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Contents

Has outward foreign direct investment contributed to the development of the Chinese economy?

Jan Knoerich*

Research and literature on foreign direct investment (FDI) and economic development have to date focused almost entirely on development in the host economy, sidelining the question of any contribution to development in a multinational enterprise's country of origin. To address this shortcoming in research on FDI, this study investigates whether Chinese outward FDI can be seen as having made a contribution to the development of the mainland Chinese economy over the past three decades. It finds that the activity of Chinese enterprises in pursuing assets and advantages abroad through outward FDI yields four categories of returns: financial, capability, capacity and macroeconomic. These returns have addressed some of the specific challenges that China has faced in the process of its economic development, although the extent and importance of the development contribution remains uncertain. Outward FDI can play both a complementary and a supplementary role to development benefits realized from opening up to international trade and inward FDI, and from emigration.

1. Introduction

Research and literature on foreign direct investment (FDI) and economic development has to date focused almost entirely on development in the host economy where investment is made (Crespo and Fontoura, 2007; Saggi, 2002; JBICI, 2002; Fan, 2003; Görg and Strobl, 2001; Lim, 2001; UNCTAD, 2013; Javorcik, 2004), sidelining the question of any contribution to home country development. In an era predating the appearance of the emerging multinational enterprises (MNEs) as important global players, this focus on the host economy – and relative negligence of home-economy development – was reasonable: FDI was largely an activity reserved for MNEs from countries that were already developed, and theories about FDI – from Hymer's (1960) market power hypothesis and Vernon's (1966) focus

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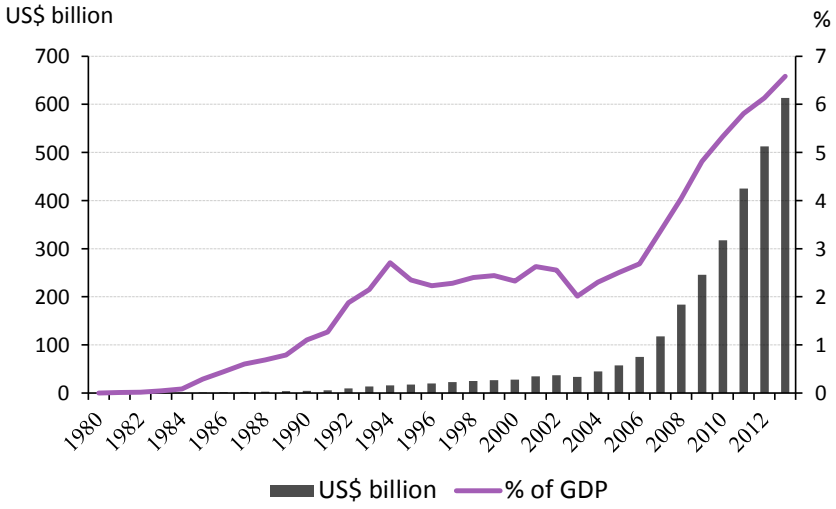
on product innovation to Dunning's (2001) ownership advantages – emphasized the technological, innovative and managerial superiority of the investing MNE as an essential explanation for the occurrence of FDI. The investment development path similarly assumed FDI to occur as a consequence of economic development (Dunning, 1981). These theories were formulated at a time when most FDI flows were unidirectional, from more to equal or less advanced economies. Development in poorer economies was also associated with the inflow of productive capital, technologies and economic activity from advanced-economy MNEs, rather than with any form of capital outflow.

The ascendance to global significance of the MNEs from emerging economies after the turn of the century ushered in a new era in the study of FDI. Since then, researchers have begun to revisit some of these assumptions, often suggesting the necessity of expanding existing theories and common understandings about the nature of FDI (Gammeltoft, Barnard and Madhok, 2010). Yet somewhat missing from these discussions is the possibility that, because the MNE is the primary beneficiary of its investments, its overseas operations and investments could support the development of its country of origin – especially if the enterprise comes from a developing or emerging economy. Hardly any research has examined in detail the development contribution of *outward* foreign direct investment (OFDI) in emerging economies or developing home countries. More generally, a comparatively small number of studies have examined the impact of FDI on home countries, with many of them focusing primarily on the potential "hollowing out" of the advanced home economies and the resulting necessity of economic restructuring, an issue that would be of lesser significance to developing home countries.

In view of these shortcomings in research on FDI, the purpose of this study is to explore the nature and importance of the gains and potential benefits for a developing home country from OFDI. As this study seeks to inductively develop a framework that focuses on the development contribution of OFDI in less advanced economies, it is analytically prudent to explore this issue by making use of the case study method. For the purpose of such an examination, I chose mainland Chinese OFDI as a particularly appropriate case for a number of reasons. First, China has so far been the source of the highest amount of OFDI among developing economies. Second, Chinese firms started to

go abroad as early as the 1980s, when China was clearly undergoing processes of rapid economic development. Figure 1 illustrates that already during the 1990s, China's OFDI stock as a percentage of gross domestic product (GDP) was between 1 and 3 percent, substantial enough to justify consideration of its potential contribution to China's economic development. After 2003, a stronger outward push became visible with the accumulated stock of Chinese OFDI rising to an impressive US$614 billion in 2013. Third, although China is a country with strong economic fundamentals, it faces severe economic and developmental challenges related to technological deficiencies, resources shortages, food security, population pressures, environmental degradation, pollution and more. Despite rapid economic growth of more than 8 per cent in most years since economic reforms were launched in 1978, China's GDP per capita is still relatively low. For these reasons, China is a particularly useful case for exploring mechanisms that link OFDI to the development of the home economy.

Figure 1 . China's OFDI stock



Source: UNCTADStat database.

An interesting aspect of Chinese OFDI is that development considerations have featured in official government policy. Since the 1980s, the Chinese government has, both institutionally and through

various legal measures and frameworks, experimented in an industrial policy-type fashion with the guidance and promotion of OFDI in the interest of China's economic development (Zhan, 1995). However, as research has not thoroughly investigated the development contribution of OFDI in home developing countries, not much is known about the effectiveness of such policies. Has OFDI made a meaningful contribution to development in China? Available theories or frameworks also do not function well in explaining the development contribution of OFDI to the home economy, given the aforementioned focus of theories on ownership advantages and the technological, innovative and managerial superiority of the investing MNE. As a result, the Chinese and other governments of developing and emerging economies will have difficulties making any decisions about appropriate OFDI policies on the basis of existing academic and scholarly research.

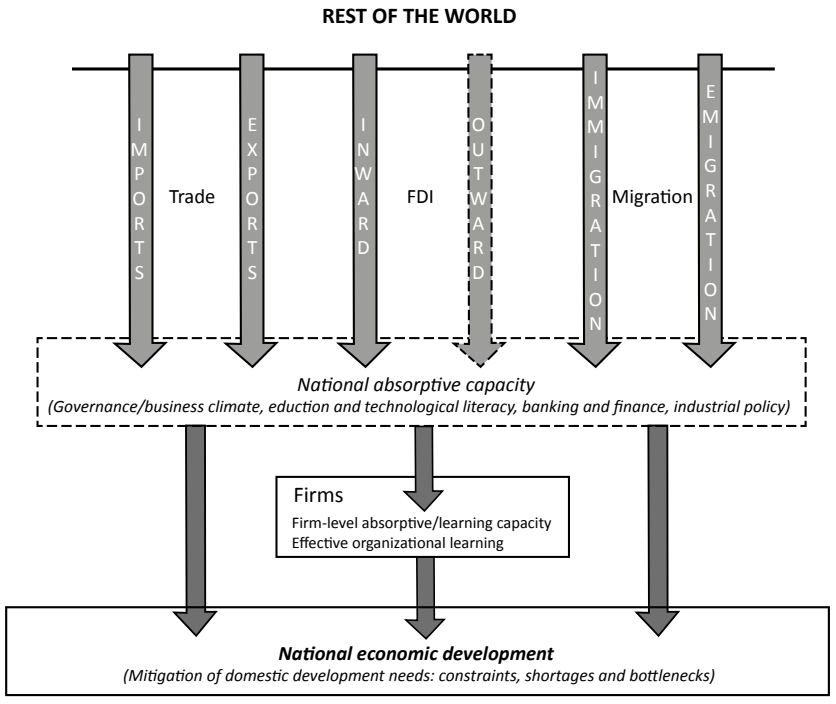
What is the nature of the potential development contribution of OFDI, and how could government policy effectively harness it? To address these questions, several analytical steps are at the core of this study's investigation. To begin with, I review the relevant literature on Chinese OFDI to gather preliminary insights into the contribution of OFDI to economic development in China. Then I identify and categorize the mechanisms through which Chinese OFDI has made development contributions. This is done by developing the concept of "returns" from OFDI and by examining how these returns have contributed to economic development in China. Particular examples of Chinese MNEs are drawn upon to confirm the findings.

