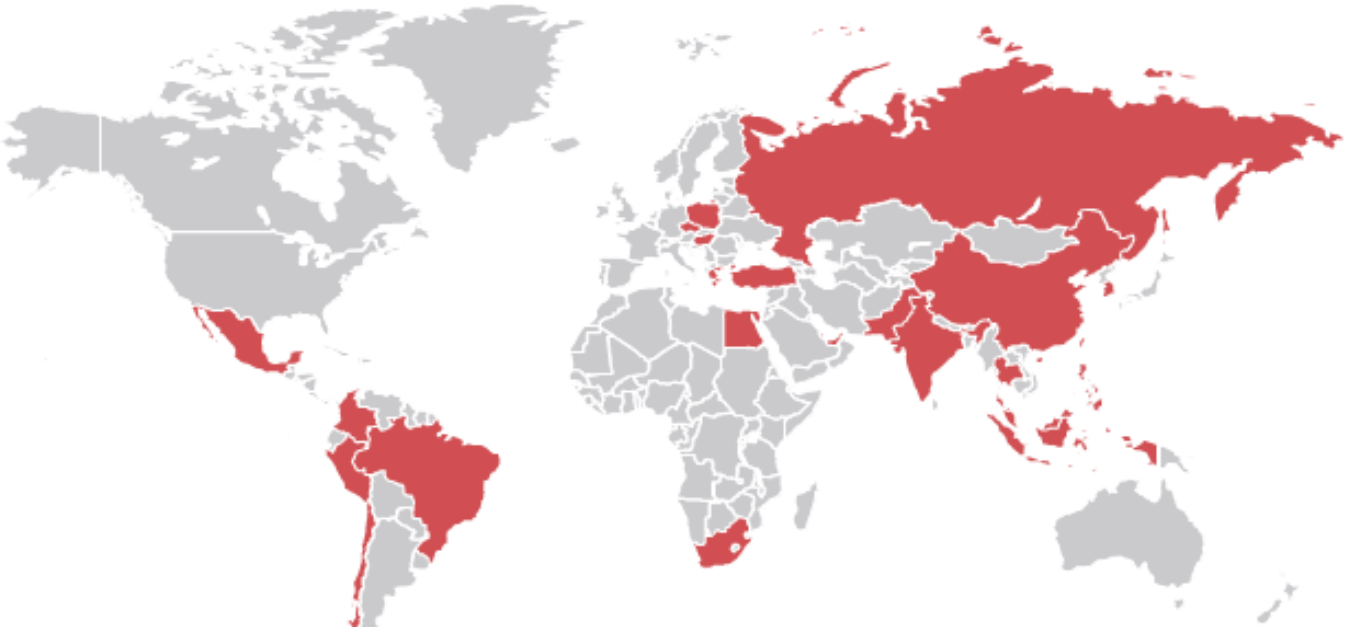
The Internationalization Process of

Emerging Market Multinationals

How institutional distance, cross-listing and absorptive capacity affect the scope and speed of the EMNE's Internationalization Process



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Date:	06-06-2019

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Abstract

This study examines the effects of institutional distance, cross-listing and absorptive capacity on the internationalization process of EMNEs. In trying to find an answer to this question, this study relied on data the Orbis database. This resulted in data from 197 Multinational Enterprises stemming from 12 different emerging countries. The research question was tested by means of a Multiple Regression Analysis. The results of this analysis indicate that institutional distance is positively related to both the scope and speed of the EMNEs internationalization process. Additionally, the results show a positive relationship between cross-listing and the scope of the EMNEs internationalization. However, when looking at the moderation effect of institutional distance on this relationship between cross-listing and the EMNEs scope, this study found that this relationship only upholds in cases of high institutional distance. This study did not find support for a relationship between absorptive capacity and the EMNEs internationalization process.

Keywords: Emerging Market Multinationals, emerging countries, institutional distance, cross-listing, absorptive capacity, internationalization process, scope, speed

Paper type: Master's thesis

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1.Introduction

1.1 Background

Since its existence, the International Business (IB) literature has been trying to explain the internationalization behaviour of Multinational Enterprises (Hymer, 1960; Johanson & Vahlne, 1977; Vernon 1979; Dunning, 1980; Kostova & Zaheer, 1999). In trying to do so, the IB literature focused on the established Multinational Enterprises, stemming from developed countries such as the United States and Europe. These so called, Developed Market Multinational Enterprises (DMNE) are known for their relatively rich and technologically advanced home base (Guillén and Canal, 2009). Analysing these particular DMNEs resulted in several dominant IB theories about the Multinational Enterprise and its internationalization process. However, there has been a shift in the world economy from the developed to the emerging countries (Berenschot, 2006). Emerging countries are known to be less evolved than the developed countries and are characterized by their unique institutional settings (Liu & Giroud, 2016). This is the case since these countries miss certain institutions that operate as intermediaries between buyer and seller, resulting in inefficient trading (Khanna & Palepu, 2010).

Nonetheless, emerging countries like the BRIC's (Brazil, Russia, India and China) have been experiencing rapid growth and remarkable transformations (Luo and Tung, 2007). In the years after the global financial crisis, China, India, Brazil and other emerging markets, were responsible for the majority of growth in global Gross Domestic Product (GDP) (Deloitte Development LLC, 2011). With the upcoming of these emerging markets, a new type of Multinational Enterprise appeared, the Emerging Market Multinational Enterprise (EMNE). These EMNEs have gained muscle in many industries and accounted for 25% of the global Foreign Direct Investment flows in 2010 (Ramamurti, 2012). The upcoming of this new type of MNE triggered an extensive and still ongoing debate within the IB literature. This is the case since, DMNEs (on which the dominant literature is based) differ significantly from EMNEs on several core features. Consequently, EMNEs seem to follow a different strategy when pursuing their internationalization process than would be suggested by the dominant IB literature (Madhok & Keyhani, 2012).

However, the dominant literature on internationalization activities and strategies includes several important theories (Ramamurti, 2012). The core explanation for the existence of the Multinational Enterprise is that in order to pursue international expansion the firm needs to possess capabilities which allow it to overcome the liability of foreignness. So, no firm specific capabilities, means no multinationals (Guillén and Canal, 2009). Dunning (1980) supports this view with his OLI model, which shows that establishing in the host country has to come with certain advantages that outweigh the disadvantages from competing abroad and therefore result in a process of internationalization. Finally,

Vernon (1979) introduced the product life cycle hypothesis. This hypothesis assumes that the Foreign Direct Investment from Multinational Enterprises flows from the developed to the less developed countries and not the other way around.

1.2 Problem Statement

Even though that these theories about internationalization have been very useful for the explanation of DMNEs, the applicability of these theories on EMNEs is not so self-evident. Evidence from EMNEs shows a rapid internationalization process suggesting the existence of accelerated and unconventional patterns in overseas growth (Matthews 2006; Guillen and Garcia-Canal, 2009; Madhok and Keyhani, 2012). They tend to quickly enter faraway foreign markets, regardless of psychic distance, successfully catching- up with the established DMNEs (Li, 2003). Thus, EMNEs tend to violate the core tenets from the dominant literature. Their different characteristics and behaviours raise questions about the validity and applicability of these dominant and existing theories (Madhok & Keyhani, 2012). These questions result in an ongoing debate within the IB literature.

Several different views can be distinguished when it comes to this debate: some scholars argue that the existing IB theory is adequate to explain EMNEs behaviour (Narula, 2006), while others argue that the existing IB theory regarding DMNEs is not suited to explain the behaviour of EMNEs and new theory should be developed (Hennart, 2012; Mathews, 2002). Finally, there is also a group of researches that argues for the extension and refinement of the existing theory due to the different features that EMNEs have when compared to DMNEs (Ramamurti, 2009; Lessard and Lucea, 2009). The view that the existing IB theory is adequate does not seem to uphold since evidence from EMNE's shows differently (Matthews 2006; Guillen and Garcia-Canal, 2009; Madhok and Keyhani, 2012; Li, 2003). Whether existing theory is in need of refinement or new theory has to be developed, both cases emphasize the limitations in the generalizability of the mainstream IB literature. Therefore, these limitations create a gap within the IB literature when it comes to the explanation of the EMNEs internationalization process.

1.3 Objective

This gap suggests that more research is required to adequately capture the dynamics of EMNEs and their internationalization (Buckley, Cross, Tan, Xin & Voss, 2008). Even though that there are already several theories that try to do so, a unified and comprehensive theoretical framework that explains the EMNEs internationalization behaviour is still lacking (Sun, Peng, Ren & Yan, 2012). This is especially the case since scholars in this stream of research tend to present partial and sometimes even opposite explanations (Stucchi, 2012), as also mentioned in section 1.2. Additionally, the existing theories on EMNEs internationalization often lack the empirical evidence to support them. Therefore, the objective of this study is to try to fill this gap by providing an empirical study into the nature of the EMNEs internationalization process.

1.4 Relevance

The increasing importance of EMNEs in the world economy and the fact that the applicability of the existing theories is questionable, offers opportunities for new research settings (Liu & Giroud, 2016). As mentioned before, some scholars argue that EMNEs internationalize in "wrong ways" (Ramamurti, 2012). They seem to internationalize much faster and target countries in a different way than the mainstream literature would suggest. Therefore, the gap regarding the applicability of existing theories on EMNEs mainly concerns spatial and temporal dimensions of the internationalization process. The difference in spatial dimension mainly concerns the countries that both types of Multinational Enterprises target, also known as the geographic scope. According to the mainstream IB literature they are supposed to target countries in a sequential manner, starting with countries that are similar to the home country and gradually expanding towards countries that differ from the home country (Johanson & Vahlne, 1977). EMNEs, however, target countries in a simultaneous matter, meaning that they enter similar and dissimilar countries at the same time (Guillén & Garcia-canal, 2009). The fact that EMNEs differ from the mainstream IB literature on this aspect, has already been the subject of attention from scholars such as Ghemawat (2007) and Ramamurti (2004). This is of no surprise since the question: "What determines the scope of the firm?", is arguably one of the most fundamental questions in strategic management and International Business (Hoskisson & Hitt, 1994; Lee, Peng, Lee & Wang, 2005). Because of the general importance of the geographic scope of the Multinational Enterprise and the fact that EMNEs seem to differ on this aspect, makes that the geographical scope will be included in this study.

The temporal dimension concerns the speed of the EMNEs internationalization. This is the case since the internationalization of EMNEs seems to proceed faster than the mainstream IB literature would suggest. EMNEs use high commitment entry modes such as mergers and acquisitions, resulting in an accelerated internationalization process (Madhok & Keyhani, 2002). Additionally, speed of internationalization is arguably the most important temporal dimension when looking at the internationalization process, since faster speed translates into higher rates of geographic diversification (Gao & Pan, 2010; Persinger, Civi & Vostina, 2007). Speed is also an important aspect of the EMNEs international strategy because there should be a balance between firm resources and international opportunities (Chetty, Johanson and Martín Martín, 2014). It is therefore that several authors already paid some attention to the speed of the EMNEs internationalization (Mathews, 2002; Guillen and Garcia-Canal, 2009; Madhok and Keyhani, 2012, Luo and Tung, 2007). So, additional research on both dimensions (scope and speed) might help to further develop IB theories that are more applicable to EMNEs than the already existing theories.

The need for an empirical base of both dimensions stems from the fact that existing contributions have failed to specifically address the most important determinants of the internationalization of EMNEs

(Satta, Parola & Persico, 2012). Therefore, this study focusses on three determinants in particular. The first determinant is the institutional distance, meaning the dissimilarity between the regulatory, cognitive and normative institutions between countries (Kostova, 1996). Institutional distance and how it affects the internationalization process, has already been the subject of attention for several scholars (Xu & Shenkar, 2002; Eden & Miller, 2004; van Hoorn & Maseland, 2016). However, this research has again mainly focused on evidence from Multinational Enterprises from developed countries. This is important since it has been suggested that institutional factors influence EMNE internationalization differently (Peng, Sun, Pinkham, & Chen, 2009; Peng, Wang, & Jiang, 2008). Therefore, it can be argued that it is significant to know how EMNEs react to institutional distance (Wei & Wu, 2015) and how this influences their internationalization process.

Secondly, this study focuses on the absorptive capacity of EMNEs on their internationalization process. Absorptive capacity refers to the firm's ability to utilize knowledge that is held by the external environment (Lane, Koka & Pathak, 2006). This knowledge is key for Multinational Enterprises since they operate in multiple external environments and the knowledge that they acquire, with their absorptive capacity in these environments, is required for further successful persuasion of their internationalization (Lane and Lubatkin (1998; Sedoglavich, 2008). However, research into absorptive capacity and internationalization is again mainly based on evidence from Multinational Enterprises from developed countries. This results in little knowledge about how EMNES seek and acquire such knowledge in the process of internationalization (Liu & Giroud, 2016). Therefore, the absorptive capacity of EMNEs is also subject of this study.

Finally, this study focuses on cross-listing as a determinant of the internationalization process. Cross-listing is a relatively new phenomenon associated with globalization and considered as a major strategic decision concerning the growth of the firm (Peng & Su, 2014). By listing not only on the home exchange but also on a foreign exchange, MNEs can raise capital from investors located in a variety of foreign markets (Banalieva & Robertson, 2010). It is therefore of no surprise that cross-listing has been the subject of research for many finance scholars (Hail & Leuz, 2009; Stulz, 1999; Vaaler & Zhang, 2011). However, Peng and Su (2014) argue that cross-listing has primarily been seen as a financial decision and therefore its impact as a strategic decision has remained underdeveloped. Because of this, and because of the increasing amount of EMNEs that engage in cross-listing, this determinant has also been included in this study.

1.5 Research Question

It can be concluded that the mainstream literature on the internationalization is overly influenced with empirical evidence from DMNEs. Consequently, theories from the mainstream IB literature seem to have trouble in explaining the internationalization process of EMNEs. As mentioned in section 1.3. the aim of this study is therefore to contribute in a theoretical and empirical way by performing a study into the internationalization process of EMNEs. This is done by investigating the influence of the three previous mentioned determinants on both the speed and scope of the internationalization of this new type of MNE. This results in the following research question:

What is the effect of institutional distance, cross-listing and absorptive capacity on the internationalization process of the EMNE?

1.6 Outline

This study will proceed as follows. The second chapter will further elaborate on the literature that is already available on the internationalization process of both types of MNEs and on its determinants. The available literature will result in the formulation of several hypotheses. This chapter will conclude with a visual conceptualization of the different variables of this study and how they are related to each other. The next and third chapter will discuss the methodology that is used for this study.

2. Theoretical Framework

The theoretical framework will provide an overview of the most important concepts that are part of this study. This is structured in such a way that every concept first elaborates on the existing and fundamental IB literature of the internationalization process, which is mainly based on Multinational Enterprises from developed countries. Afterwards, each concept also discusses how EMNEs tend to differ and what this means with regard to their internationalization process. This results in several hypotheses that will make a prediction about the nature of the most important concepts and relationships within this study. This chapter will conclude with a conceptual model, which visualises these concepts and relationships.

2.1 The internationalization process

A Multinational Enterprise can be defined as: "a firm that produces goods and services in foreign countries with their own employees, as opposed to firms that export to these countries or that license or franchise producers located there" (Hennart, 2012). So, a firm is only a Multinational Enterprise if it internationalizes by physically establishing itself in the host country, as in the case of Foreign Direct Investment (FDI). In order to be able to pursue a successful FDI strategy, going abroad has to come with certain advantages that outweigh the disadvantages. These disadvantages are captured by Hymer (1960) in the so-called 'liability of foreignness'. According to Hymer (1960) setting up operations abroad comes with certain unavoidable costs which firms who are merely operating in their home environment do not encounter. Examples of these costs are higher coordination costs, unfamiliarity with the local culture and other aspects of the local market, lack of information networks and political influences in the hosts country (Zaheer & Mosakowski, 1997). Therefore, you would expect the foreign firm to have a competitive disadvantage when compared to a local firm in this particular country. The competitive disadvantage of the foreign firm is its 'liability of foreignness'. Because of the existence of the 'liability of foreignness', going abroad should also come with certain advantages for the foreign firm. Otherwise the firm would be better off with only operating in its home country.

Dunning's (1980,1988) OLI model tries to explain the rationale of internationalizing by listing three of such necessary and sufficient advantages. The first advantage is referred to as the *ownership advantage*, which includes property rights and intangible asset advantages such as new product technologies and strong brand names (Dunning & Lundan, 2008). If the firm possess an *ownership advantage*, the firm could exploit this advantage by internationalizing by means of licensing. The second advantage is the so-called *internalization advantage*. This means that it is more efficient for firms to exploit their ownership advantages through their own employees than through renting or selling the intangibles to independent foreign firms (Hennart, 2012). In this case licensing is not an option anymore, but with both an ownership advantage and an internalization advantage the firm could choose to export to a particular foreign country. The final and third advantage is the *location advantage*. These advantages arise from using resources that are tied to a particular foreign location and therefore persuade the firm to locate the

production there instead of in the home country. In this case exporting will not suffice anymore since establishing in the foreign country is the only way to capture the location advantages.

Even though, that Dunning's (1980) OLI model has contributed a lot to the IB literature it is mainly based on empirical findings of the DMNE. It is therefore especially his model that has been the topic of discussion since the upcoming of the EMNE. As countries that are classified by economic and technological backwardness they are assumed to import capital, including FDI, rather than export it (Ramamurti, 2012). It has also been argued that EMNEs do not possess ownership advantages since they seem to lack the technology, brand and management advantages that are characterizing for this type of advantage. According to this view EMNEs are characterized by having only 'ordinary resources' (Madhok and Keyhani, 2012). 'Ordinary resources' are referred to as resources that have not been considered to be the source of a firm-specific competitive advantage, for example a low-cost position. It is therefore that these type of resources have not been considered to be a part of Dunning's (1980) model. This would imply that firms from emerging countries do either not internationalize or that the OLI model is not capable to adequately explain the internationalization behaviour of these firms.

Looking at the expansion of EMNEs during the last decades the former is obviously not the case. Therefore, it is more likely that EMNEs do have ownership advantages but of a different kind than we have been conditioned to see in DMNEs (Ramamurti, 2009) and therefore also different than the ones mentioned in the OLI model. EMNEs have, for example, a deep understanding of customer needs in emerging markets, the ability to function in difficult business environments and their ability to make products and services at ultra-low costs (Guillen and Garcia-Canal, 2009; Ramamurti, 2009). So, the lack of the traditional ownership advantages, such as technological or marketing capabilities does not imply the absence of other valuable capabilities that may provide the foundations for a successful internationalization process of EMNEs (Guillen & Garcia-Canal, 2009).

2.1.1 Scope of internationalization

The geographic scope is a critical dimension of the EMNEs international strategy (Arregle, Miller, Hitt & Beamish, 2013). In most cases, the decision to expand in a particular country by means of FDI is irreversible or at least costly to alter, and therefore affects the continuous international development of Multinational Enterprises (Duanmu, 2012). The breadth of geographical coverage of these countries through FDI is referred to as the geographical diversification or scope of internationalization (Luo &Tung, 2007). A Multinational Enterprise which is established through FDI in a lot of foreign countries is more diversified and has a broader scope than a Multinational Enterprise that established itself in few foreign countries. The conventional wisdom of the mainstream IB literature includes a theory that explains the rationale behind this process of international diversification. This process is expected to be

evolutionary, meaning that firms first expand into a country that is most familiar and then gradually and progressively diversify into less familiar countries (Johanson & Vahlne, 1977; Luo & Tung, 2007). This is the case since it is assumed that operating in an environment that is different from the home country is harder and therefore requires more experiential knowledge from previously operating in foreign countries. According to the mainstream IB literature, this would imply that Multinational Enterprises expand in a simple, path dependent way.

EMNEs on the other hand do not necessarily follow this path of expansion, but instead enter those countries that offer opportunities for their products (Luo & Tung, 2007). They tend to invest more in developed countries than into other emerging countries and therefore seem to target countries in the 'wrong sequence' (Ramamurti, 2012). This also contradicts the product life-cycle hypothesis of Vernon (1979), which argues that FDI flows from the developed to the emerging countries. However, there is evidence that EMNEs are forced to enter these developed countries from the beginning of their international expansion (Guillen & Garcia-Canal, 2009). This is a result of the need to balance the desire for global reach with the need to upgrade their capabilities. It is necessary to engage in this capability upgrading process to be able to catch up with their more advanced competitors (DMNEs) (Li, 2007; Mathews, 2006). EMNEs combine the expansion into developed countries with expanding into emerging ones. Entering emerging countries helps EMNEs to gain size and operational experience while entering developed ones contributes to this capability upgrading process (Guillen & Garcia-Canal, 2009). This way of geographical diversification results in a dual expansion path where emerging and developed countries are targeted at the same time. This study therefore assumes that EMNEs are likely to have a broader international scope, since they target more countries in a particular amount of time than would be suggested by the mainstream literature.

2.1.2 Speed of internationalization

Another subject of discussion regarding the mainstream IB literature and its applicability to EMNEs is the internationalization speed. Speed is used as a dynamic aspect which links the state of internationalization with the aspect of time (Chetty, Johanson & Martin Martin, 2014). According to the mainstream MNE literature, firms internationalize gradually, with learning between stages of expansion and increasing commitment to host countries if things go well (Johanson and Vahlne, 1977). This so called, stages model of internationalization implies a sequence of stages which indicate an increasing commitment of resources in the market (Luo & Tung, 2007). Exporting, for example, is a way to operate beyond the national borders of the home country while requiring little commitment, since the firm does not physically establish itself in the host country. Following steps of commitment might be to engage in alliances or joint ventures. The most far reaching commitment is FDI where the firm actually establishes subsidiaries in the host country, for example by means of acquisitions. It is particularly this form of

commitment that is, according to the definition (as mentioned in 2.1), a necessary condition for a Multinational Enterprise. Handling Hennart's (2012) definition, the focus of this study will be on the highest form of commitment in internationalization, the so called FDI. So, according to this model, the firm has to move through several stages before it can engage in the final and highest commitment form, and because of that can be considered as a Multinational Enterprise. Such a process of passing through the different stages of internationalization in sequential order is likely to take some time.

