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Abstract

As literature remains sparse regarding emerging African multinational corporations (EAMNCs), this article focuses on examining the key push factors (i.e. home country macroeconomic specifications) influencing the outward foreign direct investment flow from South Africa and Egypt. Based on dynamic panel data model estimation, the empirical research proves that trade openness, patent and the gross domestic product (GDP) and the GDP growth rate of South Africa and Egypt are dominant drivers of their outward foreign direct investment. In contrast, the number of investment treaties and inward foreign direct investment rate do not significantly influence outbound investment decisions of South African and Egyptian corporations.

Keywords: South African MNCs, Egyptian MNCs, emerging African MNCs, emerging MNCs, push factor determinants of OFDI.

JEL codes: P45, F21

1 Introduction

From 1994 to 2011, emerging multinational corporations (EMNCs) [1] have managed to expand their foreign investments considerably. For instance, the top

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[1] An EMNC can generally be described as a firm that is based in an emerging market and controls, through only foreign direct investment or equity modes, value-added activities in at least two countries (Arnold & Quelch, 1998; Hoskisson, Eden, Lau & Wright, 2000; Aybar & Thirunavukkarasu, 2005; Constanza, 2009; Cortesi & Plantoni, 2011; Sandberg, 2012). As per literature review, only 20 countries are commonly counted as emerging by various international organisations. These countries include: Argentina, Brazil, the Czech Republic, Chile, China, Colombia, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Morocco, Peru, the Philippines, Poland, Russia, South Africa, Thailand and Turkey. Accordingly, for the purpose of this article, the term EMNCs hereafter refers to MNCs based in one of the above-mentioned 20 countries.

17 non-financial EMNCs listed by the United Nations Conference for Trade and Development (UNCTAD), have augmented their foreign assets, sales and employment, by 52, 55 and 8 fold respectively. Moreover, there has been a marked growth of emerging markets' (EMs') outward foreign direct investment (OFDI) in recent decades. This investment accounted for nearly 18 percent of world OFDI flow in 2012, starting from less than 1 percent in 1990. Despite the rapidly increasing role of EMNCs, emerging African MNCs (EAMNCs) [2] are dramatically losing ground in the EMNCs map. After owning more than one fifth of EMs' total OFDI stock in 1990, EAMNCs now possess less than 5 percent (UNCTAD, 2013).

As going multinational could tangibly improve competences of domestic firms (Moon & Roehl, 2001; Andreff & Balcet, 2013), emerging African governments are assumed to be interested in adopting OFDI promotion policies; envisaging regaining their influential status in the EMs' outward foreign direct investment map. To ensure the effectiveness of such policies, they should be based on detailed information regarding the key factors influencing outbound investment of emerging African economies.

The importance of this investigation is increased by the fact that limited research has been conducted to examine the key salient features of MNCs domiciled in Africa, compared to those domiciled in other continents. Apparently, most of the previous research relevant to EMNCs, in particular empirical research, has been found to focus on firms based mainly in Asia, followed by Latin America, with special focus on China, India and Brazil (Banga, 2005; Aminian, Fung & Lin, 2007; Masron & Shahbudin, 2010; Poncet, 2009; Beule, Buleke & Zhang, 2014).

In an attempt to address this gap, this article aims to examine the key push drivers of EAMNCs, with application to Egyptian and South African MNCs. Despite being identified as an emerging African market by this article, Morocco is excluded from the analysis owing to data limitation considerations. In this vein, it is worth mentioning that South Africa led the emerging African markets with respect to the annual average of OFDI flow from 1990 to 2012. South African firms contributed to more than $1 billion OFDI flow annually over the same period. Moreover, South Africa was found to be the only African country recognised in the UNCTAD lists of top EMNCs for the period 1995 to 2011. Egypt was ranked second with an annual average of $267 million OFDI flow.

Before proceeding to discuss the aforementioned research question, it should be highlighted that EMNCs are likely to be motivated to invest abroad by one of two main groups of factors or a combination of both groups (UNCTAD, 2006). The first group of motives relates to home country specifications (i.e. push factors). On the other hand, the second group of motives relates to the advantages prevailing in the country hosting EMNC activities (i.e. pull factors). For the purpose of this article, the main focus will be placed on push factors. In other words, how home country macroeconomic specifications influence South

[2] This abbreviation denotes MNCs based in one of the three African countries recognised by this article as emerging, namely Egypt, Morocco and South Africa.

African and Egyptian MNCs' outbound investment.

In view of the above, this article is organised into three sections. The first section gives an overview of South African and Egyptian MNCs. The second section examines the theoretical framework and literature review of push factor determinants of overseas investment of EMNCs. The third and final section considers the key push drivers of Egyptian and South African MNCs.

To ensure the best possible coherence in addressing the aforementioned research question, this article advocates using multiple data sources, including, *inter alia*, the UNCTAD and Financial Times (FT) as well as national data sources. Moreover, it should be mentioned that both MNCs and OFDI terms are often used interchangeably and that most studies (Narula & Dunning, 2000; Aykut & Goldstein, 2006; Salehizadeh, 2007; Sauvant, Pradhanþ, Chatterjeeþ & Harely, 2010) use OFDI statistics to quantitatively analyse activities of EMNCs.

As to the South African and Egyptian data sources, the Labour Research Service (LRS)[3] maintains a database for South African MNCs (SAMNCs). By contrary, none of the relevant Egyptian authorities publish a detailed record of the Egyptian MNCs (EGMNCs). This article therefore compiled a list of Egyptian corporations that could be classified as MNCs[4]. This list gives some important insights and indications over the salient features of EGMNCs as discussed hereafter. It is however quite important to interpret the attributes of EGMNCs, drawn from the abovementioned list, with caution as it has a probable exclusion error resulted from unavailability of data over foreign activities of most Egyptian MNCs.

2 South African and Egyptian multinational corporations overview

Given available information, certain attributes of South African and Egyptian MNCs will be examined by this section. These include performance, entry mode,

[3] The Labour Research Service (LRS) was established in South Africa in 1986 as a non-profit labour service organisation. This database identifies 87 SAMNCs and maintains statistics covering a wide spectrum of aspects, including, inter alia, the five main shareholders in each corporation, sector, financial performance indicators, and listing in stock markets either in South Africa or abroad. For the purpose of this article, the abbreviation SAMNCs hereafter denotes the 87 South African corporations counted by the LRS as MNCs, unless otherwise stated.

[4] It is difficult to list all Egyptian MNCs as most Egyptian firms do not publicly publish their financial statements to check whether or not they have cross-border investments. Accordingly, and owing to data limitation, the authors of this article compiled their own list of EGMNCs based on reviewing cross-border investments involving top Egyptian firms as well as those listed on the Egyptian stock exchanges. To be counted as an MNC, an Egypt-based firm should possess not less than 10 percent of assets or voting power of a company (either a branch or associate or subsidiary) existing outside Egypt. This criterion is commonly adopted by most international organisations, including above all, the UNCTAD. Applying this criterion, it is possible to recognise 55 Egyptian corporations as MNCs. For the purpose of this article, the abbreviation EGMNCs hereafter denotes the 55 Egyptian corporations counted by this article as MNCs, unless otherwise stated.

industry and ownership structures, as well as the openness of both countries to OFDI.

2.1 Performance of South African and Egyptian MNCs:

The LRS database exhibits that SAMNCs have evolved markedly over the period 2009 to 2013, regarding revenues, profits and total assets. For instance, the total assets (i.e. domestic and foreign assets) held by all SAMNCs escalated to over $1 trillion in 2013 from $756.6 billion in 2009. Similarly, SAMNCs' total revenue (i.e. domestic and foreign revenues) increased by around $100 billion over the same period, reaching $349 billion. Similarly, but to a different extent, total assets of EGMNCs, recognized by this article, mounted nearly three times to the value of around $86 billion in 2013[5], as reflected by Table 3.1.

Compared to only two Egyptian firms, a total of 14 SAMNCs has been included in the UNCTAD lists of top 100 MNCs from developing and transition countries over the period 1995 to 2012. Top SAMNCs, listed by the UNCTAD, have increased their foreign sales and employment nearly 3 fold from 1995 to 2012. Moreover, the Transnationality Index (TNI)[6] of top SAMNCs mounted from 30 to 42 percent, reflecting that top SAMNCs tend to engage more with international markets over time (see Figure 3.1). It was also found that the TNI of top SAMNCs is almost two times higher than the respective indices of EMNCs (23 percent) and BRICS countries[7] based MNCs (20 percent)[8].

In line with the growth of South African and Egyptian MNCs, overall UNCTAD statistics indicate that both South African and Egyptian OFDI have been growing during the previous years. Yet, both countries differ from one another. Over the period 1990 to 2012, Egyptian overseas investment had witnessed great leaps, compared to the corresponding South African investment. While the South African OFDI stock had grown nearly 5.5 fold, the corresponding Egyptian investment had scaled up 38 fold during the period 1990 to 2012, which could be largely attributed to the small magnitude of baseline investment of Egypt in 1990, as shown in Figure 3.2. However, Egypt still lags behind its South Africa, regarding the magnitude of their outbound investment. Apparently, South African FDI outflow ($4.4 billion) was 20 times higher than that of Egypt ($0.21billion) in 2012. Similarly, South African OFDI stock ($82.4 billion) was 13 fold higher than that of Egypt ($6.3 billion) in the same year[9].

[5] It should be mentioned that no data are available concerning the outbound investment involvement of EGMNCs.

[6] TNI is calculated as a simple average of three variables, namely: foreign to total sales, assets and labour.

[7] This abbreviation refers to Brazil, Russia, India, China and South Africa.

[8] The number of top SAMNCs, listed by UNCTAD among the top MNCs coming from developing economies and transition countries, varied considerably from one year to another. Moreover, it was difficult to track the change in the TNI of EGMNCs as the two firms listed by the UNCTAD appeared once in two separate years.

[9] Apparently, political developments experienced by the Egyptian economy in the beginning of 2011, commonly known as Arab Spring, had not changed the fluctuating pattern of the Egyptian OFDI. Moreover, the Egyptian OFDI level registered in 2010 remains higher than those seen in the years ahead.

As discussing the performance of Egyptian and South African MNCs it is quite important to assess how they compare to their emerging competitors. The figures support the assumption that both groups of firms, particularly South African MNCs, have lost ground on the EMNCs landscape. While playing a significant role in the nineties and the beginning of the twenty first century, the top SAMNCs have lost their relatively influential position in the top EMNC landscape during 1995 to 2011 (see Figure 3.3).

The same conclusion is further supported by the slightly declining participation of SAMNCs in the Financial Times' (FT) global 500 lists relative to their emerging rivals. While five SAMNCs were listed in the FT global 500 in 2008, only three firms were counted in 2014. As a result, the total market value of the listed SAMNCs declined from 141 to 121 $ billion over the same period. This is contrary to the fact that EMNCs become more highly represented in the FT global list from one year to another[10]. Likewise, South Africa now owns nearly 4 percent of total OFDI stock possessed by EMs, which represents less than one quarter of its share at the beginning of the nineties (see Figure 3.4).