In order to evaluate the importance of OFDI to the development of the Chinese economy, I further assess the strengths and feasibility of these mechanisms in contributing to development. An important consideration is whether OFDI adds something unique to the other channels of economic interaction with the rest of the world from which China's economic development has been found to have benefited in the past – namely trade, inward FDI and migration. Development studies often depict these economic exchanges with the rest of the world as shown in figure 2 but omit OFDI owing to the lack of research on its development contribution. I include OFDI in this figure by way of a dotted line, aiming with this study to determine, for the case of China initially, whether OFDI should rightfully be included in this graph.

Given the explorative character of this study, an inductive approach to research was applied. In the spirit of concept development and theoretical expansion, a single-country case study is examined to develop an analytical framework on the development contribution of OFDI (Yin, 2014; Eisenhardt, 1989), which future studies can use and test in further analyses of the Chinese case or of other developing countries. This study concludes with relevant considerations for future economic policy.

I take the State-centric position of the MNE, which considers the MNE as a product of its economic, institutional and cultural origins in the home country (Gilpin, 2001, p. 288). This is appropriate for Chinese OFDI, which has emerged only recently and has not yet generated the kind of globalized MNEs in which the country of origin is becoming blurred. For the purpose of this study, I apply a broad understanding

Figure 2. Economic exchanges with the rest of the world and economic development



Source: Adapted from Andreosso-O'Callaghan and Qian, 1999, p. 128 and World Bank, 2008, p. 8.

of the term "development", including not only growth in GDP but also more qualitative contributions to the economy such as economic restructuring, technological advancement, sustainability, and improved productivity or efficiency (Soubbotina, 2004, p. 133). I also consider development to be an issue for countries categorized by the World Bank as developing or transition economies (a group that includes China) and a process that the advanced industrialized countries have successfully concluded.

2. Chinese OFDI: Initial considerations on home-economy development

Some studies have empirically examined the impact of OFDI on advanced home economies. Although far from all of them find evidence of such a relationship, a few have identified positive effects (Blomström and Kokko, 1998; Dunning and Lundan, 2008; Kokko, 2006; Lipsey, 2004; Moran, 2006) – an encouraging observation in view of this study's particular objectives. Table 1 provides a list of studies that have found OFDI to enhance economic growth, exports, productivity, efficiency, competitiveness, technologies and know-how in advanced home economies. It is possible to infer from these studies that similar effects must play a role in developing and emerging economies such as China, although concrete evidence is lacking. In fact, with such economies as the countries of origin, any impact from OFDI should come in the form of more specific development contributions to the home economy, with more significant qualitative benefits than the typical gains from OFDI made in advanced countries. But given the lack of concrete evidence, the need for thorough case study analysis of individual developing countries is urgent.

In line with the broader picture in the literature on inward FDI and development, accounts of Chinese OFDI have focused on the development impact that Chinese MNEs have in host countries, especially in Africa and Southeast Asia (Kubny and Voss, 2014; Whalley and Weisbrod, 2011). There is no body of literature examining the impact of OFDI on *China's* economic development, although some of the literature indicates the existence of such an impact. The rest of this section examines this literature to establish a foundation based on which a framework of Chinese OFDI and economic development can be developed.

Table 1. Favourable impact of OFDI on advanced home economies: Evidence from the literature

Type of FDI	Impact on home economy	Source
French OFDI	French exports and French FDI are complementary.	Chédor, Mucchielli and Soubaya, 2002
UK OFDI	OFDI can raise productivity in the United Kingdom.	Driffield and Love, 2005
Austrian OFDI to Eastern Europe	Outsourcing increases economic and total factor productivity growth in Austria.	Egger, Pfaffermayr and Wolfmayr-Schnitzer, 2001
Italian OFDI	OFDI is associated with employment growth at the local level compared with the national industry average.	Federico and Minerva, 2008
Swedish OFDI	OFDI supports the diffusion of foreign technology to Sweden.	Globerman, Kokko and Sjoholm, 1996
OFDI from Nordic countries	Activities of firms abroad transferred knowledge into the national innovation systems of Nordic home countries.	Herstad and Jónsdóttir, 2006
OFDI from 14 industrialized countries	In the long run, OFDI has a positive effect on output.	Herzer, 2008
OFDI from the United States and Germany	OFDI has positive effects on domestic investment in the short run and, for the United States, in the long run as well.	Herzer and Schrooten, 2008
OFDI from the United States and 50 other countries	The association between OFDI and growth is positive.	Herzer, 2010
French OFDI	Market-seeking and services OFDI create jobs in the home country; factor-seeking FDI improves capital-intensity and efficiency, and enhances exports.	Hijzen, Jean and Mayer, 2009
FDI in West Sweden	R&D activities in west Sweden resulted in benefits for the global economic activities of the foreign companies involved, in sectors ranging from manufacturing to services.	Ivarsson and Jonsson, 2003
Japanese OFDI	Japanese exports are promoted by the activities of Japanese foreign manufacturing affiliates.	Lipsey and Ramstetter, 2003
United States OFDI	Diffusion of knowledge occurs from the host country back to the United States.	Popovici, 2005
European Union (EU) OFDI	OFDI from the EU has contributed to enhancing competitiveness and productivity in EU member States.	Sunesen, Jespersen and Thelle, 2010
OFDI from 22 industrialized countries	The productivity of an economy increases if its OFDI is directed to R&D-intensive countries.	Van Pottelsberghe de la Potterie and Lichtenberg, 2001

Note: This table lists only a selection of studies that find results favourable to the home economy. It is not comprehensive and does not list studies with negative or no findings. A more comprehensive account of studies and their results has been provided by Lipsey (2004) and by Kokko (2006) in extensive summaries of the literature.

2.1. Chinese OFDI as a pursuit of assets and advantages

It has been argued that Chinese OFDI is a natural result of China's increasing economic strength (Liu et al., 2005). However, especially with regard to Chinese OFDI into the advanced economies – which is a considerable share of all Chinese OFDI – the more common view has been that the Chinese economy and its firms continue to exhibit numerous weaknesses, with OFDI often driven by the desire to overcome these weaknesses (Ash, 2008, p. 199; Child and Rodrigues, 2005, p. 388; Deng, 2007, p. 77, 2008; Knoerich, 2012, 2010; Von Zedtwitz, 2005; Yang, 2005, pp. 49-58; Wu 2005, pp. 8-9; Young et al., 1996). Reference is often made to the lack of within-firm strategic resources, especially technologies, know-how and brands (Wu, 2005; Deng, 2008). Some Chinese firms are considered "multinationals without advantages" (Fosfuri and Motta, 1999), or at least do not exhibit the same type of firm-specific capabilities, focused on technological, managerial or marketing superiority, that have been typical for MNEs from advanced economies (Guillén and García-Canal, 2009).

This view contradicts, at least in part, traditional theories of FDI, which argue that market power and competitive advantages are both key to successful overseas investment (Hymer, 1960; Dunning, 2001). Some literature suggests that Chinese companies began to invest abroad comparatively early, when China was not yet sufficiently developed to justify the magnitude of OFDI already observed (Yang, 2005, pp. 54-55). Chinese OFDI does not seem to fit with the internationalization and psychic distance approaches to foreign investment either (Johanson and Vahlne, 1977, 1990). Rather than undergoing incremental overseas expansion, as these theories would predict, Chinese companies have expanded rapidly into distant economies, many quite different from the Chinese economic system. As a result, several studies have mentioned the need to expand existing theory on the basis of observations about Chinese OFDI (Child and Rodrigues, 2005, p. 407; Buckley et al., 2007, pp. 501-503; Gammeltoft, Barnard and Madhok, 2010).

