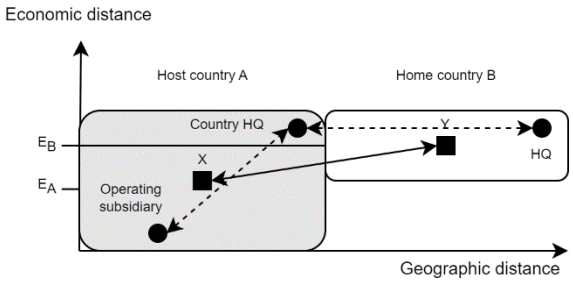
Consider a simplified example of the differences between border and distance effects. In Fig. 4.3a, we illustrate an MNE with HQ in home country B and FDI in host country A untangled into country HQ and operating subsidiary. IB studies, usually conducted at the country level, specify the geographic distance between the two parts of the firm located in two different countries as the distance between country centers, i.e., great circle distance XY. As IB scholars use country as the unit of analysis, HQ and subsidiaries in a given country are treated as a single entity. Obviously, approximating the geographic distance between a firm's world HQ in the home country and its operations in a foreign country using the XY distance introduces an error that tends to grow with the sizes of the home and host countries.

Figure 4.3. Sub-national spatial heterogeneity

(a) Relatively low sub-national spatial heterogeneity



(b) Relatively high sub-national spatial heterogeneity



Source: Beugelsdijk & Mudambi (2013, p. 417)

Beugelsdijk & Mudambi (2013) further argue that even more serious issues arise when IB studies introduce additional distance dimensions, such as economic distance, for example. In Fig. 4.3a, the subnational variation in the host country A is low, the economic distance between countries A and

[48] Moreover, the extent of discontinuity depends on the level of sub-national spatial heterogeneity.

B (E_A, E_B) suits as a reasonable approximation of economic distances between two countries. Alternatively, in Fig. 4.3b, the subnational variation in the host country B is rather large. The economic distance between the two countries is substantial but smaller than the subnational variation between the host country's parts of the firm. In such a case, which is likely to happen in the context of large and heterogeneous countries like China or India, "the discontinuity in economic space does not occur at the border but within the host country" (Beugelsdijk & Mudambi, 2013, p. 417). The authors further argue that the various distance dimensions between important business hubs in large emerging economies and HQs in developed economies are rather small. Thus, the substantial variations in averages at the country level are inaccurate and misleading.

We take into account the criticism of Beugelsdijk & Mudambi (2013) and use a revised geographic distance measure that accounts not only for the role of distance between countries but also for internal distance between consumers and producers within countries (Head & Mayer, 2002; Mayer & Zignago, 2011). Namely, Head & Mayer (2002) calculate the distance between two countries based on bilateral distances between the biggest cities of these two countries (which are not necessarily the capital cities), where inter-city distances are weighted by the share of the city in the overall country's population. They use latitudes, longitudes, and population data of the main agglomerations of all countries to calculate the weighted distance between countries (for more detail, see Mayer & Zignago (2011, p. 11)).

The following paragraphs briefly discuss various spatial models' specifications that have been used to study the spatial dependence of FDI and describe the empirical SDM model specification for this study.

4.4.2.3. Spatial models

Spatial econometrics refers to a branch of econometric techniques that include the potential spatial relationships in the data that are ignored in classical regression analysis. The most common spatial econometric models in the FDI literature are the spatial autoregressive model (SAR) and the spatial error model (SEM). The SEM model includes spatial autocorrelation in the error terms, which can be interpreted as shocks experienced in FDI flows being correlated across neighboring FDI hosts. The SAR model, in contrast, includes spatial autocorrelation in the FDI inflows, which allows for capturing how FDI flows into one host country may be potentially influenced by the FDI flows to neighboring host countries. This examination may reveal that regions are either competing or

complementary with regard to attracting FDI, such that an increase in FDI in one region may result in a decrease (or increase) in FDI elsewhere. If a SAR model includes additional spatially lagged explanatory variables, it becomes a spatial Durbin model (SDM), using the terms of Anselin (1988).

Spatial Error Model (SEM)

The first form of spatial dependence is represented by the spatial error model. SEM can be sketched as in Eq. (4.2) below.

Equation 4.2. Spatial Error Model (SEM)

$$FDI = \alpha_0 + \alpha_1 Host\ Variables + \ \mu;$$

where spatial correlation is captured by the following error term:

$$\mu = \ \lambda W\mu + \varepsilon$$

where λ is the autoregressive parameter, restricted between -1 and +1; W is the spatial weight matrix; μ is the spatially correlated error vector of the model; and ε is an independent, often Gaussian error vector. In practice, the coefficient λ measures spatial autocorrelation in the model residuals. Put differently, a shock in neighboring locations spills over to a degree depending on the value of lambda through an error term. The omission of the spatially-autocorrelated error term in Eq. (4.2) results in wrong standard errors, making the statistical significance tests on the estimated parameters invalid (Anselin, 1988).

Spatial Autoregression Model (SAR)

Spatial autoregression (SAR) is another widely used form of spatial dependence. It includes a spatial lag of the model's dependent variable as an explanatory variable. Therefore, the SAR model is also referred to as the spatial lag model. In this spatial model, the dependent variable (FDI) of a host country *j* depends on the dependent variables in each neighboring country of the host country *j*. Blonigen et al. (2007) put forward an estimation procedure to observe the spatial relationships by introducing two spatial lag variables into the standard regression analysis of FDI. According to Blonigen et al. (2007), the SAR model can be expressed as in Eq. (4.3), where the spatial FDI term and the surrounding market potential measure are included as additional regressors.

Equation 4.3. Spatial Autoregressive Model (SAR)

$$FDI = \alpha_0 + \alpha_1 Host\ Variables + \ \rho WFDI + \theta WGDP + \varepsilon;$$

where ρ is the spatial autoregression parameter that is restricted to the interval between -1 and +1, and WFDI is the spatial lag of the dependent variable. The term WGDP is surrounding market potential (SMP), a weighted sum of the market sizes of third countries, and parameter θ is unconstrained, as in usual regression models. Finally, ε is a vector of independent error terms. According to Anselin (1988), structural dependence exists if rho is statistically significant, and its omission would bias all parameter estimations and invalidate the inference.

As seen in the empirical literature review summary presented in Table 4.2, the spatial lag model is usually preferred over the spatial error model. The reason is quite obvious, as SAR allows obtaining a richer set of estimates for the effects of a given explanatory variable by including direct and indirect effects (see, for example, Esiyok & Ugur (2017) and Siddiqui & Iqbal (2018)). But most importantly, the spatial lag model "allows the data to reveal patterns of substitution or complementarity, as well as the strength of any such patterns, through the estimated spatial coefficient", whereas the spatial error model "is silent with respect to evidence of the substitution or complementarity of FDI across countries and therefore does not inform theory" (Blonigen et al., 2007, pp. 1308–1309). Moreover, the SAR model also allows for establishing whether spatial dependence is reflected as agglomeration or competition effects in the distribution of FDI between spatial units (Blonigen et al., 2007).

Nonetheless, the widely used Blonigen et al.'s (2007) SAR model has been the subject of criticism. First, Kelejian & Prucha (2010) argue that the row-normalization of the spatial weight matrix may lead to misspecified spatial models. Second, SAR specifications include only the spatially lagged dependent variable and weighted SMP without addressing other spatially lagged explanatory variables. For example, Siddiqui & Iqbal (2018), employing SDM, found evidence of strong spatial interdependence of US FDI in the MENA region through infrastructure spillovers from adjacent countries, whereas spatially lagged FDI and surrounding market potential turned out to be insignificant. As a result, SAR models cannot explain the spatial links of other explanatory variables of proximate countries for a given host's FDI inflows. LeSage & Pace (2009) and LeSage (2014) suggest using SDM as it allows to directly include other spatially weighted explanatory variables. As such, the SDM model extends the SAR model by including other spatially weighted

explanatory variables (besides inverse distance-weighted surrounding market potential) in the SAR specification, i.e., by directly incorporating the characteristics of third countries in determining the host country's FDI. As Elhorst (2010, p. 10) points out, the spatial Durbin model "produces unbiased coefficient estimates also if the true data-generation process is a spatial lag or a spatial error model" and "does not impose prior restrictions on the magnitude of potential spatial spillover effects", meaning that these spillovers can be different for different explanatory variables.

Spatial Durbin Model (SDM)

To overcome the above problems associated with the SAR model, this study employs a spatial Durbin model (SDM) to analyze the factors affecting European FDI inflows in 21 Asian countries during the period 2013-2019. We use panel data and follow the baseline econometric SDM in the literature on FDI determinants (Regelink & Elhorst, 2015). The structure of our SDM model is sketched in Eq. (4.4) below.

Equation 4.4. Spatial Durbin Model (SDM)

$$FDI = \alpha_0 + \alpha_1 Host\ Variables + \alpha_2 WHost\ Variables + \rho WFDI + \theta WGDP + \varepsilon;$$

Where WHost Variables are other spatially lagged explanatory variables. In Eq. (4.4), we calculate the distance-based weight matrix following Elhorst's (2001) weight normalization method by the largest eigenvalue, which was used recently by Regelink & Elhorst (2015) and Siddiqui & Iqbal (2018).

Host variables: the host country's explanatory variables include market size, geographic distance, trade costs, labor costs, and skilled labor (see hypotheses outlined in Table 4.3 in the previous subsection). Additionally, we include several control variables that were found to significantly impact FDI inflows into the Asian region (Hayakawa & Tsubota, 2014; Kang & Jiang, 2012; Ullah & Khan, 2017; Urata & Kawai, 2000). We include proxies for infrastructure, agglomeration economies, and regulatory quality as additional control variables.

Additionally, in line with the gravity model, we also control for home country characteristics by including the GDP and GDP per capita of the FDI origin countries. We expect that economically large countries with high income per capita tend to engage in more FDI.

ρWFDI and θWGDP: Spatial effects are captured by an autoregressive parameter ρ, associated with WFDI, the spatial lag of the dependent variable, and by the surrounding market potential of neighboring countries, WGDP, associated with the parameter θ. The GDP weights W are calculated through a $N \times N$ matrix where elements of the matrix are the distances between countries taken from CEPII (Mayer & Zignago, 2011).