With reference to the position of Egyptian MNCs in the EMNCs landscape, it was found that over 1994 to 2011, EGMNCs listed neither among the top 17 non-financial EMNCs nor the Financial Times global 500. The marginal role of Egyptian MNCs is also supported by tracking change in Egypt's role in EMs in the OFDI landscape. Egypt owned less than 1 percent of total OFDI owned by EMs; at both levels flow and stock (see Figure 3.5).

In conjunction with the above, OFDI performance index (OFDIPI)[11], developed by the UNCTAD, raises two main general observations regarding the performance of South Africa and Egypt as reflected in Figure 3.6. Firstly, the OFDI performance index of South Africa tends to decline over time contrary to Egypt. Secondly, the OFDI performance indices of both South Africa and Egypt are often less than unity. Consequently, each country's share of world OFDI is less than its relative share of world GDP, indicating that they are still playing a smaller role in the global OFDI landscape than warranted by their economies.

2.2 Foreign market entry mode of South African and Egyptian MNCs:

Over the period 2003 to 2012, it is noted from Figure 3.7 that the average annual flow of mergers and acquisitions (M&As) involvement by Egyptian firms is almost double their outbound greenfield investments. Egyptian corporations'

[10] While hosting headquarters of only 6 percent (30 firms) of the world's top 500 firms in 2008, emerging economies became the home country of 11 percent (56 firms) of the world top firms in 2014.

[11] The outward foreign direct investment performance index (OFDIPI) captures a country's relative success in investing in the global economy via foreign direct investment (FDI). If a country's share of global OFDI matches its relative share in global gross domestic product (GDP), the country's OFDIPI is equal to one. A value greater than one indicates a larger share of OFDI relative to GDP; a value less than one indicates a smaller share of OFDI relative to GDP.

slight preference of M&As over greenfield is in line with the global tendency of EMs being more influential in M&As than greenfield, with regard to the magnitude of the investment. EMs had succeeded in dominating nearly one third of the world's M&As operations; two times higher than their respective share in world greenfield projects in 2012 (UNCTAD: 2013).

On the contrary, South African MNCs show preference to greenfield over M&As, as their flow of greenfield investment was approximately 2.6 times higher than their outbound M&As. According to host country specification based theories, M&As may be preferred over greenfield as they provide firms with substantially more access to resources that are not easily available in their own home countries. This is perceived as a key trigger for firms to initiate their internationalisation process or to go multinational (Johanson & Mattsson, 1988; Moon & Roehl, 2001; Mathews, 2006).

2.3 Sector breakdown of South African and MNCs:

In line with sector structure of the Top 17 non-financial EMNCs, the mining sector is dominant in the sector breakdown of SAMNCs, based on the number of firms in 2013. Nearly 16 percent of total SAMNCs listed by the LRS database are active in mining and quarrying. Banking and financial services ranks second, followed by food and beverage, accounting for 12.6 percent and 11.4 percent of SAMNCs respectively. Education, business training & employment ranks last, as only one firm operates in this sector. As far as assets are concerned, the banking and financial services sector comes first, as it accounts for around 63 percent of SAMNCs' total assets, as seen in Table 3.2. In fact, it is important to underscore that 8 of the top 10 SAMNCs are active in the financial sector.

As to the Egyptian MNCs, the financial services sector ranked first, with regard to both the number of firms and the assets as well. Nearly 24 percent of EGMNCs were active in the financial services sector. It also accounted for more than 98 percent of EGMNCs' total assets. When considering the number of firms, the industrial sector was ranked second, followed by construction, (22 and 20 percent respectively), as exhibited in Table 3.3.

2.4 Ownership structure of South African and Egyptian MNCs:

The private sector is found to dominate, to a different extent, in both South African and Egyptian MNCs. It controlled around 96 percent of SAMNCs in 2013 (i.e. the private sector holds more than 50 percent of the firm's shares). In contrast, the public sector solely controls 3.4 percent of SAMNCs, while jointly owning 78 percent of SAMNCs. Total assets owned by the public sector reach $145 billion, accounting for 12.3 percent of total assets of SAMNCs in 2013, as exhibited in Figure 3.8. In line with the private ownership of SAMNCs, it is found that most of them (96 percent) are listed on the Johannesburg Stock Exchange (JSE). In addition to the JSE, nearly 22 percent of SAMNCs are listed on one or more of 10 foreign stock exchanges.

Similar to SAMNCs, but to a lesser extent, the private sector controlled around 80 percent of EGMNCs in 2013. On the other side, the government had the majority of 11 firms (20 percent), of which 4 firms are entirely owned by the government. Most EGMNCs (87 percent) are listed on the Cairo and Alexandria Stock Exchanges in Egypt. As mentioned before, this finding should be treated with caution as the list of EGMNCs compiled by this study is drawn mainly from top Egyptian companies as well as those listed in the stock exchange markets.

2.5 Openness of South Africa and Egypt to OFDI:

As discussing the main salient features of South African and Egyptian MNCs, it might be important to consider the openness of each economy to OFDI. This could be examined through following the developments of OFDI index (i.e. OFDI stock divided by gross domestic product) as well as the number of investment treaties signed by the government of each country. UNCTAD statistics exhibit that both South African and Egyptian economies tend to be more open towards OFDI over time. From 1990 to 2013, openness to the OFDI index South Africa escalated by roughly 14 points to reach 27 percent in 2013. Likewise, Egyptian openness to the OFDI index increased approximately 5 fold, extending to 2.4 percent in 2013.

Comparing to its emerging peers, the South African economy was ranked fourth in respect of openness to OFDI in 2013, following Malaysia (43percent), Chile (37 percent), and Hungary (30 percent). Moreover, the openness index of South Africa is double the average index of emerging economies (see Figure 3.9). Despite increasing over time, the Egyptian openness to the OFDI index remains too modest compared to the respective average of EMs. In fact, the openness index of Egypt is estimated to be nearly one fifth of the respective average index of EMs, indicating that Egypt remains less open to OFDI compared to its emerging peers. As such, the Egyptian economy is ranked seventeenth among the twenty EMs counted by this article.

When it comes to the investment treaties, from 1974 to 2003, the South African government was involved in 23 bilateral investment treaties, of which five were terminated according to UNCTAD investment treaties' database. Europe is the major partner of South Africa in terms of bilateral investment treaties. Approximately 65 percent of bilateral treaties (15 treaties altogether) were signed with European countries and Russia. Africa comes in last, with only 2 treaties (Mauritius and Mozambique), while Asia and Latin America take joint second spot (3 treaties for each continent). Moreover, South Africa has already engaged in 10 multilateral investment treaties, of which 80 percent are in force.

On the other side, Egypt had signed 84 bilateral investment treaties with the majority of countries, of which 73 remain in force. Europe is the major partner to Egypt in terms of bilateral investment treaties. Approximately 47 percent of bilateral treaties (34 treaties) had been signed with European countries and Russia, followed by the Arab world and Asia (22 and 21 percent respectively).

Thirteen percent of treaties had been signed with African countries (9 treaties), who therefore rank fourth among the different continents. Moreover, Egypt had already engaged in 13 multilateral investment treaties, of which 85 percent are still in force.

3 Theoretical framework and lierature review

As mentioned in the Introduction of this article, EMNCs are likely to be motivated to invest abroad by one of two main groups of factors or a combination of both; push factors (home country specifications) and pull factors (host country specifications). For the purpose of this article, the main focus of this section will be on the push factors only.

3.1 Theoretical framework:

Various theories and frameworks have been put forward for identifying and evaluating the significance of push factors influencing the unfolding evolution of EMNCs. Special attention has been assigned by literature to the Investment-Development Path (IDP). It appears that the IDP is one of the widely utilised frameworks for interpreting the multinationalisation process (Dunning, 1997; Narula & Dunning, 2000; Fonseca, Mendonça & Passos, 2007; Mortensen, 2009; Narula & Guimon, 2010). Dunning presented the IDP in 1981 as a dynamic approach within the framework of the Eclectic Paradigm Model[12] (Buckley & Castro, 1998).

The IDP presents a dynamic framework to explain which countries are going to engage in outward foreign direct investment and how the magnitude of cross-border investment, as well as inward foreign direct investment (IFDI), dynamically changes depending on the pace of the home country's economic development. The IDP recognises the influence of the home country's governmental policies on both inward and outward FDI flows. The IDP identifies five stages of development, starting with a country as net FDI receiver, and ending in the maturity stage in which a country can attain noticeably high levels of both inward and outward FDI flows (Narula & Dunning, 2000). Table 3.4

[12] According to the Eclectic Paradigm Model or what is referred to as Ownership, Location and Internationalization (OLI) Model, multinationality is attributed to three main advantages, namely ownership, location and internalisation (Dunning, 1995). Ownership advantages are perceived to be the main engine for becoming involved in overseas' value-added activities. Thus, a firm must possess certain advantages to be able to compete in the international arena. Dunning distinguishes between three ownership advantages: a) Those resulting from owning particular income generating assets; b) those enjoyed by foreign affiliates relative to the headquarters; and c) those resulting from the geographical dispersion. Location advantages relate to the market choice or the decision where a firm is going to locate its foreign activities. This group of advantages includes, *inter alia*, market size and the availability of cheap production factors. Internalisation advantages capture the different modalities (penetration modes) through which firms may arrange the creation and the exploitation of their core competencies based on the location advantages of different markets. Such modalities range from non-equity arrangements (such as exports and imports), to the acquisition of foreign firms.

in the Annexure summarises the main attributes of the different stages of the Investment-Development Path.

Along with the IDP, a number of theoretical approaches and frameworks have been promoted to examine push factor determinants of going multinational, including above all: the Uppsala Model, the Resource Based Theory and the Born Global Theory as well. According to the model of "knowledge development and increasing foreign market commitments", widely known as the Uppsala Model, the firm's market knowledge influences the pace and the pattern of its foreign expansion. Firms incrementally intensify their foreign market commitments as they develop and acquire new business knowledge (Johanson & Vahlne, 1977).

As to the Resource Based Theory, acquiring strategic resources is a key trigger for firms to invest abroad. These types of resources provide firms with a certain competitive advantage to improve their business efficiency. Strategic resources can be classified into three subgroups, namely: physical resources (production technology, raw materials and equipment), human resources (experience) and organisational resources (managerial and institutional structure). Home country specifications could influence a firm's strategic resources, and thus its ability to go multinational (Bareny, 1991; Watjatrakul, 2005).