EMNEs again seem to violate the tenets of this existing model. When looking at the outward investment of EMNEs they tend to internationalize relatively rapidly and not in an incremental fashion as the model of Johanson and Vahlne (1977) would suggest (Luo and Tung, 2007). They internationalize through external growth, meaning that they use high commitment entry modes such as acquisitions, rather than beginning with low commitment options such as sales subsidiaries (Madhok & Keyhani, 2012). The strategy of "buying in' accelerates their market entry and the process of internationalization, since the previous stages of the model are skipped and the EMNE immediately engages in the highest form of commitment. This accelerated pace of internationalization of EMNEs is also realized by the use of Greenfield investments. Brazilian MNEs, for example, invested in 36 Greenfield FDI projects abroad in only the first 9 months of 2004 (UNCTAD, 2004). According to Mathews (2006) this accelerated speed of internationalization stems from EMNEs attempt to close the gap between their market reach and the global presence of DMNEs. It is because of skipping these previous stages of Johanson and Vahlne's (1977) model, that the literature on the internationalization of EMNEs suggests a faster internationalization pace when comparing them to the mainstream literature.

It can be concluded that EMNEs tend to differ on several aspects, when comparing them to the mainstream literature on internationalization of Multinational Enterprises. Table 1 gives an overview of the most important differences as mentioned in previous research.

Table 1: Overviews of differences in the internationalization process

	Mainstream (DMNEs) Internationalization Process	**New (EMNEs) Internationalization Process**
Ownership advantages	Traditional	Different
FDI flows	North to South	South to North
Scope of internationalization	Simple and path dependent	Dual and simultaneous
Speed of internationalization	Gradual	Accelerated

Sources: Dunning (1988), Guillén & Garcia-canal (2009), Johanson and Vahlne (1977) and Madhok & Keyhani (2012), Vernon (1797).

2.2 Absorptive capacity

Within the last few years, the importance of knowledge generated outside the firm's boundaries has dramatically increased (Escribano, Fosfuri & Tribó, 2008). There is more and more evidence for the idea that innovation is not so much a result of the knowledge that is generated from internal processes but that the external knowledge flows are the source of innovation (Arora, Fosfuri, Gambardella, 2001; Ireland, Hit & Vaidyanath, 2002; Gans and Stern, 2003). Merely being exposed to these external knowledge flows, however, is not enough. The firm should be able to exploit the knowledge from the external environment. Cohen and Levinthal (1990) argue that the ability to do so is largely result of the level of prior related knowledge and is therefore cumulative. This prior knowledge can for example include basic skills, shared language or the most recent scientific or technological developments in a particular field. Lane et al., (2006) came up with a definition of absorptive capacity by combining the work of Cohen and Levinthal (1990) with new insights. They define absorptive capacity as:

> A firm's ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning (pp. 856)

Previous research has shown that this ability to acquire the external knowledge, is a by-product from the firm's own R&D (Tilton, Evenson & Kislev, Mowery and Allen, as cited in, Lane et al., 2006). Firms who conduct their R&D seem to be better in using externally available information (Sedoglavich, 2008). Cockburn and Henderson (1998) also emphasized the importance of investing in R&D if they want to identify and utilize externally generated knowledge. So, R&D does not only generate innovations and new knowledge but also enhances (Sedoglavich, 2008). It is therefore that R&D intensity is the key indicator of absorptive capacity (Cassiman & Veugelers, 2006; Cohen and Levinthal, 1990).

The mainstream IB literature argues that absorptive capacity is especially key for the Multinational Enterprise (Cockburn and Henderson, 1998). A Multinational Enterprise needs to know what knowledge is required in different international settings and where to seek this knowledge (Eriksson, Johanson, Majkgard & Sharma, 1997). This is the case since entering foreign markets comes with the different ideas and experiences (Barkema and Vermeulen, 1998; Eriksson, Johanson, Majkgard and Sharma, 2000), for example, different business characteristics, institutions and infrastructures (Sedoglavich, 2008). The MNE can then import, understand and assimilate the knowledge via, for example, the suppliers or customers in different foreign markets (Cohen & Levinthal, 1990). The combination of the new accumulated knowledge with the prior knowledge that the MNE already possess, can then again be used in other foreign markets. Thus, absorptive capacity in the context of internationalization refers to transferring prior procedural knowledge about a certain foreign market to another foreign market.

Foreign market knowledge can thus be acquired by a process of experiential learning. According to Johanson and Vahlne (1977) this process of experiential learning is key for the internationalization process of firms. With regard the internationalization process, the basic argument is that firms perform better if they expand into markets related to their prior knowledge base and experience because of the higher absorptive capacity involved in such situations (Barkema & Vermeulen, 1998; Isobe, Makino & Montgomery, 2000; Ahuja & Katila, 2001). Thus, the appropriate use of experience and knowledge that is acquired in the past, improves the successful further persuasion of the internationalization process. However, this also means that a lack of knowledge about foreign markets is an obstacle for the internationalization of firms. Previous research supports the importance of foreign market knowledge, and with that also the importance of absorptive capacity. Research by Lane and Lubatkin (1998) showed that internationalization is a cumulative process, in which prior experiences form the foundation for an ongoing business and which includes learning and accumulating knowledge. Research by Sedoglavich (2008) also emphasized the positive effect of absorptive capacity on the internationalization process.

There are several reasons why EMNEs seem to be successful in seeking an acquiring such procedural knowledge. Their home country environments have provided them with a training ground on how to

acquire external knowledge beyond organizational boundaries. This is the case since their home countries are known for their dynamic competitive environments and unique institutional settings which forced them to develop unique ways of learning an acquiring new knowledge before investing overseas (Cuervo-Cazurra & Ramamurt, 2014; Liu & Giroud, 2016). This would imply that EMNs have sufficient prior knowledge before entering foreign markets. Besides, EMNEs have had to learn from and compete with well-established MNEs that established themselves in their home country (Lu, Liu, Filatotchev & Wright, 2014). Therefore, they also developed unique learning capabilities and accumulated knowledge that can be used in international operations. So, the contextual factors of their home base has influenced EMNEs' knowledge-seeking objectives in their internationalization patterns and enabled them to successfully manage international knowledge acquisition when going abroad (Liu & Giroud, 2016).

So, the EMNEs unique characteristics seem to enable them to successfully seek and acquire the knowledge that is necessary to develop absorptive capacity. This implies that they possess sufficient experiential knowledge when expanding abroad. It is this experiential knowledge that, according to Johanson and Vahlne (1977), positively affects the further international expansion. Therefore, this leads to the following hypotheses:

H1a: *Absorptive capacity positively affects to the EMNEs scope of the internationalization*
H1b: *Absorptive capacity positively affects to the EMNEs speed of internationalization*

2.3 Cross-listing

The internationalization process of MNEs involves growing on an international scale. A strategic decision by which this growth can be realized is the so-called cross-listing (Peng & Su, 2014). When the MNE is cross-listed, it is not only listed on the stock exchange in the domestic market but also in a foreign market (Baker, Nofsinger & Weaver, 2002). There are several reasons why Multinational Enterprises would choose to grow by means of cross-listing. First of all, cross-listing enables them to raise external capital at lower costs (Khuruna, Martin & Pereira, 2007; Reese & Weisbach, 2002; Lins, Strickland & Zenner, 2005). The fact that cross-listed Multinational Enterprises are able to raise capital from investors located in a variety of foreign markets also enables them to spread the risk of foreign investing over several geographical locations (Banalieva & Robertson, 2010). Additionally, cross-listing is beneficial since it increases investor recognition of the stock of the firm (Fanto & Karmel, 1997). Besides investor recognition it also enhances investor protection since the firm is 'bonding' to the legal and regulatory regime of the host country (Burns, Francis & Hasan, 2007). It is because of these advantages that cross-listing has been an increasing trend among Multinational Enterprises who want to access international markets (Claessens, Klingebiel & Schmukler, 2006; Banalieva & Robertson, 2010).

Cross-listing has especially been a popular instrument for EMNEs (Peng & Su, 2014). In 2011, for example, the capital raised by cross-listed firms was dominated by firms from emerging countries, especially the BRIC countries (Brazil, Russia, India and China), and accounted for $16.6 billion (Citibank, 2011). So, the majority of firms who are cross-listed in developed markets stem from emerging countries (Peng & Su, 2014). As shown in Table 2, the leaders of the top 10 cross-listed countries in the U.S. and the U.K., are China and Russia respectively.

Table 2: The percentage of cross-listed firms from the top 10 countries among all cross-listed firms on the U.S. and U.K. financial markets.

U.S. Markets in 2011		**U.K. Markets in 2011**	
China	30%	Russia	26%
U.K.	11%	India	17%
Brazil	8%	Taiwan	8%
Japan	5%	Egypt	6%
Mexico	5%	Korea	6%
Argentina	3%	Poland	5%
India	3%	Kazakhstan	5%
Chile	2%	Lebanon	3%
France	2%	Bahrain	2%
Netherlands	2%	Pakistan	2%

Source: Citibank Universal Issuance Guide (as cited in Peng and Su, 2014).

These EMNEs use cross-listing to fuel their internationalization process by establishing a financial foothold in foreign markets (Durand, Gunawan & Tarca. 2006). Therefore, Peng and Su (2014, p47) argue that: "cross-listing may facilitate the further expansion of the geographic scope of the firm". They argue so since cross-listing is likely to attract positive coverage by analysts and journalists and at the same time enhance is visibility and reputation. In turn this may result in positive spill-overs to product market sales and helps the EMNE to win more global customers (Hasan, Kobeissi & Wang, 2011; Khanna & Palepu, 2004). Additionally, low-cost foreign capital enables firms to invest in potentially profitable projects (Khuruna, Martin & Periera, 2007) which is likely to result in more growth and a broader geographic scope.

Cross-listing especially facilitates the geographic scope of EMNEs who cross-list in developed countries. (Peng and Su, 2014). Arguments that support this reasoning concern the fact that in this case, EMNEs have to meet the stringent listing requirements in developed markets. In order to accomplish this, cross-listed EMNEs have to promote themselves in such a way that they look more competitive than firms back home who are not cross-listed. Consequently, EMNEs gain a better reputation and legitimacy in the host country (where the cross-listing takes place). Siegel (2009) researched Mexican firms who cross-listed their Mexican shares on a U.S. exchange. The majority of these firms succeeded in building large scale reputational assets. The fact that these firms attract more attention and obtain a better reputation results in more opportunities for the Mexican firm in the U.S. This is especially beneficial when firms in the U.S. are, for example, seeking potential alliance partners, suppliers and customers. These opportunities in turn may lead to an expansion of the scope of the cross-listed firms (Hasan et al., 2011).

Besides the scope of the internationalization, cross-listing is also likely to affect the speed of internationalization since it influences the entry mode that the firm uses to expand internationally. Several researches showed that cross-listing facilitates more mergers and acquisitions (M&A's) in foreign countries (Burns, Francis & Hasan, 2007; Kumar & Ramchand, 2008). This is the case since shares traded on the foreign stock exchange can be used to acquire targets in this particular country, which is not the case for the shares traded on the stock exchange in the home country (Peng & Su, 2014). Additionally, "there is less disagreement about the intrinsic value of the acquirer's equity" (Tolmunen & Torstila, 2005, p.124), resulting in reduced information asymmetries between acquirer (the EMNE who is cross-listed) and the target (the firm in the host country) (Peng & Su, 2014). According to Johanson and Vahlne (1977) entering a foreign country by means of acquisitions, is the final stage of the model and with that the highest form of commitment to the host country. When the EMNE enters the host country by means of acquisitions it skips the former stages of the model. Previous research has already shown that EMNEs in general internationalize faster than the mainstream IB literature would suggest (Madhok & Keyhani, 2012; Mathews, 2006; Luo and Tung, 2007). It is therefore assumed that cross-listing will further enhance the tendency of EMNEs to skip the earlier stages of Johanson and Vahlne's (1977) model and with that have a positive relationship with the speed of internationalization. This leads to the following hypothesis:

H2a: *Cross-listing positively affects to the EMNEs scope of internationalization*
H2b: *Cross-listing positively affects to the EMNEs speed of internationalization*

2.4 The institutional environment

Organizational activities are embedded in broader institutional environments. This institutional environment is composed out of regulative, normative and cognitive institutions (Kostova & Zaheer, 1999). Institutions are defined by North (as cited in Voinea & Kranenburg, 2017): "the rules of the game in a society or, more formal, are the humanly devised constraints that structure political, economic and social interaction". Scott (2001) added to this definition of institutions by arguing that they are multi-faceted, durable structures that are composed of regulative, normative and cultural cognitive elements. These elements together with associated activities and resources guide behaviour and provide stability and meaning to social life. Scott's (2001) definition categorizes institutions into three pillars: the regulative, normative and cognitive pillar. Regulatory institutions have the ability to establish rules and monitor the compliance with these rules. With regard to compliance, institutions also have the power to sanction, reward or punish. Examples of these kinds of institutions are formal rules governance systems, protocols, laws and incentive structures (Voinea & Kranenburg, 2017). The normative pillar includes a prescriptive, evaluative and obligatory dimension. Examples of normative institutions are for example codes of conducts, values and norms. Finally, the cultural cognitive institutions are the shared conceptions that constitute the nature of social reality and the frames through which meaning is made. Cultural-cognitive institutions are for example; priorities, problem agendas, paradigms and models of reality (Voinea & Kranenburg, 2017).

The institutional theory emphasizes the ability of the institutional environment to exert pressure on organizations in such a way that they conform to practices, policies and structures that are consistent with the preferences of these institutions (Meyer & Rowan, 1977). It is necessary that firms conform to these pressures if they want to receive support and legitimacy from the institutional environment, which is a precondition for their survival (Scott, 1987; Kostova & Zaheer, 1999; Xu & Shenkar, 2002). Kostova and Zaheer (1999) explain that firms are rewarded when they conform to these pressures, resulting in more legitimacy, resources and survival capabilities. In contrast, failure to conform to these pressures adversely affects their legitimacy. In this way institutional forces affect organizational processes, behavior and decision making (Hoskisson, Eden, Lau & Wright, 2000). It is because of the impact that institutional environments have on firms that the it has been widely accepted within the international business studies (North, 1990; Scott, 2008).

The development of the institutional environment differs for each country since it is a complex and lengthy process, meaning that it is shaped by a country's history, political and social systems and culture (Khanna & Palepu, 2010). The role of the institutions, which form this institutional environment, is to reduce both the transaction and information costs in the economy of a country and therefore reduce the uncertainty and establish a stable structure that facilitates interactions (Hoskisson, Eden, Lau and Wright, 2000). It is especially on this aspect of institutions that emerging countries often differ from

developed ones. The presence and functionality of institutions is not so self-evident in emerging countries. They have developed some of these institutions but are still frequently missing a lot of important intermediaries which are very helpful when doing business (Khanna & Palepu, 2010). The absence of specialized intermediaries, regulatory systems and contract-enforcing mechanisms in emerging countries is referred to as "institutional voids" (Khanna, Palepu & Sinha, 2005). Khanna and Palepu (2010) researched the classification of different countries and the corresponding institutional voids. They found a continuum which shows a relationship between countries and their institutional voids. The continuum confirms that emerging countries consist out of significantly more institutional voids than developed countries. Figure 1 shows a visualization of this continuum.

Figure 1: continuum of institutional voids and country classification

Source: Khanna & Palepu (2010)

2.4.1 Institutional Distance

The degree by which countries differ in terms of their institutional environments, can be measured with the so called, institutional distance (Kostova & Zaheer, 1999). Kostova (as cited in Kostova & Zaheer, 1999) defines institutional distance as: "the extent of similarity or dissimilarity between the regulatory, cognitive, and normative institutions of two countries" (p.71). Institutional distance has been extensively researched within the mainstream IB literature (Demirbag & Yaprak, 2015 ; Berry, Guillen & Zhou, 2010; Eden & Miller, 2004; Kostova, 1997; Xu and Shenkar, 2002). Operating in a particular country means that firms have to be embedded in the country's institutional environment and at the same time face the distinct challenges and opportunities that derive from this institutional environment (Dunning & Lundan, 2008). The Multinational Enterprise, however, operates in multiple countries which may vary with respect to their institutional environments and are therefore exposed to multiple sources of pressure that they have to comply with (Sundaram & Black, 1992). These different pressures make the establishment and maintenance of the legitimacy in their multiple host environments a critical issue (Kostova & Zaheer, 1999). Especially since the difficulty of dealing with these different pressures increases when the institutional distance increases (Eden & Miller, 2004, Xu & Shenkar, 2002). At the same time, the mainstream IB literature suggests that institutional distance makes it harder for the Multinational Enterprise to practice a global integration strategy, because the transfer of strategic routines between the parent and its subsidiaries becomes more complicated (Kostova & Roth, 2002).

Finally, it is also more difficult to adapt entry strategies, organizational routines and internal procedures when dealing with institutional distance (Johansen and Vahlne, 1977; Ionascu, Meyer & Erstin, 2004). Research by Dikova, Sahib & Witteloostuijn, (2010) supports the difficulty of dealing with institutional distance by showing that it results in a decreased ability of the Multinational Enterprise to successfully complete acquisitions in foreign countries. As mentioned in section 2.1, foreign acquisitions are the highest form of commitment within Johanson and Vahlne's (1977) stages model of internationalization. Therefore, it is assumed that institutional distance with its negative affect on foreign acquisitions, also negatively impacts the internationalization process.

Even though the logic of the mainstream IB literature suggests that institutional distance raises problems when choosing countries for expansion, EMNEs do not seem to encounter these (Gaffney, Karst & Clampit, 2016). It has even been speculated that institutional distance in general is perceived differently by EMNEs than the mainstream IB literature on DMNEs would suggest (Petersen & Seifert, 2014). The mainstream IB literature argues, for example, that institutional distance decreases the aggressiveness of traditional MNEs in foreign acquisitions (Pan & Tse, 2000). EMNEs, however, do not seem to be 'frightened' by institutional distance and it does not negatively affect their aggressiveness in foreign acquisitions (Aybar & Ficici, 2009). This makes sense since EMNEs are latecomers on the global stage and they need to catch up with their incumbents (Luo and Tung, 2007). Therefore, they are forced to accelerate their pace of internationalization and doing so requires the use of high commitment entry modes such as foreign acquisitions. By using such entry modes, they can create space for themselves in developed markets, which are already saturated with very capable DMNEs. At the same time, this type of entry mode enables them to acquire strategic assets from their precedents. Finally, moving into countries that are institutionally distance implies moving into developed countries where institutional environments are better and institutional voids are less or absent (Khanna & Palepu, 2005). Taking all this together, it seems that institutional distance comes with positive spill-overs for EMNEs instead of the negative spill-overs that the mainstream IB literature suggests. Therefore, this study assumes that there is a positive relationship of institutional distance on the Scope and Speed of the EMNEs internationalization. This results in the following hypothesis:

H3a: *Institutional distance positively effects the EMNEs scope of internationalization*
H3b: *Institutional distance positively effects the EMNEs speed of internationalization*

2.4.2 Institutional Distance as a moderator

As mentioned before, institutional distance is assumed not influence the internationalization process of EMNEs in a direct manner. However, it is possible that this variable affects the relationship between two other variables in the model. In this case, Institutional Distance can be referred to as a moderator (Field, 2013). This might be the case since institutional settings of countries have implications for the way in which absorptive capacity can be developed and applied within the process of expansion. The reasoning behind this is that it is easier for firms to expand into countries related to their prior knowledge base and experience because these situations are known for high absorptive capacity (Arregle, Miller, Hitt & Beamish, 2016). So, because of the cumulative knowledge development of absorptive capacity, there is a certain level of proximity between old and new knowledge (Arregle, Miller, Hitt & Beamish, 2013). When the EMNE moves into distant countries, it has to familiarize itself with new customers, build relationships with new suppliers, identify and understand new competitors, et cetera (Ghoshal and Bartlett, 1990). In addition, subsidiaries in different circumstances ask for different organizational systems and processes (Arregle, Miller, Hitt & Beamish, 2016). Therefore, the EMNE cannot rely as extensively on prior related knowledge, and with that on its absorptive capacity, as in the case of similar countries.

Even though that EMNEs seem capable to take advantage of the positive spill-overs that come with institutional distance, this distance might not be so beneficial for the EMNEs absorptive capacity which they practice during their internationalization process. Expanding into distant countries complicates the development and application of experiential knowledge (Arregle, Miller, Hitt & Beamish, 2013, which is a crucial element for absorptive capacity. The lack of this experiential knowledge is in turn an obstacle for their further expansion into developed countries. So, though EMNEs normally seem to possess capabilities for the successful development and application of absorptive capacity, in cases of institutional distance this success is not so self-evident. It is therefore assumed that institutional distance impacts the relationship of absorptive capacity on the internationalization process in such a way that this relationship becomes less positive. This leads to the following hypothesis:

H4a: *institutional distance negatively impacts the relationship between absorptive capacity and the scope of internationalization*

H4b: *institutional distance negatively impacts the relationship between absorptive capacity and the speed of internationalization*

Besides the moderating role of institutional distance on the previous mentioned relationship, it might also moderate the relationship between cross-listing and the EMNEs internationalization. This might be the case since the relationship between cross-listing and internationalization might change depending on the institutional distance. As mentioned before, cross-listing is especially used when EMNEs expand into developed countries (Peng and Su, 2014). In these situations, EMNEs are said to use cross-listing to overcome this institutional distance. According to (Bell & Rasheed, 2012) cross-listed firms are able to bond to the stricter enforcement and litigation environments which will decrease the institutional distance between the corporate laws and governance of different countries. Therefore, it is assumed that situations in which institutional distance is present, the relationship between cross-listing and the internationalization process is stronger.