The distance between two countries is based on bilateral distances between the biggest cities of those two countries, and these inter-city distances are weighted by the share of the city in the total country's population (see Mayer & Zignago (2011, p. 11) for a precise formula). Then, the distance-based weight matrix is calculated using the eigenvalue normalization method first proposed by Elhorst (2001) and then used by Kelejian & Prucha (2010), Regelink & Elhorst (2015), and Siddiqui & Iqbal (2018), among others.

WHost variables: The SDM model extends the SAR model by including *other* spatially weighted explanatory variables (in addition to the SMP variable), thus by directly incorporating the features of other regions in determining the FDI in a given host country. Brakman, Garretsen, & Van Marrewijk (2009) suggest that spatial externalities are not limited to a single channel and may be manifested through multiple channels. For example, NEG literature (e.g., Fujita, Krugman, & Venables, 1999) also highlights spillovers from other FDI determinants such as agglomeration economies. Moreover, LeSage (2014) argues that much of the literature using spatial econometric methods does not provide relevant information for practitioners. Therefore, by employing SDM, we take advantage of the possibility to directly include several additional explanatory variables (LeSage, 2014; LeSage & Pace, 2009). Namely, we also incorporate four weighted variables in our proposed model: labor cost, human capital, infrastructure, and agglomeration.

Under vertical motivation, MNEs are looking for locations with low labor costs. If the cost of labor in the surrounding countries is more expensive than in a given host country, VFDI would prefer to locate in the focal host country, where the wage level is lower relative to its neighbors. Similarly, if MNEs are seeking a location with highly skilled workers, an increase in human capital quality in surrounding countries would discourage FDI in a given host country. However, as noted by Maza et al. (2020), this effect of human capital is not clearcut, as an increase in human capital quality across neighboring countries might also have positive spillovers on a given host country. The availability of developed infrastructure in proximate countries could lead to a significant increase

in EP and/or CV FDI in a given country. Finally, the existence of agglomeration economies in neighboring countries may be a significant incentive for complex vertical FDI, as in this case, MNEs can fragment their operations across several countries and benefit from positive externalities attributed to the co-location of firms there.

4.4.2.4. Spatial Durbin (SDM) specification

As such, we estimate two SDM models in this study. The first model does not include other spatially weighted variables (see Eq. 5), while the second model includes other spatially lagged variables (see Eq. 6). The variables prefixed by O_ correspond to characteristics of the European home or origin country, and those prefixed with D_ relate to the Asian countries, which are FDI hosts or destinations.

Equation 4.5. SDM with one weighted variable

$$
\begin{aligned}
(I - \rho W_d)\, ihs(FDI)_{(t+1)} &= \alpha_1 log(O\_GDP)_t + \alpha_2 log(O\_GDP/O\_POP)_t + \alpha_3 log(D\_GDP)_t \\
&+ \alpha_4 log(DIST) + \alpha_5 log((D\_EXP + D\_IMP)/D\_GDP)_t \\
&+ \alpha_6 log(D\_POP/D\_GDP)_t + \alpha_7 log(D\_EDUC)_t + \alpha_8 log(D\_TELCO\_FM)_t \\
&+ \alpha_9 log(D\_SHARE\_MANU)_t + \alpha_{10} D\_REGU_t + \alpha_{11} D\_EDUC \\
&+ \theta_1 W_d log(D\_GDP_t) + \mu_{(t+1)} + \varepsilon_{(t+1)},
\end{aligned}
$$

where μ_t denotes time-fixed effects, included to control temporal changes over the period of study; ε_{jt} is a vector of error terms; and t=1....; T is the time index and all variables are presented as P vectors, with P=214 being the number of origin-destination (OD) pairs included in the model. This number is constant over time period, and it is smaller than the product of the number of origins with the number of destinations because we only use country pairs that have non-zero FDI for at least four of the seven years of study. The FDI flows are transformed by ihs for inverse hyperbolic sine. The transformation ihs(x) is, for positive x, similar to the logarithm, but it has the advantage of being point symmetric with respect to the origin and continuous at x=0. For our application, this is important because it allows us to include zero and negative values of FDI, where the latter correspond to a divestment. The destination neighborhood matrix W_d $(P \times P)$ is constructed from the inverse distance neighborhood of the Asian countries using the formulas of LeSage and Pace

(2008). However, since their Kronecker product formulas only apply when the model uses all possible OD pairs, we had to remove some rows and columns from their original formulation.

Equation 4.6. SDM with other weighted variables

$$
\begin{aligned}
(I - \rho W_d)\, ihs(FDI)_{p(t+1)} &= \alpha_1 log(O\_GDP)_{pt} + \alpha_2 log(O\_GDP/O\_POP)_{pt} + \alpha_3 log(D\_GDP)_{pt} \\
&+ \alpha_4 log(DIST)_{p} + \alpha_5 log((D\_EXP + D\_IMP)/D\_GDP)_{pt} \\
&+ \alpha_6 log(D\_POP/D\_GDP)_{pt} + \alpha_7 log(D\_EDUC)_{pt} + \alpha_8 log(D\_TELCO\_FM)_{pt} \\
&+ \alpha_9 log(D\_SHARE\_MANU)_{pt} + \alpha_{10} D\_REGU_{pt} + \alpha_{11} D\_EDUC \\
&+ \theta_1 W_d log(D\_GDP_{pt}) + \theta_2 W_d log(D\_POP/D\_GDP)_{pt} + \theta_3 W_d D\_EDUC_{pt} \\
&+ \theta_4 W_d log(D\_TELCO\_FM)_{pt} + \theta_5 W_d log(D\_SHARE\_MANU)_{pt} + \mu_{(t+1)} \\
&+ \varepsilon_{p(t+1)};
\end{aligned}
$$

where FDI denotes FDI inflows, and the independent variables are as follows:

1. O_GDP is the GDP of the FDI origin country;
2. O_GDP/O_POP is the GDP per capita of the FDI origin country;
3. D_GDP is the market size of the FDI destination country;
4. DIST_CEPIIW is the bilateral geographic distance between FDI origin and destination countries;
5. ((D_EXP + D_IMP)/D_GDP) is the trade openness of the FDI destination country;
6. D_POP/D_GDP is the labor cost of the FDI destination country;
7. D_EDUC is the human capital quality of the FDI destination country;
8. D_TELCO_FM is the infrastructure quality of the FDI destination country;
9. D_SHARE_MANU is the agglomeration economies in the FDI destination country;
10. D_REGU is the regulatory quality of the FDI destination country;
11. WFDI is the distance-weighted FDI inflows of the surrounding countries of the FDI destination country;
12. WGDP is the distance-weighted market potential of the surrounding countries of the FDI destination country;
13. W(D_POP/D_GDP) is the distance-weighted labor costs of the surrounding countries of the FDI destination country;
14. WD_EDUC is the distance-weighted human capital of the surrounding countries of the FDI destination country;

15. WD_TELCO_FM is the distance-weighted infrastructure of the surrounding countries of the FDI destination country;
16. WD_SHARE_MANU is the distance-weighted agglomeration economies of the surrounding countries of the FDI destination country.

Table 4.5 in the next subsection gives definitions and data sources for the variables. The following paragraphs present a description of explanatory and control variables, provide data sources, and descriptive statistics.

4.4.3. Data

To test for third-country effects and to identify the dominant motives of MNEs for investment, we use a panel of annual data on bilateral FDI from 24 developed European countries into 21 developing Asian countries over the 2013-2019 period. The year 2013 is chosen as the starting year due to data limitations, as bilateral FDI flow data for Asian countries have been lacking for many years prior to 2013, and the ending year 2019 is the year before the start of the economic crisis caused by COVID. Table 4.4 below provides the list of FDI origin and destination countries in our sample.

Table 4.4. List of sample countries

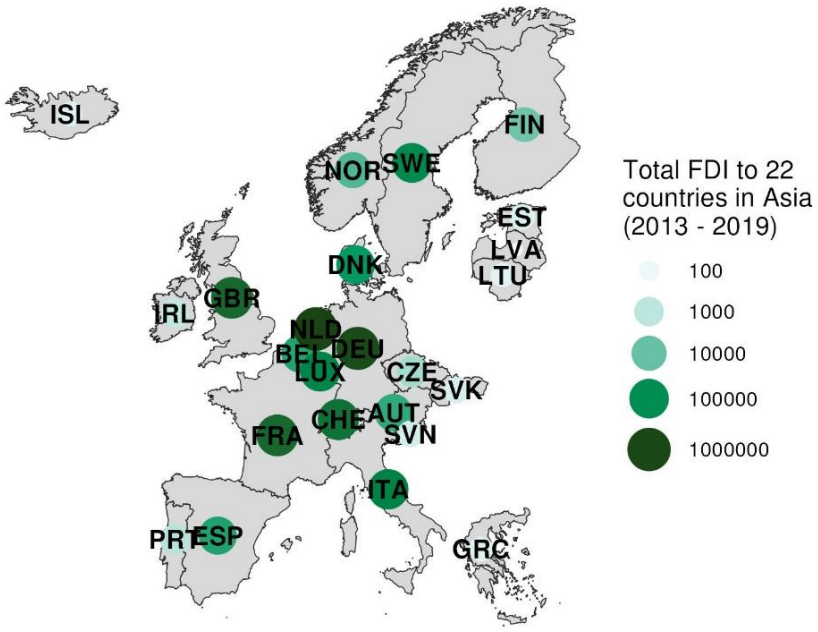
FDI origin countries: developed Europe (24)	Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom
FDI destination countries: developing Asia (21)	Bangladesh, Brunei, Cambodia, China, India, Indonesia, Kazakhstan, Kyrgyzstan, Laos, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Tajikistan, Thailand, Turkmenistan, Uzbekistan, Vietnam

We focus on exploring the main underlying motives for investment in Asia, as this region is the largest global recipient of FDI, with $662 bln or 51% of global FDI inflows in 2022 (UNCTAD, 2023). Europe, on the other hand, is one of the largest global investors, with FDI outflows of $224 bln (15% of global outflows) in 2022 (ibid.). As such, a better understanding of the main drivers

behind European FDI location decisions across Asian recipient states is of great importance for scholars, MNEs, and developing countries' governments.