The resources of the home country could promote or prohibit a firm's ownership advantages. As such, resources are perceived to be the main engine to invest abroad, according to the Ownership, Location and Internationalization (OLI) Model (i.e. Eclectic Paradigm Model). A firm must thus possess certain advantages to compete in the international arena. Coupled with the ownership advantage, the OLI Model also considers internationalisation and location advantages. Internationalisation advantage refers to the ability of a firm to manage the different foreign market penetration modes. Location advantage captures host country specifications, which goes beyond the scope of this article (Dunning, 1995).

In addition to the above drivers, availability of highly educated and well-trained human capital, particularly at the firm's top level, can play an effective role in boosting the internationalisation process. Some theoretical approaches therefore perceive the firm's top management as a determinant of going multinational (Wai & Yeung, 2002). Qualified top management can adopt globally oriented strategies, network with international business communities, explore foreign investment opportunities, and manage foreign affiliates. In this regard, Wai and Yeung (2002) propose the term "transnational entrepreneurs" to describe the group of top managers who can engage in entrepreneurial activities across borders. This type of entrepreneurship requires certain qualifications to facilitate overcoming investment barriers in host countries and improving interaction with their cultural and social context.

Promoting a wider perspective, the Born Global Theory confirms the paramount significance of both a firm's unique advantages and its decision-maker characteristics in explaining the early internationalisation of emerging multinational corporations, or what is referred to as born global firms. It should be underscored that this theory does not exclude the impact of host country specifications on the evolution of born global firms (Rasmussen & Madsen, 2002).

3.2 Previous research:

To explore the influence of push factors on the outward foreign direct investment of emerging MNCs, a certain number of studies have been conducted (Pantelidis, 2003; Banga, 2005; Aminian, Fung & Lin, 2007). In consideration of existing empirical literature examining the push drivers of Asian and Latin American MNCs, one could conclude that literature remains remarkably sparse and in need of further development regarding the area of emerging African markets based MNCs, as mentioned in the Introduction of this article.

Apart from the geographical scope of interest of previous research, it is noted that a wide range of home country macroeconomic specifications have been tested by previous studies. Of the different specifications, home country market size is perceived to be the most frequently tested determinant of EMNCs concerning the influence of push factors. Actually, all reviewed studies are found to pay attention to this aspect. Similarly, but to a lesser extent, the impact of trade openness is commonly traced by previous research (8 out of 10 studies reviewed by this article).

By contrast, only one study of the reviewed research addressed the impact of the tax policy of home country government on its overseas investment (Banga, 2005). In conjunction with the above specifications, other push factors have been examined, including: inward foreign direct investment, OFDI openness, human capital, capital abundance, quality of infrastructure, institutions, technology capabilities and currency strength (Banga, 2005; Masron & Shahbudin, 2010; Saad, Noor & Nor, 2011 & 2013).

To statistically capture the home country specifications, a remarkably wide range of variables had been used. Apparently, 26 variables had been used by the reviewed studies to test the causal relation between push factors and OFDI flow from emerging and developing countries. Such a large number of tested variables could be attributed either to differences in scope of interest of each study or data limitation, or both considerations.

Concerning the domestic market conditions, three indicators have been introduced to capture the size of the home country economy from different aspects. These include the actual market size [gross domestic product (GDP)] (Banga, 2005; Masron & Shahbudin, 2010; Saad, Noor & Nor, 2013); the potential market size (GDP growth rate) (Banga, 2005); and the demand side (GDP per capita) (Saad, Noor & Nor, 2011; Das, 2013). Despite being proven by most studies as a prominent driver of OFDI, Bang (2005) concludes that market size in no matter stimulates the intra direct investment flow among developing countries. Similar findings are concluded by Kyrkilis and Pantelid (2003), and Tolentino (2008).

Except for Tolentino (2008), previous research agrees that trade openness remarkably influences the cross-border activities of emerging MNCs, irrespective of the proxy used to capture the integration of the national economy in the global economy. Apparently, the most frequently used indices are exports as a percentage of GDP and exports plus imports as a percentage of GDP. In addition to the above, Banga (2005) adopts imports as a percentage of GDP.

Also, Kyrkilis and Pantelid (2003) depend on the volume of export plus import as a proximate indication of trade openness.

Inward foreign direct investment (IFDI) flow is found to be positively associated with the outward foreign direct investment, as concluded by Banga (2005), Masron and Shahbudin (2010) and Saad, Noor and Nor (2011). The same conclusion is supported by the research conducted by Saad, Noor and Nor (2013) concerning foreign direct investment stock. Unlike the significant influence of IFDI, contradicting results have been found regarding the impact of OFDI openness, depending on the index that is used to reflect this aspect. OFDI stock as a percentage of GDP is proven to have a significant effect on OFDI flow from East, South and South East Asia (Niti & Vandana, 2013). Although Masron and Shahbudin (2010) have failed to statistically prove the impact of bilateral investment and trade agreements on Thai and Malaysian OFDI, intra OFDI among developing countries is found to be triggered by these agreements (Banga, 2005).

In line with human capital, Saad, Noor and Nor (2011) show that real output per employee is of great importance to the Malaysian MNCs. By contrast, Tolentino (2008) mentions that productivity does not represent a big concern for Chinese and Indian MNCs. Likewise, intra OFDI among developing countries is influenced more by secondary enrolment ratio rather than real output per employee (Banga, 2005).

Primary energy consumption and transportation and communication, as a percentage of GDP, are perceived to be key determinants in the decision of undertaking overseas investment, according to Banga, (2005) and Saad, Noor and Nor (2011) respectively. Yet, electricity consumption is not a significant driver of OFDI (Banga, 2005). Technology capability of the home country could stimulate the domestic firms to compete in foreign markets, and thus possess certain investment abroad. Both the number of patents and the volume of expenditure on research and development have a tangible impact as shown by Saad, Noor and Nor (2013) and Das (2013) respectively. While not having a tangible impact on Chinese MNCs, the number of trademark applications indeed influence Indian MNCs (Tolentino, 2008).

The impact of the exchange rate is found to vary significantly from one study to another. Real exchange rate is negatively associated with OFDI, according to Kyrkilis and Pantelid (2003), and Saad, Noor and Nor (2013). By contrast, Keuh, Puah and Mansor (2009) prove the positive relation between both variables. Meanwhile, other research rejects the significant association between real exchange rate and overseas investment (Tolentino, 2008; Concer, Tutolla & Margarido, 2012; Das, 2013). Exchange rate volatility is also not of significant importance to OFDI decisions (Tolentino, 2008).

Similarly, institutional quality index has contradicting impacts on overseas investment. Contrary to what is proved by Das (2013), Masron and Shahbudin (2010) conclude that quality of institutions is negatively related to OFDI. From another perspective, the number of strikes does not impact foreign investments of MNCs (Banga, 2005). Apart from the above, limited empirical evidence supports the influence of certain home country specifications on OFDI, including

taxes and capital abundance. Contrary to what is concluded by other studies, Kueh, Puah and Mansor (2009) give empirical evidence to the role of capital abundance, captured by real interest rate, in encouraging domestic firms to explore overseas investment opportunities. Banga (2005), proves that high corporate profit taxes could encourage firms to invest abroad.

Before concluding the review of previous research section, it remains important to underscore that previous studies often depend on panel data models to examine impact of home country specifications on OFDI. Random effects model is used in case the number of cross section units (i.e. country) is larger the number of years in the sample (Banga, 2005; Das, 2013). By contrast, Fixed effect model is estimated where the number of countries is less than the number of years included in the study (Niti &Vandana, 2013). Apart from panel data models, other studies adopted time series model based on availability of quarterly observations (Tolentino, 2008; Concer, Turolla & Margarido, 2012).

Table 3.5 summarises different variables tested by previous research to examine the influence of push factors on the OFDI coming from emerging and developing economies, as well as the significance of relation to the OFDI and direction of relation to significant variables. General observation of Table 3.5 is that different research often uses real variables to exclude the impact of inflationary pressures from the analysis. Moreover, all variables are often log transformed. The theoretical framework and previous research reflect the relevance of push factors in encouraging EMNCs to invest abroad.

4 Drivers of Egyptian and South African MNCs

Given the limited research on EAMNCs, this section examines the influence of home country macroeconomic specifications on the OFDI from South Africa and Egypt.

4.1 Methodology and data sources:

In line with the literature review, and based on using annual data, this article employs a panel data model of South Africa and Egypt over a period of 34 years to analyse the key push factors of Egyptian and South African MNCs. The period selected for the analysis is 1980-2013. Owing to the lack of data availability prior to 1980, the above time span has been selected. The dependent variable is the outward foreign investment flows from the two selected countries, taking into consideration that MNCs and OFDI are often used interchangeably by literature (Narula & Dunning, 2000; Aykut & Goldstein, 2006; Salehizadeh, 2007; Sauvant, Pradhanþ, Chatterjeeþ & Harely, 2010).

Regarding the predictor variables, there could be a large number of macroeconomic variables affecting OFDI, as shown in the previous section. To categorise the different OFDI push factors, three broad classifications have been proposed by previous studies. Firstly, UNCTAD (2006) classifies home country drivers into four main sets, namely: market and trade conditions, cost of pro-

duction, local business conditions, and home government policies. The market and trade conditions refer to the scale and opportunities of the home market to expand, as well as the existence of trade barriers.

The second set reflects the cost of production factors, particularly labour. In addition to and associated with the above factors, the quality of home country business conditions and adopting OFDI promoting policies may influence the internationalisation process of local firms. Aminian, Fung and Lin (2007), and Masron and Shahbudin (2010), adopt UNCTAD's classification of home country drivers while tracking determinants of OFDI involvement by some Asian countries. Similarly, Kayam (2009) emulates the same insight to test drivers of outbound investment involvement by developing and transition economies based MNCs.

Secondly, Banga (2005) attributes the evolution of intra OFDI among developing markets to three sets of factors, namely: trade, capability and domestic economy related drivers. Trade-related drivers capture the interaction between trade (export, import and investment agreements) and OFDI. Capability related drivers reflect the fact that an economy cannot be involved in outward investments unless it enjoys certain competences or capabilities, including *inter alia*, technology, information and capital. Domestic economy drivers relate mainly to cost and return on domestic investment. Saad, Noor and Nor (2011, 2013) emulate the same framework developed by Banga in 2005 to assess determinants of Malaysian OFDI.

The third classification is promoted by Niti and Vandana (2013) who divide determinants of OFDI from East, South and South East Asia into four main groups. These include market conditions, policy variables, economic variables and production factors.

Given data limitation pertaining to policy variables considered by both the first and third categorisations, this article emulates Banga's classification of home country push factors. Accordingly, home country drivers of Egyptian and South African MNCs are categorised into three main sets, namely: trade, capability, and domestic economy related drivers. Based on availability of data, this article focuses on examining the impact of 7 independent variables on the South African and Egyptian overseas investment.