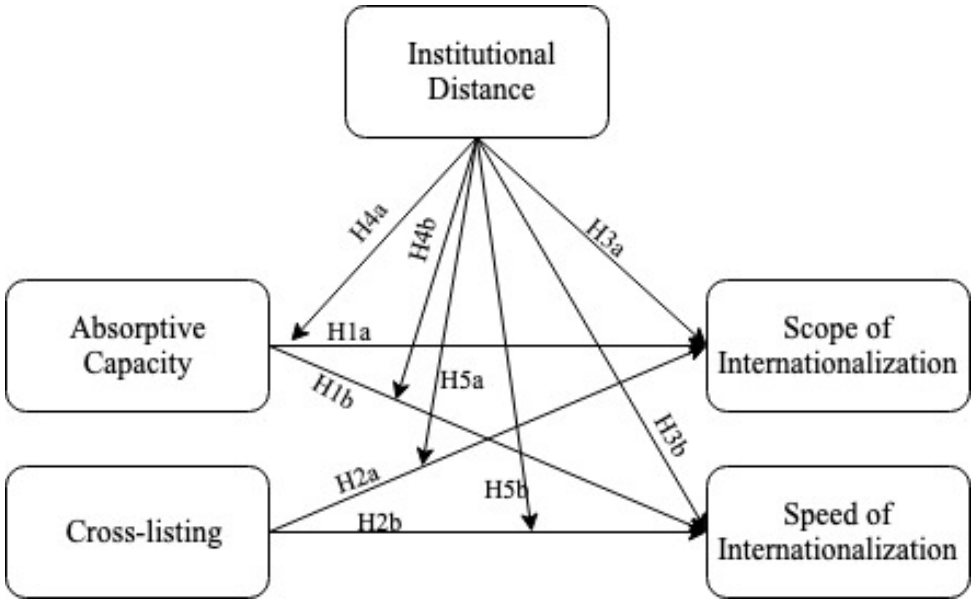
H5a: *Institutional Distance positively impacts the relationship between cross-listing and the EMNEs scope of internationalization*

H5b: *Institutional Distance positively impacts the relationship between cross-listing and the EMNEs speed of internationalization*

2.5 Conceptual model

The conceptual model of this study visualizes the core concepts of this study and their relationships. Additionally, the model shows the hypotheses about these relationships and which are formulated in the theoretical framework. The conceptual model is represented in figure 2.

Figure 2: Conceptual model



3. Methodology

This chapter will elaborate on the data that has been used to carry out this study. The first two paragraph will discuss the collection and selection of the data. The following paragraph defines the variables of this study and how they are measured. Paragraph 3.4 will discuss the analytical tool that will be used. Finally, the research ethics with regard to this study will be highlighted.

3.1 Data

The data that is used to test the hypotheses as formulated in chapter two is mainly derived from Orbis. All the variables of this study are based on data from Orbis, except the data for the variable 'institutional distance. Orbis integrates a numerous amount of databases from Burau van Dijk. This results in data on 200 million companies worldwide, which contains 90 million European companies and more than 70,000 companies that are listed on diverse stock exchanges worldwide. Orbis provides mainly company specific information such as country specific assets, number of employees and financial data. The data for the variable 'institutional distance is derived from the World Governance Indicator Project of the World Bank Group. The WGI data is very comprehensive and provides scores for more than 200 countries. The project uses over 30 individual data sources produced by multiple service institutes, think tanks, non-governmental organizations, international organizations and private sector firms. It is therefore that the WGI Data is frequently used for research that concerns institutional aspects.

So, to execute this study on the internationalization of EMNEs, data from Orbis is used. To assess the internationalization of these EMNEs this study looks at foreign subsidiaries. However, foreign subsidiaries are not built overnight and it is likely that such a process takes several years. The year 2017 provided the most recent available data and therefore this year was chosen as the year in which the dependent variables are measured. The year 2010 has been chosen for the independent variables since the Orbis databases from before 2010 are different and less extensive. This means that a dataset from before 2010 might not contain variables that are used within the dataset of 2017. In this case it would not be possible to measure the effect of the independent variables (as noted in 2010) on the dependent variables in 2017. Therefore, data from both the year 2010 and from the year 2017 has been withdrawn from Orbis.

3.2 Data selection

This study focusses on Multinational Enterprises from emerging countries. Therefore, it is important to have an overview of countries that are classified as emerging ones. There are several institutes and scholars that provide such a classification of emerging countries. The different lists of classifications will be compared to one another in order to decide which countries will be used for this study. Hoskisson, Wright, Filatotchev and Peng (2013), for example, classified sixty emerging countries based on an institution and an infrastructure score. However, a classification of sixty countries is still too generic and extensive to include in this study for practical reasons. Besides, there are some countries that are classified by Hoskisson et al., (2013) as emerging but which score relatively high on both aspects indicating that they are more developed than countries with a lower score. It is likely that such countries have only developed further the last couple of years and therefore might not be categorized as emerging countries anymore. Israel and South-Korea, for example, were countries that were classified as emerging ones by Hoskisson et al., in 2013. However, three years later Moon, Mishra, Mishra and Kang (2016) classified them as developed countries. Therefore, it might be more accurate to use more recent and narrower classifications.

Another list of classifications is developed by Morgan Stanley Capital International (MSCI, 2016). MSCI is an independent provider of indexes of all kinds of financial topics. They set up a list of 23 emerging countries across four regions in the world. The institute FTSE Russel (2016) also classified 23 emerging markets. FTSE Russel provides analytics, data solutions and indices for major financial markets. They use different categories for the classification of the different markets. They distinguish between developed countries, advanced emerging countries, secondary emerging countries and frontier countries. For this study only the advanced emerging countries and the secondary emerging countries are relevant.

It can be concluded that both FTSE and MSCI provide accurate classifications since their classifications are used in several other studies regarding emerging markets (Kearney, 2012; Kim & Song, 2016; Bekaert & Harvey, 2017). Comparing the classifications of MSCI and FTSE shows that they are very similar. The only difference is that MSCI includes Korea while FTSE does not and FTSE includes Pakistan while MSCI does not. Since there is no consensus on both countries it has been decided to leave Korea and Pakistan out of this study. This results in the following selection of 22 countries:

Table 3: Classification of Emerging Countries

	Emerging Countries	
America	**Europe, Middle East, Africa**	**Asia**
Brazil	Czech Republic	China
Chile	Egypt	India
Colombia	Greece	Indonesia
Mexico	Hungary	Thailand
Peru	Poland	Malaysia
	Qatar	Philippines
	Russian Federation	Taiwan
	South Africa	
	Turkey	
	United Arab Emirates	

Source: MSCI (2016) & FTSE (2016)

3.3 Variables

The following section will elaborate on the variables that are included in this study and how they will be measured. This paragraph concludes with an overview of the operationalization of the different variables in this study, as shown in table 3.

3.3.1 Dependent variables

The subject of this study is Multinational Enterprises from emerging countries. For a firm to be a considered as a Multinational Enterprise it has to produce goods and services in the foreign country with own employees, as opposed to firms that export to these countries or that license or franchise producers located there (Hennart, 2012). So, the firm is only a Multinational Enterprise if it establishes in the foreign country, for example by means of FDI. The establishment of these EMNEs in foreign countries is therefore measured by their foreign subsidiaries. However, only foreign subsidiaries where the EMNE has a 51 percent or higher participation are included since this is considered as a majority ownership (Chibber & Majumdar, 2005). This is the case since a 51 percent ownership holding gives the EMNE the chance to implement ordinary resolutions without recourse to the votes of other sympathetic supporters.

With regard to the direction of these FDI outflows EMNEs tend to violate the mainstream IB literature. According to the product life cycle hypothesis (Vernon (1979), FDI should flow from developed to the less developed countries. However, EMNEs contradict this since, evidence shows that the FDI of EMNES into developed countries has significantly risen in the recent decades (Zheng, Wei, Zhang & Yang, 2016; Buckley, Elia & Kafouros, 2011). Research by Bertoni, Elia and Rabbiosi (2008) also showed that FDI from, for example the BRICS, is mainly focused on Western Europe. The Western European countries that are targeted the most are: Great Brittan (17.03%), Germany (10.07%), France (6.47%) and Italy (4.32%). Since EMNEs again seem to violate the IB literature on this aspect and the BRICS are part of the countries selected within this study, the dependent variables will be measured by their foreign subsidiaries in Great Brittan, Germany, France and Italy.

3.3.1.1 Scope of internationalization

As mentioned in the previous section, the dependent variables are captured by measuring the EMNEs foreign subsidiaries. The internationalization process, which is the dependent variable, is captured within this study by means of two dimensions. The spatial dimension is measured by the scope of internationalization, as also motioned in section 2.1.1. According to Luo and Tung (2007) the scope of internationalization can be captured with the geographical coverage of countries by means of outward FDI (Luo & Tung, 2007). To be able to measure this, Orbis provided this study with data that shows which EMNEs have foreign subsidiaries in the previous mentioned European countries, and how many.

So, for example, an EMNE that has 150 foreign subsidiaries in Great Brittan, Germany and France has a broader scope than an EMNE that has 50 foreign subsidiaries in Great Brittan and Italy. This data stems from the year 2017, since the aim is to measure what the effect is from the independent variables as measured in 2010 on the internationalization of the firm in 2017.

3.3.1.2 Speed of internationalization

The second dimension of internationalization is its speed. The speed of internationalization has been used as a dependent variable in several other studies. According to Chetty, Johnson and Martin Martín (2014), the extant literature does not properly conceptualize or measure speed of internationalization, resulting in no systematic empirical evidence on speed. Studies that do operationalize speed are for example the study by Satta et al., (2014), who operationalized the speed by the average number of overseas subsidiaries by each MNE per year in the time frame of 2002-2011. Vermeulen and Barkema (2002) measure speed of internationalization by the number of foreign subsidiaries divided by number of years since the firms first foreign expansion. However, Orbis does not enable the withdrawal of historical data and also contains no information of the firms first foreign expansion. Therefore, this study includes the foreign subsidiaries from the year 2010 and the foreign subsidiaries for the year 2017, by running the 2010 version of Orbis and the 2017 version. To be able to determine the speed of internationalization, the amount of foreign subsidiaries in 2010 will be subtracted from the foreign subsidiaries in 2017. The resulting amount will indicate the increase of the number of foreign subsidiaries in the seven-year time frame, assuming a more or less linear increase. More foreign subsidiaries during this period, means a higher speed and a higher state of internationalization.

3.3.2. Independent variables

The independent variables are expected to explain the variance in the dependent variables of the internationalization process. The independent variables are mainly derived from previous research to ensure that these variables are accurately measured. The upcoming sections will elaborate on how these independent variables are measured within this study.

3.3.2.1 Absorptive capacity

Absorptive capacity can be captured by different measures as shown by previous research. Commonly used measures are R&D intensity (Cohen & Levinthal, 1989, 1990), staffing of the R&D department (Cassiman & Veugelers, 2002) and human capital (Mowery and Oxley, 1995; Keller, 1996). Escribano, Fosfuri and Tribó (2008) combine the R&D expenses, fully staffed R&D department, training for R&D personnel and the ratio of scientists and researchers to total employees. Since Orbis does not provide any data in terms of personnel or expense on training, this study will only use R&D intensity. R&D intensity is defined as R&D expenses divided by the total sales (Cohen & Levinthal, 1989). So, to be

able to measure R&D intensity, Orbis provides this study with data from the R&D expenses and the total sales of MNEs in the year 2010.

3.3.2.2 Institutional Distance

Van Hoorn & Maseland (2014) already investigated institutional distance by using six indicators. These World Governance Indicators are derived from the World Bank. The WGI project scores different countries on the following indicators: Voice and Accountability; Political Stability; Government Effectiveness; Regulatory Quality; Rule of Law; and Control of Corruption. The sum of these variables indicates the institutional development of the particular country. The data that will be used to measure this variable will be from the year 2010. This is the case since the data from the other independent variables, which were withdrawn from Orbis, were also from the year 2010. Besides the direct relationship between institutional distance and the internationalization process, it is also assumed that institutional distance functions as a moderator on the relationship of absorptive capacity and cross-listing on the internationalization process.

To make sure that these six indicators are a reliable measurement of the variable 'institutional development', Cronbach's alpha is used. With Cronbach's alpha it can be measured whether correlations of these six indicators are strong enough to make the construct "institutional development", Cronbach's α is used. Cronbach's α asses the internal consistency of the indicators, meaning that all the indicators are measuring the same construct and thus are highly correlated (Hair et al., 2010). The common threshold for Cronbach's α is that it has to be equal to or greater than .7. In this case the internal consistency of the multi-item measure is acceptable (Hair et al., 2010). Appendix 1 shows the SPSS output of this reliability analysis. It can be seen that Cronbach's alpha has a value of .942. This value is higher than the threshold of .7, indicating that the correlations of these indicators are strong enough to measure the construct "institutional development".

After establishing that these indicators can be used, the institutional distance variable can be constructed. Institutional Distance was defined as the extent of similarity or dissimilarity between the regulatory, normative and cognitive institutions of both countries (Kostova,1999). Therefore, the difference between these institutional development score of two countries, indicates its institutional distance. This study focusses on the subsidiaries of the EMNEs in four developed countries, which are Italy, Germany, United Kingdom and France. Therefore, the distance has been measured by looking at the institutional development score of the home country of the EMNE and subtracting this from the institutional development of the host country in which it is embedded (Appendix 1). To illustrate this, we will discuss an example of a Taiwanese EMNE with a subsidiary in France. Taiwan has a score of 5.74 on institutional development, while France has a score of 7.61. The difference between these scores is 1.87. This means that the institutional distance between Taiwan and France is 1.87 and this value will be assigned to the Taiwanese EMNE. However, there are also EMNEs that have subsidiaries in more than

one of these developed countries. In these cases, the score with the highest distance has been used. This has been done since previous literature assumes that it is easier to overcome cases of lower distance than cases of high distance. So, it is assumed that if the EMNE can overcome a distance of 5.45 it can also overcome a distance of 2.63. When the average of both scores would have been taken, the highest score would become less and with that a little bit of distance would have been lost.

3.3.2.3 Cross-listing

According to the definition of Baker, Nofsinger and Weaver (2002) the EMNE cross-lists when they list their stock on their domestic market and outside of their domestic market. To see whether this is the case for the selected EMNEs, Orbis provides data about the main and secondary stock listing of the these particular EMNEs and the corresponding country codes. With this information it is possible to see whether a EMNE is cross-listed or not. Cross-listing is therefore a nominal variable: the MNE is either 'cross-listed' or 'not cross listed'. Since this variable does not consist of quantifiable data, it cannot be used within SPSS. However, it is possible to include a categorical predictor in a regression model when there are only two categories. This can be done by coding the variables and with that turning them into a dummy variable (Field, 2013). Dummy variables are made by coding a baseline category with a 0 and the other category with a 1. Thus, in this case there are two categories, the baseline category is 0 for 'not cross-listed' and the 'cross-listed' category is assigned with 1.

3.3.3 Control variables

Control variables are used to ensure the validity and reliability of a study (Field, 2013). The first control variable that will be used within this study is the profitability. This is the case since it can be argued that a EMNE with a higher profit has more resources that can be used to expand abroad than a firm with a lower profit. Orbis provides this study with profitability data by means of the EMNEs profit margin in the year 2010. Secondly, this study will include the control variable of firm size. This is the case since it can be argued that a bigger EMNE has more access to resources than a smaller EMNE and this in turn might influence the options it has to use these resources when expanding into foreign countries. To assess the size of the firm, Orbis will provide this study with the number of employees of the EMNE in the year 2010.

Table 4: Overview of the definition and operationalization of variables

Variable	Definition	Operationalization	Hypotheses
Dependent Variable			
Scope of internationalization	The EMNEs geographical coverage of countries by means of outward FDI (Luo & Tung, 2007).	Number of foreign subsidiaries in 2017	
Speed of internationalization	The dynamic aspect that links the state of internationalization to the aspect of time (Chetty, Johanson & Martin Martin, 2014).	The increase in number of foreign subsidiaries between 2010 and 2017	
Independent Variable			
Absorptive capacity	The ability of the EMNE to assess the value of new information, assimilate it and apply it to commercial ends. (Cohen & Levinthal, 1990; Lane et al., 2006)	R&D intensity: R&D expenses divided by total sales	**H1a** **H1b**
Cross-listing	Situation in which EMNEs list their stock on their domestic market and outside of their domestic market (Baker, Nofsinger and Weaver, 2002)	A dummy variable by which: 0 represents not cross-listed 1 represents cross-listed	**H2a** **H2b**
Institutional distance	The extent of similarity or dissimilarity between the regulatory, cognitive and normative institutions of two countries (Kostova, 1999).	The sum of the country's score on the six WGI indicators. The distance indicated by the difference between the score of the host and home country	**H3a** **H3b** **H4a** **H4b** **H5a** **H5b**
Control Variable			
Profitability		Profit margin	
Size		The number of employees	

3.4 Analytical Technique

The hypotheses which are formulated in this study, will be tested by using a multiple regression analysis. This analytical technique can be used to measure the variance that the independent variables produce in the dependent variables (Hair et al., 2010). It is important to state that only metric variables can be incorporated in this analytical technique. The independent variables institutional distance and absorptive capacity are indeed both metrical. Cross-listing is a non-metrical variable since the EMNE is either 'cross-listed' or 'not cross-listed'. To be able to incorporate this variable, it has been transformed into a metrical variable by means of a dummy variable. This dummy variable can now act as a replacement for the original independent variable (Hair, Black, Babin & Anderson, 2010). Both dependent variables, scope and speed of internationalization, are also metric variables and can therefore be used in this study.

These different variables are used to perform a multiple regression analysis. The general form of a multiple regression analysis can be represented as follows (Hair et al., 2010):

$$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \ldots + \beta_kX_k + \varepsilon$$

In which Y represents the dependent variable and the β_0 represents the intercept. Additionally, the X's represent the different independent variables and their corresponding β represents their coefficient slope. Finally, the 'e' stands for the error term. When incorporating the variables of this study, the equation will look as follows:

$$Y= \beta_0 + \beta_1SIZE + \beta_2PROFIT_i + \beta_3DISTANCE_i + \beta_4CROSSDUMMY_i + \beta_5RDINTENSITY_i + \beta_6 RDINTENSITY*DISTANCE_i + \beta_7CROSSDUMMY*DISTANCE$$

The primary predictor variables within this equation are absorptive capacity, captured by 'ABCAP', institutional distance captured by 'DISTANCE' and cross-listing captured by 'CROSSDUMMY'. The moderator effect of institutional distance is formulated by 'RDINTENSITY*DISTANCE'. The remaining 'PROFIT' and 'SIZE' are the control variables within this study. They are incorporated as covariates since both are metrical variables. With regard to the dependent variable Y, the equation shows that there can only be one dependent variable. However, this study includes two dependent variables, namely the scope and speed of the internationalization process. Therefore, the multiple regression analysis will be performed twice, once with the scope as dependent variable and once with the speed as dependent variable. To be able to successfully perform this multiple regression analysis several assumptions have to be met (Hair et al., 2010). These assumptions cover four different areas: (1) Linearity of the phenomenon measured, (2) Constant variance of the error terms, (3) Independence of the error terms, (4) Normality of the error terms. The assessment of these assumptions will be further discussed in chapter four.

3.5 Research Ethics

The data that is used for this study is derived from the Orbis Database and from the WGI project of the World Bank Group. The data will therefore not be collected by the researcher but has already been collected. Consequently, the researcher has had no influence on the way in which the data was collected. However, both Orbis and the Wolrd Bank Group are well renowned and acknowledged organizations for the collection of data. Therefore, it can be assumed that the collection of this data happened in an ethical and responsible manner. Additionally, the data used for this study is freely available and will therefore not cause any harm to the involved parties in terms of privacy. With regard to the ethics of the researcher of this study, it can be assured that the data has not been manipulated. Data that turned out not to be accurate has been excluded and the results of this study are genuine.

4. Results

4.1 Sample description

After withdrawing the data from Orbis 2010 and 2017, 197 EMNEs of the selected countries (as mentioned in section 3.2) provided the appropriate data and therefore compose the sample of this study. The majority of these EMNEs stem from Taiwan, since they account for 57,6% of the total sample. Subsequently, Chinese EMNEs are mostly represented within the sample accounting for 19.7% of the total. Some countries, such as Indonesia, and the United Arab Emirates are only represented by one EMNE. Some of the 22 countries as selected in section 3.2 are not represented by this sample. Examples of these countries are Thailand, Russian Federation, Qatar and remarkably all the countries that were selected from America (Brazil, Chile, Mexico, Colombia and Peru). Table 5 represents all the countries that were included in the sample of this study and the number of EMNEs that stem from each country.

Table 5: Sample summarization

Country	**Number of EMNEs**
United Arab Emirates	1
China	39
Egypt	1
Greece	2
Hungary	1
Indonesia	1
India	17
Philippines	2
Poland	7
Turkey	6
Taiwan	114
South Africa	7
Total sample	198

When extracting the EMNEs for this sample, Orbis also provided each EMNE with a NACE code. This code is a four-digit classification which provides the framework for collecting and presenting a large range of statistical data according to economic activity codes are similar to the ISIC codes which are also an acknowledged representation of industries (https://ec.europa.eu). So, these codes represent the main industry or sector in which a particular EMNE is active. The first two numbers of the NACE code

represent the department. These different departments are in turn part of bigger economic industry which is represented by a letter. For example, if a company has the following NACE code: 2620, then the first two numbers (26) represent the department "manufacture of computer, electronic and optical products". As a result, this EMNE falls under the main industry "Manufacturing", represented by the letter C. All the EMNEs within this sample have a NACE code that starts with two digits which fall within the range of 10 till 32. The NACE codes within this range all belong to the main industry Manufacturing and therefore this sample is a full manufacturing sample.