The dependent variable is annual bilateral gross FDI inflows in an ihs-transformed form. To avoid the zero-flow problem, we restricted the sample to OD pairs where at least four out of seven flows are non-zero. FDI data are taken from the ITC Investment Map database[49]. Investment Map integrates and organizes FDI data from several databases, including international organizations (UNCTAD, IMF, OECD), regional organizations (ASEAN, EUROSTAT, etc.), and national institutions such as national statistical offices, central banks, ministries of trade and investment, investment promotion agencies, etc. Fig. 4.4 and 4.5 below depict the distribution of FDI outflows from 24 developed European countries and FDI inflows into 21 Asian countries, respectively.

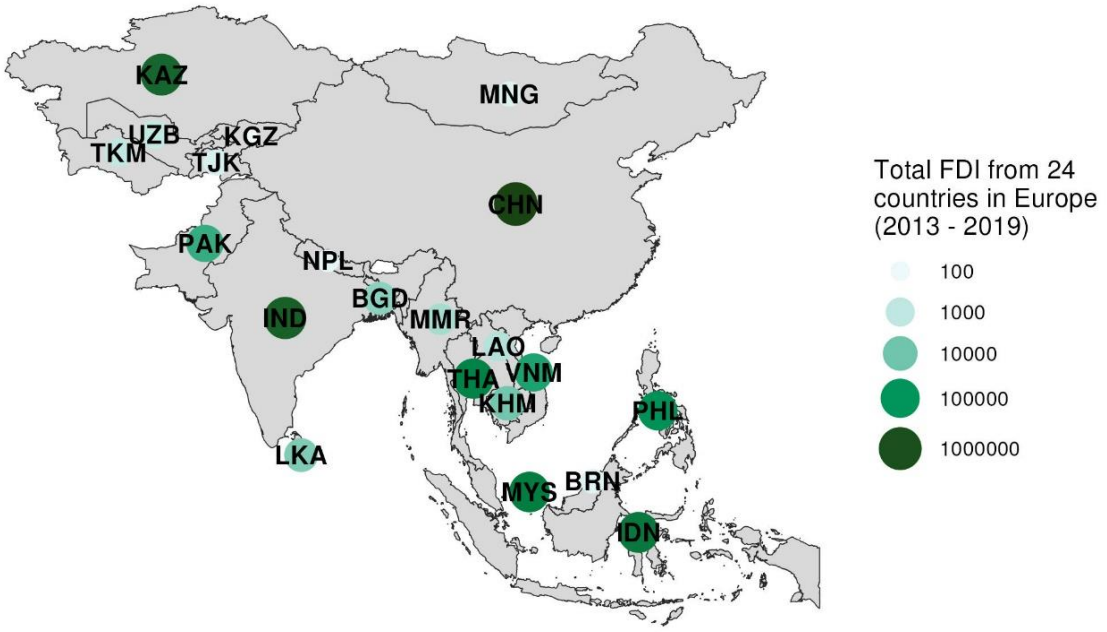
Figure 4.4. The distribution of FDI outflows from 24 European developed countries over 2013-2019 (in mil.US$)



Source: authors' construction using data from ITC Investment Map.

[49] https://www.investmentmap.org/methodology-fdi-data

Figure 4.5. The distribution of FDI inflows in 21 Asian developing countries over 2013-2019 (in mil.US$)



Source: authors' construction with data from ITC Investment Map.

The independent variables are defined in the following paragraphs.

Market size (O_GDP): we proxy the market size of the FDI home country by country's real GDP (in mln. 2017US$). Data on GDP are taken from the Penn World Tables.

Income level (O_GDP/O_POP): we proxy the income level of the FDI home country by real GDP per capita (in mln. 2017US$), calculated as GDP divided by population size. Data on GDP and population sizes are taken from the Penn World Tables.

Market size (D_GDP): we proxy the market size of the FDI host country by its real GDP (in mln. 2017US$). Data on GDP are taken from the Penn World Tables.

Bilateral geographic distance (DIST_CEPIIW): we employ bilateral geographic distance from CEPII, which is calculated with the use of latitudes, longitudes, and population data of the main agglomerations of countries (see Mayer & Zignago (2011, p. 11) for a formula).

Trade openness ((D_EXP + D_IMP)/D_GDP)): we proxy the trade openness of the FDI host country as the sum of exports and imports divided by GDP. Data on exports and imports are taken from CEPII.

Labor costs (D_POP/D_GDP): as a proxy of labor costs in FDI host countries, we simply use the real GDP per capita in each country because the data on wage levels for our sample of Asian countries are either unavailable or not homogeneous. Thus, GDP per capita is used as a fair alternative to indirectly capture the effect of average wage and is frequently used in the literature on FDI determinants (Amaro & Miles, 2006; Ascani, Crescenzi, & Iammarino, 2016b, 2016a; Asiedu, 2002; Edmiston, Mudd, & Valev, 2003; Hayakawa & Tsubota, 2014; Kirkpatrick & Shimamoto, 2008). However, there is some ambiguity in what the GDP per capita variable is actually measuring. Many argue that per capita GDP measures economic development, and its higher values would imply better prospects for horizontal market-seeking FDI (Asiedu, 2002; Edmiston et al., 2003). Alternatively, several previous studies (Amaro & Miles, 2006; Asiedu, 2002) used the logarithm of the inverse of GDP per capita as a close proxy for return on investment and, thus implicitly, labor costs[50]. We follow Asiedu (2002) by employing the inverse of the GDP per capita of the host country as a proxy for cheap labor and hypothesize a positive relationship between this variable (as it is the inverse) and all four FDI types. GDP per capita is calculated based on real GDP and population data taken from the Penn World Tables.

Human capital (D_EDUC): We proxy skilled labor availability in the FDI host country by the mean years of education of adults aged 25 and above, taken from the Global Data Lab.

Control variables

We also include host country control variables (infrastructure, agglomeration, and institutional factors) that have been selected on the basis of previous studies (Blonigen et al., 2007; Hayakawa & Tsubota, 2014; Regelink & Elhorst, 2015; Sharma et al., 2014; Siddiqui & Iqbal, 2018).

Infrastructure (D_TELCO_FM): first, we control for infrastructure quality since the efficient transportation of raw materials, intermediate or final goods allows foreign investors to reduce both plant set-up costs (Kang & Lee, 2007) and production costs (Ho & Rashid, 2011) by reducing

[50] The lower GDP per capita is, the higher the inverse is. Hence, the hypothesized relationship between this variable and FDI is positive.

waiting times, avoiding extra storage costs, and boosting productivity of the investment (Asiedu, 2002). Hence, the effect of infrastructure is expected to be positive for all types of FDI, as both foreign and domestic businesses need reliable access to transportation, energy, communication, and other essential services to compete domestically or internationally. Due to the unavailability of data on transportation infrastructure for many countries in our sample, we proxy infrastructure quality by the sum of mobile cellular and fixed telephone subscriptions per 100 people. Data are taken from World Development Indicators (WDI).

Agglomeration (D_SHARE_MANU): second, NEG literature highlights the importance of agglomeration economies as a determining factor in the location decisions of MNEs. Agglomeration refers to the concentration and co-location of economic activities that give rise to economies of scale and positive externalities. Agglomeration provides benefits that firms accrue by locating in clusters or industrial agglomerations. These benefits arise from the spatial concentration of related economic activities, which allows MNEs to access a wider pool of skilled labor, specialized inputs, demand and supply linkages, knowledge spillovers, etc. (Jacobs, 1969; Krugman, 1991a, 1991b; Marshall, 1920). Moreover, agglomeration provides access to information about the local environment (Mariotti & Piscitello, 1995), where the presence of other foreign investors is seen as proof of success in developing countries often characterized as uncertain environments (Lall & Streeten, 1977). Empirical literature usually finds a positive effect of agglomeration on FDI (Guimarães et al., 2000; Woodward & Rolfe, 1993), which suggests that concentration benefits outweigh dispersion benefits. Following previous studies (Horn & Cross, 2016; Jordaan, 2008; Woodward & Rolfe, 1993), we proxy agglomeration economies by manufacturing concentration, measured by the proportion of workers in secondary industries in the total labor force. Data are taken from WDI.

Regulatory quality (D_REGU): finally, to account for the impact of institutional quality on FDI, we follow previous research (Gutiérrez-Portilla et al., 2019a; Lemi et al., 2021) by controlling for regulatory quality. Regulatory quality is an essential dimension of the host country's institutional quality and represents the impact of regulatory risks on FDI abroad. It captures perceptions of the ability of governments to formulate and implement sound policies and regulations that permit and promote private sector development. Various dimensions of regulatory quality are usually found to be positively correlated with FDI inflows in Asian developing countries (Kang & Jiang, 2012;

Ullah & Khan, 2017; Zheng, 2009, 2013) Data on regulatory quality are taken from the World Governance Indicators (WGI). A positive sign is expected for these three control variables.

Table 4.5 summarizes all variables included in the analysis and provides the data sources. We use natural log transformation of the independent variables (except for D_EDUC and D_REGU) as they become symmetric, additive, and normed indicator of relative change (Törnqvist, Vartia, & Vartia, 1985). We also use temporally lagged values for the dependent variables (with a 1-year lag) as it helps to mitigate problems arising from reverse causality (Wooldridge, 2010). The total number of observations is 1498 and is based on a balanced panel with n=214 pairs and T=7 years. Pairs with more than three out of seven time periods with zero investment are excluded. Table 4.6 provides descriptive statistics for all the variables.