In this regard, it is found to be difficult, due to data unavailability, to control the difference in the key economic sectors driving MNCs from each country in the estimated model. Consequently, the general form of panel data model used by this article is given as follows (Banga, 2005; Saad, Noor & Nor, 2011; 2013):

$$\begin{aligned} LogOFDI_{it} &= logf[(\text{trade-related drivers})_{it}, (\text{capability-related drivers})_{it}, \\ &\quad (\text{domestic drivers})_{it}] + \mu_{it} \end{aligned}$$

Where:
i stands for Egypt and South Africa
t stands for the time period (1980-2013)
μ = error term
OFDI denotes the OFDI flows from each of the two selected countries

Trade-related drivers include trade openness as well as investment treaties
Capability related drivers encompass technology capability and IFDI
Domestic drivers comprise actual market size and potential market size
Each of the independent variables will be discussed in detail as follows:

a Trade-related drivers:

Trade openness: Trade boom is likely to fuel OFDI. As export increases, firms obtain more accessibility to the markets receiving their exports. Accordingly, uncertainties and risks associated with investment in such markets tend to diminish, which in turn motivates OFDI (Banga, 2005; Masron & Shahbudin, 2010; Saad *et al.*, 2011 & 2013). In the same context, the Uppsala Model predicts that firms are likely to commence their foreign activities through low market commitment modes (such as export) owing to a lack of market knowledge. Later, and as companies acquire increasing levels of market knowledge through involvement in exports, they will commit more resources to their activities abroad (such as OFDI) (Johanson & Vahlne, 1977).

From another perspective, import may positively influence OFDI through the displacement effect. A higher flow of imports is associated with higher competition in the domestic market, which may reduce the market share of domestic firms. As a result, imports may encourage local firms to initiate their internationalisation process to obtain access to larger markets (Banga, 2005). Accordingly, it is expected to have a positive relation between trade openness and OFDI. Trade openness indicator is calculated as the percentage of export plus imports to the GDP.

Hypothesis a.1 can thus be expressed as: OFDI is positively associated with trade openness.

Investment treaties: in addition to the push power associated with trade openness, investment treaties may further enhance the probability of undertaking OFDI, particularly vertical investments in cases where they include rules of origin and local content requirements. Moreover, investment treaties may encourage OFDI as they mitigate risks associated with overseas investments (Banga, 2005). It is important to underscore that a small number of EMNCs related studies test the relation between investment and OFDI (only two out of ten reviewed studies, as shown in Table 3.5).

By contrast, developed economies' MNC-related studies prove the significant positive relation between both variables. Guerin (2011) argues that investment treaties encourage EU OFDI flows targeting developing countries by up to 35 percent. From reviewing a number of studies, Bellak (2013) concludes that the average impact of investment treaties is around 18 percent. Accordingly, it may be important to test the existence of such a positive relation between investment treaties and the Egyptian and South African OFDI. This article uses the total number of bilateral and multilateral investment treaties signed by each country.

Hypothesis a.2 can thus be expressed as: OFDI is positively associated with investment treaties.

b Capability related drivers:

Technology capability: Know-how and technology represent one of the main ownership-specific advantages that could encourage a firm to invest abroad to exploit its own advantages (Niti &Vandana, 2013). In the same context, Das (2013) argues that OFDI of a certain country may be affected by its technological achievements. This is owing to the fact that developing and emerging countries that place greater focus on expanding their technological innovation base, are likely to benefit from the international technological spillover. Thus, they could augment their own specific advantages, as well as fuelling higher levels of OFDI. Tolentino (2008) proved that the national technological capacity of India granger causes its level of OFDI. Of the three variables used in the literature to capture the technology capacity, this article will use the number of patents applied for by residents owing to data limitation consideration.

Hypothesis b.1 can thus be expressed as: OFDI is positively associated with the number of patents.

Inward FDI: The inflow of foreign investments into the economy may encourage domestic firms to undertake outbound investment through two potential channels, namely technology spillover and displacement effect. Inward FDI may participate positively in upgrading technological standards of the domestic economy, which in turn could improve the efficiency and competitiveness of local firms. Therefore, inward FDI could be perceived as one of the mechanisms to acquire competences needed to invest abroad (Saad *et al.*, 2013). In the same context, Poncet (2009) argues that the spillover of inward FDI is likely to deepen China's integration in the global value chains, or what is referred to as the global segmentation of production process. These changes will further drive new waves of internationalisation.

From another perspective, Kayam (2009) confirms that OFDI from developing and emerging countries tends to increase with foreign competition in the domestic market, augmented by inward FDI. Previous researches empirically proved the significant positive impact of inward FDI on encouraging overseas investments (Banga, 2005; Masron & Shahbudin, 2010; Saad *et al.*, 2011 & 2013). Moreover, Daniels, Krug, and Trevino (2007) state that inward FDI may have provided an important stimulus for OFDI and the development of Transnational Corporations (TNCs) in Latin America. Therefore it is expected to have a positive relation between inward FDI and OFDI.

Hypothesis b.2 can thus be expressed as: OFDI is positively associated with inward FDI.

c Domestic drivers:

Actual market size: the Investment-Development Path theory anticipates that the home country's level of development will play a significant role in determining the magnitude as well as the targets of its OFDI (as mentioned in Section 4.1). Moreover, according to the OLI Model, the size of the domestic economy reflects the ownership advantage and is therefore positively correlated with the overseas investment (Saad *et al.*, 2013). Associated with its theoretical importance, the actual size of the economy has been proven to be one of the

key dominant drivers of OFDI that is recognised by previous research (Kueh *et al.*, 2009, Kayam, 2009; Masron & Shahbudin, 2010; Saad *et al.*, 2013; Niti & Vandana, 2013). Most previous studies use the real GDP as an approximation for the actual economy size.

Adopting different perspective, Bang (2005) assumes that actual market size could have a negative impact on OFDI. Small market size could act as a stimulus for domestic firms to invest abroad and therefore to increase their profits. It is so expected to have either positive or negative association between both the actual size of the domestic market and OFDI.

Hypothesis c.1 can thus be expressed as: OFDI is positively associated with the real GDP.

Hypothesis c.2 can thus be expressed as: OFDI is negatively associated with the real GDP.

Potential market size:

Along with the actual market size, Bang (2005) advocates examining the impact of the potential market size as a push factor for OFDI. Bang (2005) proposes using the growth rate of real GDP as an indicator of the potential market size. It is expected, according to Bang (2005), to have a negative association between the potential size of the domestic market and OFDI. This is because firms are assumed to seek overseas investment in case the domestic market is growing slowly.

Hypothesis c.3 can thus be expressed as: OFDI is positively associated with the growth rate of real GDP.

Table 3.6 outlines the seven variables used by this article (dependent as well as independent) to track the relation between the OFDI flow from Egypt and South Africa and their home country macroeconomic specifications. It also contains definitions and hypothesised relation to OFDI as well as the data sources. In line with literature, all variables are log transformed, with the exception of the number of investment treaties, as it contains many zero values.

To wrap up, the final equation of the panel model adopted by this article is given as follows:

$$LogOFDI_{it} = logf[(TRAD, BMIT)_{it}, (PAT, IFDI)_{it}, (GDP, GDPG)_{it}] + \mu_{it}$$

4.2 Empirical results:

As a first step, the variance inflation factor (VIF) is estimated to detect existence of multicollinearity among the aforementioned independent variables selected for the proposed panel model (i.e. trade, investment treaties, patents, inward FDI, GDP and GDP growth rate). Estimation of the VIF reflects that there is no multicollinearity problem as the tolerance indices of the six independent variables are greater than 0.1 (i.e. VIF is less than 10)[13], see Table 3.7.

Stationarity of all used data series has been tested. By applying Im-Pesaran-Shin unit-root test, it was found that the GDP data series was of level one while

[13] According to Williams (2015), one should be concerned about the problem of multicollinearity only if any of the VIF values exceed 10 (or equivalently, tolerances of .10 or less).

the series of other variables were of level zero (i.e. stationary), see table 3.8. The GDP data series was transformed by taking the first difference to become stationary.

As evident in literature, a panel data model could be fitted through various statistical models, namely, Fixed Effect (FE) or what is labelled as Least Square Dummy Variable model (LSDV), Pooled Ordinary Least Squares (POLS) model and Random Effect (RE). The FE model was preferred over the POLS based on the findings of the Wald test (F-test) which was found to be significant at less than 5% (Prob > F =0.000). It was so expected that panels (i.e. countries) are heterogeneous which drops one of the key assumptions of the POLS. Furthermore, no evidence of significant difference across panels (i.e random effect) was detected according to the Breusch-Pagan Lagrange Multiplier test of random effect (prob > Chibar2 index of the test =1). Supporting the estimation of FE, Hausman test rejected the RE model (prob > Chibar2 index of the test =0.00).

Breusch-Pagan LM test of independence excluded the existence of cross section dependence problem in the proposed FE model (Probability = 0.21, therefore one could accept the null hypothesis cross section independence). However, the residuals of the static FE model exhibited a degree of autocorrelation at confidence level of 10%. The LM test for autocorrelation rejected the null hypothesis of no autocorrelation at 10% (test statistic 83.3, p-value 0.069). In such case, Carstensen & Toubalb (2003) support specifying a dynamic model instead of static one to adjust for the autocorrelation. For this purpose, one lagged endogenous variable was introduced as an additional regressor in the aforementioned model to read as follows:

$$LogOFDI_{it} = ßlagOFDI + \alpha logf[(\text{TRAD,BMIT})_{it}, (\text{PAT,IFDI})_{it}, (\text{GDP,GDPG})_{it}] + \mu_{it}$$

Where:

lag OFDI= Log OFDI_{it-1}.

β = reflects the persistence in the process of adjustment towards an equilibrium.

α = measures the short-run effect parameter (i.e. coefficient) of regeressors on OFDI_{it} given $\text{OFDI}_{it-1.}$. Long term coefficient = short term coefficient /(1-parameter corresponding to the lagged variable), as mentioned by Carstensen & Toubalb (2003)and Sabra (2015) .

In contrast to the least squares dummy variables (LSDV) estimator of the dynamic panel data model, the general method of moments (GMM) estimator of Arellano-Bover/Blundell-Bond (ABBB) is expected to be consistent (Carstensen & Toubalb, 2003; Sabra, 2015). This study therefore employed the ABBB method to estimate the dynamic model. To assess the validity of the estimated dynamic model, it was tested for autocorrelation since the consistency of the GMM estimators rests on the absence of autocorrelation of the di?erenced disturbances (Carstensen & Toubalb, 2003). Based on the Arellano and Bond test for autocorrelation, one could not reject the null hypothesis of zero autocorrelation in first-differenced errors at any conventional significance level. It was so concluded that ABBB method was appropriate to specify the aforementioned model. Findings were represented in Table 3.9.