Instead of emphasizing the competitive advantages of Chinese MNEs as a foundation of their OFDI behaviour, a number of studies have focused on what could be termed the "pursuit of assets and advantages" abroad. Chinese MNEs have made attempts to overcome

their firm-specific disadvantages by using OFDI as a means to acquire various kinds of strategic assets, including know-how, brands and technologies (UNCTAD, 2006, pp. 162-163; Child and Rodrigues, 2005). This has been confirmed in numerous case studies (Knoerich, 2010; Rui and Yip, 2008; Child and Rodrigues, 2005; Wu, 2005), and has been identified as a motivation for OFDI – even before 1992 (Young et al., 1996). Chinese OFDI in the acquisition and extraction of natural resources has also been significant and is rapidly expanding (Buckley et al., 2007, p. 504; Deng, 2004, p. 11; Cai, 1999; UNCTAD, 2007, p. 100), with the annual number of new deals reaching record levels in recent years.

Probably the main motivations for Chinese companies to invest abroad have in fact been expansion into new markets, strengthening of export markets, or circumvention of trade barriers (Knoerich, 2012; Keller and Zhou, 2003, p. 11; Deng, 2004, pp. 12-13; Taylor, 2002, p. 221). Together with strategic-asset-seeking FDI, such pursuit of market access, often for low-cost or niche products (Knoerich, 2012), explains the peculiar situation of a certain geographic concentration of Chinese OFDI in advanced economies: their large markets combine with an environment in which firms hold a considerable amount of managerial and marketing know-how, technologies and brand names. OFDI aimed at reducing production costs has been less important for Chinese companies, as production costs have been among the lowest in China itself. However, this kind of OFDI from China is slowly increasing as the Chinese economy reaches the "Lewis turning point" and as labour costs are rising rapidly.

OFDI as a pursuit of assets and advantages to overcome competitive weaknesses and disadvantages is being highlighted as an important difference from conventional North-North or North-South FDI. A few studies have examined Chinese OFDI through the resource-based view of the firm (Deng, 2008), explaining how the Chinese MNEs, through overseas investments, obtain complementary resources that they lack in-house. Similarly, the linkage-leverage-learning approach takes a learning-based view of Chinese OFDI (Li, 2007; Mathews, 2006).

Such perspectives are particularly useful when exploring the development implications of OFDI for the Chinese economy. Many of the assets and advantages pursued by Chinese MNEs can yield

broader benefits for the investing firm's operations in China, for other firms in China and for the Chinese economy as a whole. Yet, in much of the literature, the link between the motivations and determinants of Chinese OFDI and their respective development outcomes in China has been made implicitly, if at all. There is definitely a lack of detailed, focused analyses of the various dimensions of this development contribution. This may be because much of the research on Chinese OFDI to date has emerged in the field of international business, which is primarily concerned with firm-level analyses, rather than in other areas such as development studies, where macroeconomic effects and development implications may receive greater coverage. The purpose of this study is to bring more attention to this broader dimension of economic development – essentially an outcome of the activities of Chinese firms going abroad – in order to raise awareness of an important but underinvestigated area of inquiry.

2.2. Chinese government support for OFDI and development

Since the 1980s, the Chinese government has been concerned in a number of ways with fostering OFDI in line with national economic development priorities (Zhan, 1995, p. 81; Zhang and Van Den Bulcke, 1996, p. 417; Zhang, 2003, p. 62). The high level of State ownership of China's outward investing firms (Morck *et al*., 2008, p. 340; MOFCOM, 2014, p. 107; Korniyenko and Sakatsume, 2009, p. 11; OECD, 2008, p. 2), capital market imperfections that favour those firms (Buckley *et al.*, 2007, p. 501), and the steering of OFDI behaviour through a well-structured policy framework and economic incentives have been regularly pointed out in studies of Chinese OFDI (Brown, 2008, p. 5; Lu, Liu and Wang, 2011; Wang, 2002, p. 187; Yeung and Liu, 2008; UNCTAD, 2006, p. 157). In the earlier years of China's economic reforms, the Chinese government was particularly concerned with the encouragement, regulation and control of Chinese enterprise activities and investments abroad (Zhang, 2003, p. 55). Government involvement in OFDI decisions could be very direct, guiding large Chinese State-owned enterprises (SOEs) in selected industries to invest in designated destination countries in line with China's long-term strategic interests. Such government involvement was often motivated by concerns related to China's economic development, such as the strengthening

of export opportunities and access to strategic resources, including know-how, technologies, equipment and raw materials (Wang, 2002, pp. 192-194; Wu and Chen, 2001, pp. 1237-1239; Guo, 1984; Zhang, 2003, p. 57; Zhan, 1995, p. 70; Zhang and Van Den Bulcke, 1996, pp. 417). OFDI had the potential to improve the competitive strength of Chinese firms, support catch-up ambitions and offset disadvantages in global competition (Tan, 2001, p. 192; Chen, 2005, p. 30; Luo, Xue and Han, 2010).

This approach was continued, albeit in a less stringent way, with the "going out" policy implemented by China's Ministry of Commerce with the National Development and Reform Commission (NDRC) after 2000. The policy supports the exploration of natural resources to reduce domestic shortages, promotes exports, encourages the establishment of research and development (R&D) centres abroad to utilize foreign technological know-how, and selectively supports engagement in mergers and acquisitions (M&As) that can improve the competitiveness of Chinese firms and facilitate access to foreign markets (UNCTAD, 2006, p. 210). Support offered by the government has included the provision of information, guidance and training to investors (including through the publication of three consecutive lists indicating the countries and industries in which Chinese enterprises should invest), administrative support, facilitation of investments through diplomatic or non-diplomatic means, and financial assistance, such as through insurance, taxation (People's Daily Online, 2007), and low-interest loans and preferential credit (Child and Rodrigues, 2005; Zhang, 2003, p. 60-61; Warner *et al*., 2004, p. 340; UNCTAD, 2006, p. 180; Xiao and Sun, 2005). Gallagher and Irwin (2014) estimate the magnitude of China's OFDI finance from its development banks between 2002 and 2012 to have reached US$140 billion.

Because of these many forms of involvement by the Chinese State, the business literature often sees political and institutional factors functioning as important drivers and home-economy determinants of Chinese OFDI. The support and encouragement by the State, State ownership, and the existence of capital market imperfections in China that give preference to SOEs have been found to influence the OFDI decisions of Chinese enterprises and potentially offer them a source of competitive advantage (Morck *et al.*, 2008; Antkiewicz and Whalley, 2006; McKinsey, 2008, p. 4).

China's industrial policy-type OFDI regime is usually dealt with in a critical manner and not considered in light of the country's development priorities. Concerns about the potential negative spillovers of China's institutions and OFDI policy regime in host countries greatly exceed any recognition that the Chinese government may be pursuing legitimate development policies that may often be in line with host country interests. The literature does not present a framework that enables an analysis of whether and how Chinese OFDI contributes to the development of the Chinese economy, thereby preventing a proper evaluation of the appropriateness of China's OFDI policies. The purpose of the following section is to develop such a framework.

3. The returns from Chinese OFDI

The literature on Chinese OFDI forms a useful basis for exploring the mechanisms through which OFDI contributes to China's economic development. This literature has shown that Chinese enterprises, often driven by deficiencies in the home economy, invest abroad to pursue assets and advantages in four key areas: markets, strategic assets, natural resources and, on lesser occasions, efficiency enhancement. It is this pursuit of assets and advantages as a core activity of any direct investment that should form the starting point of an analysis of the development contribution.

How the pursuit of markets, strategic assets, natural resources and efficiency contributes to development in the Chinese economy remains obscure. In this study, I argue that a contribution to economic development in China becomes possible if the successful and effective pursuit and appropriation overseas of an asset or advantage generates some sort of positive return, not only for the subsidiary of the Chinese company but also for the company's headquarters and operations in China and, by extension, for the Chinese economy as a whole. A thorough analysis of the nature and types of returns that Chinese OFDI generates, including an examination of the impact these returns have in China and whether they address any particular development needs, can greatly help assess the role OFDI plays in supporting development in the home economy.

In what follows, the case of Chinese OFDI is examined to identify the returns that OFDI generates. In the process, quantitative macro

data and relevant findings from the literature are supplemented by concrete evidence from individual cases of Chinese companies. For this purpose, table 2 provides a rare list of more than two dozen specific cases in which the returns generated by Chinese companies' OFDI have been concretely identified and documented. This collection of clear examples is in many ways unique, especially given the generally low availability of concrete and published accounts of Chinese OFDI cases. The examination of this data resulted in the identification of four types of returns generated by Chinese companies from OFDI. The following sections examine each of these in greater detail.