Table 4.5. Variable definitions and data sources

Variable	Definition	Data source
FDI	Annual gross bilateral foreign direct investment flows (in mln US$)	ITC Investment Map[51]
O_GDP	Market size of home country. Output-side real GDP at current PPPs (in mln 2017US$)	Penn World Tables 10.1
O_GDP/O_POP	Income level of home country. Output-side real GDP at current PPPs (in mln 2017US$) divided by population	Penn World Tables 10.1
D_GDP	Market size of host country. Output-side real GDP at current PPPs (in mln 2017US$)	Penn World Tables 10.1
DIST_CEPIIW	The distance between countries is calculated with the great-circle formula that considers the latitudes and longitudes of the most important cities provided by Mayer & Zignago (2011)	CEPII[52]
((D_EXP + D_IMP)/D_GDP))	Trade openness of host country. The sum of exports and imports divided by GDP	CEPII and Penn World Tables 10.1
D_POP/D_GDP	Labor cost of host country. The inverse of GDP per capita	Penn World Tables 10.1
D_EDU	Human capital of host country. Mean years of education of adults aged 25+	Global Data Lab[53]
D_TELCO_FM	Infrastructure of host country. The sum of mobile cellular subscriptions (per 100 people) and fixed telephone subscriptions (per 100 people)	WDI[54,55]
D_SHARE_MANU	Agglomeration economies in host country. Employment in industry (% of total employment)	WDI[56]
D_REGU	Regulatory quality of host country. Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The scale is measured in units ranging from –2.5 to 2.5, with higher values corresponding to the best regulatory environment.	WGI[57]

[51] https://www.investmentmap.org/data-sources
[52] http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=8
[53] https://globaldatalab.org/areadata/table/edyr25/?levels=1
[54] https://data.worldbank.org/indicator/IT.CEL.SETS.P2?view=chart
[55] https://data.worldbank.org/indicator/IT.MLT.MAIN.P2?view=chart
[56] https://data.worldbank.org/indicator/SL.IND.EMPL.ZS?end=2019&most_recent_value_desc=true&start=2013
[57] https://info.worldbank.org/governance/wgi/

Table 4.6. Descriptive statistics

Variable	Mean	Std	Min	Max	Histogram
ihs(FDI)	4,720	3,676	-7,884	12,143	
log(DIST_CEPIIW)	8,940	0,312	8,075	9,417	
log(O_GDP)	26,542	1,419	23,412	29,084	
log(O_GDP/O_POP)	10,684	0,337	10,044	11,624	
D_log(GDP)	26,401	1,825	23,781	30,602	
D_Wce log(GDP)	19,815	4,724	12,848	26,496	
D_log((EXP + IMP)/GDP)	-1,507	0,672	-2,953	-0,259	
D_log(POP/GDP)	-9,051	0,849	-11,498	-7,675	
D_Wce log(POP/GDP)	-6,832	1,631	-9,229	-4,360	
D_EDUC	8,253	2,500	3,765	12,210	
D_Wce EDUC	5,962	1,502	3,701	8,955	
D_log(TELCO_FM)	1,544	0,102	0,759	1,670	
D_Wce log(TELCO_FM)	1,170	0,281	0,731	1,572	
D_log(SHARE_MANU)	2,649	0,491	1,580	3,451	
D_Wce log(SHARE_MANU)	1,992	0,485	1,282	2,798	
D_REGU	-0,450	0,655	-2,132	1,099	

Note: All variables except for D_EDU and D_REGU are expressed in natural logarithms. The number of observations is 1498. This is based on a balanced panel with n=214 pairs and T=7 years. Pairs with more than three out of seven time periods with zero investment are excluded.

4.5. EMPIRICAL RESULTS AND DISCUSSION

Following previous studies (e.g., Fonseca & Llamosas-Rosas (2019) and Siddiqui & Iqbal (2018)), we first estimated Eq. (4.3) through panel SLX regression without controlling for the spatial effects of FDI, which serves as the base model with which we later compare SDM results.

4.5.1. SLX panel results

The SLX results, presented in Table 4.7, show that the FDI host country's market size, openness to trade, quality of human capital, as well as regulatory quality, have a statistically significant positive effect on European FDI inflows into 21 Asian countries. The surrounding market potential (SMP) variable is positive and statistically significant, thus implying the importance of third-country markets for European investors. Cost of labor and quality of local infrastructure variables did not turn out statistically significant, albeit positive in line with the hypothesized direction[58]. The SLX model also produced some interesting results related to several variables. First, the larger bilateral distance between FDI home and host countries has a positive effect on FDI inflows in Asian countries. Second, results show that the agglomeration variable has a negative relationship with FDI across our sample of host Asian countries.

Table 4.7. Determinants of FDI – SLX model

Variable	Estimate		Std. Error	t-value	Pr(>|t|)
log(DIST_CEPIIW + 1)	1,142	***	0,412	2,768	0,006
log(O_GDP)	1,175	***	0,053	22,072	0,000
log(I(O_GDP/O_POP))	3,861	***	0,234	16,504	0,000
log(D_GDP)	1,493	***	0,083	18,039	0,000
D_Wce.log.GDP.	0,108	***	0,023	4,774	0,000
log(I((D_EXP + D_IMP)/D_GDP))	0,413	**	0,171	2,409	0,016
log(D_POP/D_GDP)	0,222		0,172	1,292	0,197
D_EDUC	0,329	***	0,060	5,495	0,000
log(D_TELCO_FM)	0,934		1,015	0,920	0,358
log(D_SHARE_MANU)	-1,093	***	0,381	-2,865	0,004
D_REGU	0,642	***	0,229	2,803	0,005
$R^2 = 0,490$					

*Note: ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.*

[58] The labor cost variable, proxied as the inverse of the GDP per capita of the host country, captures the cheap labor availability rather than the cost of labor; therefore, the expected sign is positive.

FDI origin characteristics (GDP and GDP per capita) have the expected positive signs and are statistically significant. In line with previous research, we found that MNEs originating in European countries with higher GDP per capita tend to engage in FDI more actively.

The SLX model established the main determinants of FDI in the Asian region. However, it lacks the capability to examine the spatial interdependence of FDI across FDI host countries. We now turn to the SDM methodology to test for the spatial interdependence of FDI.

4.5.2. Spatial Durbin (SDM) estimates

We estimate Eq. (4.5), which includes spatial lag of FDI and SMP and Eq. (4.6), which incorporates four additional spatially weighted variables. In Table 4.8, column 1 reports the estimates of our base SDM model and column 5 – estimates SDM with other spatial variables.

SDM results confirm the SLX outcomes for the statistical significance of host and home countries' earlier estimates. The surrounding market potential variable (D_Wgc.log.GDP) is positive and statistically significant (column 1 in Table 4.8), providing support for the importance of proximate third-country markets for European FDI across Asian countries. However, SMP loses its statistical significance in the second model after the inclusion of other spatially weighted explanatory variables (see column 5 in Table 4.8).

Most importantly, our findings support the existence of spatial patterns of European FDI across Asian host countries, as rho is statistically significant at 1% with a negative sign. The negative coefficient of spatial lag of FDI (rho) detects the presence of substitution patterns of FDI across countries in the Asian region. As outlined in Table 4.1 in subsection 4.2.3, the negative sign of spatial lag combined with the positive effect of SMP seem to indicate export-platform FDI as the main motive for European FDI in the Asian developing region.

The explanatory power of our base model improves after the inclusion of other spatially weighted explanatory variables (Table 4.8, column 5), as manifested by the decreased Akaike information criterion (AIC) (Akaike, 1973). The R^2 does not correspond to the usual coefficient of determination, which may give non-sensual values in spatial econometric models (Anselin, 1988). Instead, we report the squared correlation coefficient between the observed values of the dependent variable and its predictions, which can be interpreted as a goodness-of-fit measure. The AIC is not an indicator of absolute goodness-of-fit; instead, it estimates the relative goodness-of-fit among

Table 4.8. Spatial determinants of FDI – SDM model

	Base model Spatial effects through SMP only					Base model Spatial effects through SMP and other variables				
Variable	**Estimate**		**Std. Error**	**t-value**	**Pr(>|t|)**	**Estimate**		**Std. Error**	**t-value**	**Pr(>|t|)**
rho (ρ)	-0,553	***	0,100	-5,532	0,000	-0,519	***	0,100	-5,208	0,000
log(DIST_CEPIIW + 1)	1,388	***	0,407	3,413	0,001	1,476	**	0,600	2,461	0,014
log(O_GDP)	1,144	***	0,052	21,797	0,000	1,166	***	0,054	21,710	0,000
log(I(O_GDP/O_POP))	3,700	***	0,230	16,082	0,000	3,874	***	0,231	16,786	0,000
log(D_GDP)	1,606	***	0,084	19,108	0,000	1,703	***	0,088	19,373	0,000
D_Wce.log.GDP.	0,105	***	0,022	4,755	0,000	0,049		0,637	0,077	0,939
log(I((D_EXP + D_IMP)/D_GDP))	0,486	***	0,169	2,870	0,004	0,345	*	0,203	1,701	0,089
log(D_POP/D_GDP)	0,139		0,169	0,824	0,410	0,222		0,229	0,966	0,334
D_Wce.log.POP.GDP.						0,365		1,929	0,189	0,850
D_EDUC	0,297	***	0,059	5,022	0,000	0,309	***	0,064	4,823	0,000
D_Wce.EDUC						1,146	***	0,234	4,902	0,000
log(D_TELCO_FM)	1,027		0,996	1,031	0,302	0,248		1,084	0,229	0,819
D_Wce.log.TELCO_FM.						-12,249		8,822	-1,388	0,165
log(D_SHARE_MANU)	-1,310	***	0,378	-3,467	0,001	-1,188	***	0,387	-3,070	0,002
D_Wce.log.SHARE_MANU.						6,075	**	2,406	2,525	0,012
D_REGU	0,703	***	0,226	3,112	0,002	0,835	***	0,240	3,482	0,000
	R^2 = 0,481					*R^2 = 0,495*				
	AIC = 7116,089					*AIC = 7091,368*				

*Note: ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.*

several alternative spatial models, where the model with the lowest AIC is the best-fitting model. Now we turn to the discussion of our empirical findings.

Market size of the host country (D_GDP) is a positive and statistically significant factor attracting FDI into Asian countries. Results show that a larger **geographic distance** between FDI origin and destination countries positively influences FDI. According to Egger (2008), larger distances between home and host countries motivate horizontal FDI, and this effect is expected to increase with bilateral home and host market sizes.