4.2 Assumptions

To be able to perform a multiple regression analysis, it is important to look at several aspects of the data that will be used for this analysis. When exploring the data by means of SPSS it is important to look at for example; 1) distribution of the predictor variables, 2) the presence of outliers, 3) the sample size, and 4) multicollinearity (Hair et al., 2010). This section will first elaborate on these four aspects of the data. Afterwards, this section will also discuss the four main assumptions of multiple regression analysis, which are: 1) homoscedasticity, 2) linearity, 3) independence of error term, and 4) normality of the error term distribution.

4.2.1. Distribution of the predictor variables

When exploring the data with SPSS it can be seen whether the predictor variables are normally distributed. According to Hair et al., (2010), the Skewness and Kurtosis can be used as an indication for the normality of a particular variable. The values of the Skewness and Kurtosis should range between -3 and +3. Initially, the output of SPSS (Appendix 2) shows that the Kurtosis of R&D intensity and Size are too high, indicating that they are non-normally distributed. For the predictor size, the value of Skewness is also too high. To correct for these distributional problems the data was transformed. To correct for size, the log transformation was used and the R&D intensity predictor was transformed by means of the square root. Both transformations result in appropriate values for the Skewness and Kurtosis as shown in Appendix 2.

4.2.2 Outliers

The outliers within this sample were identified by means of z-scores. By converting the data to z-scores it is possible to use benchmarks that are applicable to any data set when searching for outliers (Field, 2013). When the data is converted by SPSS, the cut-off values can be defined. Normally, the cut-off value can be set at three, which means that 99,90% of the scores can be found within three times the standard deviation (Stanimoriva & Walczak, 2008). So, regular samples are the samples that contain z-scores within a range of -3 and +3. When looking at the z-sores that SPSS provided, it can be seen that TATA Steel Limited has a very high z-score of 13.14 for Scope and 13.26 for Speed. These scores are higher than the boundary of three and therefore this EMNE can be classified as an outlier.

4.2.3. Sample size

The rule of thumb for sample sizes within multiple regression analysis says that the sample size should at least contain five observations for each independent variable (Hair et al., 2010). However, the desired level ranges between fifteen and twenty observations for each independent variable. These levels of observations increase the power and the generalizability of the results. This study contains seven independent variables and therefore the sample size should at least be 140 (= 7 x 20). After deleting the outlier as mentioned in the previous section, the sample contains 197 EMNES. Therefore, it can be concluded that the sample size is large enough to perform a multiple regression analysis.

4.2.4 Multicollinearity

When two or more predictors are included in a regression model it is important that a strong correlation between the predictors is absent (Field, 2013). When running the model in SPSS, it can provide several collinearity statistics. One of these statistics is the so called VIF-value, which indicates whether a predictor has a strong linear relationship with the other predictors. Hair et al., (2010) recommend a threshold of < 10 for VIF values. Besides the VIF-value, SPSS also provides us with a tolerance statistic (Appendix 2). The threshold for tolerance values is >.10. To see whether multicollinearity is a concern within this model, we will look at both of these statistics as provided by SPSS. These statistics are represented within model two of the coefficients table. For both dependent variables Scope and Speed, the VIF- values range from 1.057 to 1.287. Additionally, the tolerance statistic includes values between .777 and .946. Therefore, it can be concluded that there is no indication of multicollinearity.

4.2.5. Homoscedasticity

The first assumption can be assessed by looking at the scatterplot. In the case of homoscedasticity, the dots are more or less evenly dispersed and they do not contain a pattern of funnelling. When looking at the scatterplot (Appendix 2) it can be concluded that for both Scope and Speed, a more or less funnelled pattern can be seen around the zero value of the x-axis. When moving up on the y-axis the dots become more dispersed. Additionally, it also seems as if some values are outliers. Consequently, both Scope and Speed have been transformed by using a Log transformation. A Log transformation can be used to correct for the positive kurtosis, unequal variances and it also improves the linearity of the data (Field, 2013). This transformation resulted in the variables Ln_SCOPE and Ln_SPEED. The scatterplots of the transformed variables are represented in figure 3a and 3b. It can be seen that the dots are now more a whole and therefore there are no obvious outliers. The new plots also do not contain a clear pattern of funnelling. Therefore, it can be assumed that the assumption of homoscedasticity is met.

4.2.6. Linearity

The previous scatterplot can also be used to test the assumption of linearity. For linearity to hold true, there should be no systematic relationship between the errors in the model and the predicted values of the model. When the scatterplot for example shows a curve in the residuals, this is an indication for non-

linearity. Another indication for linearity is the equal distribution of the residuals around the zero-value on the y-axis. Appendix 2 show the scatterplots that were constructed within SPSS. The scatterplots show that there is no curve within the array of dots which suggests linearity of the data.

4.2.7. Independence of error terms

Appendix 2 shows the residual statistics as provided by SPSS. These statistics can be used to assess whether the errors in the model are unrelated to each other. If the assumption of independence is met, then the standardized predicted value should have a mean of 0.000 and a standard deviation of 1.000. As shown in the tables both the standard predicted values of Ln_Scope and Ln_Speed have a mean of 0.000 and a standard deviation of 1.000, indicating that the assumption of independence of the error terms is met.

4.2.5 Normality

The final assumption is the normal distribution of the dependent variable. As mentioned before, for a variable to be normally distributed its Skewness and Kurtosis should fall within a range of -3 till +3 (Hair et al., 2010). When looking at the Descriptive Statistics table (Table 8) as provided by SPSS, it can be concluded that both variables are more or less normally distributed. The assumption of normality can also be assessed by using a graph. The P-P Plot (Appendix 2) plots the cumulative probability of a variable against the cumulative probability of a particular distribution. If the dots fall on the diagonal line of the plot then the variable is normally distributed (Field, 2013). The dots within the plot of Ln_Scope sag a little bit below the diagonal line in the middle of the graph. This indicates that the Kurtosis deviates from the normal distribution, which can also be seen within the Descriptives table. However, this does not lead to any problematic consequences since the line does not consistently deviate and the value of the Kurtosis is still smaller than the boundary of three.

Table 8: Descriptives

			Statistic	*Std. Error*
Ln_SCOPE	Mean		,4218	,01810
	95% Confidence Interval	Lower Bound	,3861	
	for Mean	Upper Bound	,4574	
	5% Trimmed Mean		,4049	
	Median		,3010	
	Variance		,065	
	Std. Deviation		,25398	
	Minimum		,00	
	Maximum		1,40	
	Range		1,40	

	Interquartile Range		,18	
	Skewness		1,331	,173
	Kurtosis		2,659	,345
Ln_SPEED	Mean		,3249	,01876
	95% Confidence Interval	Lower Bound	,2879	
	for Mean	Upper Bound	,3619	
	5% Trimmed Mean		,3041	
	Median		,3010	
	Variance		,069	
	Std. Deviation		,26325	
	Minimum		,00	
	Maximum		1,30	
	Range		1,30	
	Interquartile Range		,48	
	Skewness		,902	,173
	Kurtosis		1,311	,345

Note. N = 197

4.3 Descriptive statistics

Once the assumptions of multiple regression analysis are met, it is important to look into the descriptive statistics. The descriptive statistics represent a summary of the data that will be used for this analysis. Table 9 represents an overview of the variables within this model and their correlations. As mentioned in section 4.2.4, it is important that there is no multicollinearity between the variables. If the correlations have values of .80 or higher, multicollinearity exists (Field, 2013). Looking at the Pearson correlations, the highest correlation for Ln_SCOPE is .368 and for Ln_SPEED.324. This indicates that there is no multicollinearity among these variables, which corresponds to the conclusions as based on the VIF – and tolerance values mentioned in section 4.2.4.

Table 9: Descriptive Statistics and Pearson Correlations

Variables	*Mean*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*
1. Ln_SCOPE	.421	.253	1,000					
2. Ln_SIZE	7.756	1.569	,265	1,000				
3. PROFIT	8.995	11.849	,078	,017	1,000			
4. CROSSDUMMY	.13	.334	,368	,216	,065	1,000		
5. DISTANCE_HIGH	4.929	4.078	,337	,017	,210	,324	1,000	
6. SQRT_RD	1.288	9.846	-,015	-,075	,078	-,145	-,305	1,000
1. Ln_SPEED	.324	.263	1,000					
2. Ln_Size	7.756	1.569	,154	1,000				
3. PROFIT	8.995	11.849	,061	,017	1,000			
4. CROSSDUMMY	.13	.334	,152	,216	,065	1,000		
5. DISTANCE_HIGH	4.929	4.078	,287	,017	,210	,324	1,000	
6. SQRT_RD	1.288	.984	-,030	-,075	,078	-,145	-,305	1,000

Note. N=197. CROSSDUMMY was coded as 0 = not cross-listed and 1 = cross-listed.

4.4 The Regression Model

The regression analysis was performed in a hierarchical manner, meaning that each set of summary statistics is repeated for each stage in the hierarchy (Field, 2013). The first model includes all the control variables that were accounted for within this study, which are size and profit. Besides the control variables, the second model also includes the main effects of the independent variables institutional distance, absorptive capacity and cross-listing on the dependent variables. The third model includes the control variables, the main effects and the interaction effects of institutional distance on the main effects of absorptive capacity and cross-listing. The ANOVA table in Appendix 3 tests whether the models within this analysis are significantly better at predicting the outcome than the mean. The table shows that all three models for both Scope are significant (p = .000). For Speed, however, the first model with

Size and Profit is not significant (p = .069). Since we are mainly interested in model two and three this is not problematic.

Table 10 shows the results as generated by SPSS. The table for the dependent variable Scope shows the three models that were run within this analysis. The first model, which contains the control variables, has a R^2 value of .075 meaning that size and profit explain 7.5% of the variance in Scope. Adding the main effects, the R^2 increases to .245. So, the predictive capacity of the model increases to 24.5% for model 2. The F change statistic shows that this increase in predictive capacity from model one to model two is significant (p = .001). The third model includes the interaction terms and has an R^2 value of .275, indicating that the predictive capacity again increased to 27.5%. Additionally, the change from model two to model three is significant, with a F change statistic of 0.021.

For the dependent variable Speed, the first model shows a R^2 value of 0.027. Therefore, size and profit explain 2.7% of the variance in Speed. Model two has an R^2 of .111, meaning that size, profit, institutional distance, absorptive capacity and cross-listing account for 11.1% of the variation in Speed. Adding the main affects results again in a significant F change (p = .001). Looking at the third model which includes the interaction terms, it can be seen that the R^2 increases to .131 (13.1%). However, the F change statistic shows that this increase from model two to model three is not significant (p = .118).

Table 10a: Results Multiple Regression Analysis

	Model 1				*Model 2*				*Model 3*			
Estimates	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*
Ln_SIZE	.043	.011	.263***	.000	.035	.010	.217***	.001	.032	.010	.201**	.002
PROFIT	.002	.001	.074	.288	.000	.001	-.14	.833	.000	.001	-.19	.775
CROSSDUMMY					.187	.052	.246***	.000	-.99	.119	-.129	.408
DISTANCE					.018	.004	.296***	.000	.018	.007	.294**	.006
SQRT_RD					.033	.017	.129	.056	.047	.025	.182	.066
RD*DISTANCE									-.03	.004	-.84	.433
CROSS*DISTANCE									.036	.014	.433**	.009
R^2	.075				.245				.275			
Adjusted R^2	.066				.225				.248			
Sig. F Change	.000***				.000***				.021*			

a. Dependent Variable : Ln_SCOPE

*Note. N = 197. *p < .05 ** p <.01 *** p< .001 (two-tailed)*

Table 10b: Results Multiple Regression Analysis

	Model 1				*Model 2*				*Model 3*			
Estimates	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*
Ln_SIZE	.026	.012	.153*	.032	.025	.012	.148*	.037	.023	.012	.137	.052
PROFIT	.001	.002	.058	.414	.000	.002	-.014	.847	.000	.002	-.14	.843
CROSSDUMMY					.028	.058	.036	.629	-.191	.135	-.242	.158
DISTANCE					.019	.005	.301***	.000	.022	.007	.333**	.004
SQRT_RD					.021	.019	.080	.275	.041	.029	.152	.159
RD*DISTANCE									-.04	.005	-.111	.344
CROSS*DISTANCE									.027	.015	.319	.076
R^2	.027				.111				.131			
Adjusted R^2	.017				.088				.099			
Sig. F Change	.069				.001***				.118			

a. Dependent Variable: Ln_SPEED
*Note. N = 197. *p < .05 ** p <.01 *** p< .001 (two-tailed)*

The results, as shown in table 10, can also be used to assess the hypotheses as formulated in chapter two. The upper part of the table gives an overview of the variables that were included in the regression equation. The variables that have a statistically significant contribution are marked with asterisk. In the model for Scope this goes for: Size, Cross-listing, Distance and the interaction term of Cross-listing x Distance ($p < .05$). With regard to Speed this goes for: Size and Distance ($p < .05$). Consequently, these results have implications for the acceptance or rejection of the hypothesis as formulated in chapter 2. Table 11 summarizes the variables and their corresponding hypothesis. The table also indicates the beta and significance of the relationship. Looking at the beta and de significance, it can be decided whether the hypotheses can be accepted or not.

Table 11: Overview of hypothesis and results

Hypotheses	***β***	**Sig. (p value)**	**Accepted ✓/ Rejected ✗**
Absorptive capacity			
H1a	.129	.056	✗
H1b	.080	.275	✗
Cross-listing			
H2a	.246	.000	✓
H2b	.036	.629	✗
Institutional Distance			
H3a	.296	.000	✓
H3b	.301	.000	✓
Institutional Distance			
(Moderator)			
H4a	-.84	.433	✗
H4b	-.111	.344	✗
H5a	.433	.009	✓
H5b	.319	.076	✗

4.5 Additional analysis

After performing the multiple regression analysis an additional analysis has been done to check for the robustness of the findings. Furthermore, the results in the previous section showed that there is a moderation effect of institutional distance on the relationship between cross-listing and the EMNEs Scope. To be able to interpret this moderation effect a follow-up analysis was performed.

4.5.1 Robustness Check

Some of the variables that were used within this analysis are transformed. This is done to make sure that they meet the assumptions that are prerequisite for a multiple regression analysis. Section 4.2 of this study showed that the variables; Size, R&D intensity, Scope and Speed were transformed. To make sure that the transformation of these variables did not influence the significance of some of the results, the analysis was also performed with untransformed variables (Appendix 4). So, when performing this robustness check, all variables, except the control variable size, are included in their raw form.

Section 4.4 shows the R^2 values of both the model for Scope and for Speed. The common thresholds for the explanatory power of the overall model are: $R^2 > .2$ for an acceptable fit, $R^2 > .4$ for a good fit, and a $R^2 > .5$ for a very good fit (Hair et al., 2010). The model fit criterion R^2 for Scope has values of .245

(model two) and .275 (model three). Even though that values higher than .2 are an acceptable fit (Hair et al., 2010) these values are rather low. When comparing these to the analysis with untransformed variables (Appendix 4) it can be seen that these R^2 values are a little lower with values of .240 (model two) and .265 (model three). The R^2 values for Speed are very low with .111 for model two and .131 for model three. Comparing these to the R^2 values of the untransformed analysis it can be seen that these values are only a little bit higher with values of .115 (model two) and .135 (model three).

Checking the model for Scope shows that the relationships that were significant with transformed variables are also significant in the case with untransformed variables. These significant relationships are the ones of Cross-listing, Institutional Distance and the interaction effect of cross-listing and institutional distance. For Speed some of the relationships differ in significance when comparing the analysis. Cross-listing for example is significant in the model with untransformed variables (p =.045) but not significant within the analysis of transformed variables (p=.629). Institutional Distance, however, is significant for model two in both the analysis (untransformed p = .002; transformed p = .000). The interaction term of Institutional Distance on Cross-listing is significant in the analysis with untransformed variables (.040) but non-significant in the transformed analysis (p=.076). However, when looking at the sig. F change for model three in the two analysis, it can be seen that these are non-significant in both cases (untransformed p = .119; transformed = .118). This means that adding the moderator does not impact the explained variance in Speed. Therefore, it is assumed that the significant effect in case of the untransformed variables might not be accurate and that it is indeed a non-significant relationship. Since the results for Scope are similar in both analysis and the transformed results for Speed seem more accurate, the results of the transformed analysis will be leading within this study.

4.5.2 Moderation: follow up analysis

When looking at the results for Scope (model three), the interaction term of institutional distance on the relationship between cross-listing and Scope, shows a positive and significant interaction effect (β =.433, p=.000), indicating that the relationship between cross-listing and the EMNEs Scope is moderated by institutional distance. Additionally, the sig. F change of model three is also significant (p = .021) which indicates that the interaction term impacts the explained variance in Scope, meaning that hypothesis 5a should be accepted. It is also important to state that the direct relationship of cross-listing on the EMNEs scope is not significant (p=.408) anymore once the interaction term is included (model three) and the direction of the relationship even turns negative (β = -.99). So, the moderator specifies the conditions in which the relationship of cross-listing on the EMNEs scope is present, i.e. in cases of institutional distance. These conditions can be interpreted by a follow up analysis. Figure 4 shows the simple slopes equations of the regression of cross-listing on the EMNEs Scope at two levels of institutional distance. Looking at the slopes it can be seen that when institutional distance is low (blue

line) there is a non-significant negative relationship between cross-listing and the EMNEs Scope. More important however, when institutional distance is high (orange line) there is a significant positive relationship of cross-listing on the Scope of internationalization.

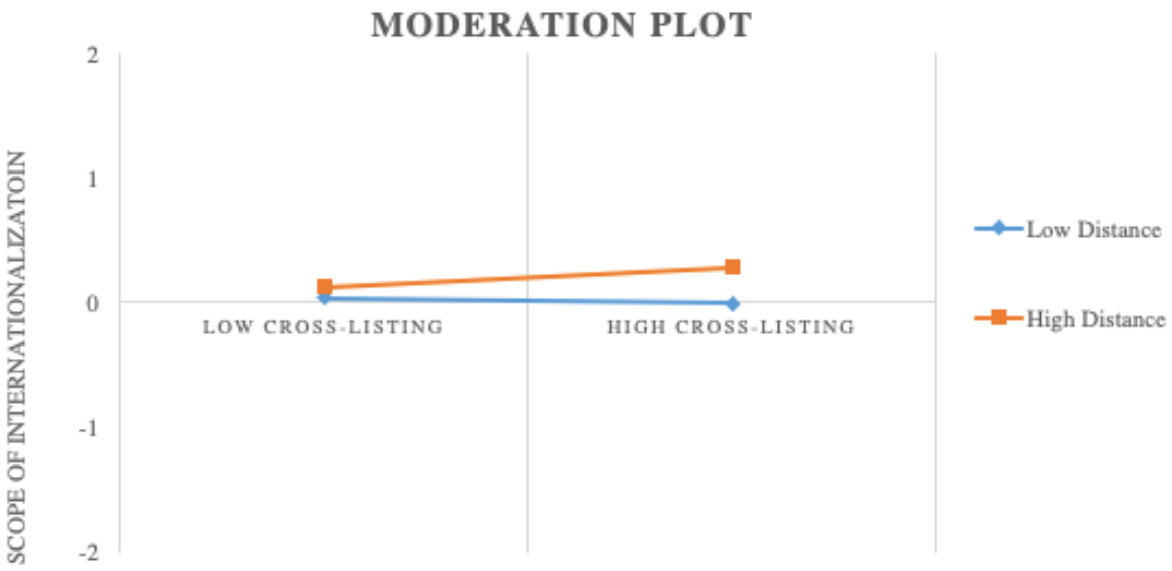


Figure 4: Simple Slopes Equations

5. Discussion & Conclusion

The final chapter concludes this study. This is done by first discussing the results. Afterwards, this chapter will reflect on the research question that was the focus of attention for this study. Section 5.3 will discuss some theoretical implications of this study while section 5.4 will elaborate on the managerial implications. This chapter will finish by critically addressing the main limitations of this study and with that some recommendations for future research will be given.

5.1 Discussion

The introduction of this study mentioned the debate within the IB literature that concerns the gap between the mainstream IB literature and the new deviating theories on EMNEs This debate considers three different views: 1) The existing IB literature is adequate to explain EMNEs behaviour (Narula, 2006), 2) The existing IB literature is not suited to explain the behaviour of EMNEs and new theories should be developed (Hennart, 2012; Mathews, 2002), 3) Existing theories should be extended and refined since EMNEs have different features than DMNEs (Ramamurti, 2009; Lessard and Lucea, 2009). The goal of this study was to participate in filling the gap by looking into three different determinants of the internationalization process of EMNEs. In trying to address these, this study performed a multiple regression analysis. This chapter will discuss the results while taking into account the literature as discussed in chapter two.

One of the determinants that this study tried to capture as the institutional distance. This study found a positive significant relationship between institutional distance and the Scope and Speed of the EMNEs internationalization process. This is an interesting finding since the mainstream IB literature suggests that institutional distance has negative implications for the internationalization process of Multinational Enterprises. The mainstream IB literature argues for example that institutional distance makes it harder to practice a global integration strategy (Kostova & Roth, 2002) and to adapt entry strategies, organizational routines and internal procedures (Johansen and Vahlne, 1977; Ionascu, Meyer & Erstin, 2004). The positive significant result that was found in this study contradicts these theories from the mainstream IB literature. With this finding this study seems to show that the mainstream IB literature about institutional distance is not suited to explain the EMNEs internationalization behaviour, supporting the second view of the debate. These findings, however, could be explained by new and upcoming theories about the EMNEs internationalization. Such theories suggest that EMNEs do not encounter problems stemming from institutional distance (Gaffney, Karst & Clampit, 2016) and that they perceive institutional distance differently than DMNEs do (Petersen & Seifert, 2014). The empirical support for these theories is, however, still limited. This study contributed to these theories by providing such necessary empirical evidence.