3.1. Financial gains from FDI and associated economic activities

It is in the nature of an investment that the ultimate objective is financial gain. Although not explicitly mentioned in table 2, most if not all investments listed there were ultimately driven by the profit motive. Balance-of-payments statistics for China show that the overall amount of money earned by Chinese MNEs abroad is not insignificant – more than US$30 billion in income was generated from OFDI in 2013. As figure 3 illustrates, rates of return on Chinese OFDI have ranged between 5 and 6 per cent in the years from 2009 to 2013. Substantial amounts of FDI income are reinvested in the host country (US$22 billion in 2013), but when remaining funds are repatriated and reinvested in the home economy, Chinese companies and China stand to benefit economically. Although an estimated overall value of a few billion dollars in repatriated income will not make a particularly noteworthy economic contribution in view of China's overall financing capacity today, the contribution to capital accumulation and potential development contribution in individual, possibly localized contexts should not be ignored. For example, remittances from migration may be much higher than these financial returns from OFDI, but they are often consumed rather than reinvested. Moreover, the financial income from OFDI might have mattered more in earlier years of China's economic reforms, when China was in greater need of foreign exchange.

Possibly of greater importance have been the financial implications of OFDI for China's export industries, especially as enhancement of exports has played an important role in China's strategy to promote economic development and maintain a current account surplus. Many

Table 2. Example cases of Chinese investments abroad

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
Consortium led by MMG Limited (including CITIC Metal)	Las Bambas copper mine (acquired from Glencore Xstrata)	Peru (2014)	"China gave its approval to the merger [of Glencore with Xstrata] after Glencore agreed to sell its stake in Xstrata's copper mining project in Peru to a buyer approved by Chinese authorities." (BBC, 2014)	"The mining giant also agreed to supply a minimum volume of copper concentrate to China for a period of eight years." (BBC, 2014)
Shuanghui International	Smithfield Foods Inc.	United States (2013)	"enabling Shuanghui to learn from the Virginia-based company's food safety and production technology." (Tadena, 2013)	"Smithfield, […] and Shuanghui […] have said their joining will increase U.S. pork exports to China". (Tadena, 2013)
Zhuhai Yintong Energy Co., Ltd.	Altair Nano-technologies (Altair Nano)	United States (2011)	"to obtain Altair Nano's lithium titanate battery technology for China" (Szamosszegi, 2012, p. 100)	"it is one of the technologies listed in China's 863 Technology Plan. […] Yintong's New Energy Vehicle Development Plan for 2011-2020 makes clear that the Altair Nano investment was undertaken with the state's development objectives in mind […].'Through holding shares of American Altairnano Company, Yintong Group has introduced the globally most advanced cell anode material technology – lithium titanate technology into Chinese market. Yintong Group purchases dedicated lithium titanate material of Altairnano for production of cell cells {sic} in China. […] it possesses superior reliability in applications of national defense, national infrastructure and other equipment'.*" (Szamosszegi, 2012, p. 100)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
Anshan Iron & Steel Group	Steel Development Co. (14% stake) and construction of associated steel plants	United States (2010)	"A spokesman for Anshan […] said […] the Mississippi company uses an electronic-furnace technology that Anshan would like to introduce to China to save power and reduce pollution." (Areddy, 2010)	"Specifically, Anshan explained that: Anshan's investment in building mills in the U.S. is not only going to fit the need of self-development, it's also Anshan's sacred historic mission of being the 'eldest son of iron and steel' of the world's largest iron and steel country. […] It is also Anshan's contribution to the realization of transforming China from a big iron and steel country to a strong iron and steel country.** Moreover, several of Anshan's justifications for its investment derive directly from the […] industrial policies, including acquiring advanced technology and returning the technology to China, and 'enhanc[ing] the internationalization of Anshan.'**" (Price et al., 2011, p. 10)
Zhejiang Geely Holding Group	Volvo	Sweden (2010)	"Geely will be able to tap Volvo for three much-needed technologies, including the use of a midsize platform, Volvo's proven safety innovations and interior air quality systems. The latter two technologies are important to improve the crashworthiness of Geely's cars, along with helping isolate vehicle occupants from China's often severe air pollution." (Ross, 2012)	"The report says that Volvo tech will likely be used on a premium car brand that Geely is expected to create." (Ross, 2012)
Hangzhou Machine Tool Group (HZMTG)	aba z&b	Germany (2010)	"Chinese HZMTG takes over 100% of the shares of aba z&b Schleifmaschinen [grinding machines]." [translated from German] (Schreier, 2010)	"… the production of standard machines was relocated to the site in Linan in China…" [translated from German] (Schreier, 2010)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
Yanzhou Coal Mining Co.	Felix Resources Ltd.	Australia (2009)	"'Yanzhou Coal has been looking at expanding its assets into Australia for several years,' said Andrew Driscoll, [...]. 'Its production levels in China are fairly flat in comparison with its peers and opportunities for expansion at home are limited. It needs to look abroad to expand output." (Scott and Duce, 2009)	"agreed to buy Australia's Felix Resources Ltd. [...] to secure supplies" (Salidjanova, 2011, p. 7) "Yanzhou will pursue plans to boost its coal reserves, President Yang Deyu said in an October interview." (Scott and Duce, 2009)
China-Africa Cotton Development Ltd (a joint venture between Qingdao Ruichang Cotton Industrial Co, China-Africa Development Fund and Qingdao Fuhui Textile Co.)	"China-Africa Cotton had grown a presence in Malawi." (Wang, 2014)	Malawi (2008)	"China-Africa Cotton has established a seed-breeding base and a ginnery in Malawi, with annual capacity of 30,000 tons. [...] China-Africa Cotton has also bought a plant in Malawi from Cargill, [...] to extract oil from cotton seed." (Wang, 2014)	"A small amount of the cotton is processed locally, with the rest being shipped back to China, Wang [the general manager] says." (Wang, 2014)
China National Offshore Oil Corporation (CNOOC)	Awilco	Norway (2008)	"technology of the Norwegian oil producer Awilco, purchased [...] for 2.4 billion euros." (Geinitz and Lindner, 2012, translated from German)	"This year, CNOOC began its first own deep-sea drilling. This was possible with the technoloy of [...] Awilco." (Geinitz and Lindner, 2012, translated from German)
Wanxiang Group	"has purchased or taken stakes in 20 U.S. companies" (Szamosszegi, 2012, p. 82)	United States (1999-2006)	"Wanxiang America expanded by purchasing some of these financially distressed firms." (Szamosszegi, 2012, p. 81)	"and shifting a portion of their production to China" (Szamosszegi, 2012, p. 81)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
China Qianjiang Group	Benelli	Italy (2005)	"The main reasons for QJ to purchase Benelli was to utilize a well-known and recognized brand in terms of quality and sporting tradition, as well as to capitalize on Benelli's professionalism and knowledge, in order to offer a high-quality product in segments that had not yet been penetrated by the QJ group." (Spigarelli et al., 2012, p. 366)	"Benelli's products/spare-parts were also to be used in China, so as to increase the quality of domestically manufactured products and to further diversify production to new categories of clients. Increased efficiency and a wide range of quality products would have helped QJ to compete with the leading Japanese companies in the motorbike market." (Spigarelli et al., 2012, p. 367)
Lenovo/Legend	IBM PC Business	United States (2005)	"Not only would Lenovo be allowed to use the IBM brand under license for five years, […] it would also own IBM's premium Think trademark which covers the prestigious ThinkPad notebook brand and the ThinkCenter desktop line. Equally important would be Lenovo's gaining access to IBM's international expertise, especially in areas such as the management of manufacturing and distribution channels in the 160 countries." (Wu, 2005, p. 18). "as well as gain technology and expertise to complement its existing firm-specific advantages in China" (UNCTAD, 2006, p. 163)	"As one senior manager commented, 'The deal has enhanced our technology and innovative capabilities by at least 5 years. More importantly, we have the world-class managerial team from IBM, and that is invaluable' (Lenovo, personal communication, May, 2005)." (Deng, 2007, p. 76)
Nanjing Automobile	MG Rover	United Kingdom (2005)	"Nanjing obtained MG Rover's engine plant and other facilities, five Rover car brands, the opportunity to sell in Europe, and an existing network of procurement, selling, and service in Europe." (Rui and Yip, 2008, p. 220)	"All of these assets were expected by Nanjing to produce competitive cars so as to obtain a stronger market position in China and an exporting position in Europe. […] Another was to attract Chinese customers […] by 'localizing' the brand." (Rui and Yip, 2008, p. 220)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
Heilongjiang Dongning Huaxin Industry and Trade Group	Armada (joint venture)	Russia (2004)	"Covering an area of 40,000 hectares, Armada is not only the largest Sino-Russian agricultural cooperation project but also the biggest farm in the Russian Far East." (Wu and Liu, 2013)	"It raises 30,000 pigs a year and grows soybeans and corn that is sold in local markets or shipped back to China." (Stanway, 2013) "Chinese corporations are involved in producing food in neighbouring countries for the domestic market, one example being the 400,000 hectare farm on the China–Russia border jointly owned by China's Huaxin Group and Russia's Armada." (Morton, 2013)
Shenyang Machine Tool Group (SYMG)	Schiess GmbH	Germany (2004)	"SYMG's strategy through its acquisition of Schiess was not just to thereby gain access to new markets, first in Europe and the[n] worldwide. It was also to draw on the skills and technology of the German company's designers and engineers to produce a whole new generation of machine tools [...]." (Hattersley, 2014)	"'SYMG machines are being developed and brought to readiness for series production using Germany's technologically high levels of engineering expertise and then [...] to be manufactured [in China] at an economically viable cost,' explains Dr Marcus Otto, Director of Schiess Tech. '[...] at Schiess Tech's berlin [sic] office engineers from ten European countries are working closely with Chinese colleagues to develop equipment for the world market. One of the first results of this collaboration is our new VIVA TURN 4, [...] which is designed here in Berlin for the European market and assembled [...] in Shenyang.'" (Hattersley, 2014)
Shagang	Thyssen-Krupp Stahlwerke	Germany (2002)	"In an unprecedented campaign, both the Phoenix steelworks ("East") and the coking plant Kaiserstuhl and large parts of the Westfalenhütte were sold to a Chinese consortium ("Shagang")." [translated from German] (www.industriedenkmal.de)	"A complete steelworks including blast furnaces, rolling mills and sintering plant shall be disassembled into millions of individual parts, to subsequently rebuild it in China's Zhangjiagang, 9,000 kilometres away." [translated from German] (Dohmen and Schmid, 2002)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
Haier	Meneghetti refrigerator plant	Italy (2001)	"Haier saw this acquisition as providing the opportunity to develop new products from a European manufacturing base." (Bonaglia et al., 2007, p. 377)	"[…] buying Meneghetti-produced built-in ovens and hobs to market them in China under the Haier brand name." (Bonaglia et al., 2007, p. 377)
Holly Group (Holly Holdings (USA) Ltd)	Philips Semi-conductors (CDMA hand-set reference design operation), establishing Holly com-munication Group Inc.	United States (2001)	"The Holly Group provides an example of foreign acquisition aimed at securing proprietary technology […] A major step forward towards implementing this strategy was Holly's acquisition in September 2001 of the CDMA hand-set reference design operation from Philips Semiconductors in the USA." (Child and Rodrigues, 2005, p. 392)	"Philips Semiconductors agreed to transfer to Holly Holdings all equipment, assets and associated know-how, alongside intellectual property rights, which were embodied and engendered by the activity of hand-set reference designs. Furthermore, the Holly Group also benefited […] by gaining an exclusive license to handle and process the CDMA software protocol that earlier had been developed by Philips. The latter promized [sic] to supply Holly and its (prospective) customers with key silicon-components, so that Holly could continue the process of developing and marketing these licensed products." (Warner et al., 2004, p. 335)
Huawei Technologies	R&D centres	India, Germany, Japan, United States, etc. (since 1999)	"Huawei […] provides another example of how Greenfield investment in R&D can help Chinese companies be close to sources of knowledge and learning." (Deng, 2007, p. 75)	"These ventures […] aim to offset areas of weakness in China's innovation system, to access foreign technological assets, and to capture the externalities created by host-country technology clusters (www.huawei.com.cn)." (Deng, 2007, p. 75)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
Haier	Haier Industrial Park (greenfield), South Carolina; marketing centre, New York; design and R&D centres, Los Angeles and Boston	United States (since 1999)	"For Haier, investment in the U.S. is certainly motivated by factors such as expanding the range of products it sells and bypassing non-tariff barriers on imports of Chinese appliances. [...] In the words of one senior manager, 'By setting up the production plant in the U.S., we aim to draw on America's expertise in design, research, innovation, and technology, as well as to increase our global brand.' (Haier Group, personal communication, August, 2004)." (Deng, 2007, p. 75)	"The major role of these R&D centers is to develop, acquire, and transfer technology, and to help the head office develop home appliances that meet the needs and wants of local consumers (Haier Group, personal communication, August, 2004)." (Deng, 2007, p. 75)
Galanz	R&D centre, Seattle	United States (1998)	"Galanz [...] has invested [...] in an R&D center in Seattle, Washington in order to improve its own proprietary technological capability." (Deng, 2007, p. 75)	"The increased technological strength helped Galanz not only become the world's largest manufacturer of microwave ovens, but also build up its strong international brand for the future." (Deng, 2007, p. 75)
China Petroleum and Natural Gas Corporation	Oil-related projects	Peru and Canada (since 1992); Sudan, Venezuela, Kazakhstan (since 1996)	"exploration and exploitation of oil" (Cai, 1999, p. 869)	"On 15 September 1997 the first shipment of crude oil obtained from the company's overseas investment was brought back to China."*** (Cai, 1999, p. 869)