Table 3.9 reflects that the level of outward foreign direct investment of South Africa and Egypt in a certain point of time depends on its level in the previous year given the other regressors constant. Moreover, home country macroeconomic specifications are found to have a statistically significant influence on boosting the OFDI of both countries.

Regarding trade-related drivers, trade openness (TRAD) is prominent in promoting multinational orientation of the Egyptian and South African MNCs. As postulated previously (Section 3.2), export mitigates uncertainties and risks associated with investment in foreign markets, through increasing market knowledge. In addition, imports may encourage local firms to initiate their internationalisation process to obtain access to larger markets. This conclusion is likely to be supported by the findings of previous studies (Das, 2013; Kueh, Puah & Mansor, 2009).

Unlike trade, bilateral and multilateral investment treaties signed by Egyptian and South African governments (BMIT) do not have a significant impact on fueling their OFDI. Concluding a similar finding, Masron and Shahbudin (2010) argue that investment treaties have no prominent impact on OFDI flow from some Asian countries. Bellak (2013) argues that the small degree of annual variation of the number of investment treaties signed by a certain country could represent one of the probable reasons for the inability to empirically observe the effect of investment treaties.

Apart from trade-related drivers, the number of patents (PAT) was found to significantly influence the intention of Egyptian and South African firms to invest abroad, contrary to IFDI. According to Das (2013) the positive association between OFDI and PAT could be attributed to the fact that the more the country expand their technological innovation base the better they benefit from the international technological spillover which could resulted in augmenting their own specific advantages, as well as fuelling higher levels of OFDI.

Regarding impact of domestic drivers, both actual and potential market size have been proven to be prominent push drivers of OFDI of Egypt and South Africa. Yet, this finding should be treated with caution as each of the two push drivers has a different impact on OFDI. Actual market size, captured by the real GDP, is proven to have a positive influence on OFDI as expected by many researchers (Kueh *et al.*, 2009; Masron & Shahbudin, 2010; Saad *et al.*, 2013; Niti & Vandana, 2013). Consequently, expanding the GDP is expected to improve the ownership advantage of home country which in turn could fuel the intention of domestic firms to invest abroad.

It is however found that the growth rate of real GDP, as indicator of potential market size, is negatively associated with outbound investment decisions of both groups of firms. Accordingly, the high growth rate of the GDP might suppress domestic firms from investing abroad. As mentioned by Banga (2005), the negative association between the growth rate of real GDP and OFDI may reflect, to certain extent, the significance of the market seeking motivation of South African and Egyptian OFDI. Further analysis of host country drivers (i.e. pull factors) may be required to validate this finding.

4.3 Limitations of the findings:

Before concluding this study, it is worth highlighting the main limitations of the previous results. While providing evidence for most of the hypotheses and being in line with the key findings of previous research, aforementioned results have various limitations resulted from data shortage. First of all, in ability to control in the estimated model for the various issues emerging from the discussion section (section 2) pertaining to the composition of South African and Egyptian MNCs (proportion of listed MNCs in the stock exchange markets to non listed ones, ratio of financial to non financial MNCs and ratio of private to state owned MNCs).

The List of EGMNCs, compiled by this study, is assumed to be less inclusive than the LRS's list of SAMNCs. It is so misleading to control for the abovementioned issues based on the current limited data. Moreover, it was not possible to control the difference in the key economic sectors driving MNCs from each country as well as the foreign market entry mode in the estimated model.

5 Conclusion

Overall statistics exhibit that both South African and Egyptian MNCs grew remarkably, at a different pace during the period 1990 to 2012. SAMNCs' total assets have increased to over $1 trillion in 2013 from $756.6 billion in 2009. Moreover, from 1990 to 2012, OFDI stock held by South Africa had grown nearly 6 fold. South Africa possessed $82.4 billion OFDI stock in 2012, compared to $15 billion in 1990. Likewise, EGMNCs' total assets had escalated nearly threefold over the period 2010 to 2013, to worth more than $86 billion in 2013. Also Egypt's OFDI had evolved nearly 38 fold from 1990 to 2012. Egypt held $6 billion OFDI stock in 2012, compared to $163 million in 1990.

Compared to that of their emerging peers, the figures tell a different story about the performance of South African and Egyptian MNCs. The figures support the assumption that both groups of firms were significantly losing ground on the EMNC landscape during 1995 to 2011. South Africa now owned nearly 4 percent of the total OFDI stock held by emerging economies, which represents less than one quarter of its share at the beginning of the nineties. Egypt's share of total OFDI flow and stock owned by emerging economies had not surpassed 1 percent over the entire period from 1990 to 2012. The OFDI performance indices of both South Africa and Egypt are often less than unity, indicating that they are still playing a smaller role in the global OFDI landscape than warranted by their economies.

From another perspective, the result of the empirical analysis, using dynamic panel data model, shows that home macroeconomic specifications, namely: trade openness, capability and domestic economy related drivers, could significantly influence the outward foreign direct investment flow from South Africa and Egypt. Amongst the 6 push factors tested by this article, 4 have been proven to be significant at confidence level less than 5 percent.

OFDI flow from South Africa and Egypt has been greatly facilitated by trade openness. Consequently, integration of the South African and Egyptian economies in the world economy would increase their outbound investment. Despite its theoretically hypothesised positive impact on OFDI flows between countries, investment treaties, both bilateral and multilateral, are in no matter stimulate outbound investment decisions of both South African and Egyptian MNCs. Accordingly, holding investment agreements is not perceived to be the ideal course of actions to increase the volume of Egyptian and South African cross border direct investments.

In line with the literature review, expanding the technological innovation base of the Egyptian and South African economies, captured by the total number of patents, could further fueled the OFDI of South Africa and Egypt. In contrast, the increase in inward foreign direct investment flow to Egypt and South Africa is not necessarily to be reflected in a significant expansion in their overseas investment.

In addition to the abovementioned push driver, domestic economy related drivers are proven to be significant stimulus in this regard. Both actual and potential market size could have influence on outbound investment decisions of South African and Egyptian firms. It is however important to keep in mind the different direction of relation between each of the two drivers and OFDI, which could give, to some extent, conflicting policy implications.

Following examining some of the macroeconomic push factors of South African and Egyptian outbound investment, it remains important to consider a number of research issues in the quest to draft the right OFDI promotion policies for both countries. Important among these, is to examine the influence of other potential macroeconomic push factors that have not been tested by this article owing to existing data limitation. As they have been proven by some research to be significant drivers of OFDI, future research might pay attention to investigate the influence of human capital, institution and infrastructure on overseas investment of South African and Egyptian firms.

Equally important is to reexamine the key push factors of South African and Egyptian OFDI bearing in mind aspects of similarity and difference between both group of firms reading ownership, foreign market entry mode, listing in stock exchange markets..etc. This is to give a better picture of what really motivates them to go to invest abroad. In addition to the macroeconomic analysis, policy makers might need to further examine the influence of push factors from the microeconomic perspective to consider differences among sectors. What makes this type of investigation more important is the fact that governments are likely to promote OFDI in specific sectors. In doing so, special surveys should be conducted to collect detailed information required for the analysis.

Along with push factors, it remains important to test the significance of the other group of motives relating to the advantages prevailing in countries hosting South African and Egyptian investments, or what is labelled as pull factors.

References

[1] Aminian, N., Fung, K. & Lin, C. (2007). Outward direct investment from East Asia: Experiences of Hong Kong and Taiwan, Paper presented at International Workshop on Intra-Asian FDI Flows: Magnitude, Trends, Prospects and Policy Implications. April, 2007, Casurina Hall, India Habitat Centre, India.

[2] Andreff, W. & Balcet, G. (2013). Emerging countries' multinational companies investing in developed countries: at odds with the HOS paradigm. *The European Journal of Comparative Economics*. Vol. 10, No.1, pp. 3-26.

[3] Arnold, D. & Quelch, J. (1998).New Strategies in Emerging Markets. MITSloan Management Review.Vol. 40, No. 1.http://sloanreview.mit.edu/article/new-strategies-in-emerging-markets.

[4] Aybar, B. & Thirunavukkarasu, A. (2005). Emerging market multinationals:an analysis of performance and risk characteristics. *Journal of Asia-Pacific Business*. Vol. 6, No.2, pp. 5-39.

[5] Aykut, D. & Goldstein, A. (2006). Developing country multinationals: South-South investment comes of age, Industrial Development for the 21st Century: Sustainable Development Perspectives, United Nations Conference on Environment and Development, pp. 85-116.

[6] Banga, R. (2005). Drivers of outward foreign direct investment from Asian developing economies. Indian Council for Research in International Economic Relations.

[7] Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*. Vol. 17, No. 1, pp. 99-120.

[8] Bellak, C. (2013). How bilateral investment treaties impact on foreign direct investment: A meta-analysis of public policy. Paper presented in 2013 MAER Network Colloquium, University of Greenwich, London, UK.

[9] Buckely, P. & Castro, F. (1998). The investment-development path: the case of Portugal. *Transnational Corporations*.Vol. 7, No. 1, pp.1-15.

[10] Concer, R., Turolla, F. & Margarido, M. (2012). The macroeconomic determinants of outward FDI: The influence of the exchange rate in the Brazilian case. The High School of marketing and propaganda (ESPM), Brazil.

[11] Constanza, B. (2009). Retail internationalization from emerging markets: A case study evidence from Chile. *International Marketing Review*.Vol. 26, No. 2, pp. 221-243.

[12] Cortesi, D. & Plantoni, M. (2011). The internationalization of emerging market firms: motivations and approaches. University of Bergamo, Italy.

[13] Daniels, J., Krug, J. & Trevino, A. (2007). Foreign direct investment from Latin America and the Caribbean. *Transnational Corporations*, 16(1), 27;53.

[14] Das, K. (2013). Home country determinants of outward FDI from developing countries. *Journal of Applied Economic Research*, Vol. 7,No.4, pp. 93-116.

[15] Dunning, J. (1995). Reappraising the eclectic paradigm in an age of alliance capitalism. *Journal of International Business Studies*. Vol. 26, No.3, pp. 461-491. Palgrave Macmillan Journals.

[16] ————. (1997). Alliance capitalism and global business. *Journal of International Business Studies.*Vol. 28, No. 4, pp. 866-868.

[17] Financial Times (2014). Global 500 2014, http://www.ft.com/cms/s/0/988051be-fdee-11e3-bd0e-00144feab7de.html#axzz3aUXrSoNQ, accessed 18^{th} of May 2015.

[18] Fonseca, M., Mendonça, A. & Passos, J. (2007). The investment- development path hypothesis: Evidence from the Portuguese case – A panel dataAnalysis. *Working Papers Series*. No. WP 021/2007, pp. 1-29.

[19] Guerin, S. (2011). Do bilateral investment treaties encourage FDI outflows? Institute of European Studies, Vrije University, Brussels, Belgium.

[20] Hoskisson, R., Eden, L. & Wright, M. (2000). Strategy in emerging economies. *Academy of Management Journal*. Vol. 43, No. 3, pp. 249-267.