Secondly, this study looked into cross-listing as a determinant of the EMNEs internationalization. Previous research concerning cross-listing mainly covered its financial aspects or its relevance for

corporate governance. Within the financial context for example, research focused on US cross-listed firms and their improved access to lower cost external financing (Khuruna, Martin & Pereira, 2007; Reese & Weisbach, 2002; Lins, Strickland & Zenner, 2005). Additionally, cross-listing has also been examined as a corporate governance driven action (Bhaumik, Driffield, Gaur, Mickiewicz & Vaaler, 2019). In this case cross-listing signals that the corporate governance of the EMNE is bonded to laws and regulations and with that enables the EMNE to connect to foreign regulatory regimes. However, in such cases cross-listing and it signalling function are barely seen as a pillar of the internationalization of multinational enterprises but more often as a particular setting. This might be the case since in its attempt to explain internationalization, the IB literature has been overly influenced by paradigms that are based on intangible assets and the desire of multinational enterprises to protect these (Bhaumik et al, 2019). Peng and Su (2014) and Kharuna, Martin & Periera (2007) are among the few who proposed that cross-listing is a convenient instrument for EMNEs which can fuel their process of internationalization. However, the evidence to support the importance for cross-listing in relation to internationalization theories is still scarce (Kharuna, Martin & Periera, 2007). By incorporating cross-listing, this study tried to contribute by providing evidence for such theories. Since this study indeed found a significant relationship between cross-listing and the EMNEs scope of internationalization, it can be concluded that cross-listing does not merely have financial implications but also strategic ones.

Additionally, Peng and Su (2014) also pointed out that the boundary conditions on when and why EMNEs use cross-listing might be different than those for DMNEs. Peng and Su (2014) proposed, for example, that this relationship between cross-listing and the scope of internationalization is especially present for EMNEs who expand into developed countries (Peng & Su, 2014). Such situations normally involve high institutional distance between the home country of the EMNE and the host countries (developed countries). In trying to find empirical support for this proposition, this study also examined a possible moderation effect of institutional distance on the relationship between cross-listing and the scope of internationalization. The results showed that the moderation effect was indeed positive, meaning that in cases of high institutional distance there is a significant positive relationship of cross-listing on the scope of internationalization. A possible explanation for this could be that cross-listing enables the EMNE to bond to stricter enforcement and litigation environments (Bell & Rasheed, 2012). In this way the MNE shows that it is committed to adhere to higher-level regulations in developed countries (Reese & Weisbach, 2002). This might result in decreased institutional distance with regard to the corporate laws and governance of different countries (Bell & Rasheed, 2012). If these explanations hold true, then EMNEs use cross-listing for different purposes than DMNEs do, which implicates that the mainstream IB literature on this aspect is in need of refinement (supporting the second view of the debate). These results together with the direct relationship of cross-listing on the scope of internationalization suggest that cross-listing is a relevant, but yet insufficiently examined instrument that EMNEs can use for their international expansion.

Since cross-listing seems an important instrument for the international expansion of EMNEs, some theories also suggest its importance for the speed of the EMNEs internationalization. Previous research proposed that cross-listing facilitates more mergers and acquisitions, which are common means of expediting internationalization (Burns, Francis & Hasan, 2007; Kumar & Ramchand, 2008). This in turn might enhance the speed, since such mergers and acquisitions can function as fast entry modes into foreign countries. However, in contrast to scope, this study did not find empirical evidence that supports the hypothesis for speed. The limitations section of this chapter (section 5.4) will elaborate on possible explanations for these insignificant results.

Finally, this study looked into absorptive capacity as a determinant of the EMNEs scope and speed of internationalization. Previous research argues that EMNEs possess unique characteristics which enable them to accurately develop and apply absorptive capacity. This suggests that the absorptive capacity can be implemented in the process of internationalization, resulting in a successful further expansion abroad (Johanson and Vahlne, 1977). However, the results of this study could not confirm these hypotheses since they showed that relationships with scope and speed are indeed positive but non-significant. Furthermore, there were also no significant results for the interaction term of absorptive capacity and institutional distance. Also in this case, the limitation section will discuss the measurement of absorptive capacity within this study since this might have caused the insignificant results.

It can be concluded that the significant findings of this study support the assumptions of some upcoming theories with regard to the EMNEs internationalization. In some cases, (institutional distance) this might implicate that mainstream IB literature is not suitable anymore and that new theories should be developed. While in other cases (cross-listing) the refinement of existing theories might be sufficient. By performing this study, the researcher tried to participate in filling the gap and with that make a step forward in this process of theorization on EMNEs.

5.2 Conclusion

To be able to conclude this study, this section will reflect on the research question as mentioned in section 1.5. This research question was formulated as follows:

What is the effect of institutional distance, cross-listing and absorptive capacity on the internationalization process of the EMNE?

This study found that institutional distance is positively related to the scope and speed of the EMNEs internationalization. Additionally, this study found a positive relationship between cross-listing on the scope of the EMNEs internationalization. In trying to find evidence for upcoming theories on the EMNEs internationalization process, this study also looked at the moderating effect of institutional distance on the relationship between cross-listing and the EMNEs scope of internationalization. This showed that there is indeed a significant positive moderation effect, which indicates that cross-listing is

especially used by EMNEs in cases of institutional distance. However, this study could not confirm a positive relationship of cross-listing on the speed of internationalization. A moderation effect of institutional distance on this relationship between cross-listing and speed was according to this study also not present. additionally, this study did not find a significant relationship for cross-listing on the EMNEs scope nor on its speed of internationalization. Even though that a direct relationship of absorptive capacity on the EMNEs internationalization was not found, this study also incorporated a moderation effect of institutional distance on this relationship. However, the results could not confirm a significant moderation effect in this case.

5.3 Theoretical Implications

This study has important implications for the theory about the EMNEs internationalization. First of all, this study came into existence because EMNEs do not seem to follow the existing theories from the mainstream IB literature regarding the internationalization process. As a result, new theories about the EMNEs internationalization arose in order to fill this gap between EMNEs and the mainstream IB literature. This study tried to participate in filling the gap by providing evidence for such upcoming theories about the EMNEs internationalization. Even though that the results of this study participate to the growing body of knowledge on the EMNEs internationalization, an integrative framework is still lacking. At the same time, the evidence of this study feeds the debate about the applicability of the mainstream IB theories in the case of EMNEs. This is the case since the positive significant relationships of institutional distance and cross-listing on the EMNEs internationalization support both the second and the third view of this debate. This means that new theories should be developed or existing theories should be refined to be able to explain the EMNEs internationalization process.

Therefore, researchers need to continue their efforts to construct an integrative framework by rethinking concepts, relations and causalities about the internationalization process. Previous research by Luo and Tung (2007) sets the example for such frameworks since their work not only discusses the unique traits and motivations but also strategies and activities and even internal and external forces that are relevant for the EMNEs internationalization process. Other examples can be seen when looking at Mathews (2006) who incorporated the implications of strategic alliances, links and ties into already existing internationalization theories. His Linkage-Leverage-Learning model proposes that EMNEs are able to quickly expand abroad because they achieve new competitive advantages through external linkages and because they leverage on partnerships and joint ventures more diffusely than DMNEs do. Combining such frameworks and theories with empirical evidence, as for example done by Satta et al., (2014) or by this study, will eventually result in a sound and extensive theoretical framework on the internationalization process of EMNEs.

5.4 Managerial Implications

The goal of this study mainly includes theoretical contributions, as discussed in the previous section. However, besides these theoretical implications, this study also has some managerial implications. The results of this study suggest that EMNEs are able to turn institutional distance into something positive, since it positively effects their internationalization process. Therefore, it is important that managers are aware that institutional distance does not necessarily only includes negative uncertainties and liabilities as suggested by the main stream IB literature. This is not only important for managers within EMNEs, but especially for those in DMNEs. Since these types of multinational enterprises are the ones who especially encounter such uncertainties and liabilities. Being aware of the fact that it could also bring positive opportunities and benefits enables them to find ways to reap these benefits, as EMNEs seem to do by means of cross-listing. Therefore, this awareness should encourage both EMNE and DMNE managers to invest in such relevant instruments when expanding into institutionally distant host countries.

Secondly, managers of EMNEs should be aware that cross-listing does not only have financial implications but that it can also enable the EMNE to unfold its international scope. At the same time, managers need to know that this is the case because of the legal and reputational bonding that comes with cross-listing in developed markets. This implies that managers know the value of meeting the stringent listing requirements in developed countries and in turn make sure that this really happens. When this is not assured, the EMNE will probably not be able to fully bond with the host country which in turn will have consequences for the success of their further international expansion into developed countries.

5.5 Limitations

As in any study, there are some limitations that have to be acknowledged. It is important to mention such methodological limitations since they place the results of this study in a broader daylight. First of all, this section will elaborate on the measurement of some variables that are part of this study. In the cases of absorptive capacity and speed, the limitations within the measurement of these variables might have caused insignificant results. For example, this study captured absorptive capacity by means of the firms R&D intensity, which is said to be the key indicator for this construct (Cassiman & Veugelers, 2006; Cohen and Levinthal, 1990). However, several other indicators are also important when capturing absorptive capacity. This is especially the case since absorptive capacity is also related to extent by which individuals in the organisation are able to assimilate, process and transform external knowledge flows (Escribano, Fosfuri & Tribo, 2009). So, other indicators can be for example; human capital (Mowery and Oxley, 1995), investment in scientific and technical training or the number of scientists and engineers (Keller, 1996) and the number of doctorates within the R&D department. Therefore, Escribano, Fosfuri and Tribo (2009) measured the construct absorptive capacity by combining all these human related indicators with the R&D indicator. Capturing these other indicators was however not

possible within this study since Orbis did not provide such data. So, the absence of these indicators might be an explanation for the non-significant results that were found within this study.

With regard to the speed of internationalization, there has been a lot of discussion about how to adequately conceptualize and measure this construct (Chetty, Johanson & Martin, 2014). This study captured speed by measuring the increase in foreign subsidiaries between 2010 and 2017, assuming a more or less linear relationship. It is however argued that the content validity of this measure can be questioned since scholars normally refer to speed as the time it takes to internationalize from inception of the firm (Chetty & Campbell-Hunt, 2004; Zahra, Ireland, & Hitt, 2000). Additionally, measuring speed in this manner does not include the period subsequent to the start of internationalization (Chetty, Johanson & Martin, 2014). Therefore, Vermeulen and Barkema (2002) and Wagner (2004) combined these different measures in their attempt to capture speed, which is especially suitable in cases of large multinational corporations like the EMNEs that are the subject of this study. However, Orbis did not provide accurate and reliable data available on the inception of the firm nor about the start of the EMNEs' internationalization. It would have been possible to gather such information through other sources, however due to time constraints this study limited itself to measuring speed by means of the increase in foreign subsidiaries.

However, variables that did result in significant relationships might also have limitations with regard to their measurement. Therefore, these should also be pointed out, for example in the case of institutional distance. To be able to measure institutional distance this study relied on previous research from van Hoorn and Maseland (2016) which uses six indicators from the WGI project. These indicators however mainly capture the regulatory institutions that are part of the institutional distance. As mentioned in section 2.4.1., institutional distance also consists out of cognitive and cultural institutions which should therefore also be considered when measuring institutional distance. However, due to lacks of data availability, his study only used the WGI indictors.

Additionally, Van Hoorn and Maseland (2016) argue that to be able to adequately analyse institutional distance effects, multiple reference points should be used. They mention two requirements for a multiple reference point measure. First of all, the sample of reference and partner countries should be sufficiently institutionally diverse, meaning that the reference countries should rank both below and above the partner countries on the institutional indicator (Van Hoorn & Maseland, 2016). This is indeed the case in the sample of this study. When looking at the Appendix 1, Poland and Taiwan both score relatively high for emerging countries, with scores of 4.86 and 5.74 respectively. Consequently, they score higher on the institutional indicator than Italy which is part of the partner (developed) country sample. So, the sample of the reference countries contain both high (Poland and Taiwan) and low (Philippines) scoring emerging countries and the sample of partner countries does also contain high (France) and low (Italy) scoring developed countries. The second requirement however was not met within this study. According

to van Hoorn and Maseland (2016) the sample should at least contain seven reference countries and seven partner countries. Unfortunately, due to practical considerations this study only included four partner countries (Italy, Germany, France and United Kingdom). Taking into account that the measurement of institutional distance did not fully meet the requirements for a multi-reference measure in combination with the fact that the cultural and cognitive aspect of this construct were not measured, could implicate that the internal validity of this construct is rather low within this study.

Other limitations are related to the sample of this study. It was the intention to include EMNEs from countries listed by MSCI (2016) & FTSE (2016) (section 3.2). However, it turned out that the Orbis database did not provide data for all the selected countries. Consequently, the final sample only contained 12 of the 22 emerging countries. This resulted for example in the exclusion of all the countries that were selected from America. The findings of this study are therefore not representative for all the emerging countries. Additionally, this study looked at a full manufacturing sample. Since the results of this study are not representative for all emerging countries neither for all industries, the generalizability of this study might be limited.

Finally, the chosen time frame of this study can also be seen as a limitation. This study tried to include a longitudinal aspect by capturing the effect of absorptive capacity, cross-listing and institutional distance over time, on the scope and speed of the EMNE. The scope and speed were measured by the number of foreign subsidiaries of the EMNE in 2017 and the increase in foreign subsidiaries between 2010 and 2017. This means that this study considered a seven-year time frame. However, it can be argued that it takes more than seven years to capture the effect of the independent variables since it takes a significant amount of time to build new foreign subsidiaries. It is therefore that larger time frames might be more accurate when trying to capture these effects. For example, research into the EMNEs speed, which was carried out by Satta et al., (2014), selected a ten-year time frame. Unfortunately, due to limited resources it was not possible to choose a larger time frame for this study.

5.6 Suggestions for future research

The limitations as mentioned in the previous section suggest a number of future research directions. With regard to the design of future research it might be an idea to focus on emerging countries from South-America or select a sample in which emerging countries from all parts of the world are represented. It might also be interesting to replicate this study by incorporating different industries, since Ramamurti (2012) already mentioned that the industry in which it operates also has implications for the internationalization strategy of the EMNE. Additionally, future research that has access to more resources could replicate the study and try to capture these effects over a ten- or fifteen-year time frame. Finally, it might also be an idea to capture a dichotomous approach, by which empirical research includes evidence from both EMNEs and DMNEs.

The limitation section of this chapter already pointed out that the measurement of institutional distance that was used within this study, did not capture its cultural and cognitive aspect. These aspects are, however, important to include. Culture for example is shown to be very important especially in international mergers and acquisitions. Cultural differences between two merging partners is said to be the usual suspect blamed for ruining mergers and acquisitions (Chakrabarti, Gupta-Mukherjee & Jayaraman, 2009). This is especially relevant for EMNEs who expand into developed countries since such situations involve people from very different backgrounds with different values and beliefs about the workplace (Salama, Holland & Vinten, 2003). Since such mergers and acquisitions are a common way of internationalizing, this might have implications for the successful expansion of the EMNE. Future research into institutional distance should therefore try to include a measure that captures all three aspects of institutional distance to grasp the full implications that it has for the internationalization process. It would be interesting to see if the positive relationship between institutional distance still upholds when all three aspects are considered. This is especially important since more research is required to back up the upcoming EMNE theories which suggest that institutional distance does not necessarily come with negative implications.

As mentioned before, the implications that cross-listing might have for the internationalization are relatively under examined since research has mainly focused on its financial implications and its relevance for corporate governance. Therefore, future research should further dive into cross-listing and its importance for multinational enterprises and how it facilitates their internationalization. When doing so, future research should not only focus on EMNEs who use cross-listing but also on DMNEs. By only focusing on EMNEs, the average benefit of cross-listing might be understated. Even though that the legal and reputational bonding of cross-listing by EMNEs might not be present in cases of DMNEs, it is likely that cross-listing comes with several other benefits that can also be captured by DMNEs. Possible ideas for future research might for example be to examine if cross-listing comes with some sort of location advantage and if this has implications for further international expansion.

Looking at the gap as explained in section 1.2 of this study, it can be concluded that there is still a lot to discover about the internationalization of EMNEs. Besides the previous suggestions for future research, there are many other research settings thinkable. Therefore, it offers many opportunities for future research and with that for the further development of more extensive theories of the EMNEs internationalization process.

Literature

Ahuja, G., & Katila, R. (2001). Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study. *Strategic management journal*, *22*(3), 197-220.

Arora, A., Fosfuri, A., Gambardella, A. (2001). Markets for Technology: Economics of Innovation and Corporate Strategy. The MIT Press, Cambridge, MA.

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

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

Aybar, B., & Ficici, A. (2009). Cross-border acquisitions and firm value: An analysis of emerging-market multinationals. *Journal of International Business Studies*, *40*(8), 1317-1338.

Baker, H. K., Nofsinger, J. R., & Weaver, D. G. (2002). International cross-listing and visibility. *Journal of Financial and Quantitative Analysis*, *37*(3), 495-521.

Banalieva, E. R., & Robertson, C. J. (2010). Performance, diversity, and multiplicity of foreign cross-listing portfolios. *International Business Review*, *19*(6), 531-547.

Barkema, H. G., & Vermeulen, F. (1998). International expansion through start-up or acquisition: A learning perspective. *Academy of Management journal*, *41*(1), 7-26.

Bekaert, G., & Harvey, C. (2017). Emerging equity markets in a globalizing world.

Bell, R. G., Filatotchev, I., & Rasheed, A. A. (2012). The liability of foreignness in capital markets: Sources and remedies. *Journal of International Business Studies*, *43*(2), 107-122.

Berenschot (2006). *Het Strategie boek 2: een veranderend speelveld*. Amersfoort, Netherlands: Drukkerij Wilco.

Berry, H., Guillen, M.F and Zhou, N. (2010). An institutional approach to cross-national distance, *Journal of International Business Studies*, 41 (9), 1460-80.

Bertoni, F., Elia, S., & Rabbiosi, L. (2013). Outward FDI from the BRICs: Trends and patterns of acquisitions in advanced countries. In *Emerging economies and firms in the global crisis*(pp. 47-82). Palgrave Macmillan, London.

Bhaumik, S., Driffield, N., Gaur, A., Mickiewicz, T., & Vaaler, P. (2019). Corporate governance and MNE strategies in emerging economies. *Journal of World Business*.

Buckley, P. J., Cross, A. R., Tan, H., Xin, L., & Voss, H. (2008). Historic and emergent trends in Chinese outward direct investment. *Management International Review*, *48*(6), 715- 748.

Buckley, P. J., Elia, S., & Kafouros, M. (2011). FDI from emerging to advanced countries: some insights on the acquisition strategies and on the performance of target firms. *Economia e Politica Industriale*.

Burns, N., Francis, B. B., & Hasan, I. (2007). Cross-listing and legal bonding: Evidence from mergers and acquisitions. *Journal of Banking & Finance*, *31*(4), 1003-1031.

Cassiman, B., & Veugelers, R. (2002). R&D cooperation and spillovers: some empirical evidence from Belgium. *American Economic Review*, *92*(4), 1169-1184.

Cassiman B, Veugelers R. (2006). In search of complementarity in the innovation strategy: internal R&D and external knowledge acquisition. *Management Science* 52, 68 – 82.

Chakrabarti, R., Gupta-Mukherjee, S., & Jayaraman, N. (2009). Mars–Venus marriages: Culture and cross-border M&A. *Journal of International Business Studies*, *40*(2), 216-236.

Chetty, S., & Campbell-Hunt, C. (2004). A strategic approach to internationalization: a traditional versus a "born-global" approach. *Journal of International marketing*, *12*(1), 57-81.

Chetty, S., Johanson, M., & Martín, O. M. (2014). Speed of internationalization: Conceptualization, measurement and validation. *Journal of World Business*, *49*(4), 633- 650.

Chibber, P. K., & Majumdar, S. K. (2005). Property rights and the control of strategy: Foreign ownership rules and domestic firm globalization in Indian industry. *Law & Policy*, *27*(1), 52-80.

Citibank (2011). *City Depositary Receipts Year- End 2011 Repor*t. Retrieved from https://depositaryreceipts.citi.com/

Claessens, S., Klingebiel, D., & Schmukler, S. L. (2006). Stock market development and internationalization: Do economic fundamentals spur both similarly?. *Journal of Empirical Finance*, *13*(3), 316-350.

Cockburn, I. M., & Henderson, R. M. (1998). Absorptive capacity, coauthoring behavior, and the organization of research in drug discovery. *The Journal of Industrial Economics*, *46*(2), 157-182.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 128-152.

Cuervo-Cazurra, A. & Ramamurti, R. (2014). *Understanding multinationals from emerging markets*. Cambridge: Cambridge University Press.

Deloitte. (2011). Fortresses and Footholds : Emerging market growth, strategies, practices and outlook. Retrieved from https://www2.deloitte.com/us/en/pages/strategy/articles/emerging-market-growth-strategies-practices-and-outlook.html

Demirbag, M., & Yaprak, A. (Eds.). (2015). *Handbook of emerging market multinational corporations*. Edward Elgar Publishing.

Dikova, D., Sahib, P. R., & Van Witteloostuijn, A. (2010). Cross-border acquisition abandonment and completion: The effect of institutional differences and organizational learning in the international business service industry, 1981–2001. *Journal of International Business Studies*, *41*(2), 223-245.

Duanmu, J. L. (2014). A race to lower standards? Labor standards and location choice of outward FDI from the BRIC countries. *International Business Review*, *23*(3), 620-634.