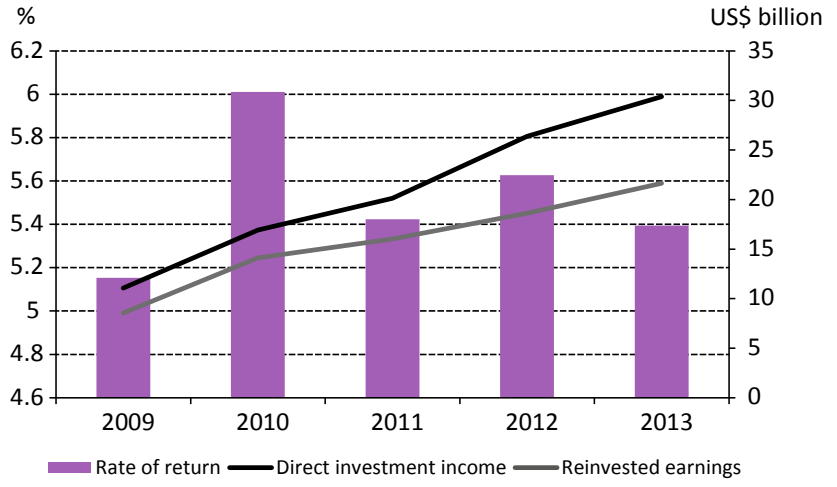
Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
San Huan New Material High-Tech Inc., and China National Nonferrous Metals Import and Export Company	Magne-quench (majority share)	United States (1995)	"Magnequench had a unique expertise in the manufacture of high-powered neodymium magnets, which it pioneered in the 1980s for its parent company, General Motors [...]" (Tkacik, 2008)	"in 2004, Magnequench, together with its merger partner NEO Material Technologies (and its inte-grated Chinese joint-venture partners), supplied about 80 percent of the world market share of neodymium and rare-earth oxide powders [...] Magnequench's crown-jewel technologies had already seeped off unnoticed to China, and the entire production line was already being disman-tled in the United States. [...] NEO and its Mag-nequench affiliate report that 85 percent of their manufacturing facilities are in China" (Tkacik, 2008)
China Ocean Fishing Corporation	>50 wholly owned subsidiaries, joint ventures and cooperative subsidiaries	in almost 20 countries, including the United States, Iran, and Argentina as well as in West African nations (1985-1995)	"Operating a fleet of more than 800 ships of various types and employing 15,000 sailors and land-based workers abroad" (Deng, 2004, p. 11)	"[I]ts annual catch of several hundred thousand tons of seafood is all sent back to the rapidly growing Chinese market." (Deng, 2004, p. 11)
Shougang (Capital) Iron and Steel Corp	Masta Engineering and Design Inc. (70%)	United States (1988)	"obtain access to the US company's high technology design capability in steel rolling and casting equipment" (Wall, 1997, pp. 24-25); "Through this investment Shougang is able to use Masta's 650 blueprints and microfilms, 46 software packages, 41 technical patents and 2 registered trade marks in well-advanced rolling and continuous casting technologies. Masta became Shougang's research-and-development basis overseas." (Zhan, 1995, p. 89)	"This investment has significantly strengthened Shougang's abilities to design and manufacture heavy metallurgical equipment and increased the international competitiveness of China's iron and steel industry. [...]