[21] Institute of International Finance (IIF).(2012). Capital flows to emerging market economies. *IIF Research Note*.

[22] International Monetary Fund (2008). *Balance of payments and international investment position manual,* Washington.

[23] Jaumotte, F. (2004). Foreign direct investment and regional trade agreements: The market size effect revisited. *IMF Working Paper* No.WP/04/206.

[24] Johanson, J. & Vahlne, J. (1977). The internationalization process of the firm – a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*. Vol. 8,No.3, pp. 23-32.

[25] Kayam, S. (2009).Home market determinants of FDI Outflows from developing and transition economies. Paper presented at Anadolu International Conference in Economics, Turkey.

[26] Kueh, J., Puah, H. & Mansor, S. (2009). Empirical analysis on emerging issues of Malaysia outward FDI from macroeconomic perspective. Department of Economics, Faculty of Economics and Business, University of Malaysia, Malaysia

[27] Kyrkilis, D. & Pantelidis, P. (2003). Macroeconomic determinants of outward foreign direct investment. *International Journal of Social Economics*, Vol. 30, Issue 7, pp. 827-836.

[28] Labour Research Service (2015). *South African MNCs database*, http://www.lrs.org.za/mnc/, accessed 18^{th} of May 2015.

[29] Masron, T. & Shahbudin, A. (2010). Push factors of outward FDI: Evidence from Malaysia and Thailand. School of Management, Sains University, Malaysia.

[30] Mortensen, J. (2009). Emerging multinationals: The South African hospital industry overseas. Danish Institute for International Studies. University of Copenhagen.

[31] Mubasher info (2015), http://www.mubasher.info/TDWL/home-page, accessed 13^{th} of May 2015.

[32] Narula, R. & Dunning, J. (2000). Industrial development, globalization and multinational enterprises: new realities for developing countries, *Oxford Development Studies*. Vol.28, No.2, pp. 141-167.

[33] Narula, R. & Guimon, J. (2010). The investment-development path in a globalized world: implications for Eastern Europe. *Eastern Journal of European Studies*. Vol. 1, Issue 2, pp. 5-19.

[34] Niti, B. & Vandana, J. (2013). Home country determinants of outward FDI: A Study of select Asian economies, Department of Commerce, University of Delhi, India.

[35] Organization for Economic Cooperation and Development (2008). OECD *Benchmark definition of foreign direct investment.* Fourth Edition 2008.http://www.oecd.org/daf/inv/investmentstatisticsandanalysis/40193734.pdf

[36] Park, H. (2010). Practical Guides to Panel Data Analysis. International University of Japan.http://www.iuj.ac.jp/faculty/kucc625/writing/panel_guidelines.pdf

[37] Poncet, S. (2009). Inward and outward FDI in China. Paris School of Economics, University of Paris. France.

[38] Rasmussen, E. & Madsen, T. (2002).The born global concept. Presented paper in the 28^{th} EIBA Conference 2002, in a special session entitled SME internationalization and born global – different European views and evidence. Department of Marketing. University of Southern Denmark.

[39] Saad, R., Noor, A. & Nor, A. (2011). Home countries' determinants of outward foreign direct investment (OFDI) in developing economies: Malaysian case. *Journal of ProsidingPerkem*, Vol. 2, No. 6, pp. 299-307.

[40] Salehizadeh, M. (2007). Emerging economies' multinationals: current status and future prospects. *Third World Quarterly*. Vol. 28, No. 6, pp. 1151-1166.Taylor & Francis, Ltd.

[41] Sandberg, S. (2012). Internationalization processes of small and medium enterprises: entering and taking off from emerging markets. Linnaeus University Dissertations No.78/2012.Linnaeus University Press.

[42] Sauvant,K., Pradhanþ, J., Chatterjee, A.þ & Harely, B. (2010). *The rise of Indian Multinationals: perspectives on Indian outward foreign direct investment*. Palgrave Macmillan.

[43] ————(2013). Developing countries' outward investment: Push factors for Malaysia. *Journal of Procedia- Social and Behavioral Sciences*, Vol. 130, No, 3, pp. 237-246.

[44] Standard & Poor's (2012).Statistical note on S&P Global BMI indices.

[45] Statistics South Africa (2015), http://www.statssa.gov.za, accessed 17^{th} of May 2015.

[46] Tolentino, P. (2008). The determinants of the outward foreign direct investment of China and India: Whither the home country? *UNU-Merit, Working Paper Series* No. 49, Maastricht Economic and Social Research and Training Centre on Innovation and Technology, United Nations University, The Netherlands.

[47] United Nations Conference for Trade and Development (2006). *World investment report*.

[48] ———— (2009).UNCTAD Training manual on statistics for FDI and the operations of TNCs. Vol. II *Statistics on the operations of transnational corporations*.

[49] ———— (2013). *World investment report*.

[50] ———— (2015). International investment treaties navigator, http://investmentpolicyhub.unctad.org/IIA , accessed 10^{th} of May 2015.

[51] Wai, H. & Yeung, C. (2002). Entrepreneurship in the international business: an Institutional perspective. *Asia Pacific Journal of Management*. Vol. 19, No.5, pp. 29-66. Kluwer Academic Publishers.

[52] Williams, R. (2015). Multicollinearity, University of Notre Dame, Netherland. http://www3.nd.edu/∼rwilliam/

[53] Watjatrakul, B. (2005). Determinants of IS sourcing decisions: A comparative study of transaction cost theory versus the resource-based view. *Journal of Strategic Information Systems*. Vol.14, No.6, pp. 389–415.

[54] World Bank (2011).*Global development horizons 2011-multipolarity: The new Global economy*

[55] ————(2015). *World development indicators*, http://databank.worldbank.org/data/home.aspx, accessed 18^{th} of May 2015.

ANNEXURE

Table 3.1
Financial performance of South African and Egyptian MNCs from 2009 to 2013 ($ billion)

Year	SAMNCs*				EGMNCs**	
	Revenue	Profit before tax	Assets	Liabilities	Assets	Liabilities
2009	249.5	28.6	756.6	621.4	NA	NA
2010	316.0	50.5	981.8	742.4	32.7	30.6
2011	348.6	61.8	1081.0	1392.6	82.9	78.4
2012	361.4	44.4	973.2	759.5	54.4	51.1
2013	349.1	40.0	1048.0	774.5	85.9	80.4

Source: *Author's own calculation based on Labour Research Service (LRS) database.

Author's own calculation based on Mubashir database, www.mubashir.info. Original values are measured in Egyptian Pound. To be converted to US dollar, this article used annual exchange rate derived from World Bank's World Development Indicators (WDI) database.

Table 3.2
Sector breakdown of SAMNCs ranked by number of firms in 2013 ($billion) ***

Sector**	Number of firms	Revenue	Profit before tax	Assets	Liabilities
Mining	14	5.5	5.5	141.1	38.0
Banking and financial services	11	12.9	12.9	739.2	671.9
Food and beverage	10	1.3	1.3	13.3	6.5
Retail	9	2.5	2.5	14.0	8.2
Industrial	8	5.5	5.5	88.6	53.6
Construction	6	0.6	0.6	10.1	6.4
Diversified holdings	6	2.4	2.4	41.6	20.3
Health	6	1.5	1.5	26.0	9.4
Transport	6	1.8	1.8	37.4	23.0
Hospitality	3	0.5	0.5	3.7	2.1
Paper and packaging	3	0.7	0.7	16.1	10.5
Media	2	1.2	1.2	12.9	5.8
Technology and telecommunications	2	6.6	6.6	30.2	11.2
Education, business training & employment	1	0.0	0.0	0.5	0.2

Source: Author's own calculation based on Labour Research Service (LRS) database.
** Sector classification is based on what is mentioned in LRS database.
*** Note: As 2013 financial statistics were unavailable for some SAMNCs, latest available financial statistics were used instead. Accordingly, total values of assets, revenues, profit before tax and liabilities are less important.

Table 3.3
Sector breakdown of Egyptian MNCs in 2013

Sector**	Number of firms	Value of assets ($ million)	Share in total assets (%)
Financial services	13	85125.5	98.5
Industrial	12	7.8	0.01
Construction	11	804.0	0.93
Technology and communications	6	62.2	0.07
Food and beverage	3	0.3	0.00
Hospitality	3	1.5	0.00
Trade	2	9.3	0.01
Diversified	1	(-)	(-)
Energy and mining	2	367.5	0.43
Transportation sector	1	0.1	0.00
Utilities	1	0.3	0.00

Source: Author's own calculation based on firm database published by www.mubashir.info
** Sector classification is based on what is published by www.mubashir.info.
(-) means not available.

Table 3.4

Investment-Development Path Stages

Stage	Outward FDI	Inward FDI	Net FDI flow	Economic development conditions	Motives for FDI
Stage 1	Negligible	Negligible	Zero	Lacks both ownership and location advantages	Resources seeking investment
Stage 2	Remains very limited	Grows significantly	Negative	Relative improvement in location advantages Weak ownership advantages	Resources seeking investment
Stage 3	Grows significantly	Lower growth rate	Remains negative as inward FDI stock remains higher	Relative improvement in both location and ownership advantages	Market seeking and efficiency seeking
Stage 4	Continued growth	Lower growth rate	Turns positive	Significant improvement in both location and ownership advantages	Efficiency seeking, market seeking and seeking to augment assets
Stage 5	High stock of outward FDI	High stock of inward FDI	Revolves around zero	Leading developed countries	Efficiency seeking, market seeking and seeking to augment assets

Source: Narula & Dunning (2000).

Table 3.5

Different push factor determinants considered by previous research*

Domain	Variables/ relation to outward FDI	Banga (2005)	Saad, Noor & Nor (2011)	Saad, Noor & Nor (2013)	Masron & Shahbudin (2010)	Das (2013)	Niti &Vandana (2013)	Concer, Turolla & Margarido (2012)	Tolentino (2008)	Kueh, Puah & Mansor (2009)	Kyrkilis& Pantelid (2003)
Market size	Real GDP	X		+	+		+			+	X
	Real GDP growth rate	X									
	Real GDP per capita		-			+			X		
Inward FDI	Inward FDI flow	+	+		+						
	Inward FDI stock			+							
OFDI openness	Outward OFDI / GDP						+				
	Bilateral investment & trade agreement	+			X						
Trade	Exports/GDP	+	+	+	+						
	Imports/GDP	+									
	Exports + imports / GDP					+			X	+	
	Exports + imports										-
Human capital	Real output per employee	X	+	-	-				X		
	Secondary enrolment ratio	+									
	Number of third-level education students										X
Capital abundance	Real domestic interest rate	X			X				X	+	X

Domain	Variables/ relation to outward FDI	Banga (2005)	Saad, Noor & Nor (2011)	Saad, Noor & Nor (2013)	Masron & Shahbudin (2010)	Das (2013)	Niti &Vandana (2013)	Concer, Turolla & Margarido (2012)	Tolentino (2008)	Kueh, Puah & Mansor (2009)	Kyrkilis& Pantelid (2003)
Quality of infrastructure	Electricity consumption/ GDP	X									
	Transport and communication/ GDP	+									
	Primary energy consumption		-	X							
Taxes	Corporate profit tax	+									
Institutions	Number of strikes and layouts	X									
	Institutional quality index				-	+					
Exchange rate	Real exchange rate			-		X		X	X	+	-
	Exchange rate volatility								X		
Technology capability	No. of Patents			-							+
	R&D expenditure					+					
	No. of trademark applications								+ (Only for India but insignifica nt-cant for China)		

Source: Author's own

*Note: X refers to insignificant relation between the mentioned variable and OFDI, while minus and plus signs denote negative and positive relations respectively.