Dunning, J.H. (1980). 'Towards an eclectic theory of international production: Some empirical tests', *Journal of International Business Studies,* 11:9-31.

Dunning, J. H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of international business studies*, *19*(1), 1-31.

Dunning, J. H., & Lundan, S. M. (2008). *Multinational enterprises and the global economy*. Edward Elgar Publishing.

Durand, R. B., Gunawan, F., & Tarca, A. (2006). Does cross-listing signal quality?. *Journal of Contemporary Accounting & Economics*, *2*(2), 170-189.

Eden, L., & Miller, S. R. (2004). Distance matters: Liability of foreignness, institutional distance and ownership strategy. In *" Theories of the Multinational Enterprise: Diversity, Complexity and Relevance"* (pp. 187-221). Emerald Group Publishing Limited.

Eriksson, K., Johanson, J.A., Majkgard, A., and Sharma, D. (1997). Experiential Knowledge and Cost in the Internationalization Process. Journal of International Business Studies, 28(2), pp. 337-360.

Eriksson, K., Johanson, J.A., Majkgard, A., and Sharma, D. (2000). Effect of Variation on Knowledge Accumulation in the Internationalization Process. International Studies in Management and Organization, 30(1), pp. 26-44.

Escribano, A., Fosfuri, A., & Tribó, J. A. (2008). Managing external knowledge flows: The moderating role of absorptive capacity. *Research policy*, *38*(1), 96-105.

Fanto, J. A., & Karmel, R. S. (1997). A Report on the Attitudes of Foreign Companies Regardng a US Listing. *Stan. JL Bus. & Fin.*, *3*, 51.

Field, A. (2013). Discovering Statistics Using IBM SPSS Statistics. London: Sage.

FTSE Russel (2016). *FTSE Annual Country Classification Review*. Retrieved from https://www.ftse.com/products/downloads/FTSE-Country-Classification-Update-2016.pdf

Gaffney, N., Karst, R., & Clampit, J. (2016). Emerging market MNE cross-border acquisition equity participation: The role of economic and knowledge distance. *International Business Review*, *25*(1), 267-275.

Gao, G. Y., & Pan, Y. (2010). The pace of MNEs' sequential entries: Cumulative entry experience and the dynamic process. *Journal of International Business Studies*, *41*(9), 1572-1580.

Gans, J., Stern, S., 2003. The product market and the market for "ideas": commercialization strategies for technology entrepreneurs. Research Policy 32 (2), 333–350.

García-Canal, E., & Guillén, M. F. (2008). Risk and the strategy of foreign location choice in regulated industries. *Strategic Managment Journal*, 29, 1097-1115

Ghemawat P. (2007). *Redefining Global Strategy*. Harvard Business School Press: Boston, MA.

Ghoshal, S., & Bartlett, C. A. (1990). The multinational corporation as an interorganizational network. *Academy of management review*, *15*(4), 603-626.

Guillén, M. F., & García-Canal, E. (2009). The American model of the multinational firm and the "new" multinationals from emerging economies. *Academy of Management Perspectives*, *23*(2), 23-35.

Hail, L., & Leuz, C. (2009). Cost of capital effects and changes in growth expectations around U.S. cross-listings. Journal of Financial Economics, 93: 428–454.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate Data Analysis (7th Edition). New Jersey: Pearson.

Hasan, I., Kobeissi, N., & Wang, H. (2011). Global equity offerings, corporate valuation, and subsequent international diversification. *Strategic Management Journal*, *32*(7), 787-796.

Hennart, J. F. (2012). Emerging market multinationals and the theory of the multinational enterprise. *Global Strategy Journal*, *2*(3), 168-187.

Hitt, M. A., Dacin, M. T., Levitas, E., Arregle, J. L., & Borza, A. (2000). Partner selection in emerging and developed market contexts: Resource-based and organizational learning perspectives. *Academy of Management journal*, *43*(3), 449-467.

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management journal*, *40*(4), 767-798.

Hoskisson, R. E., Eden, L., Lau, C. M., & Wright, M. (2000). Strategy in emerging economies. *Academy of management journal*, *43*(3), 249-267.

Hoskisson, R. E., Wright, M., Filatotchev, I., & Peng, M. W. (2013). Emerging multinationals from mid-range economies: The influence of institutions and factor markets. *Journal of Management Studies*, *50*(7), 1295-1321.

Hymer, S.H., (1960). The International Operations of National Firms: A Study of Direct Foreign Investment. MIT Press, Cambridge, MA (published in 1976).

Ionascu, D., Meyer, K. E., & Estrin, S. (2004). Institutional distance and international business strategies in emerging economies.

Ireland, R. D., Hitt, M. A., & Vaidyanath, D. 2002. Alliance management as a source of competitive advantage. *Journal of Management*, 28, 413–446.

Isobe, T., Makino, S., & Montgomery, D. B. (2000). Resource commitment, entry timing, and market performance of foreign direct investments in emerging economies: The case of Japanese international joint ventures in China. *Academy of management journal*, *43*(3), 468-484.

Johanson, J. and Vahlne, J.-E. (1977). 'The internationalization process of the firm—A model of knowledge management development and increasing foreign market commitments', *Journal of International Business Studies*, 8: 23-32.

Kearney, C. (2012). Emerging markets research: Trends, issues and future directions. *Emerging Markets Review*, *13*(2), 159-183.

Keller, W., 1996. Absorptive capacity: on the creation and acquisition of technology in development. Journal of Development Economics 49, 199–227.

Khanna, T. and Palepu, K.G. (2010). 'The nature of institutional voids in emerging markets', in T.

Khanna and K.G. Palepu (eds), *Winning in Emerging Markets: A Road Map for Strategy and Execution*: 13-26. Boston: Harvard Business Press.

Khurana, I. K., Martin, X., & Periera, R. (2007). Cross-listing and firm growth. *Review of Finance*, *12*(2), 293-322.

Khanna, T., & Palepu, K. G. (2004). Globalization and convergence in corporate governance: Evidence from Infosys and the Indian software industry. *Journal of International Business Studies*, *35*(6), 484-507.

Khanna, T., Palepu, K. G., & Sinha, J. (2005). Strategies that fit emerging markets. *Harvard business review*, *83*(6), 4-19.

Kim, H., & Song, J. (2017). Filling institutional voids in emerging economies: The impact of capital market development and business groups on M&A deal abandonment. *Journal of International Business Studies*, *48*(3), 308-323.

Kostova, T., & Roth, K. (2002). Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of management journal*, *45*(1), 215-233.

Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management review*, *24*(1), 64-81.

Kumar, P., & Ramchand, L. (2008). Takeovers, market monitoring, and international corporate governance. *The Rand Journal of Economics*, *39*(3), 850-874.

Lane, P. J., Koka, B. R., & Pathak, S. (2006). The reification of absorptive capacity: A critical review and rejuvenation of the construct. *Academy of management review*, *31*(4), 833- 863.

Lane, P.J., and Lubatkin, M. (1998). Relative Absorptive Capacity and Interorganizational Learning. Strategic Management Journal, 19, pp. 461- 477.

Lessard D, Lucea R. (2009). Mexican multinationals: insights from CEMEX. In *Emerging Multinationals in Emerging Markets*. Ramamurti R, Singh JV (eds). Cambridge University Press: Cambridge, U.K.: 280–311.

Li, P.P., (2003). Toward a geocentric theory of multinational evolution: the implications from the Asian MNEs. Asian Pacific Journal of Management 20, 217–242.

Li, P. P. (2007). Toward an integrated theory of multinational evolution: The evidence of Chinese multinational enterprises as latecomers. *Journal of international management*, *13*(3), 296-318.

Lins, K. V., Strickland, D., & Zenner, M. (2005). Do non-US firms issue equity on US stock exchanges to relax capital constraints?. *Journal of financial and quantitative analysis*, *40*(1), 109-133.

Liu, X., & Giroud, A. (2016). International knowledge flows in the context of emerging-economy MNEs and increasing global mobility.

Lu, J., Liu, X., Filatotchev, I. & Wright, M. (2014). The impact of domestic diversification and top management teams on the international diversification of Chinese firms. *International Business Review*, 23(2): 455-467.

Luo, Y., & Tung, R. L. (2007). International expansion of emerging market enterprises: A springboard perspective. *Journal of International Business Studies*, 38: 481-498.

Madhok, A., & Keyhani, M. (2012). Acquisitions as entrepreneurship: Asymmetries, opportunities, and the internationalization of multinationals from emerging economies. *Global Strategy Journal*, *2*(1), 26-40.

Mathews J. A. (2002). *Dragon Multinational: A New Model for Global Growth*. Oxford University Press: New York.

Mathews, J. A. (2006). Dragon multinationals: New players in 21 st century globalization. *Asia Pacific journal of management*, *23*(1), 5-27.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, *83*(2), 340-363.

Moon, S., Mishra, A., Mishra, H., & Kang, M. Y. (2016). Cultural and economic impacts on global cultural products: evidence from US movies. *Journal of International Marketing*, *24*(3), 78-97.

Mowery, D. C., & Oxley, J. E. (1995). Inward technology transfer and competitiveness: the role of national innovation systems. *Cambridge journal of economics*, *19*(1), 67-93.

MSCI. (2016). MSCI emerging markets index. Retrieved from https://www.msci.com/emerging-markets.

Narula, R. (2006). Globalization, new ecologies, new zoolo- gies, and the purported death of the eclectic paradigm. *Asia Pacific Journal of Management* 23(2): 143–151.

North, D.C. 1990. Institutions, institutional change, and economic performance. New York: Cambridge University Press.

Pan, Y., & Tse, D. (2000). The hierarchical model of market entry modes. Journal of International Business Studies, 31, 535L 554.

Peng, M. W., & Su, W. (2014). Cross-listing and the scope of the firm. *Journal of World Business*, *49*(1), 42-50.

Peng, M. W., Lee, S. H., & Wang, D. Y. (2005). What determines the scope of the firm over time? A focus on institutional relatedness. *Academy of Management Review*, *30*(3), 622-633.

Peng, M. W., Wang, D. Y., & Jiang, Y. (2008). An institution-based view of international business strategy. A focus on emerging economies. Journal of International Business Studies, 39(5), 920–936.

Peng, M. W., Sun, S. L., Pinkham, B., & Chen, H. (2009). The institution-based view as a third leg for a strategy tripod. The Academy of Management Perspectives, 23(3), 63–68.

Persinger, E. S., Civi, E., & Vostina, S. W. (2007). The born global entrepreneur in emerging economies. *International Business and Economics Research Journal*, *6*(3), 73.

Petersen, B., & Seifert Jr, R. E. (2014). Strategic Asset Seeking by EMNEs: A Matter of Liabilities of Foreignness–or Outsidership?. In *Multinational Enterprises, Markets and Institutional Diversity* (pp. 375-398). Emerald Group Publishing Limited.

Ramamurti R. (2004). Developing countries and MNEs: extending and enriching the research agenda. *Journal of International Business Studies* 35: 277–283.

Ramamurti, R. (2009). What have we learned about emerging-market MNEs? In *Emerging Multinationals in Emerging Markets*, Ramamurti R, Singh JV (eds). Cambridge University Press: Cambridge, U.K.; 399-426.

Ramamurti, R. (2012). What is really different about emerging market multinationals?. *Global Strategy Journal*, *2*(1), 41-47.

Reese Jr, W. A., & Weisbach, M. S. (2002). Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings. *Journal of financial economics*, *66*(1), 65-104.

Salama, A., Holland, W., & Vinten, G. (2003). Challenges and opportunities in mergers and acquisitions: three international case studies–Deutsche Bank-Bankers Trust; British Petroleum-Amoco; Ford-Volvo. *Journal of European industrial training*, *27*(6), 313-321.

Santangelo, G. D. (2000). Corporate strategic technological partnerships in the European information and communications technology industry. *Research Policy*, *29*(9), 1015- 1031.

Satta, G., Parola, F., & Persico, L. (2014). Temporal and spatial constructs in service firms' internationalization patterns: the determinants of the accelerated growth of emerging MNEs. *Journal of International Management*, *20*(4), 421-435.

Scott, W. R. (1987). The adolescence of institutional theory. *Administrative science quarterly*, 493-511.

Scott, W. R. (2008). *Institutions and organizations: Ideas and interests*. Sage.

Sedoglavich, V. (2008). *Absorptive capacity and internationalization of New Zealand hightech SMEs in the agro-technology sector* (Doctoral dissertation, The University of Waikato).

Siegel, J. (2009). Is there a better commitment mechanism than cross-listings for emerging-economy firms? Evidence from Mexico. *Journal of International Business Studies*, *40*(7), 1171- 1191.

Stanimirova, I., & Walczak, B. (2008). Classification of data with missing elements and outliers. *Talanta*, *76*(3), 602-609.

Stucchi, T. (2012). Emerging market firms' acquisitions in advanced markets: Matching strategy with resource-, institution-and industry-based antecedents. *European Management Journal*, *30*(3), 278-289.

Stulz, R. M. (1999). Globalization, corporate finance, and the cost of capital. Journal of Applied Corporate Finance, 12: 8–25.

Sun, S. L., Peng, M. W., Ren, B., & Yan, D. (2012). A comparative ownership advantage framework for cross-border M&As: The rise of Chinese and Indian MNEs. *Journal of World Business*, *47*(1), 4-16.

Sundaram, A. K., & Black, J. S. (1992). The environment and internal organization of multinational enterprises. *Academy of management review*, *17*(4), 729-757.

Tolmunen, P., & Torstila, S. (2005). Cross-Listings and M&A Activity: Transatlantic Evidence. *Financial Management*, *34*(1), 123-142.

UNCTAD (2004). *Outward FDI from Brazil: Poised to Take Off?* Geneva: United Nations, Geneva (www.unctad.org/en/docs/iteiia200416_en.pdf).

Vaaler, P. M., & Zhang, I. (2011). Legal system and rule of law effects on US cross-listing to bond by emerging-market firms. Working paper, University of Minnesota.

van Hoorn, A., & Maseland, R. (2016). How institutions matter for international business: Institutional distance effects vs institutional profile effects. *Journal of International Business Studies*, *47*(3), 374-381.

Vermeulen, F., & Barkema, H. (2002). Pace, rhythm, and scope: Process dependence in building a profitable multinational corporation. *Strategic Management Journal*, *23*(7), 637-653.

Vernon R. (1979). The product cycle hypothesis in a new international environment. *Oxford Bulletin of Economics and Statistics* 41(4): 255–267.

Veugelers, R., & Cassiman, B. (1999). Make and buy in innovation strategies: evidence from Belgian manufacturing firms. *Research policy*, *28*(1), 63-80.

Voinea, C. L., & Van Kranenburg, H. (2017). *Nonmarket Strategic Management*. Taylor & Francis.

Wagner, H. (2004). Internationalization speed and cost efficiency: Evidence from Germany. *International Business Review*, *13*(4), 447-463.

Xu, D. & Shenkar, O. (2002). Institutional distance and the multinational enterprise. *Academy of Management review*, 27 (4), 608-618

Zahra, S. A., Ireland, R. D., & Hitt, M. A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *Academy of Management journal*, *43*(5), 925-950.

Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic management journal*, *18*(6), 439-463.

Zheng, N., Wei, Y., Zhang, Y., & Yang, J. (2016). In search of strategic assets through cross-border merger and acquisitions: Evidence from Chinese multinational enterprises in developed economies. *International Business Review*, *25*(1), 177-186.

Appendix

Appendix 1 – Cronbach's alpha

Cronbach's Alpha	**Cronbach's Alpha Based on Standardized items**	**N of items**
0.942	0.951	6

Appendix 2- Institutional Distance

Country	ISO	Governmental effectiveness	Regulatory quality	Rule of law	political stability and no violence	control of corruption	voice and accountability	Institutional environment
Brazil	BR	-0,035341211	0,152444333	0,044080537	0,013475911	0,046279952	0,571348846	0,79
Chile	CL	1,272530079	1,438483834	1,335540414	0,67960453	1,4972893	1,095608711	7,32
China	CN	0,088648684	-0,234011024	-0,409915984	-0,657060683	-0,561642945	-1,68054831	-3,45
Colombia	CO	-0,059238378	0,253474891	-0,308589816	-1,537184834	-0,385390997	-0,132379189	-2,17
Czech Republic	CZ	0,905217707	1,299504995	0,949479163	0,989233732	0,331638575	1,014817715	5,49
Egypt, Arab Rep.	EG	-0,370581895	-0,174629584	-0,179419875	-0,898418307	-0,631366074	-1,188053608	-3,44
France	FR	1,430300951	1,31238091	1,519731045	0,681087554	1,466379523	1,202856779	7,61
Germany	DE	1,571171761	1,573053479	1,631237388	0,796834469	1,776269913	1,297783494	8,65
Greece	GR	0,556039333	0,644664288	0,630501211	-0,127206877	-0,057776872	0,897718072	2,54
Hungary	HU	0,666669607	1,016506791	0,780267775	0,685783744	0,365650147	0,894202769	4,41
India	IN	0,025990726	-0,378629327	-0,037394792	-1,2779845	-0,468117386	0,443272382	-1,69
Indonesia	ID	-0,214305162	-0,415856957	-0,6399979	-0,853916168	-0,751360238	-0,037774231	-2,91
Italy	IT	0,44190973	0,896335602	0,430328697	0,473923683	0,126922861	0,962797403	3,33
Malaysia	MY	1,120517969	0,588942647	0,478164613	0,143352136	0,089267343	-0,499978125	1,92
Mexico	MX	0,162429854	0,252709299	-0,550830901	-0,726463437	-0,361549228	0,178506866	-1,05
Peru	PE	-0,191170737	0,450333714	-0,562922597	-0,999915421	-0,228810817	0,111137487	-1,42
Philippines	PH	0,001555011	-0,233532518	-0,552582622	-1,650759578	-0,760486543	-0,039102528	-3,23
Poland	PL	0,640948951	0,980891109	0,683574736	1,01733005	0,497079551	1,03760159	4,86
Qatar	QA	0,84518373	0,598410308	0,851967752	1,15385592	1,406557083	-1,012165904	3,84
Russian Federation	RU	-0,468811393	-0,35328877	-0,764931798	-0,929458737	-1,090530515	-0,888972819	-4,5
South Africa	ZA	0,392140895	0,363410115	0,141175568	-0,029427003	0,131467938	0,602069676	1,6
Taiwan, China	TW	1,176270604	1,117008567	1,013429046	0,85661	0,743405104	0,831275165	5,74
Thailand	TH	0,187760577	0,173714787	-0,204702571	-1,442788363	-0,333862871	-0,495821983	-2,12
Turkey	TR	0,29497084	0,298663348	0,110653944	-0,915285528	0,029263416	-0,084820725	-0,27
United Arab Emirates	AE	0,89796114	0,320224732	0,323019534	0,801757872	0,896253645	-0,903512776	2,34
United Kingdom	GB	1,568379402	1,732977629	1,764102578	0,411818206	1,604826927	1,289994001	8,37

Country	ISO	Institutional environment	Distance with IT	Distance with GR	Distance with UK	Distance with FR
Brazil	BR	0,79	2,54	7,85	7,58	6,82
Chile	CL	7,32	-3,99	1,33	1,05	0,29
China	CN	-3,45	6,79	12,1	11,83	11,07
Colombia	CO	-2,17	5,5	10,82	10,54	9,78
Czech Republic	CZ	5,49	-2,16	3,16	2,88	2,12
Egypt, Arab Rep.	EG	-3,44	6,77	12,09	11,81	11,06
France	FR	7,61	-4,28	1,03	0,76	0
Germany	DE	8,65	-5,31	0	-0,27	-1,03
Greece	GR	2,54	0,79	6,1	5,83	5,07
Hungary	HU	4,41	-1,08	4,24	3,96	3,2
India	IN	-1,69	5,03	10,34	10,06	9,31
Indonesia	ID	-2,91	6,25	11,56	11,29	10,53
Italy	IT	3,33	0	5,31	5,04	4,28
Malaysia	MY	1,92	1,41	6,73	6,45	5,69
Mexico	MX	-1,05	4,38	9,69	9,42	8,66
Peru	PE	-1,42	4,75	10,07	9,79	9,03
Philippines	PH	-3,23	6,57	11,88	11,61	10,85
Poland	PL	4,86	-1,53	3,79	3,51	2,76
Qatar	QA	3,84	-0,51	4,8	4,53	3,77
Russian Federation	RU	-4,5	7,83	13,14	12,87	12,11
South Africa	ZA	1,6	1,73	7,05	6,77	6,01
Taiwan, China	TW	5,74	-2,41	2,91	2,63	1,87
Thailand	TH	-2,12	5,45	10,76	10,49	9,73
Turkey	TR	-0,27	3,6	8,91	8,64	7,88
United Arab Emirates	AE	2,34	1	6,31	6,04	5,28
United Kingdom	GB	8,37	-5,04	0,27	0	-0,76

Appendix 3 – Assumptions

3.1 Distribution of predictor variables

Descriptives

			Statistic	Std. Error
CROSSDUMMY	Mean		,13	,024
	95% Confidence Interval for Mean	Lower Bound	,08	
		Upper Bound	,17	
	Median		,00	
	Std. Deviation		,334	
	Interquartile Range		0	
	Skewness		2,259	,173
	Kurtosis		3,135	,345
RDINTENSITY	Mean		2,625067408000000	,218318257000000
	95% Confidence Interval for Mean	Lower Bound	2,194512974000000	
		Upper Bound	3,055621842000000	
	Median		1,836539614000000	
	Std. Deviation		3,064242757000000	
	Interquartile Range		3,590065968000000	
	Skewness		2,046	,173
	Kurtosis		6,401	,345
SIZE	Mean		11304,04	4342,309
	95% Confidence Interval for Mean	Lower Bound	2740,39	
		Upper Bound	19867,69	
	Median		2272,00	
	Std. Deviation		60947,205	
	Interquartile Range		5991	
	Skewness		12,821	,173
	Kurtosis		173,384	,345