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
				In late 1989, Shougang and its subsidiary Masta established a joint venture in Beijing, Masta Engineering Beijing Co. Ltd. With the advanced technology from Masta, the venture undertook a number of large technological renovation projects in China, including one research-and-development project listed as a key one in China's Seventh National Development Plan. Through joint research and development with United States experts and hands-on training in both China and the United States, Chinese engineers soon became familiar with the most advanced technology and know-how in the metallurgical industry." (Zhan, 1995, p. 89)
China Metallurgical Import and Export Corp	Channar Mine joint venture with CRA	Australia (1987)	"extraction of iron ore" (Cai, 1999, p. 868)	"The ore is taken by conveyor belt to Paraburdoo, where it is transported – with product from the mine there and from Eastern Range – by the Hamersley and Robe River railway to the port of Dampier, and then loaded on ships, many headed for China. […] The Channar ore body was identified as the most suitable for Chinese steel mills, […] production began in January 1990, the first shipment being sent from Dampier to Shanghai." (Callick, 2010) "Within the 30-year duration of the joint venture there will be a stable shipment of 200 million tons of quality iron ore from Australia to China."**** (Cai, 1999, p. 869)

Chinese company	Foreign investment	Country (Year)	Asset/advantage sought	Returns
China Bicycles Corporation	Purchase of an American bicycle company	United States	"in order to gain access to the technology for producing the high specification models in demand in the United States and Europe" (Wall, 1997, p. 24)	"The company transferred the technology back to its Shenzhen plant which now has a highly successful export market." (Wall, 1997, p. 24); "In this way, not only was the technology itself transferred but also the ability to translate it into practical commercial use." (Deng, 2004, p. 11)
Shanghai Baoshan Iron and Steel Corporation	Six joint ventures	Australia, Brazil, South Africa	"to gain access to both iron-ore mining and steel marketing" (Deng, 2004, p. 11)	"Between 1990 and 1994, the company shipped over 10 million tons of mineral back to China, saving an estimated $6 million in fees and charges." (Deng, 2004, p. 11)

* Original source: Guangdong Yintong Investment Holding Group Company Limited New Energy Vehicle Development Plan (2011-2020).
** Original source: "Angang to Invest and Build Factory in the United States", Anshan Iron and Steel Group Corporation (May 17, 2010) (Chinese translated version).
*** Original source: Renmin Ribao, 16 September 1997, p. 1.
**** Original source: Jiang, Bolun, and Zhenfang Zou (1996). Foreign Investment of Chinese Enterprises (Beijing: Economic Science Press), pp. 18-19.

Figure 3. Financial returns from Chinese OFDI



Source: IMF Balance of Payments (BOP) Statistics, UNCTADStat (for FDI positions). Rates of return are calculated by dividing direct investment income in year t by the average of the FDI positions for years t and t-1 (UNCTAD, 2013).

Chinese investments, and especially those in advanced economies, have as their objective the pursuit of new export markets overseas or the enhancement of access to existing export markets (Knoerich, 2012). Not only are the investing firms' export earnings enhanced by such activities, but their Chinese suppliers benefit in similar ways, with attendant financial benefits accruing directly within the Chinese economy from profits and foreign exchange earnings.

A final benefit is that OFDI has made financing from overseas sources possible, opening up a viable alternative to domestic sources of capital (Wall, 1997, p. 16; Deng, 2004, p. 15). The availability of capital and foreign exchange has been distorted in China, where SOEs are still the primary recipients of loans from State banks. Such capital market imperfections have, for instance, forced small- and medium-sized enterprises to rely more on informal finance and export earnings to finance and expand their operations. OFDI has broadened the overall pool of financing options available to all kinds of Chinese firms.

3.2. Intangible benefits and the enhancement of capabilities

Beyond immediate financial gains, Chinese firms investing abroad have enjoyed intangible benefits from the pursuit of technologies, managerial and marketing skills, brands and various forms of tacit know-how available in foreign locations. Once these intangible resources reach the home economy – which would normally occur through within-firm transfer mechanisms – and are assimilated and integrated into domestic economic activities, Chinese firms enjoy greater access to capabilities that are new or unfamiliar to them. Economic development occurs when these acquired capabilities support Chinese companies in the process of catching up in technological and other fields, help improve efficiency in resource use or advance sustainability in the economy in other ways.

The amount, nature and type of capabilities obtained by Chinese companies through OFDI differ with the entry mode of investment. Greenfield investments can yield access to capabilities through reverse spillovers, reverse competition and demonstration effects, and reverse labour turnover (Knoerich, 2012). Chinese OFDI in R&D activities has also expanded at a brisk pace (OECD, 2007, p. 22). With advanced economies as the dominant destination for this kind of OFDI (UNCTAD, 2005, p. 150), catch-up has been an important motivation (Von Zedtwitz, 2005, p. 121). Another possibility has been inter-firm cooperation, such as through joint ventures between Chinese and foreign firms (Wall, 1997, pp. 15-16). Mergers and acquisitions (M&As) are generally known to be a particularly direct and effective means of gaining access to firm-specific capabilities (Dunning, 1998; Inkpen, 1998; Ranft and Lord, 2002), but they are capital-intensive undertakings. Chinese firms have been very active participants in cross-border acquisitions in advanced economies, as the cases of Lenovo's acquisition of IBM's PC business (United States) and of Medion (Germany), Geely's acquisition of Volvo (Sweden), Shuanghui's acquisition of Smithfield (United States), CNOOC's acquisition of Nexen (Canada) and some other cases listed in table 2 exemplify.

A few studies have documented internal transfers of (technological) know-how, brand recognition and other capabilities back to company headquarters in China (Knoerich, 2010; Zhan, 1995;

Deng, 2004), and the examples of Zhuhai Yintong, Anshan, Huawei, Shougang, Geely, CNOOC, China Qianjiang Group, Lenovo, Nanjing Automobile, Shenyang Machine Tool Group, Haier, Holly Group, Galanz, San Huan New Material High-Tech Inc. and China Bicycles Corporation in table 2 provide additional evidence of the existence of such "capability returns". Many of these documented activities have occurred in sectors of key importance to China's economic development, such as in the machinery and equipment, electronics and automotive industries. In at least the first four of these cases, documentation (cited in table 2) explicitly highlights the important link to China's development priorities, such as the need to mitigate shortcomings in the country's national innovation system (Deng, 2007, p. 75).

Despite substantial progress, especially in recent years, China has in most areas not yet reached a level of technological sophistication and innovation comparable with the international leaders, and its firms remain constrained by competitive and technological weaknesses. There is an intense debate between those who believe in the ability of Chinese firms to catch up and become strong international competitors and technology leaders (Rasking and Lindenbaum, 2004; Sigurdson, 2005, p. 15; Zeng and Williamson, 2003, p. 93; Brandt and Thun, 2010), and those who view this potential progress rather sceptically, citing technological and managerial deficiencies, lack of marketing and branding skills, weak innovation performance, low productivity, and low product variety and quality (Nolan, 2001, 2002; Alon, 2012; Yang, 2005, pp. 49-54; Wu, 2005, pp. 8-9; Steinfeld, 2004; Gilboy, 2004; McKinsey, 2008, p. 5; UNCTAD, 2006, p. 152). China has strong ambitions to become a knowledge-based economy, but it is reliant on foreign sources of know-how to complement domestic innovation efforts, as the latter on their own would be too costly and not fast enough to support catch-up with the international technology frontier. Thus, investments in foreign R&D centres, partnerships with more advanced firms abroad and foreign acquisitions may be more pragmatic approaches. Even leading Chinese firms such as Haier, TCL and Lenovo have had strategic needs, which they have sought to overcome by investing overseas (Deng, 2008).

However, the exact dynamics and success rate of accessing, appropriating and transferring firm-specific capabilities through OFDI are still little understood. There is no guarantee that a Chinese firm

will accomplish this successfully. Two important requirements are the capacity to absorb the know-how and intangible resources obtained abroad and the ability to transfer them across borders. The complex nature of many kinds of know-how and the challenges of integrating parent and subsidiary effectively to facilitate transfers are additional complicating factors. Beyond these within-firm challenges, stakeholder opposition in the host country could result in further difficulties, as could numerous cultural, contractual and legal barriers (Knoerich, 2010).