Trade openness (D_EXP + D_IMP)/D_GDP) has a positive effect on FDI location across Asian countries, providing evidence that European MNEs engage in trade and prefer locations without trade restrictions and barriers. Although the estimates remain robust across different specifications, the coefficient and statistical significance of this variable have slightly decreased in our best model (see Table 4.8, column 5).

Cheap labor availability in the host country (D_POP/D_GDP) has a positive but statistically insignificant effect on FDI. Likewise, the spatially weighted labor variable of neighboring countries (D_Wce.log.POP.GDP) does not affect the FDI inflows into a host country. Overall, these results point out that seeking low-cost labor in host Asian countries is not a major concern for European MNEs.

Instead, FDI is attracted by the availability of **educated human capital**, as D_EDUC is significantly positive and robust across all specifications. Spatially weighted human capital in proximate countries (D_Wce.EDUC) is also positive and statistically significant. These findings point to the existence of significant positive spillovers through the educated workforce available in the region on FDI inflows into a particular host country. Notably, regional effects are much stronger than own-country effects (1.146 and 0.365, respectively). From the NEG point of view, this could be explained by potential knowledge diffusion and cross-border collaboration, leading to knowledge spillovers and enhanced productivity. Specialized skilled labor in the region may play complementary roles in the supply chain, creating a network effect that increases a host country's attractiveness as a FDI destination.

Infrastructure (D_TELCO_FM) is not significant in any model, albeit this variable has an expected positive sign. Likewise, spatially weighted infrastructure quality in the surrounding

countries has no statistically significant impact on FDI location in a given host country. The insignificant impact of the host country's infrastructure on FDI was previously found by Hoang & Goujon (2019) for intra-ASEAN FDI in their spatial study, where the authors classified this type of FDI as an export-platform.

Agglomeration economies (D_SHARE_MANU), proxied as a percentage of employment in industry to total employment in the host country, have a surprising negative relationship with FDI inflows in Asia. The coefficient is negative across all specifications and statistically significant. This result contradicts the existing empirical literature, as the overwhelming majority of previous studies established a positive relationship between agglomeration economies and FDI inflows into different subsets of Asian countries (Hayakawa & Tsubota, 2014; Urata & Kawai, 2000).

These findings might suggest that European FDI is deterred by the high concentration of labor-intensive industries in a host country. First, European investors may avoid locating their FDI in countries with a high concentration of industrial activities as it increases congestion costs (logistic challenges, inefficiencies, and increased costs of doing business). Second, sectoral concentration increases competition for resources (skilled labor, infrastructure, utilities, etc.) and generally intensifies local competition, which could decrease profitability, limit growth, and possibly impede the market penetration of European MNEs.

On the other hand, spatially weighted agglomeration in neighboring countries (D_Wce.log.SHARE_MANU) has a positive and statistically significant effect on FDI in a host country. This observed positive spatial spillovers at the regional level within Asia, whereby agglomeration effects in neighboring countries positively influence FDI inflows into a given host country, is interesting. As with spatially weighted human capital variable, such an outcome could be explained through the lens of regional complementarities and agglomeration dynamics. While an individual country's high level of industrial concentration might deter European FDI inflows due to reasons outlined in the previous paragraph, the cumulative effect of agglomeration in proximate countries could potentially generate regional synergies and enhanced competitiveness that act as a pull factor for FDI.

The NEG literature emphasizes the role of regional interconnectedness in shaping agglomeration externalities. Krugman & Venables (1995) showed how greater global integration through trade can lead to the emergence of economic regional clusters. Feenstra (1998) further suggested that not

only global integration via trade but also the fragmentation of the production process of final goods, i.e., outsourcing, can give rise to regional agglomeration activities. Positive spillovers from agglomeration in neighboring economies on FDI inflows into the host country in question largely align with the concept of "agglomeration shadow" borrowed from urban economics (Fujita & Krugman, 1995; Fujita, Krugman, & Mori, 1999).

In urban systems, regions located close to the core are under the "agglomeration shadow", meaning that their economic resources are absorbed by the core. Hence, the economic vibrancy of a particular country or region spreads to its adjacent areas, creating an agglomeration attraction effect in the broader neighborhood. Moreover, the attractiveness of regional agglomeration effects could be enhanced by factors such as supply chain integration, knowledge diffusion, and easy access to nearby markets, which could be more pronounced at the regional scale (Venables, 2006). In this context, the negative direct effect of individual host countries' agglomeration on European FDI inflows might be mitigated by the strong positive externalities arising from broader intra-regional agglomeration. As can be seen from Table 4.8 (column 5), the spatially weighted percentage of employment in industry to total employment in the surrounding countries has the highest coefficient in our SDM model (6,075).

The institutional control variable **regulatory quality** (D_REGU) of the host country has a strong and robust positive effect on FDI inflows into the host country.

At last, we turn to the spatially weighted variables – spatial lag of FDI and SMP. First, the coefficient rho of the spatially weighted dependent variable **(WFDI)** is statistically significant and has a negative sign. This result is robust across different specifications. These observations suggest that European FDI location in a particular Asian country usually occurs at the expense of other countries in the region. According to Table 4.1 of Blonigen et al. (2007), presented in section 4.2.3 of this Chapter, negative and statistically significant spatial lag may indicate either an export-platform or vertical type of FDI.

The spatially weighed **surrounding market potential** (D_Wce.log.GDP) of proximate countries is also statistically significant, with a positive sign in our SLX and SMD (Table 4.8, column 1) specifications. SMP, however, loses its statistical significance, and its coefficient decreases by half in our preferred model (Table 4.8, column 5), when other spatial variables are included. Blonigen

et al. (2007) obtained similar results in their SAR specification (as in Eq. (4.3)), although their spatial lag coefficient decreased nearly threefold.

One of the plausible explanations is the presence of an unobserved correlation among spatial variables. For example, there exists a theoretical underpinning in economic geography and trade theories on the correlation between market size and agglomeration economies. As Thisse (2011, p. 142) summarizes the adoption of Krugman's (1991a) contributions by economic scholars: “There is a wide agreement that the space-economy may be viewed as the outcome of a trade-off between different types of scale economies in production and the mobility costs of goods, people and information”. As such, when the market size of a country increases, it creates a demand for goods or services, which, in turn, encourages a fragmented concentration of economic activities within specific regions. As firms cluster to exploit economies of scale, knowledge spillovers, and reduced production costs, agglomeration emerges as a strategic response to increase market size. The positive feedback loop between market size and agglomeration, whereby larger markets attract more firms, intensifies the possibility of their correlation. Nonetheless, the loss of the SMP coefficient’s statistical significance requires further empirical investigation.

Table 4.9 below provides a comparison between the hypothesized coefficients of spatial lag, market potential, and other explanatory host country-specific variables on four types of FDI and the empirical findings of this study discussed above (see the last column).

Table 4.9. Summary on hypothesized effects and empirical evidence

Explanatory variable	Horizontal	Export-platform	Vertical	Complex vertical	Empirical result
ρWFDI	0	-	-	+	-
θWGDP	0	+	0	0/+	+/(+)
Market size	+	+/0	0	+/0	+
Geographic distance	+	?	-	?	+
Trade costs	+	-	-	-	-
Labor cost	-	-	-	-	(-)
Skilled labor	+	+	-	+	+

Note: (+) and (-) denote statistically insignificant positive and negative result, respectively.

The combination of a negative spatial lag of FDI and a positive and generally statistically significant surrounding market potential points to the dominance of export-platform (EP) motivation for 24 European FDI origin countries across 21 Asian developing economies over the

2013-2019. First, empirical findings point out that European MNEs prefer to locate in countries with openness to international trade to serve third-country markets via exporting. Second, labor costs are not the major concern for investors, but the educated workforce is, thus contradicting the motivation of V MNEs and indirectly pointing to EP FDI. Finally, the significance of the market sizes of host and home countries combined with the positive effect of the larger geographic distance between those countries also comply with horizontal motives for investment (Egger, 2008). Nachum (2000) argued that in the presence of substantial economies of scale, export-oriented investment can emerge from market-seeking FDI, thus making the distinction between them difficult.

Turning to the control variables, the negative relationship between a country's own agglomeration and FDI, as discussed above, may indicate that European MNEs avoid competition when they pursue horizontal motives in domestic Asian markets. Additionally, we discovered positive spatial spillovers from agglomeration economies and improvements in human capital quality in neighboring countries on FDI inflows in a particular host country.

The non-significance of the infrastructure variable (as well as the spatially weighted infrastructure of surrounding countries) is particularly puzzling, as usually infrastructure is a necessary antecedent of horizontal market-seeking FDI, which enables firms to efficiently distribute goods across the local market and gain more market share (Dunning, 1977, 1998). However, EP FDI might require access only to specific export-oriented infrastructure, such as seaports or interstate railroads, as well as energy and water supply. Even though such FDI is not directly affected by the telecommunication infrastructure, which we chose as a proxy in this study, these findings require future empirical tests.

Overall, these results seem to reject vertical and complex vertical FDI types for European FDI in the developing Asian region and point toward export-platform and, partially, to horizontal motives.

4.5.3. Robustness checks

Finally, we conduct two robustness checks. First, we estimate the SAR model as in Eq. (4.3) to check the sensitivity of parameter estimates, especially the robustness of the rho coefficient. As mentioned before, SAR remains the most common technique to test for the presence of spatial dependence in the FDI data. Second, we estimate the SDM model as in Eq. (4.5) to check the

sensitivity of parameter estimates of the bilateral distance measure borrowed from Mayer & Zignago (2011) by employing the standard measure of great circle distance between the capital cities of two countries (GC_DIST_KM). Tables 4.10 and 4.11, respectively, show the results.

The spatial lag of FDI remained negative and statistically significant at the 1% level in both the SAR and SMD models. However, the rho coefficient has slightly decreased in both models compared to our baseline model results reported in Table 4.8. Overall, this confirms the robustness of our spatial lag coefficient. In the SAR model, results for independent variables mostly remained robust except that the agglomeration variable became insignificant (albeit still negative) and the coefficient of bilateral distance measure (DIST_CEPIIW) decreased by half and became only marginally significant.