Table 3.6
Variables used in the model, definitions, hypothesised signs and data sources

	Variable	Definition	Hypothesised relation with OFDI	Data source
1.	OFDI	Log of outward FDI flow	-------	UNCTAD
2.	TRAD	Log of exports plus imports as a percentage to GDP	+	World Bank
3.	BMIT	Number of bilateral and multilateral investment treaties	+	UNCTAD
4.	PAT	Log of number of patents applied for by residents	+	World Bank
5.	IFDI	Log of inward FDI flow	+	World Bank
6.	GDP	Log of the real gross domestic product	+/-	World Bank
7.	GDPG	Log of the growth rate of real GDP	-	World Bank

Source: Author's own compilation

Table 3.7
Variance inflation factor (VIF)

Variable	VIF	Tolerance
GDP	1.14	0.8793
GDPG	1.2	0.8346
BMIT	1.23	0.8113
IR	1.11	0.9008
PAT	1.37	0.7283
TRAD	1.55	0.6439
IFDI	1.14	0.8793
Mean VIF	1.27	

Source: Author's own calculation

Table 3.8
Results of the Im-Pesaran-Shin unit-root test

Variable	P-value
OFDI	0.0015
GDP	0.3700
GDPG	0.0004
BMIT	0.0067
PAT	0.0875
TRAD	0.0886
IFDI	0.0466

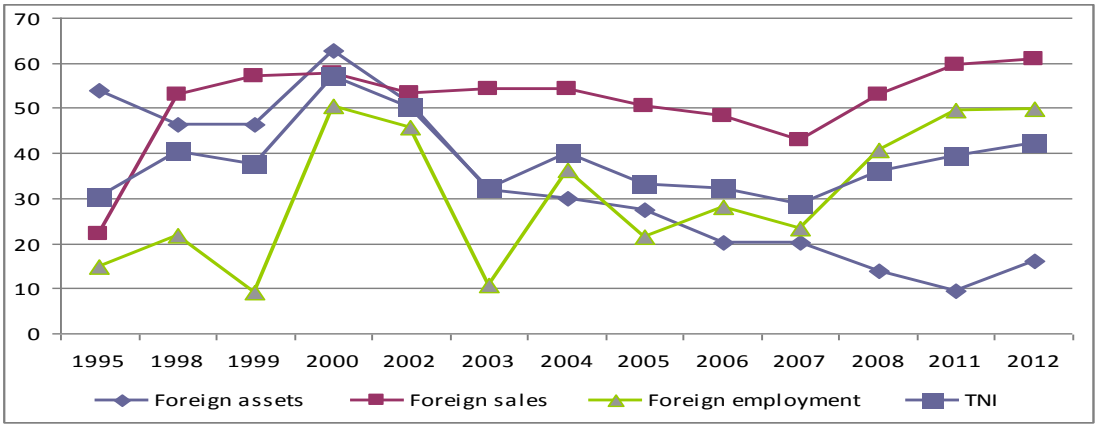
Source: Author's own calculation

Table 3.9
The dynamic model results

	Short run parameters			Long run parameter*
Variable	**Coefficient**	**Standard error***	**P>|z|**	
Lag OFDI	**0.49**	**0.051**	**0.000**	-
TRAD	**1.41**	**0.542**	**0.009**	**2.76**
BMIT	**-0.006**	**0.013**	**0.623**	**-0.01**
PAT	**0.52**	**0.028**	**0.000**	**1.02**
IFDI	**0.205**	**0.151**	**0.176**	**0.40**
GDP	**5.5**	**0.168**	**0.000**	**10.78**
GDPG	**-0.85**	**0.056**	**0.000**	**-1.67**
Constant	**-4.64**	**1.24**	**0.000**	
Wald chi2(1)	**6.77**			
Prob > chi2	**0.0093**			
Arellano-Bond test for zero autocorrelation in first-differenced errors	**Order**	**z**	**Prob > z|**	
	1	**-1.3939**	**0.1634**	
	2	**.44183**	**0.6586**	
	H0: no autocorrelation			

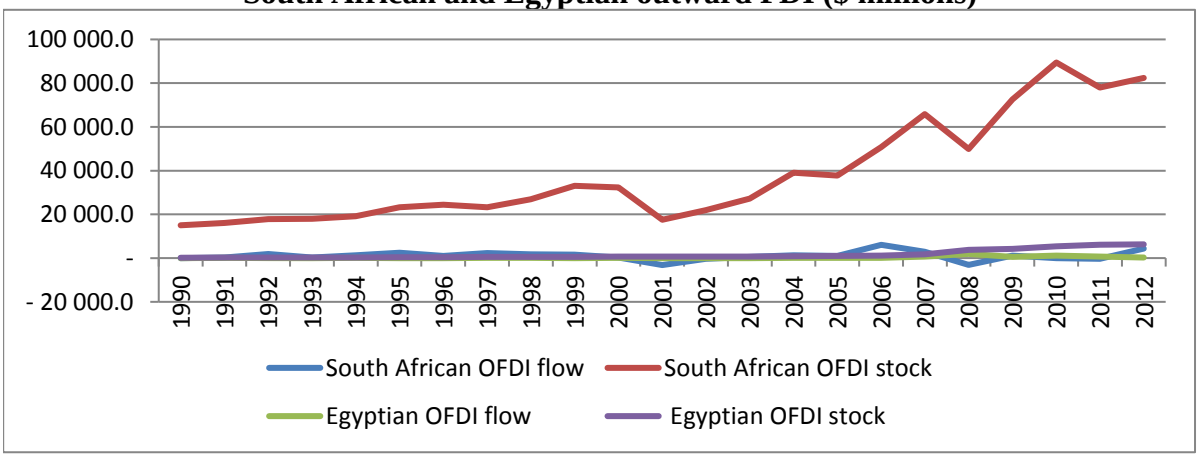
Note: Long term coefficient= short term coefficient/(1-parameter corresponding to the lagged variable)
* Standard errors are corrected for heteroscedasticity.

Figure 3.1
Foreign assets, sales, employment as percentage of total respective indicators of top SAMNCs and their Transnationality index over 1995 to 2012 (%)*



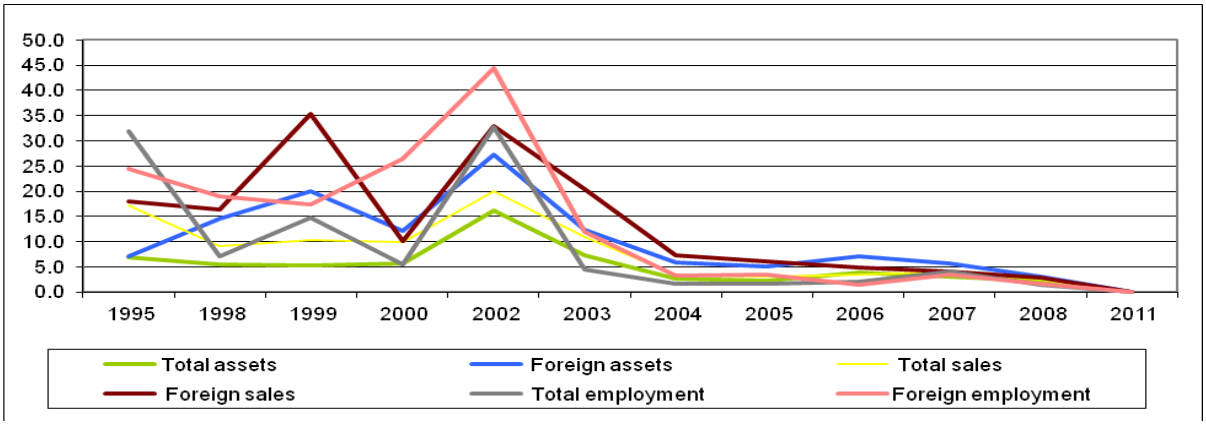
Source: Author's own calculation based on UNCTAD statistics.
* TNI is calculated as a simple average of three variables, namely sales abroad relative to total sales, foreign assets relative to total assets, and foreign labour relative to total labour.

Figure 3.2
South African and Egyptian outward FDI ($ millions)



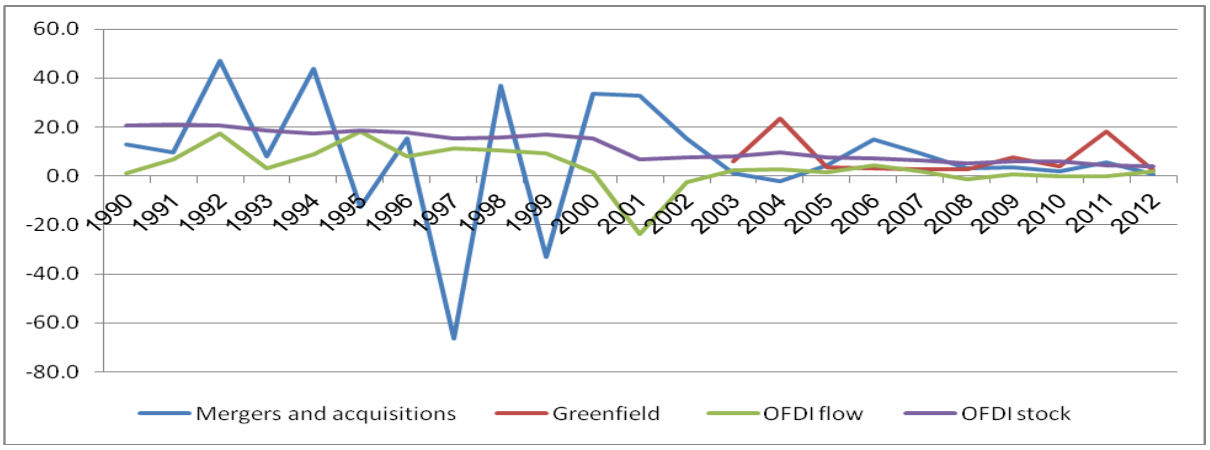
Source: UNCTAD statistics

Figure 3.3
Share of SAMNCs in total and foreign assets, sales and employment of the top 17 EMNCs over the period 1995 to 2011 (%)