Yet cases such as that of Lenovo, which emerged as a leading global computer giant after its acquisition of IBM's PC division, and the recent rise of global telecommunications companies Huawei and ZTE with their international network of R&D centres, indicate that some Chinese companies have successfully accomplished these tasks. ZTE's European R&D centre was instrumental in developing the 4G technology that gave the company a strong market share in China. Accordingly, Huang and Wang (2009) find a positive association between OFDI and Chinese patents, and Wang (2012) proposes that OFDI can help upgrade the Chinese economy. Another study also suggests that OFDI is geared towards strengthening industries in China (Huang and Wang, 2011). In view of this co-existence of opportunities and challenges, a likely conclusion to be drawn is that OFDI can help Chinese firms upgrade their capabilities, although this works better in some cases and contexts than in others.

3.3. Enhanced availability of commodities, materials and physical assets

Certain types of Chinese OFDI enhance the availability and accessibility of commodities, raw materials or particular kinds of physical assets (e.g. machines or entire factories). Many investments by Chinese enterprises, especially State-owned ones, in resource-rich countries in Africa, the Americas, the Middle East and other regions have had the objective of tapping into overseas reserves of oil, gas, iron, copper, aluminium and other resources. Investment projects in this area tend to be large, accounting for a substantial share of China's corporate assets overseas. They are frequently achieved by acquiring shares in foreign firms or by engaging in cooperation schemes such as shareholding agreements and joint development (Tan, 2013; Deng,

2004, p. 11; Jiang and Sinton, 2011). In addition, Chinese companies have been purchasing or leasing farmland in many parts of the world, such as in Africa and Latin America, to produce a wide range of agricultural commodities including grain, palm oil, sugar, tea and meat (Sun, 2011, p. 15; Von Braun and Meinzen-Dick, 2009; Smaller and Mann, 2009).

Some of these commodities, materials and physical assets are shipped back to China for use in industrial production and to provide energy and supplies. For at least 11 of the cases in table 2 such direct (or intended) transportation of overseas products or physical assets back to China has been explicitly documented. In a detailed study of Chinese OFDI in agriculture, Smaller et al. (2012, pp. 15-27) identify projects in Argentina, Brazil, Kazakhstan, the Lao People's Democratic Republic, Malaysia, Myanmar, the Russian Federation, Senegal and Tanzania where export to China is an explicit purpose of the investment. The Chinese government has offered subsidies to resource-oriented investments aimed at shipping resources back to China (Luo, 2010, p. 76).

Apart from these immediate benefits, the ownership rights that OFDI conveys to a Chinese company promise more secure and stable access to overseas commodities and natural resources than does reliance solely on market mechanisms. OFDI is a means to hedge against the risks of being exposed to the volatility of prices in global commodity markets by enabling more direct access to raw materials under long-term contracts. The stability and certainty gained from reducing the likelihood of any shortages or crises provides an important advantage to China's economy. Even if commodities are not shipped back to China but sold in the open market internationally or locally, which is common for example in the energy and agriculture sectors (Chen, 2011, pp. 607-608; Economist, 2008, p. 12; Smaller, 2012, p. 6; Morton, 2013), the additional supply provided by Chinese firms can have the side effect of lowering the global market price of a commodity, ultimately reducing import and input prices for industries in China. And in times of crisis or shortages, Chinese companies, and especially SOEs, could still give privilege to China as a destination for shipment of these resources (Economist, 2010a, 2010b; Ma and Andrews-Speed, 2006, p. 19).

For a long time, China's model of economic growth relied on large-scale investments in industry and infrastructure construction, requiring considerable amounts of raw materials. But despite natural and energy resources in China being plentiful at an aggregate level, owing to the enormous size of the country's territory, there is a shortage of most resources in per capita terms, given China's huge population of more than 1.3 billion people. Overall, China's natural resource endowment is below the world average. Rapid economic growth over the last few decades, averaging 10 per cent per year from 1978 to 2010, has further exacerbated these shortages: domestic natural resources are not sufficient to meet China's rising energy needs and supply Chinese industries. Power consumption has been strongly tied to economic growth in China, and equally rose by 10 per cent per year between 1991 and 2007 (Liu and Zhang, 2012, p. 4). During the past decade, the share of heavy industry, such as steel and cement production, in the Chinese economy has grown continuously (Yang, 2012). Increasing amounts of raw material inputs are required to serve the rising needs of Chinese households, including strong growth in energy consumption, and to maintain China's high level of exports.

China lacks sufficient capacity in important sources of energy, especially oil and gas (Smil, 2000, p. 212). Its own oil resources are being depleted and have continued to fall behind soaring demand, forcing greater reliance on imports (Ma and Andrews-Speed, 2006). In the period from 1990 to 2010, China's self-sufficiency in oil declined from 119 per cent to 45 per cent (Xing, 2012, p. 8), and oil security became a priority concern for the government (Smil, 2004, p. 20). Accordingly, the Chinese government has viewed OFDI as important for China's energy security (Yang, 2012).

Moreover, industrialization-induced environmental degradation (air, water and land pollution) has amplified shortages of water and land. The constant scarcity of land in China (Ash, 1996, p. 77), especially in view of China's enormous population, has kept the issue of food security on the agenda, even if it is not an imminent threat. It was just a bit more than 50 years ago that China experienced the most severe famine in human history, and its government maintained a policy of 90 per cent self-sufficiency in grain until recently. The pursuit of agricultural land and water by Chinese companies abroad must be viewed in this context.

Chinese OFDI in resources exploration, extraction and production enhances accessibility to energy resources, metals and agricultural products, with some of these commodities, as well as capital goods, being shipped directly back to China. This process enhances capacities in China to produce, consume, construct and operate, in both stable and unstable times. However, the degree to which China has actually improved its resource security and benefited from such "capacity returns" remains an issue requiring further exploration in future research.

3.4. Macroeconomic effects from OFDI

Finally, Chinese OFDI has had an aggregate impact on industrial production, exports and employment in China. Chinese investments in advanced economies have opened up additional markets for goods produced at low cost in China (Knoerich, 2012), and many Chinese efficiency- or resource-seeking investments in Africa, Southeast Asia and other low-cost locations require the procurement of intermediary products and parts produced in China. This export-promoting function of Chinese OFDI has existed for many years and for a long time received explicit encouragement from the Chinese government (Wong and Chan, 2003, p. 281). It has been tied in with a growing need to expand business activity beyond China, owing to increasing domestic competition from foreign investors, oversaturation of domestic markets and excess production capacities (Wu, 2005, p. 7; Deng, 2004, pp. 11-12; Keller and Zhou, 2003, p. 11; Zhan, 1995, p. 93). An UNCTAD survey found that 40 per cent of Chinese companies considered maximizing domestic manufacturing capacity as an important reason for expanding abroad, while 36 per cent highlighted circumventing trade barriers (UNCTAD, 2006, p. 156). Accordingly, Huang and Wang found a positive association between Chinese exports to a particular country and OFDI in that country (Huang and Wang, 2011, p. 18). Zou also finds a positive impact of OFDI on production in China (Zou, 2008).

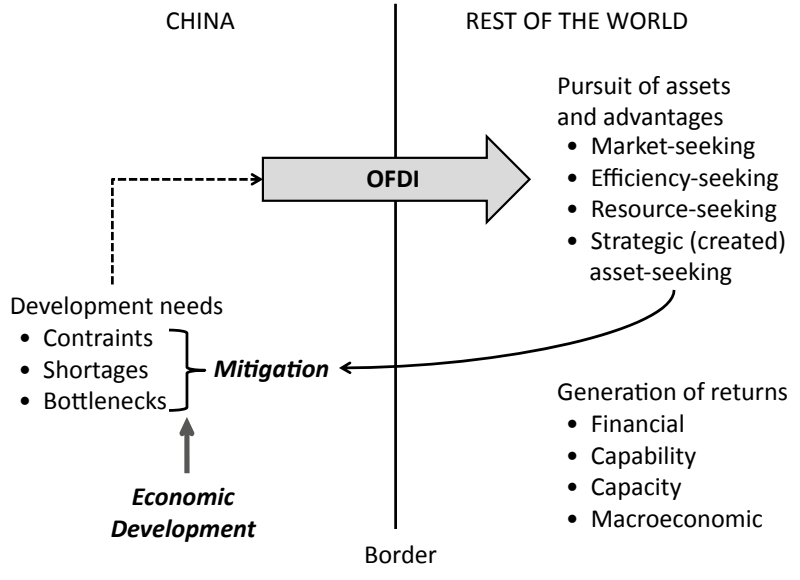
However, the impact can also be negative, if Chinese companies expand production in other developing countries at the expense of production in China. With labour and other costs of production rising rapidly in China and with the gradual appreciation of the Renminbi, some Chinese companies have begun to offshore (parts of) their production activities to lower-cost locations, especially in Asia and

Africa. But this is only a recent trend and not yet of great macroeconomic significance. Even if such offshoring were to take place at a larger scale, the consequences would not necessarily be severe, as OFDI could still expand the production of intermediary products in China for export to overseas production locations. Such OFDI would also induce companies in China to upgrade their production activities away from low-cost, low-skill manufacturing. Again, the net effects are unknown and remain to be determined in future research.