Table 4.10. Spatial determinants of FDI – SAR model

Variable	Estimate		Std. Error	t-value	Pr(>|t|)
rho (ρ)	-0,461	***	0,090	-5,098	0,000
log(DIST_CEPIIW + 1)	0,678	*	0,384	1,767	0,077
log(O_GDP)	1,152	***	0,053	21,769	0,000
log(I(O_GDP/O_POP))	3,753	***	0,232	16,165	0,000
log(D_GDP)	1,398	***	0,074	18,879	0,000
log(I((D_EXP + D_IMP)/D_GDP))	0,675	***	0,165	4,083	0,000
log(D_POP/D_GDP)	0,141		0,171	0,826	0,409
D_EDUC	0,194	***	0,055	3,500	0,000
log(D_TELCO_FM)	1,389		1,003	1,385	0,166
log(D_SHARE_MANU)	-0,474		0,341	-1,389	0,165
D_REGU	0,404	*	0,220	1,835	0,066
R^2 = 0,476					
AIC = 7141,662					

*Note: ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.*

Table 4.11 shows that the great circle distance measure (GC_DIST_KM) remained positive and significant, but its coefficient dropped compared to DIST_CEPII. As in Table 4.8 (column 1), when the SMP variable is the only spatially weighted explanatory variable included in the SDM model, it again becomes statistically significant. Findings for other variables are in line with our base results.

Table 4.11. Determinants of FDI – SDM model with GC_DIST as a bilateral distance variable

Variable	Estimate		Std. Error	t-value	Pr(>|t|)
rho (ρ)	-0,471	***	0,090	-5,246	0,000
log(GC_DIST_KM + 1)	1,002	***	0,360	2,785	0,005
log(O_GDP)	1,152	***	0,053	21,867	0,000
log(I(O_GDP/O_POP))	3,755	***	0,231	16,258	0,000
log(D_GDP)	1,503	***	0,079	18,936	0,000
D_Wgc.log.GDP.	0,099	***	0,026	3,820	0,000
log(I((D_EXP + D_IMP)/D_GDP))	0,411	**	0,179	2,290	0,022
log(D_POP/D_GDP)	0,198		0,172	1,151	0,250
D_EDUC	0,300	***	0,062	4,824	0,000
log(D_TELCO_FM)	1,130		1,000	1,130	0,259
log(D_SHARE_MANU)	-0,976	***	0,363	-2,687	0,007
D_REGU	0,801	***	0,247	3,251	0,001
R2 = 0,480					
AIC = 7130,011					

*Note: ***, ** and * represent significance at the 1%, 5% and 10% level, respectively.*

4.6. CONCLUSION

Understanding the key determinants of FDI location and MNE motives for investment has been a widely debated topic in economics and IB literature. However, the role of spatial linkages between the FDI host country and its neighbors has often been ignored by the empirical literature on FDI determinants. This study addresses this gap and employs a spatial Durbin panel model to identify the main drivers of FDI and the main motives of European investors in 21 Asian developing countries over 2013-2019.

The primary objective of this study was to identify the main location determinants and dominant motives for investment of European MNEs in the Asian region. By applying Blonigen et al.'s (2007) taxonomy of four investment motives, we discovered the presence of spatial interdependence of European FDI across Asian host countries. The negative sign of the spatial lag of FDI, combined with the positive sign of the surrounding market potential variable, points to the predominantly export-platform motivation of European FDI. Accordingly, most European MNEs seem to establish production in a particular host country and then serve the nearby regional market via exports.

Next, we found that European FDI in developing Asia is mostly driven by the host country's openness to international trade, availability of skilled labor, and sound regulatory environment. It is important to highlight that human capital quality and the agglomeration economies of neighboring countries create positive spatial spillovers and also emerge as the key investment drivers for FDI in a given host country. Furthermore, findings also point to the horizontal motives of European MNEs across Asian countries, as they may be encouraged by large foreign markets located far away from their home countries and discouraged from locating their FDI in countries with intense industry competition.

This study makes several important contributions. First, we contribute to the growing literature on the spatial dependence of FDI by unveiling the dominant investment motives of European MNEs across a large sample of Asian countries. Second, we refine the spatial econometric approach by employing the spatial Durbin model and including other spatially weighted characteristics of neighboring countries. Our results show that the explanatory power of our base model increased with the inclusion of additional spatial variables. Third, we use the spatial weighting matrix normalized by eigenvalue following Regelink & Elhorst (2015) in order to avoid the loss of information in terms of distance decay. Finally, we enriched the IB literature by taking advantage

of economic geography's perspective on distance concept by adopting a revised geographic distance measure between countries of Mayer & Zignago (2011). It accounts for both external distances between countries and for internal distances between consumers and producers within countries (Mayer & Zignago, 2011) and does not lead to a "systematic overstatement of border effects" as a great circle distance measure (Head & Mayer, 2002, p. 21).

This study has important implications for empirical FDI location research, policymakers in developing countries, and MNEs. First, ignoring spatial linkages in the empirical studies on FDI location leads to serious econometric problems, which could potentially question the findings of these studies (LeSage & Pace, 2009). FDI location researchers, especially in the field of IB, need to develop a better understanding of space and distance as well as use more advanced econometric methods to investigate the complex phenomenon of FDI motives and location decisions. Second, policymakers in Asian developing economies may focus on creating a favorable environment for European firms if they are willing to attract more export-platform and horizontal FDI. This might involve reducing trade restrictions, facilitating smoother export-oriented operations, improving infrastructure and logistics, promoting skills development, and technology transfer. Third, understanding the dominant FDI motives can help MNEs identify potential host countries that align with their business strategies, thus reducing risks and enhancing operational efficiency. EP FDI might prioritize Asian countries with well-established export platform infrastructure and production capabilities to efficiently serve both host and regional markets. This, however, may change in the future, as our analysis is based on the 2013-2019 period only.

Although our findings are largely consistent and intuitive, this study inevitably has some limitations. First, this study employs aggregate country-level data on FDI inflows, which hides heterogeneous patterns at the industry- and firm-level, while each might have different cost functions and FDI motives, presenting different spatial independence patterns. Future research is encouraged to investigate and compare the patterns of spatial linkages across various sectors, as they may be very different. Second, LeSage & Pace (2009) advise decomposing the point estimates (total effect) into direct and indirect effects to test hypotheses about the existence of spatial spillovers. Since the purpose of our study was to test the dominant motives for European FDI into Asian economies, we focused on point estimates and significance tests for the parameters while not aiming to quantify the importance of potential spillover effects. To this end, future research

might take into account an extension of the present approach that allows to additionally calculate the spatial impact measures devised by LeSage & Pace (2009) and adapted to the case of origin-destination flows by LeSage & Thomas-Agnan (2015).

Finally, it is worth mentioning that we were unable to form a set of neighboring countries in an unbroken study area, as suggested earlier by Regelink & Elhorst (2015). Due to data limitations, several small countries, like Bhutan, located between China and India, as well as some other countries located in the periphery (Afghanistan and North Korea among others), were excluded from the sample. In such a case, some important information about spatial linkages with other countries could get lost, leading to biased estimates of spatially lagged variables. However, this is not the critical issue in our case, as the excluded countries from our sample are mostly isolated countries lacking economic integration with regional and global economy and the FDI inflows received by them are minimal. Future spatial studies should aim to sample countries in an unbroken study area and account for proximate countries located outside the study area in order to avoid the loss of information on potential spatial linkages (Regelink & Elhorst, 2015).

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5. FIFTH CHAPTER: THESIS CONCLUSION

5.1. INTRODUCTION

Driven by the aim of advancing our understanding of the FDI location phenomenon, this doctoral dissertation has addressed several important issues related to *where* and *why* MNEs locate their investment in developing countries. What makes a particular developing country or region attractive to MNEs (the *where* question)? Why do MNEs decide to invest in a particular developing country or region (the *why* question)? This doctoral dissertation attempted to resolve the "somewhat inconsistent empirical evidence" (Nielsen, Asmussen, & Weatherall, 2017) regarding the impact of FDI location factors on the inflows of foreign investment in developing countries.

Research on FDI location in developing countries is important because of the numerous benefits that FDI brings to the host country, such as fueling economic growth (Borensztein, De Gregorio, & Lee, 1998; Hansen & Rand, 2006) and reducing income inequalities (Nguyen, 2021). Furthermore, FDI creates knowledge spillovers and enhances human capital improvement (De Mello Jr., 1997; Lucas, 1988; Romer, 1986). Therefore, a clearer understanding of the key drivers of FDI and the underlying investment motives of foreign investors can help many developing countries put themselves on the path of rapid economic development (Dunning & Lundan, 2008; Luo, Xue, & Han, 2010). Furthermore, a more nuanced understanding of MNEs' motives for investment in developing countries can contribute to the development and refinement of existing theories (Benito, 2015) by allowing scholars to test and validate theoretical frameworks and the generalizability of results (Cheng, 1994).

In this dissertation, I addressed the *where* and *why* questions by writing three research studies that focused on (1) synthesizing the most important host country-specific location determinants of FDI in developing countries and regions and (2) identifying the main motives for investment there.

The remainder of this Chapter is organized as follows. The next Section summarizes the key findings of the three studies and highlights the main contributions. Section 5.3 discusses the implications of this research. Section 5.4 highlights the limitations of this dissertation and provides avenues for future research.

5.2. SUMMARY OF FINDINGS AND CONTRIBUTIONS

5.2.1. Study 1: What drives FDI into developing countries? A systematic literature review

The first study is an interdisciplinary systematic literature review (SLR) surveying the previous empirical literature on FDI determinants in developing countries over the 1975-2018 period. It addressed the research gap on somewhat inconclusive existing empirical evidence (Nielsen et al., 2017) regarding the factors that attract or deter FDI in developing countries by reviewing the empirical literature that focuses explicitly on developing countries (Blonigen & Wang, 2005). This review had three main objectives:

- **Objective 1:** To review, synthesize, and categorize all relevant empirical studies on FDI location choice in developing countries and address important issues about country samples, measurements, data, methodological choices, and theoretical lenses used in previous research.