PROFIT	Mean		8,995431472000000	,844263911000000
	95% Confidence Interval for Mean	Lower Bound	7,330423810000000	
		Upper Bound	10,660439130000000	
	Median		8,080000000000000	
	Std. Deviation		11,849808680000000	
	Interquartile Range		11,775000000000000	
	Skewness		-,582	,173
	Kurtosis		2,744	,345
DISTANCE	Mean		4,9296	,29055
	95% Confidence Interval for Mean	Lower Bound	4,3566	
		Upper Bound	5,5027	
	Median		2,9100	
	Std. Deviation		4,07813	
	Interquartile Range		6,28	
	Skewness		,614	,173
	Kurtosis		-,826	,345

3.1.1 Transformation Size and R&D Intensity

	Mean	**SE**	**Interquartile Range**	**Skewness**	**Kurtosis**
SIZE	11304,04	4342,309	5991	12,821	173,384
LN_Size	7,756024325	,1118520643	2,258535867	,281	,649

	Mean	**SE**	**Interquartile Range**	**Skewness**	**Kurtosis**
RDINTENSITY	2,625067408	,2183182570	3,590065968	2,046	6,401
SQRT_RD	1,2886	.07014	1,59	,311	,173

3.2 Multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	,077	,089		,863	,389					
	Ln_Size	,043	,011	,263	3,816	,000	,265	,264	,263	1,000	1,000
	PROFIT	,002	,001	,074	1,066	,288	,078	,076	,074	1,000	1,000
2	(Constant)	-,005	,091		-,054	,957					
	Ln_Size	,035	,010	,217	3,351	,001	,265	,236	,211	,946	1,057
	PROFIT	,000	,001	-,014	-,211	,833	,078	-,015	-,013	,933	1,072
	CROSSDUMMY	,187	,052	,246	3,600	,000	,368	,252	,226	,850	1,176
	DISTANCE_HIGH	,018	,004	,296	4,147	,000	,337	,287	,261	,777	1,287
	RDsqrt	,033	,017	,129	1,922	,056	-,015	,138	,121	,879	1,137
3	(Constant)	,013	,096		,134	,894					
	Ln_Size	,032	,010	,201	3,132	,002	,265	,222	,194	,933	1,072
	PROFIT	,000	,001	-,019	-,287	,775	,078	-,021	-,018	,918	1,089
	CROSSDUMMY	-,099	,119	-,129	-,830	,408	,368	-,060	-,051	,158	6,340
	DISTANCE_HIGH	,018	,007	,294	2,801	,006	,337	,200	,173	,347	2,882
	RDsqrt	,047	,025	,182	1,851	,066	-,015	,133	,115	,398	2,513
	Moderation_RD_DISTANCE	-,003	,004	-,084	-,785	,433	,189	-,057	-,049	,333	3,000
	Moderation_CROSS_DISTANCE	,036	,014	,433	2,646	,009	,440	,189	,164	,143	6,972

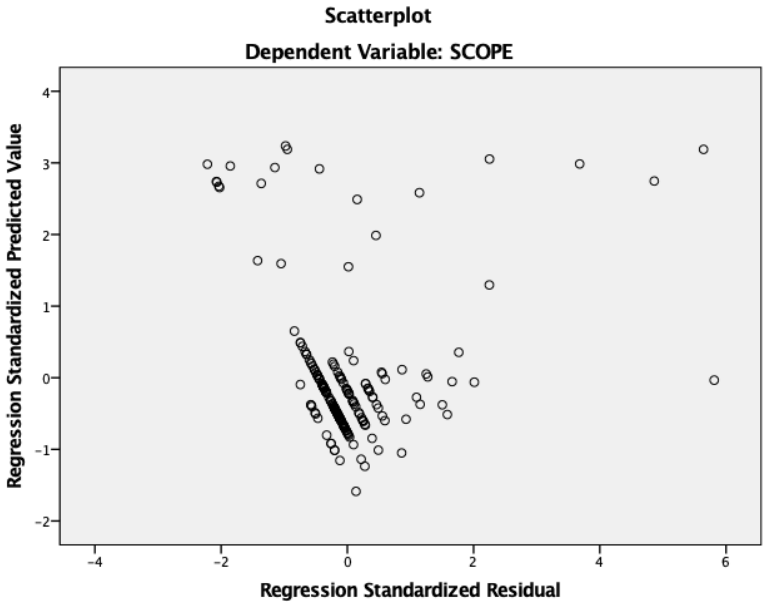
Coefficients[a]

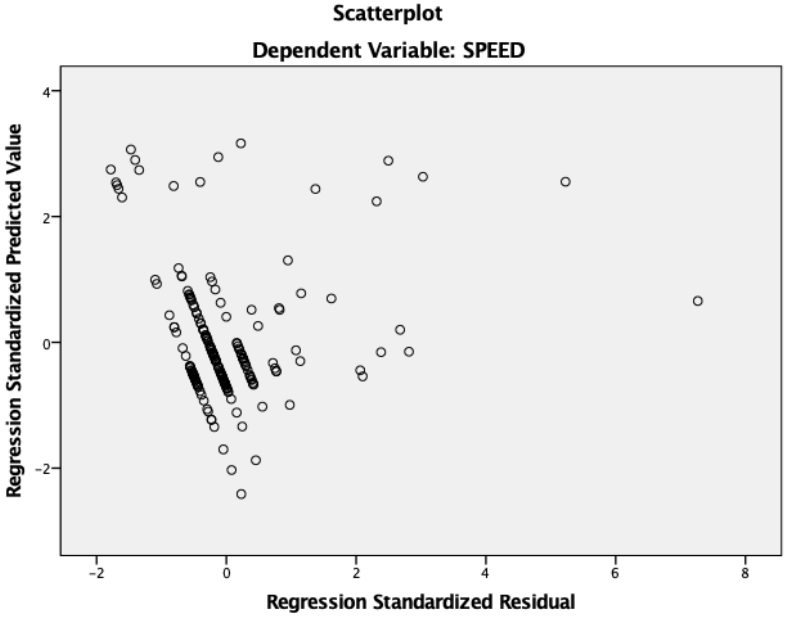
Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	,114	,095		1,203	,230					
	Ln_Size	,026	,012	,153	2,163	,032	,154	,153	,153	1,000	1,000
	PROFIT	,001	,002	,058	,819	,414	,061	,059	,058	1,000	1,000
2	(Constant)	,009	,102		,088	,930					
	Ln_Size	,025	,012	,148	2,104	,037	,154	,151	,144	,946	1,057
	PROFIT	,000	,002	-,014	-,193	,847	,061	-,014	-,013	,933	1,072
	CROSSDUMMY	,028	,058	,036	,484	,629	,152	,035	,033	,850	1,176
	DISTANCE_HIGH	,019	,005	,301	3,884	,000	,287	,271	,265	,777	1,287
	RDsqrt	,021	,019	,080	1,094	,275	-,030	,079	,075	,879	1,137
3	(Constant)	,008	,109		,073	,942					
	Ln_Size	,023	,012	,137	1,954	,052	,154	,141	,132	,933	1,072
	PROFIT	,000	,002	-,014	-,198	,843	,061	-,014	-,013	,918	1,089
	CROSSDUMMY	-,191	,135	-,242	-1,418	,158	,152	-,103	-,096	,158	6,340
	DISTANCE_HIGH	,022	,007	,333	2,896	,004	,287	,206	,196	,347	2,882
	RDsqrt	,041	,029	,152	1,413	,159	-,030	,102	,096	,398	2,513
	Moderation_RD_DISTANCE	-,004	,005	-,111	-,949	,344	,139	-,069	-,064	,333	3,000
	Moderation_CROSS_DISTANCE	,027	,015	,319	1,784	,076	,226	,129	,121	,143	6,972

a. Dependent Variable: Ln_SPEED

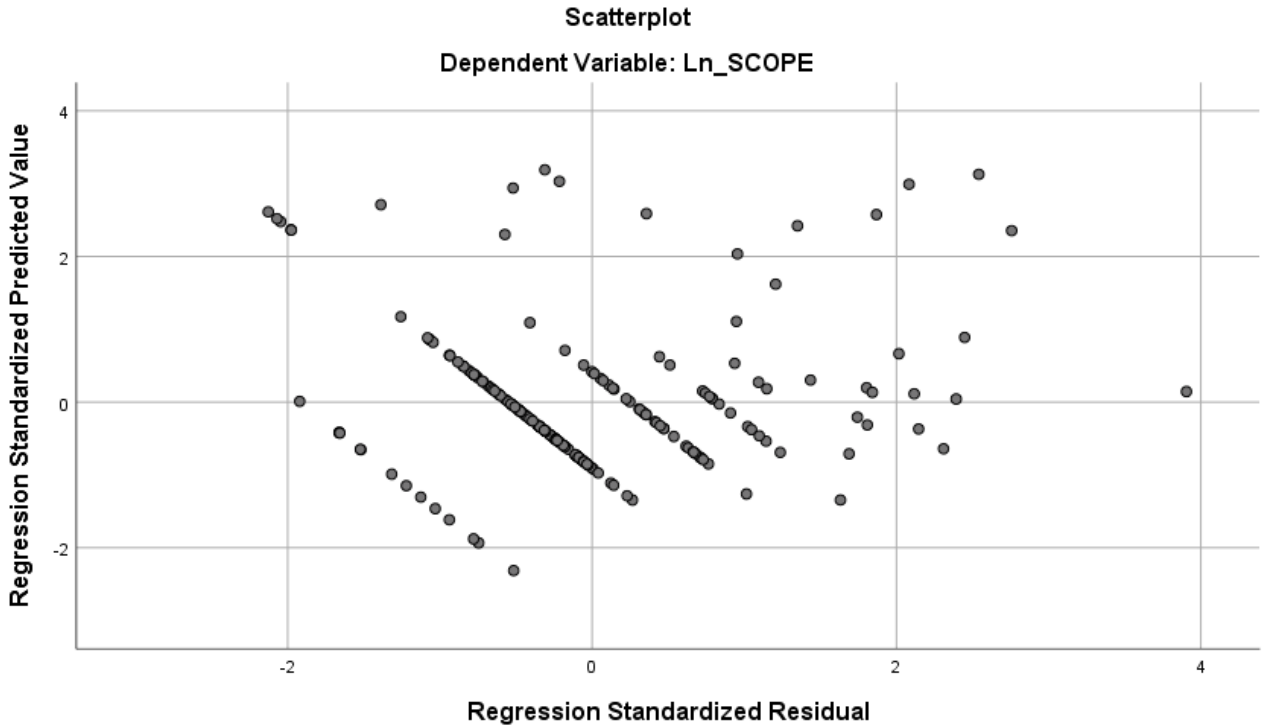
3.3 Homoscedasticity and Linearity

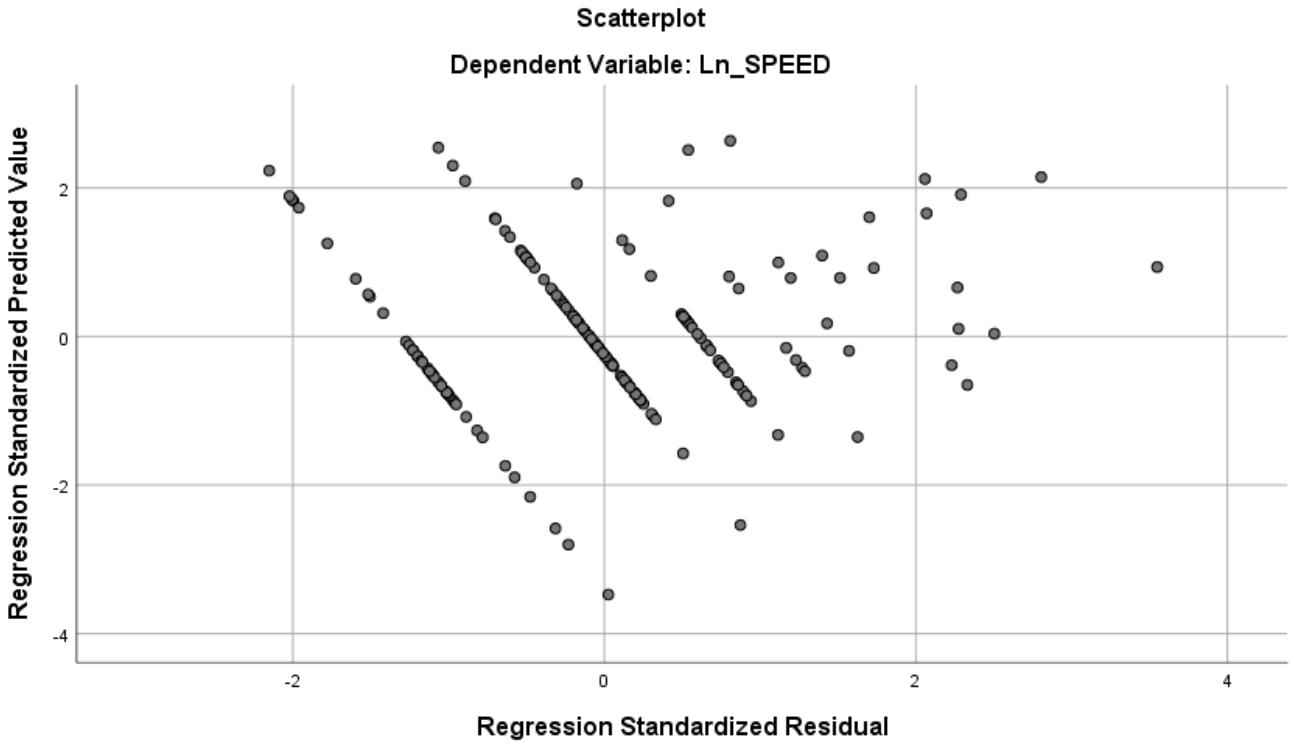
3.3.1 Scatterplots untransformed variables





3.3.2 Scatterplots transformed variables




Scatterplot
Dependent Variable: Ln_SPEED
Regression Standardized Predicted Value
2
0
-2
-4
-2
0
2
4
Regression Standardized Residual

3.4 Independence of error terms

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	,1135	,8466	,4218	,13317	197
Residual	-,46861	,86005	,00000	,21627	197
Std. Predicted Value	-2,315	3,190	,000	1,000	197
Std. Residual	-2,128	3,905	,000	,982	197

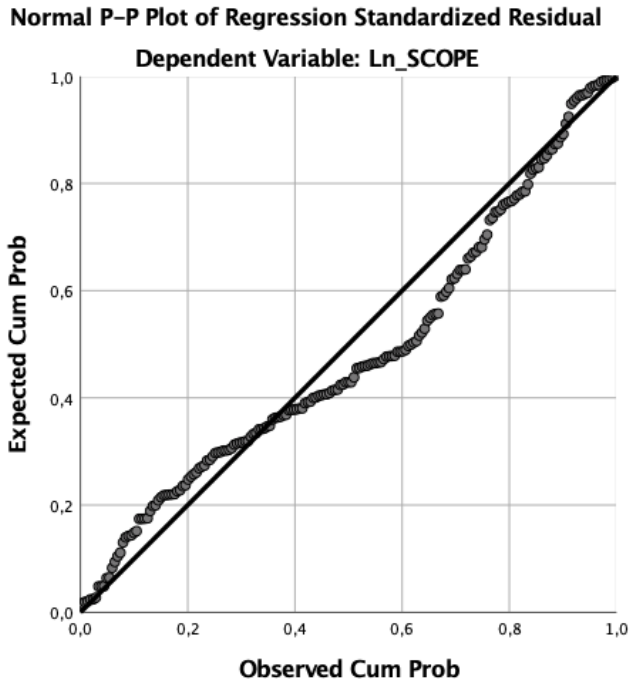
a. Dependent Variable: Ln_SCOPE

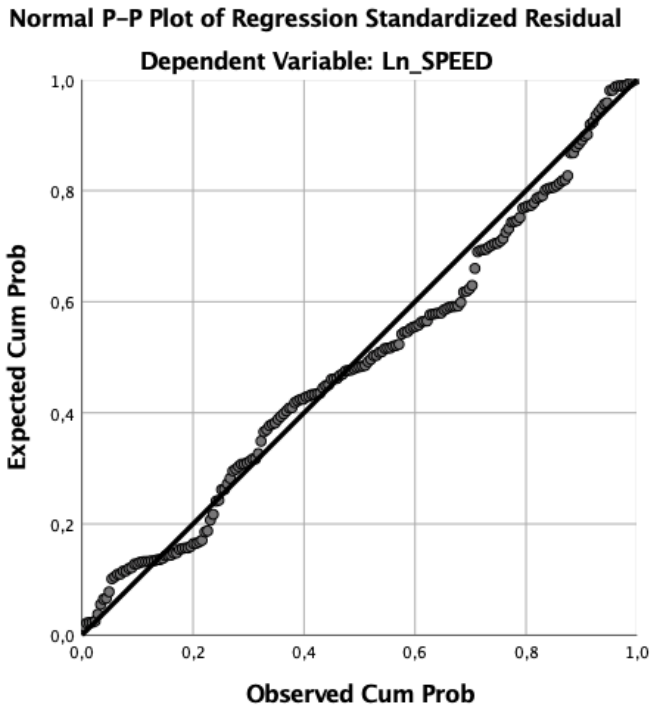
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-,0064	,5761	,3249	,09539	197
Residual	-,53779	,88698	,00000	,24536	197
Std. Predicted Value	-3,474	2,633	,000	1,000	197
Std. Residual	-2,152	3,550	,000	,982	197

a. Dependent Variable: Ln_SPEED

3.5 Normality





Appendix 4 – Multiple Regression Analysis

4.1 Multiple Regression Analysis for Scope

Descriptive Statistics			
	Mean	Std. Deviation	N
Ln_SCOPE	,4218	,25398	197
Ln_Size	7,756024325000000	1,569918534000000	197
PROFIT	8,995431472000000	11,84980868000000	197
CROSSDUMMY	,13	,334	197
DISTANCE_HIGH	4,9296	4,07813	197
RDsqrt	1,2886	,98466	197
Moderation_RD_DISTANCE	5,1318	6,82235	197
Moderation_CROSS_DISTANCE	1,0638	3,05762	197

Correlations

		Ln_SCOPE	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDsqrt	Moderation_RD_DISTANCE	Moderation_CROSS_DISTANCE
Pearson Correlation	Ln_SCOPE	1,000	,265	,078	,368	,337	-,015	,189	,440
	Ln_Size	,265	1,000	,017	,216	,017	-,075	-,018	,229
	PROFIT	,078	,017	1,000	,065	,210	,078	,259	,109
	CROSSDUMMY	,368	,216	,065	1,000	,324	-,145	,107	,915
	DISTANCE	,337	,017	,210	,324	1,000	-,305	,484	,418
	RDsqrt	-,015	-,075	,078	-,145	-,305	1,000	,473	-,159
	Moderation_RD_DISTANCE	,189	-,018	,259	,107	,484	,473	1,000	,155
	Moderation_CROSS_DISTANCE	,440	,229	,109	,915	,418	-,159	,155	1,000
Sig. (1-tailed)	Ln_SCOPE	.	,000	,138	,000	,000	,419	,004	,000
	Ln_Size	,000	.	,407	,001	,407	,147	,401	,001
	PROFIT	,138	,407	.	,184	,002	,139	,000	,063
	CROSSDUMMY	,000	,001	,184	.	,000	,021	,066	,000
	DISTANCE	,000	,407	,002	,000	.	,000	,000	,000
	RDsqrt	,419	,147	,139	,021	,000	.	,000	,013
	Moderation_RD_DISTANCE	,004	,401	,000	,066	,000	,000	.	,015
	Moderation_CROSS_DISTANCE	,000	,001	,063	,000	,000	,013	,015	.
N	Ln_SCOPE	197	197	197	197	197	197	197	197
	Ln_Size	197	197	197	197	197	197	197	197
	PROFIT	197	197	197	197	197	197	197	197
	CROSSDUMMY	197	197	197	197	197	197	197	197
	DISTANCE	197	197	197	197	197	197	197	197
	RDsqrt	197	197	197	197	197	197	197	197
	Moderation_RD_DISTANCE	197	197	197	197	197	197	197	197
	Moderation_CROSS_DISTANCE	197	197	197	197	197	197	197	197

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PROFIT, Ln_Size[b]	.	Enter
2	RDsqrt, CROSSDUMMY, DISTANCE[b]	.	Enter
3	Moderation_RD_DISTANCE, Moderation_CROSS_DISTANCE[b]	.	Enter

a. Dependent Variable: Ln_SCOPE

b. All requested variables entered.