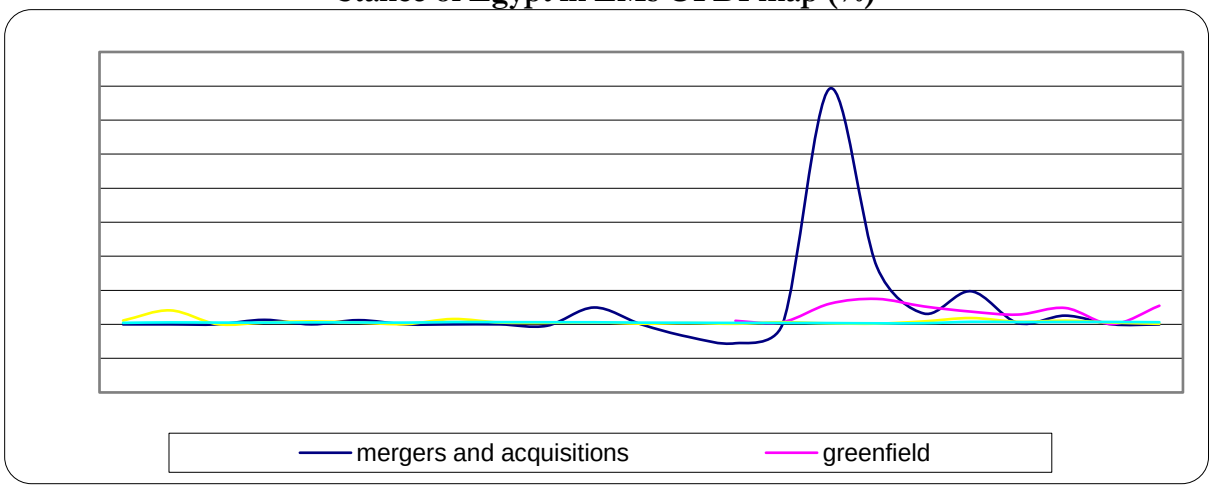
Source: Author's own calculation based on UNCTAD statistics.

Figure 3.4
Stance of South Africa in EMs OFDI map (%)



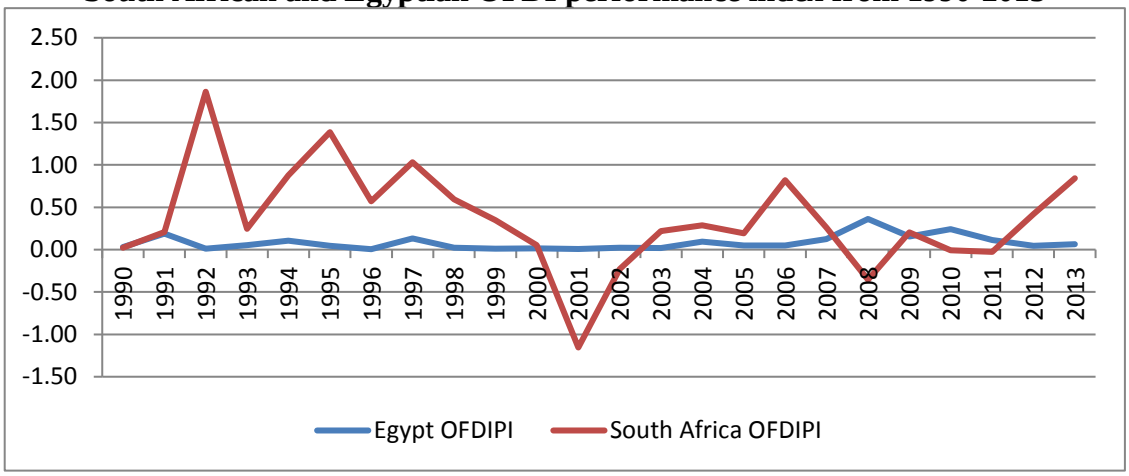
Source: Author's own calculation based on UNCTAD statistics.

Figure 3.5
Stance of Egypt in EMs OFDI map (%)



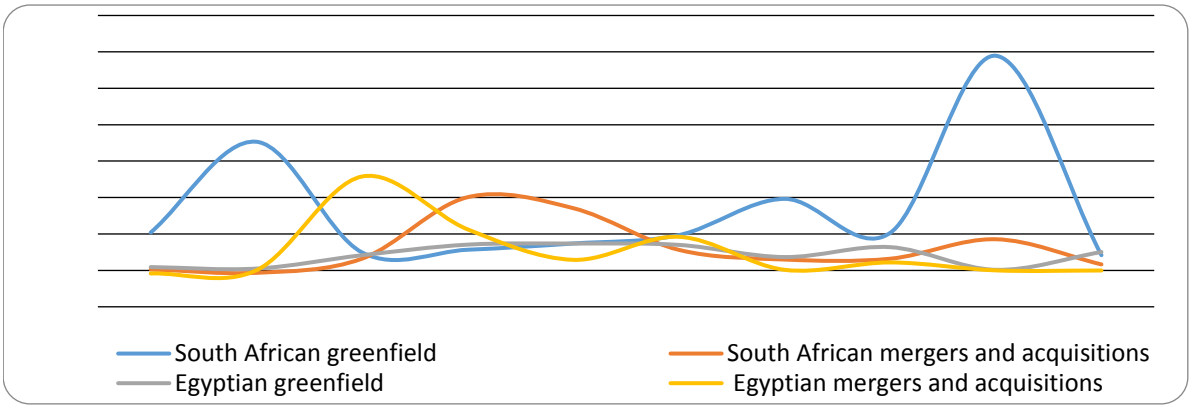
Source: Author's own calculation based on UNCTAD statistics.

Figure 3.6
South African and Egyptian OFDI performance index from 1990-2013



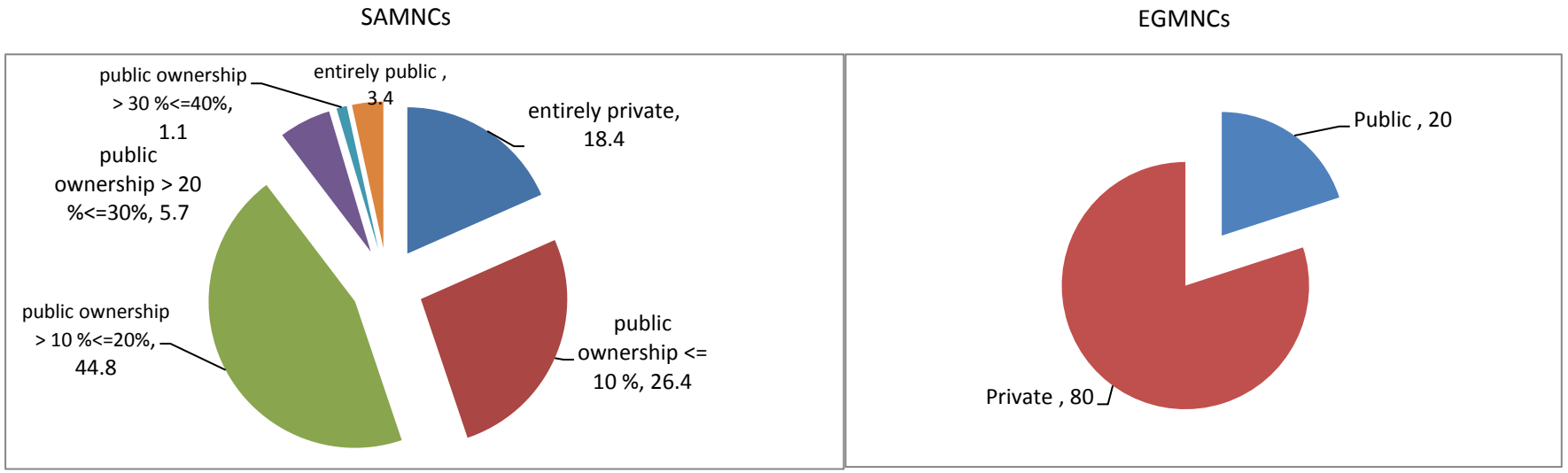
Source: Author's own calculation based on UNCTAD statistics.

Figure 3.7
South African and Egyptian OFDI by type of investment ($ millions)



Source: UNCTAD statistics.

Figure 3.8
Ownership structure of South African and Egyptian MNCs in 2013 (%)



Source: Author's own calculation based on Labour Research Service (LRS) database of SAMNCs and the list compiled by this study of EGMNCs. Note, the ownership structure of each of the two groups of firms is presented in a different way based on the available detailed data

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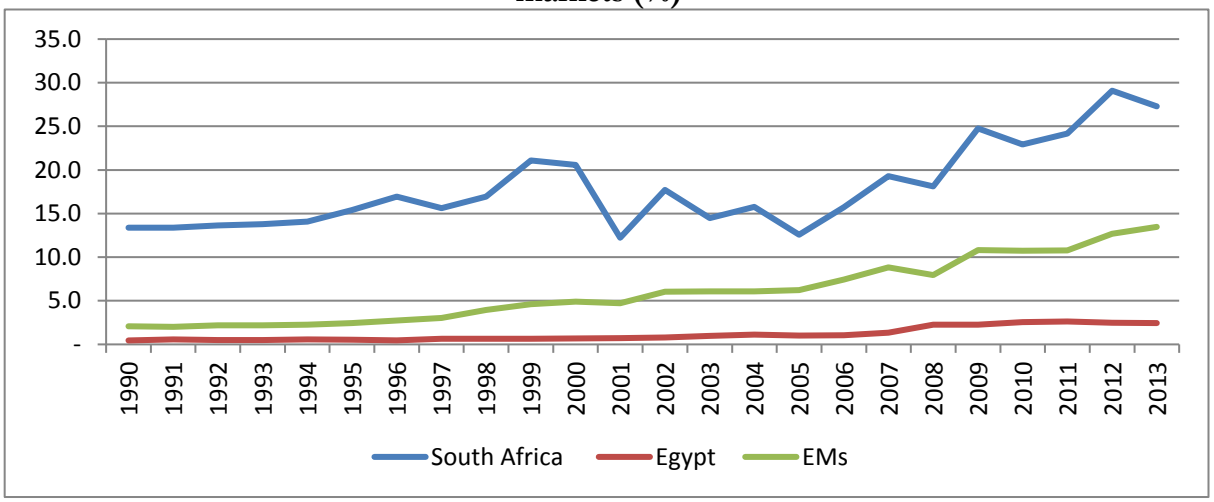
Figure 3.9
OFDI openness of South Africa and Egypt versus the respective average of emerging markets (%)*



Source: Author's own calculation based on UNCTAD statistics.
* OFDI openness equals OFDI stock divided by gross domestic product.