- **Objective 2:** To provide a comprehensive analysis of the empirical findings on the relationship between twenty selected host country-specific location determinants and FDI inflows in developing countries.

- **Objective 3:** To compare similarities and differences in foreign investors' behavior across several geographic regions of the developing world.

In this SLR, I examined 416 empirical studies on FDI location choice in developing economies over the 1975-2018 period, sourced from 123 academic journals across ten disciplines, including economics, international business, finance, public sector, etc. I highlighted the most important challenges that empirical FDI location literature in developing countries encountered, including biases stemming from country samples, geographic coverage, data, and methodological choices (*Objective 1*). I synthesized 20 host country-specific location factors, broadly classified into 14 economic and 6 institutional FDI determinants, and analyzed the available empirical evidence regarding which factors attract and deter FDI in developing countries (*Objective 2*). Furthermore, I observed a substantial heterogeneity in FDI location determinants and motives for investment across six regions of the developing world, including Africa, Middle East and North Africa

(MENA), Central and Eastern Europe (CEE), Latin America and the Caribbean (LAC), Asia, and China (*Objective 3*).

More specifically, this study provided a detailed overview of 416 studies with a focus on data and methodological approaches and attempted to critically assess the sampling and credibility of empirical findings in the extant empirical literature on FDI location in developing countries. I highlighted geographic coverage bias, level of analysis (i.e., national vs. subnational), data source bias and challenges it poses, types of dependent variables (FDI flows vs. stock, for example), and empirical methodologies used in previous empirical literature.

This review summarized the empirical findings on the relationship between 20 host country-specific location determinants and FDI inflows in developing countries. Results showed that the top factors attracting FDI into host developing countries include agglomeration economies, large domestic markets, developed infrastructure, openness to trade of goods, and quality of regulations on capital flows and local business environment. Likewise, the top factors deterring FDI include the large bilateral geographic distance between FDI home and host countries, heavy tax burden, and political instability.

Further analysis revealed a considerable divergence in empirical findings on 20 FDI determinants across different geographic settings. For example, in Africa, FDI is mostly attracted by low labor costs, educated workforce, openness to trade, a large market size, and the availability of natural resources. In Asia, on the other hand, the most important FDI location factors include the quality of the host country's regulations on openness to foreign capital flows and economic freedom in the host country's market, openness to trade, and geographic proximity to the investor country. Except for several key determinants that are found to be largely important for most developing countries irrespective of their geographic location, such as agglomeration economies, market size, or infrastructure, it becomes evident that motives for FDI largely vary across regions.

This review contributes to the literature on FDI location choice by reviewing and aggregating a large body of empirical literature on FDI location determinants in developing countries across several disciplines. This review paid special attention to the challenges posed by data availability and the empirical and methodological approaches used in the previous FDI location literature. It synthesized twenty FDI location determinants and compared the empirical findings across six

distinct geographic regions of the developing world, thus highlighting a substantial heterogeneity in FDI location determinants and motives. As such, this review calls for caution against overly broad interpretations of the literature in this field, as findings obtained for one geographic region or country cannot be generalized to other regions or countries. Finally, this SLR offers several promising areas for future research.

5.2.2. Study 2: Exploring the importance of location factors for FDI attractiveness in developing countries – a meta-analysis

The second study is a meta-analysis that extended the SLR by empirically analyzing the relative importance of FDI location determinants and identifying dominant motives for investment across developing countries and regions. Most importantly, this meta-analytic review focused on the relative importance of 20 host country-specific location factors and attempted to answer the call for systemic treatment of FDI motives (Blonigen, 2005; Dunning, 2009; Franco, Rentocchini, & Vittucci Marzetti, 2010) by identifying the dominant motives for investment across developing countries and regions. Moreover, it complemented the SLR by addressing the mixed findings of the previous empirical research in more detail, such as the moderating roles of country of origin and industry effects. This meta-analysis had three main objectives:

- **Objective 4:** To synthesize accumulated findings in the empirical literature on the relative importance of twenty host country-specific FDI determinants using meta-analysis techniques.

- **Objective 5:** To identify the dominant motives for investment across different countries and geographic regions by building on the Investment Development Path (IDP) framework (Narula & Dunning, 2000, 2010).

- **Objective 6:** To further explore the contextual relationship between FDI and selected FDI determinants and investigate the relative importance of twenty FDI determinants across countries of origin (developed vs. developing) and sectors (manufacturing vs. services).

In this meta-analysis, I empirically investigated whether the relative importance of 20 host country-specific determinants varies depending on MNEs' FDI location decisions across developing countries and regions. I collected 14,546 estimates from 308 empirical studies on the relationship

between 20 host country-specific determinants and FDI location choice and computed meta-averages for each of the 20 factors in developing countries. I found a significant variation in the relative importance of host country-specific location factors across six geographic regions of the developing world (*Objective 4*). Most importantly, I have identified the dominant motives for investment across six developing regions, which are largely in line with the IDP framework (*Objective 5*). Additionally, I provided a more in-depth analysis concerning the moderating roles of FDI countries of origin and sectors in FDI location decisions (*Objective 6*).

More specifically, the results of this meta-analytic study showed that the relative significance of 20 host country-specific determinants varies substantially across developing countries and regions. The aggregate results concerning the most important location factors in developing countries remained common predictors of FDI in developing economies (i.e., agglomeration, market size, or infrastructure); others are specific to a particular region (natural resources in Africa and MENA regions, for example). The findings suggest that the top five largest effect sizes among 20 FDI determinants include agglomeration economies (0.234), market size (0.200), trade openness (0.180), large geographic distance (-0.160), and natural resource availability (0.146). The absolute value of the remaining effect sizes varies between 0.071 and 0.141. Interestingly, an FDI determinant with the smallest effect size of the 20 factors explored in this review turned out to be a democracy (0.026), which continued to interest researchers over the past decade (Gossel, 2018; Hecock & Jepsen, 2014; Ledyaeva, Karhunen, & Kosonen, 2013).

Findings of this study largely support the predictions of the IDP that suggested that countries at stages 1 and 2 (Africa and MENA regions) attract predominantly resource- and market-seeking investment. Countries at stages 1, 2 and 3 (LAC and Asia) attract all kinds of investments (i.e., resource-, market-, and efficiency-seeking), whereas countries at stage 3 (CEE and China) mostly attract market- and efficiency-seeking FDI. The findings for African and MENA regions are in line with the IDP, as are the findings for China. In LAC and Asia, market- and efficiency-seeking motives are clearly manifested, whereas the available evidence does not support the resource-seeking motives in these regions. Finally, the CEE region attracts not only market- and efficiency-seeking FDI but also some resource-seeking FDI.

Next, I explored to what extent the FDI location decisions differ between developed and developing investor countries and manufacturing and service sectors. MNEs from developed countries prefer

proximate developing countries with large market sizes, agglomeration economies, political stability, the availability of various kinds of tax incentives and SEZs. Developing countries' MNEs, on the other hand, invest in countries with politically stable environments, low labor costs, the availability of natural resources, a large market size, and the presence of SEZs. However, there is a considerable difference between countries of origin such as the US, Japan, or China. Finally, the results of this meta-analysis point out that the nature of the sector in which an MNE operates affects the relative significance of host country-specific location FDI determinants; however, these findings are limited due to the lack of studies focusing on service industries.

This meta-analysis contributes to the IB literature by showing how the relative significance of 20 host country-specific determinants varies for FDI location decisions across developing countries and regions. It further advances our understanding of the dominant motives for investment across six developing countries and regions. In line with the IDP predictions (Narula & Dunning, 2000, 2010), this study found that the FDI motives in a host country largely depend on its stage of economic development. Furthermore, this study highlighted considerable differences in FDI location choice between developed and developing home countries and outlined several paths for future research.

5.2.3. Study 3: Motives of European FDI in developing Asia: a spatial econometric analysis

The third study is an empirical analysis of European FDI location choice in 21 developing Asian economies over the 2013-2019 period. This study addressed the methodological limitations of previous research and employed a spatial econometric method to empirically investigate the dominant motives for investment by building on the approaches of Blonigen et al. (2007) and Regelink & Elhorst (2015). This study explored the motives of European FDI across a large sample of Asian developing countries, thus contributing to the empirical literature on FDI determinants and motives in a relatively underresearched geographic context. This empirical study had one main objective:

- **Objective 7:** To identify the dominant motives for investment by European MNEs from developed countries in 21 Asian developing countries using spatial econometric techniques.

In this empirical study, we used a spatial econometric technique to identify the main motives for investment, following the approach proposed by Blonigen et al.'s (2007). We explored the data on European FDI flows across a sample of developing Asian countries using the spatial econometric technique and identified the main FDI determinants and investment motives of European firms in this region (*Objective 7*). Furthermore, we refined the spatial econometric approach to study FDI flows by employing the spatial Durbin model and spatial weighting matrix as earlier suggested by Regelink & Elhorst (2015).

More specifically, the results showed the presence of the spatial interdependence of European FDI across Asian host countries over the 2013-2019 period. The negative sign of the spatial lag of FDI, combined with the positive sign of the surrounding market potential variable, points to the predominantly export-platform motivation of European FDI in this region. Overall, empirical evidence points to the export-platform motivation of European FDI across developing Asian countries when firms establish production in a particular host country and then serve the nearby regional market via exports. Furthermore, the findings also point to the horizontal motives of European MNEs across Asian countries. This study also found the significant influence of other spatially weighted explanatory variables (i.e., the characteristics of neighboring countries of the potential host country), like agglomeration economies and human capital, thus supporting the importance of third-country effects for FDI location decisions of MNEs.

First, this study contributes to the growing IB literature on the spatial dependence of FDI by examining the dominant investment motives of European MNEs across a large sample of Asian countries. Additionally, in response to the earlier suggestion to IB scholars of "changing the nature of existing distance dimensions" (Beugelsdijk & Mudambi, 2013, p. 415), we attempted to enrich the IB literature by taking advantage of economic geography's perspective on distance concept. We did so by adopting a revised geographic distance measure between countries of Mayer & Zignago (2011), which includes within-country spatial variation (Goerzen, Asmussen, & Nielsen, 2013). It is seen as more accurate than other commonly used distance measures (e.g., great circle distance) because they only capture the border effect and not the distance effect (Beugelsdijk & Mudambi, 2013). Second, we contributed to the spatial econometric approach to studying FDI flows by using the spatial weighting matrix normalized by eigenvalue following Regelink & Elhorst (2015) in order to avoid the loss of information in terms of distance decay. Furthermore, our results suggest

that including other spatially weighted characteristics of neighboring countries increases the explanatory power of the spatial model.