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,275[a]	,075	,066	,24546	,075	7,920	2	194	,000
2	,495[b]	,245	,225	,22362	,169	14,247	3	191	,000
3	,524[c]	,275	,248	,22023	,030	3,960	2	189	,021

a. Predictors: (Constant), PROFIT, Ln_Size

b. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH

c. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH, Moderation_RD_DISTANCE, Moderation_CROSS_DISTANCE

d. Dependent Variable: Ln_SCOPE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,954	2	,477	7,920	,000[b]
	Residual	11,689	194	,060		
	Total	12,643	196			
2	Regression	3,092	5	,618	12,365	,000[c]
	Residual	9,551	191	,050		
	Total	12,643	196			
3	Regression	3,476	7	,497	10,237	,000[d]
	Residual	9,167	189	,049		
	Total	12,643	196			

a. Dependent Variable: Ln_SCOPE

b. Predictors: (Constant), PROFIT, Ln_Size

c. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH

d. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH, Moderation_RD_DISTANCE, Moderation_CROSS_DISTANCE

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance	VIF	Minimum Tolerance
1	CROSSDUMMY	,323[b]	4,814	,000	,327	,950	1,053	,950
	DISTANCE	,332[b]	4,975	,000	,337	,956	1,047	,956
	RDsqrt	-,001[b]	-,007	,994	-,001	,988	1,012	,988
	Moderation_RD_ DISTANCE	,187[b]	2,661	,008	,188	,932	1,073	,932
	Moderation_CROSS_ DISTANCE	,396[b]	6,045	,000	,399	,936	1,068	,936
2	Moderation_RD_ DISTANCE	-,102[c]	-,943	,347	-,068	,335	2,988	,335
	Moderation_CROSS_ DISTANCE	,441[c]	2,705	,007	,193	,144	6,943	,144

a. Dependent Variable: Ln_SCOPE

b. Predictors in the Model: (Constant), PROFIT, Ln_Size

c. Predictors in the Model: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH

Collinearity Diagnostics[a]

				Variance Proportions								
Model	Dimension	Eigenvalue	Condition Index	(Constant)	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDsqrt	Moderation_RD_ DISTANCE	Moderation_CROSS_ DISTANCE
1	1	2,471	1,000	,01	,01	,06					
	2	,509	2,203	,01	,01	,93					
	3	,020	11,198	,99	,98	,00					
2	1	3,971	1,000	,00	,00	,02	,01	,01	,01		
	2	,894	2,107	,00	,00	,01	,64	,02	,05		
	3	,547	2,695	,00	,00	,82	,02	,01	,07		
	4	,401	3,149	,00	,00	,13	,28	,37	,21		
	5	,169	4,841	,02	,06	,02	,00	,54	,59		
	6	,017	15,073	,97	,94	,00	,05	,06	,06		
3	1	4,815	1,000	,00	,00	,01	,00	,00	,00	,01	,00
	2	1,548	1,764	,00	,00	,01	,04	,00	,01	,00	,03
	3	,555	2,947	,01	,01	,51	,00	,01	,02	,05	,00
	4	,519	3,047	,00	,00	,33	,00	,00	,02	,21	,00
	5	,412	3,418	,00	,00	,14	,02	,17	,11	,00	,00
	6	,075	8,002	,00	,02	,00	,64	,10	,23	,20	,62
	7	,060	8,957	,00	,11	,00	,29	,54	,45	,43	,30
	8	,016	17,480	,98	,85	,00	,01	,18	,16	,09	,04

a. Dependent Variable: Ln_SCOPE

4.2 Multiple Regression Analysis for Speed

Descriptive Statistics

	Mean	Std. Deviation	N
Ln_SPEED	,3249	,26325	197
Ln_Size	7,756024325000000	1,569918534000000	197
PROFIT	8,995431472000000	11,849808680000000	197
CROSSDUMMY	,13	,334	197
DISTANCE	4,9296	4,07813	197
RDsqrt	1,2886	,98466	197
Moderation_RD_DISTANCE	5,1318	6,82235	197
Moderation_CROSS_DISTANCE	1,0638	3,05762	197

Correlations

		Ln_SPEED	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDsqrt	Moderation_RD_DISTANCE	Moderation_CROSS_DISTANCE
Pearson Correlation	Ln_SPEED	1,000	,154	,061	,152	,287	-,030	,139	,226
	Ln_Size	,154	1,000	,017	,216	,017	-,075	-,018	,229
	PROFIT	,061	,017	1,000	,065	,210	,078	,259	,109
	CROSSDUMMY	,152	,216	,065	1,000	,324	-,145	,107	,915
	DISTANCE	,287	,017	,210	,324	1,000	-,305	,484	,418
	RDsqrt	-,030	-,075	,078	-,145	-,305	1,000	,473	-,159
	Moderation_RD_DISTANCE	,139	-,018	,259	,107	,484	,473	1,000	,155
	Moderation_CROSS_DISTANCE	,226	,229	,109	,915	,418	-,159	,155	1,000
Sig. (1-tailed)	Ln_SPEED	.	,015	,199	,016	,000	,340	,026	,001
	Ln_Size	,015	.	,407	,001	,407	,147	,401	,001
	PROFIT	,199	,407	.	,184	,002	,139	,000	,063
	CROSSDUMMY	,016	,001	,184	.	,000	,021	,066	,000
	DISTANCE	,000	,407	,002	,000	.	,000	,000	,000
	RDsqrt	,340	,147	,139	,021	,000	.	,000	,013
	Moderation_RD_DISTANCE	,026	,401	,000	,066	,000	,000	.	,015
	Moderation_CROSS_DISTANCE	,001	,001	,063	,000	,000	,013	,015	.
N	Ln_SPEED	197	197	197	197	197	197	197	197
	Ln_Size	197	197	197	197	197	197	197	197
	PROFIT	197	197	197	197	197	197	197	197
	CROSSDUMMY	197	197	197	197	197	197	197	197
	DISTANCE	197	197	197	197	197	197	197	197
	RDsqrt	197	197	197	197	197	197	197	197
	Moderation_RD_DISTANCE	197	197	197	197	197	197	197	197
	Moderation_CROSS_DISTANCE	197	197	197	197	197	197	197	197

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PROFIT, Ln_Size[b]	.	Enter
2	RDsqrt, CROSSDUMMY, DISTANCE	.	Enter
3	Moderation_RD_ DISTANCE, Moderation_CROSS _DISTANCE[b]	.	Enter

a. Dependent Variable: Ln_SPEED

b. All requested variables entered.

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,165[a]	,027	,017	,26099	,027	2,705	2	194	,069
2	,334[b]	,111	,088	,25138	,084	6,041	3	191	,001
3	,362[c]	,131	,099	,24986	,020	2,158	2	189	,118

a. Predictors: (Constant), PROFIT, Ln_Size

b. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE

c. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE, Moderation_RD_DISTANCE, Moderation_CROSS_DISTANCE

d. Dependent Variable: Ln_SPEED

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,369	2	,184	2,705	,069[b]
	Residual	13,214	194	,068		
	Total	13,583	196			
2	Regression	1,514	5	,303	4,791	,000[c]
	Residual	12,069	191	,063		
	Total	13,583	196			
3	Regression	1,783	7	,255	4,081	,000[d]
	Residual	11,800	189	,062		
	Total	13,583	196			

a. Dependent Variable: Ln_SPEED

b. Predictors: (Constant), PROFIT, Ln_Size

c. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH

d. Predictors: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH, Moderation_RD_DISTANCE, Moderation_CROSS_DISTANCE

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance	VIF	Minimum Tolerance
1	CROSSDUMMY	,122[b]	1,684	,094	,120	,950	1,053	,950
	DISTANCE_HIGH	,285[b]	4,096	,000	,283	,956	1,047	,956
	RDsqrt	-,023[b]	-,320	,749	-,023	,988	1,012	,988
	Moderation_RD_DISTANCE	,136[b]	1,867	,063	,133	,932	1,073	,932
	Moderation_CROSS_DISTANCE	,197[b]	2,734	,007	,193	,936	1,068	,936
2	Moderation_RD_DISTANCE	-,125[c]	-1,060	,291	-,077	,335	2,988	,335
	Moderation_CROSS_DISTANCE	,330[c]	1,849	,066	,133	,144	6,943	,144

a. Dependent Variable: Ln_SPEED

b. Predictors in the Model: (Constant), PROFIT, Ln_Size

c. Predictors in the Model: (Constant), PROFIT, Ln_Size, RDsqrt, CROSSDUMMY, DISTANCE_HIGH

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDsqrt	Moderation_RD_DISTANCE	Moderation_CROSS_DISTANCE
1	1	2,471	1,000	,01	,01	,06					
	2	,509	2,203	,01	,01	,93					
	3	,020	11,198	,99	,98	,00					
2	1	3,971	1,000	,00	,00	,02	,01	,01	,01		
	2	,894	2,107	,00	,00	,01	,64	,02	,05		
	3	,547	2,695	,00	,00	,82	,02	,01	,07		
	4	,401	3,149	,00	,00	,13	,28	,37	,21		
	5	,169	4,841	,02	,06	,02	,00	,54	,59		
	6	,017	15,073	,97	,94	,00	,05	,06	,06		
3	1	4,815	1,000	,00	,00	,01	,00	,00	,00	,01	,00
	2	1,548	1,764	,00	,00	,01	,04	,00	,01	,00	,03
	3	,555	2,947	,01	,01	,51	,00	,01	,02	,05	,00
	4	,519	3,047	,00	,00	,33	,00	,00	,02	,21	,00
	5	,412	3,418	,00	,00	,14	,02	,17	,11	,00	,00
	6	,075	8,002	,00	,02	,00	,64	,10	,23	,20	,62
	7	,060	8,957	,00	,11	,00	,29	,54	,45	,43	,30
	8	,016	17,480	,98	,85	,00	,01	,18	,16	,09	,04

a. Dependent Variable: Ln_SPEED

Appendix 5– Robustness check

5.1 Multiple Regression Analysis Scope – Untransformed variables

Descriptive Statistics			
	Mean	Std. Deviation	N
SCOPE	2,31	3,303	197
Ln_Size	7,756024325000000	1,569918534000000	197
PROFIT	8,995431472000000	11,84980868000000	197
CROSSDUMMY	,13	,334	197
DISTANCE	4,9296	4,07813	197
RDINTENSITY	2,625067408000000	3,064242757000000	197
Moderatie_CROSSDUMMY_Distance	1,0638	3,05762	197
Moderatie_RDINTENSITY_Distance	9,776650794000000	16,37443746000000	197

Correlations

		SCOPE	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDINTENSITY	Moderatie_CROSSDUMMY_Distance	Moderatie_RDINTENSITY_Distance
Pearson Correlation	SCOPE	1,000	,230	,103	,432	,290	-,019	,482	,136
	Ln_Size	,230	1,000	,017	,216	,017	-,125	,229	-,035
	PROFIT	,103	,017	1,000	,065	,210	,129	,109	,280
	CROSSDUMMY	,432	,216	,065	1,000	,324	-,070	,915	,112
	DISTANCE	,290	,017	,210	,324	1,000	-,254	,418	,368
	RDINTENSITY	-,019	-,125	,129	-,070	-,254	1,000	-,101	,540
	Moderatie_CROSSDUMMY_Distance	,482	,229	,109	,915	,418	-,101	1,000	,142
	Moderatie_RDINTENSITY_Distance	,136	-,035	,280	,112	,368	,540	,142	1,000
Sig. (1-tailed)	SCOPE	.	,001	,075	,000	,000	,398	,000	,028
	Ln_Size	,001	.	,407	,001	,407	,040	,001	,312
	PROFIT	,075	,407	.	,184	,002	,035	,063	,000
	CROSSDUMMY	,000	,001	,184	.	,000	,163	,000	,059
	DISTANCE	,000	,407	,002	,000	.	,000	,000	,000
	RDINTENSITY	,398	,040	,035	,163	,000	.	,078	,000
	Moderatie_CROSSDUMMY_Distance	,000	,001	,063	,000	,000	,078	.	,024
	Moderatie_RDINTENSITY_Distance	,028	,312	,000	,059	,000	,000	,024	.
N	SCOPE	197	197	197	197	197	197	197	197
	Ln_Size	197	197	197	197	197	197	197	197
	PROFIT	197	197	197	197	197	197	197	197
	CROSSDUMMY	197	197	197	197	197	197	197	197
	DISTANCE	197	197	197	197	197	197	197	197
	RDINTENSITY	197	197	197	197	197	197	197	197
	Moderatie_CROSSDUMMY_Distance	197	197	197	197	197	197	197	197
	Moderatie_RDINTENSITY_Distance	197	197	197	197	197	197	197	197

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PROFIT, Ln_Size[b]	.	Enter
2	RDINTENSITY, CROSSDUMMY, DISTANCE[b]	.	Enter
3	Moderatie_RDINTENSITY_Distance, Moderatie_CROSSDUMMY_Distance[b]	.	Enter

a. Dependent Variable: SCOPE

b. All requested variables entered.

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,250[a]	,062	,053	3,214	,062	6,466	2	194	,002
2	,490[b]	,240	,220	2,917	,177	14,855	3	191	,000
3	,515[c]	,265	,238	2,883	,025	3,239	2	189	,041

a. Predictors: (Constant), PROFIT, Ln_Size

b. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE_HIGH

c. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE_HIGH, Moderatie_RDINTENSITY_DistanceHIGH, Moderatie_CROSSDUMMY_DistanceHIGH

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133,628	2	66,814	6,466	,002[b]
	Residual	2004,484	194	10,332		
	Total	2138,112	196			
2	Regression	512,851	5	102,570	12,054	,000[c]
	Residual	1625,260	191	8,509		
	Total	2138,112	196			
3	Regression	566,704	7	80,958	9,737	,000[d]
	Residual	1571,408	189	8,314		
	Total	2138,112	196			

a. Dependent Variable: SCOPE

b. Predictors: (Constant), PROFIT, Ln_Size

c. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE

d. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE, Moderatie_RDINTENSITY_Distance, Moderatie_CROSSDUMMY_Distance

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance	Collinearity Statistics: VIF	Collinearity Statistics: Minimum Tolerance
1	CROSSDUMMY	,396[b]	6,039	,000	,399	,950	1,053	,950
	DISTANCE_HIGH	,278[b]	4,056	,000	,280	,956	1,047	,956
	RDINTENSITY	-,003[b]	-,042	,967	-,003	,967	1,034	,967
	Moderatie_CROSSDUMMY_ Distance	,448[b]	6,948	,000	,447	,936	1,068	,936
	Moderatie_RDINTENSITY_ Distance	,127[b]	1,759	,080	,126	,920	1,087	,920
2	Moderatie_CROSSDUMMY_ Distance	,417[c]	2,542	,012	,181	,144	6,940	,144
	Moderatie_RDINTENSITY_ Distance	-,027[c]	-,276	,783	-,020	,427	2,344	,427

a. Dependent Variable: SCOPE

b. Predictors in the Model: (Constant), PROFIT, Ln_Size

c. Predictors in the Model: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDINTENSITY	Moderatie_ CROSSDUMMY_ Distance	Moderatie_ RDINTENSITY_ Distance
1	1	2,471	1,000	,01	,01	,06					
	2	,509	2,203	,01	,01	,93					
	3	,020	11,198	,99	,98	,00					
2	1	3,808	1,000	,00	,00	,02	,01	,02	,02		
	2	,898	2,059	,00	,00	,01	,56	,02	,12		
	3	,559	2,609	,00	,00	,31	,20	,07	,39		
	4	,499	2,761	,01	,01	,61	,13	,06	,08		
	5	,218	4,178	,01	,03	,05	,04	,78	,32		
	6	,017	14,793	,98	,96	,00	,05	,06	,06		
3	1	4,576	1,000	,00	,00	,01	,00	,01	,01	,00	,01
	2	1,535	1,727	,00	,00	,01	,03	,00	,02	,03	,01
	3	,722	2,517	,01	,01	,01	,00	,02	,08	,00	,17
	4	,538	2,916	,00	,01	,64	,00	,01	,07	,00	,02
	5	,435	3,244	,00	,00	,32	,01	,17	,09	,00	,15
	6	,109	6,482	,01	,04	,00	,03	,59	,63	,02	,59
	7	,069	8,146	,00	,01	,01	,91	,09	,00	,91	,01
	8	,016	16,703	,98	,93	,00	,00	,12	,10	,03	,04

a. Dependent Variable: SCOPE

5.2 Multiple Regression Analysis Speed – Untransformed variables

Descriptive Statistics

	Mean	Std. Deviation	N
SPEED	1,64	2,438	197
Ln_Size	7,756024325000000	1,569918534000000	197
PROFIT	8,995431472000000	11,849808680000000	197
CROSSDUMMY	,13	,334	197
DISTANCE	4,9296	4,07813	197
RDINTENSITY	2,625067408000000	3,064242757000000	197
Moderatie_ CROSSDUMMY_Distance	1,0638	3,05762	197
Moderatie_ RDINTENSITY_Distance	9,776650794000000	16,374437460000000	197

Correlations

		SPEED	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDINTENSITY	Moderatie_ CROSSDUMMY_Distance	Moderatie_ RDINTENSITY_Distance
Pearson Correlation	SPEED	1,000	,130	,084	,245	,278	-,029	,308	,129
	Ln_Size	,130	1,000	,017	,216	,017	-,125	,229	-,035
	PROFIT	,084	,017	1,000	,065	,210	,129	,109	,280
	CROSSDUMMY	,245	,216	,065	1,000	,324	-,070	,915	,112
	DISTANCE	,278	,017	,210	,324	1,000	-,254	,418	,368
	RDINTENSITY	-,029	-,125	,129	-,070	-,254	1,000	-,101	,540
	Moderatie_CROSSDUMMY_Distance	,308	,229	,109	,915	,418	-,101	1,000	,142
	Moderatie_RDINTENSITY_Distance	,129	-,035	,280	,112	,368	,540	,142	1,000
Sig. (1-tailed)	SPEED	.	,034	,120	,000	,000	,342	,000	,035
	Ln_Size	,034	.	,407	,001	,407	,040	,001	,312
	PROFIT	,120	,407	.	,184	,002	,035	,063	,000
	CROSSDUMMY	,000	,001	,184	.	,000	,163	,000	,059
	DISTANCE	,000	,407	,002	,000	.	,000	,000	,000
	RDINTENSITY	,342	,040	,035	,163	,000	.	,078	,000
	Moderatie_CROSSDUMMY_Distance	,000	,001	,063	,000	,000	,078	.	,024
	Moderatie_RDINTENSITY_Distance	,035	,312	,000	,059	,000	,000	,024	.
N	SPEED	197	197	197	197	197	197	197	197
	Ln_Size	197	197	197	197	197	197	197	197
	PROFIT	197	197	197	197	197	197	197	197
	CROSSDUMMY	197	197	197	197	197	197	197	197
	DISTANCE	197	197	197	197	197	197	197	197
	RDINTENSITY	197	197	197	197	197	197	197	197
	Moderatie_CROSSDUMMY_Distance	197	197	197	197	197	197	197	197
	Moderatie_RDINTENSITY_Distance	197	197	197	197	197	197	197	197

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PROFIT, Ln_Size[b]	.	Enter
2	RDINTENSITY, CROSSDUMMY, DISTANCE[b]	.	Enter
3	Moderatie_RDINTENSITY_ Distance, Moderatie_CROSSDUMMY_ Distance[b]	.	Enter

a. Dependent Variable: SPEED

b. All requested variables entered.

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,154[a]	,024	,014	2,422	,024	2,344	2	194	,099
2	,339[b]	,115	,092	2,324	,092	6,590	3	191	,000
3	,367[c]	,135	,103	2,310	,020	2,151	2	189	,119

a. Predictors: (Constant), PROFIT, Ln_Size

b. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE

c. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE, Moderatie_RDINTENSITY_Distance, Moderatie_CROSSDUMMY_Distance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27,494	2	13,747	2,344	,099[b]
	Residual	1137,917	194	5,866		
	Total	1165,411	196			
2	Regression	134,228	5	26,846	4,972	,000[c]
	Residual	1031,184	191	5,399		
	Total	1165,411	196			
3	Regression	157,179	7	22,454	4,209	,000[d]
	Residual	1008,232	189	5,335		
	Total	1165,411	196			

a. Dependent Variable: SPEED

b. Predictors: (Constant), PROFIT, Ln_Size

c. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE

d. Predictors: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE, Moderatie_RDINTENSITY_Distance, Moderatie_CROSSDUMMY_Distance

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance	VIF	Minimum Tolerance
1	CROSSDUMMY	,223[b]	3,129	,002	,220	,950	1,053	,950
	DISTANCE_HIGH	,270[b]	3,853	,000	,267	,956	1,047	,956
	RDINTENSITY	-,025[b]	-,339	,735	-,024	,967	1,034	,967
	Moderatie_CROSSDUMMY_ Distance	,288[b]	4,085	,000	,282	,936	1,068	,936
	Moderatie_RDINTENSITY_ Distance	,120[b]	1,635	,104	,117	,920	1,087	,920
2	Moderatie_CROSSDUMMY_ Distance	,370[c]	2,079	,039	,149	,144	6,940	,144
	Moderatie_RDINTENSITY_ Distance	-,010[c]	-,091	,927	-,007	,427	2,344	,427

a. Dependent Variable: SPEED

b. Predictors in the Model: (Constant), PROFIT, Ln_Size

c. Predictors in the Model: (Constant), PROFIT, Ln_Size, RDINTENSITY, CROSSDUMMY, DISTANCE

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Ln_Size	PROFIT	CROSSDUMMY	DISTANCE	RDINTENSITY	Moderatie_ CROSSDUMMY_Distance	Moderatie_ RDINTENSITY_Distance
1	1	2,471	1,000	,01	,01	,06					
	2	,509	2,203	,01	,01	,93					
	3	,020	11,198	,99	,98	,00					
2	1	3,808	1,000	,00	,00	,02	,01	,02	,02		
	2	,898	2,059	,00	,00	,01	,56	,02	,12		
	3	,559	2,609	,00	,00	,31	,20	,07	,39		
	4	,499	2,761	,01	,01	,61	,13	,06	,08		
	5	,218	4,178	,01	,03	,05	,04	,78	,32		
	6	,017	14,793	,98	,96	,00	,05	,06	,06		
3	1	4,576	1,000	,00	,00	,01	,00	,01	,01	,00	,01
	2	1,535	1,727	,00	,00	,01	,03	,00	,02	,03	,01
	3	,722	2,517	,01	,01	,01	,00	,02	,08	,00	,17
	4	,538	2,916	,00	,01	,64	,00	,01	,07	,00	,02
	5	,435	3,244	,00	,00	,32	,01	,17	,09	,00	,15
	6	,109	6,482	,01	,04	,00	,03	,59	,63	,02	,59
	7	,069	8,146	,00	,01	,01	,91	,09	,00	,91	,01
	8	,016	16,703	,98	,93	,00	,00	,12	,10	,03	,04

a. Dependent Variable: SPEED