Collectively, these three studies have contributed to a better understanding of FDI location decisions in developing countries, the main factors that attract or deter FDI, and the dominant motives for investment in particular regions and countries.

5.3. IMPLICATIONS

This doctoral dissertation has several important implications for FDI location research, policymakers in developing countries, and MNEs, to a certain extent. The most important academic and practical implications are summarized below.

5.3.1. Academic implications

First, this extensive interdisciplinary analysis of 20 host country-specific FDI determinants in developing countries has provided some valuable insights into regional variations in FDI determinants and firms' motives. This work emphasizes the issue of external validity and cautions against a broad generalization across economically, geographically, and culturally distinct regions of the world. FDI location researchers may find useful the gaps identified in the FDI location literature in developing countries and make use of the numerous research paths offered in this study.

Second, the use of the Investment Development Path (IDP) framework has proven to be a plausible approach to explaining the FDI activities of countries based on their economic development stage. The results of this dissertation largely confirm the predictions of the IDP and encourage further exploration and theoretical refinements by incorporating economic development considerations into FDI location theories. Moreover, significant variations in the relative importance of FDI location factors across different regions underline the need for more nuanced and context-specific approaches in the empirical FDI location literature, as substantial regional disparities might affect firms' FDI strategies.

Third, this research work also showed that ignoring spatial linkages in the empirical studies on FDI location leads to serious econometric problems, which could potentially question the findings of these studies (LeSage & Pace, 2009). FDI location researchers, especially in the field of IB, need to develop a better understanding of place and space concepts as well as use more advanced econometric methods (such as SDM) to investigate the complex phenomenon of FDI motives and location decisions. Furthermore, IB scholars can make use of the revised geographic distance measure borrowed from economic geography literature (Mayer & Zignago, 2011), which distinguishes between border and distance effects (Beugelsdijk & Mudambi, 2013).

5.3.2. Practical implications

Scholars largely agree that foreign investment helps promote economic growth in developing economies (Borensztein et al., 1998; Hansen & Rand, 2006). As stated by the United Nations (2003, p. 9), "a central challenge, therefore, is to create the necessary domestic and international conditions to facilitate direct investment flows".

First, the results of this dissertation may interest policymakers in developing countries as they highlight considerable differences in the relative importance of various location factors and dominant investment motives in driving FDI inflows across specific regions. If governments of developing countries understand more clearly the antecedents for MNEs' investment in their countries, they will be able to tailor their policies and investment promotion strategies to increase FDI inflows into their economies. For example, host countries that wish to attract market-seeking MNEs may emphasize market access or potential consumer base expansion.

Second, policymakers in Asian developing economies may focus on creating a favorable environment for European firms if they are willing to attract more export-platform and horizontal FDI. This might involve reducing trade restrictions, facilitating smoother export-oriented operations, improving infrastructure and logistics, promoting skills development, and technology transfer.

Finally, the results of this dissertation may guide MNEs in making informed decisions regarding entry and expansion strategies in host developing countries in accordance with the dominant motives for FDI in a specific host region. Understanding the key drivers of FDI and dominant motives for investment can help MNEs identify potential host countries that align with their business strategies, thus reducing risks and enhancing operational efficiency. For example, export-platform MNEs might prioritize Asian developing countries with well-established infrastructure and production capabilities to efficiently serve both host and regional markets.

5.4. LIMITATIONS AND FUTURE RESEARCH

This dissertation is also subject to certain limitations, as highlighted at the end of each of the three Chapters. The next paragraphs briefly summarize the main limitations of this work and highlight potential avenues for future research.

List of FDI determinants

First, the SLR and meta-analysis focused only on a specific set of host country-specific FDI location determinants, thus overlooking other possibly important FDI determinants such as exchange rates, bilateral investment treaties, financial and technological development, etc. Furthermore, this dissertation ignores firm characteristics that capture firm-specific advantages and their interactions with host country-specific advantages that co-determine FDI location choices (Bu & Wagner, 2016). Future research might take into account firm-, industry-, and a broader set of location-specific characteristics to better understand the location decisions of MNEs.

Publication bias

Second, both review and meta-analysis studies may experience file drawer problems (Rosenthal, 1979), stemming from their reliance on selected published studies and ignoring unpublished works. Although the review and meta-analysis studies include a substantially larger number of studies compared to other similar works (e.g., Bailey (2018) and Nielsen et al. (2017)) and are not limited to top management and IB journals (e.g., Kim & Aguilera (2016)), they might still suffer from publication bias. Moreover, many academic journals focusing on developing and emerging economies are not included in the Harzing Journal Quality List, which was used as the quality benchmark in this dissertation, such as *Communist and Post-Communist Studies*, *International Journal of Emerging Markets*, among others. Future research may validate the findings of these studies by adopting a broader perspective when reviewing and analyzing the previous empirical research to minimize publication selection bias.

Data

Third, most studies included in the samples of the SLR and meta-analysis use aggregate data that mask patterns at both firm- and industry-levels. In a similar vein, the spatial econometric study employs aggregate country-level data on FDI inflows from Europe to Asia, which hides heterogeneous patterns at the industry- and firm-level, while each might have different cost

functions and FDI motives, presenting different spatial independence patterns. Furthermore, it covers a relatively short period from 2013 to 2019; however, economic conditions, policies, and global events can change over time, so the findings of this study may not reflect future trends in FDI determinants. Future studies are encouraged to use longitudinal and industry-specific data in service industries, in particular, when analyzing the FDI location choices of firms.

Methodology

Fourth, both systematic literature review and meta-analysis methodologies have numerous flaws, especially in terms of comprehensive synthesis of the findings due to the high heterogeneity in terms of methods, geographic coverage, data sampling, and timeframes, among others. Consequently, the results of the systematic literature review and meta-analysis, in particular, are sensitive to the limitations inherent in the primary studies included in their samples. Empirical studies of FDI location choice are highly heterogeneous and have used different methodologies, data sources, and definitions of FDI location determinants. Hence, potential limitations in previous empirical studies' design might affect the credibility and consistency of the SLR's and meta-analysis results. Future research may conduct similar reviews or meta-analyses to validate the findings of this dissertation by paying closer attention to the geographic and temporal bias, level of analysis, and definitions of dependent and independent variables. This might be a fruitful area for more empirical work, and future research might conduct more fine-grained analyses by taking into account more context-related factors and methodological choices.

Finally, for spatial econometric analysis, LeSage & Pace (2009) advise decomposing the point estimates (total effect) into direct and indirect effects to test hypotheses about the existence of spatial spillovers, which might help to quantify the importance of potential spillover effects. To this end, future research might take into account an extension of their approach that allows to additionally calculate the spatial impact measures devised by LeSage & Pace (2009) and adapted to the case of origin-destination flows by LeSage & Thomas-Agnan (2015).

In conclusion, I hope that this doctoral dissertation helped advance our understanding of the FDI location phenomenon and will motivate new research on FDI location phenomena in developing countries and factors influencing firms' overseas investment choices.

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Résumé en français

Cette thèse étudie les facteurs attirant les investissements directs étrangers (IDE) vers les pays en développement ainsi que les motivations incitant les entreprises multinationales (EMN) à y investir. Elle se focalise principalement sur les raisons (« pourquoi ») et les destinations spécifiques (« où ») de la localisation des IDE dans ces pays.

J'aborde ces questions à travers trois essais :

Une revue systématique et interdisciplinaire de la littérature analysant 416 articles empiriques parus au cours des quatre dernières décennies concernant les déterminants des IDE dans les pays en développement. Une méta-analyse qui prolonge la première étude en évaluant l'importance relative des facteurs influençant la localisation des IDE et en identifiant les principales motivations d'investissement dans six régions en développement. Une analyse économétrique spatiale visant à examiner les interconnexions spatiales et à déterminer empiriquement les motivations prédominantes d'investissement des IDE européens dans 21 économies asiatiques en développement entre 2013 et 2019.

Ces recherches offrent conjointement une vision approfondie des décisions relatives à la localisation des IDE dans les pays en développement, des facteurs les favorisant ou les freinant, et des motivations majeures des EMN pour investir dans certaines régions ou pays. Les conclusions de cette thèse présentent un intérêt majeur pour les études sur la localisation des IDE, notamment dans le domaine des affaires internationales, et fournissent des orientations précieuses aux responsables politiques des pays en développement désireux d'attirer davantage d'IDE pour dynamiser leur économie.

Mots-clés :

Investissements directs étrangers (IDE) ; déterminants de l'IDE ; motifs de l' IDE ; pays en développement ; Asie

Résumé en anglais

This dissertation explores the factors attracting foreign direct investment (FDI) in developing countries and the investment motives of multinational enterprises (MNEs). The main questions addressed in this doctoral research focus on the *where* and *why* sides of the FDI location phenomenon in developing countries.

I address these questions by writing three research essays.

The first study is an interdisciplinary systematic literature review that surveyed 416 empirical articles on FDI determinants in developing countries over the past four decades. The second study is a meta-analysis that extends the review by analyzing the relative importance of FDI location determinants and identifying dominant motives for investment across six developing regions. The third study is a spatial econometric analysis aiming to capture spatial linkages and empirically identify the dominant investment motives of European FDI across 21 developing Asian economies over 2013–2019.

Collectively, these studies contribute to a better understanding of the FDI location decisions of MNEs in developing countries, the main factors that attract or deter FDI, and the dominant motives for investment in particular countries and regions. The findings of this dissertation have important implications for FDI location research, the IB stream in particular, and may assist policymakers in developing countries in attracting more FDI to boost their economic growth.

Keywords:

Foreign Direct Investment (FDI); FDI determinants; FDI motives; developing countries; Asia