4. Contribution to development

On the basis of the findings described here, it is now possible to construct an analytical framework summarizing the mechanisms through which OFDI has contributed to economic development in China (figure 4). When conducting OFDI, Chinese firms have pursued a variety of assets and advantages that are accessible abroad but often either unavailable or not sufficiently available in China. Successful access to these assets and advantages overseas, and their transfer back to China – whether directly or indirectly – has generated financial gains, capability improvements, capacity enhancements and favourable macroeconomic

Figure 4. OFDI and Chinese economic development: An analytical framework



effects. These financial, capability, capacity and macroeconomic returns have in turn supported economic development in China, especially if they addressed any of China's prevalent development challenges, such as financing needs, innovation bottlenecks, resource shortages or export constraints. Some returns are more effective than others in fulfilling this development function.

Although these findings are encouraging, one may question the extent to which OFDI makes a significant difference to economic development worth more intensive consideration by researchers and policymakers. There are several constraints in addition to those already mentioned in the preceding section. Most notably, assets and advantages have to be available and accessible overseas – for example, the appropriate know-how or resources may not be available, foreign partner firms may not be willing to offer the necessary degree of cooperation, or foreign governments may prevent the pursuit of an asset or advantage if it is against the national interest of the host country. This last constraint has at times been a particular challenge to Chinese firms and could be seen as a foreign reaction to some of China's OFDI having been induced by considerations of industrial policy. Returns also have to be realizable – for example, it is not straightforward to transfer acquired know-how back to the home economy and utilize it effectively there, especially as Chinese firms may lack the necessary absorptive capacity. Similarly, the extent to which Chinese natural resources companies, especially during times of crisis, are able to give privilege to China for the shipping of raw materials is unknown. There is also the possibility that China's interests are not aligned with those of its enterprises; for example, when Chinese firms offshore productive activities away from China or when they use OFDI to escape the institutions of the home economy (Sutherland, 2010, pp. 19-20; Witt and Lewin, 2007).

The question then is this: How important is OFDI in view of the other channels of economic interaction with the rest of the world shown in figure 2 – trade, inward FDI and migration? China has used each of these channels to support its economic development, yet the degree of their contribution has been repeatedly questioned. Here also, the interests of the companies and individuals involved may not be aligned with those of China as a country, economy and developmental state, and there have been a number of other limitations.

For example, China has for many decades relied on imports to support its economic development. The country has a long history of importing capital goods, dating back at least to the cooperation with the Soviet Union during the first five-year plan in the mid-1950s. A decade after the Sino-Soviet split in 1960, Western countries and Japan became the main sources of technology imports for the Chinese economy. Not only did imports of capital goods such as machinery and equipment support industrial modernization, but imported technologies were also reverse engineered. Such practices have continued to the present day, albeit with mixed success, given the difficulties inherent in replicating technologies and the limitations in availability of advanced technologies on the open market.

China's development has also benefited substantially from the country's emergence as an export platform. Chinese companies have over the years generated massive export earnings and a considerable trade surplus by manufacturing low-cost and labour-intensive products for the world market. They have also benefited from manufacturing and assembling high-tech products on behalf of leading MNEs. By serving as original equipment manufacturers (OEMs) for these MNEs, Chinese firms have managed to acquire know-how and technological skills that helped them upgrade their production activities. However, MNEs tend to outsource production only of their less technologically advanced components, which puts strong limits on the overall transfer of skills to Chinese companies. Moreover, operating as an OEM helps upgrade capabilities only at early stages of technological development, and learning opportunities cease once a certain technological level has been reached.

Beyond the financial gains from increased capital inflows, China has also reaped technological and other benefits from *inward* FDI in its economy (Berthélemy and Démurger, 2000; Tseng and Zebregs, 2002; Liu and Wang, 2003). The country benefited from various types of spillover effects, technology transfer and labour turnover. But evidence about the extent of such benefits remains inconclusive (Sigurdson, 2005, pp. 97-98; Fan, 2003, p. 50; Lardy, 1995; Shan *et al.*, 1999; Lo, 2006; Taylor, 2002, p. 214; Young and Lan, 1997). Technology spillovers in China could have been disappointing, and FDI might have been concentrated in low-skill areas. Foreign firms have avoided employing their most sophisticated technologies in China (Raskin and Lindenbaum, 2004,

p. 7). They have protected market information and avoided sharing technology in joint ventures (Wang, 2002, p. 203). Moreover, before the late 1990s, export-processing activities in China undertaken by companies from the neighbouring economies of "Greater China" (e.g. Taiwanese investors on the mainland) were unlikely to have induced substantial spillovers (Naughton, 2007, p. 368; Knoerich, 2015, p. 99). Obstacles encountered in adapting foreign technologies to match local specifications add to these limitations (Sigurdson, 2005, p. 98).

Migration to other countries also transferred money to China, when Chinese migrants sent remittances home to support their family members. Know-how was also transferred through the education that Chinese migrants received overseas and through transnational networks created by the Chinese global diaspora (Saxenian, 2005). Returning migrants have reportedly made many positive contributions to the Chinese economy through entrepreneurship, know-how transfer and inward FDI (World Bank, 2008, p. 125; Filatotchev *et al*., 2009; Wright *et al*., 2008). But at the same time, migration involves an outward transfer of skills (World Bank, 2008, p. 122) – the so-called "brain drain", which has been a serious problem for China (Luo, 2003, p. 293; World Bank, 2008, p. 124; Naughton, 2007, p. 363). According to one statistic, 1.2 million Chinese studied abroad between 1978 and 2007, with only 319,700 returnees (Wang, 2008). China has also not received many immigrants who could contribute to the development of the Chinese economy.

In sum, despite the support to China's economic development offered by trade, inward FDI and migration, each of these channels of interaction with the rest of the world has confronted its own set of limitations. The question is then whether Chinese enterprises can overcome some of these limitations by expanding their own global operations, thereby generating returns from the pursuit of assets and advantages overseas. Or, viewed differently, if the development contribution of trade, inward FDI and migration has its own limitations, we should not expect the development contribution of OFDI to be without constraints.

Rather, the analysis provided in this study suggests that OFDI has been both complementary and supplementary to the other channels of China's economic interaction with the rest of the world.

Its complementary function is evident in the potential of OFDI to bring in additional finances, to further enhance domestic technological and other know-how, to secure much needed foreign imports and to support the expansion of exports. Chinese firms employ overseas Chinese in their foreign subsidiaries, and in occasional circumstances – for example, when Chinese firms investing abroad collaborate with host country firms that wish to invest in China – OFDI can even foster new FDI projects in China.

OFDI has had a supplementary function because it can contribute to development of the home economy in unique ways not addressed by the other channels of economic interaction with the rest of the world. It facilitates access to assets and advantages that are available abroad but not brought to China through the other channels, such as brands, particular kinds of advanced know-how, specific capital goods and new markets that would be hard to penetrate without an investment. OFDI has enabled Chinese MNEs to access technologies and know-how that were unavailable in the open market and therefore not accessible through technology imports, that were not brought to China by foreign firms and that were internal to the foreign firms involved, thus barring exchanges of people (e.g. migrants) and talent from yielding the same results. Firms such as Haier, TCL and Lenovo have benefited from this aspect of OFDI (Deng, 2008). To some degree, OFDI has helped overcome the reliance on foreign companies to bring the appropriate know-how to China through inward FDI, licensing or the OEM track, as it has allowed the Chinese firms themselves to assume a more proactive role by venturing abroad and targeting those assets and advantages they required or desired. Some of the know-how obtained through OFDI is more tacit and more advanced, and therefore of greater value to the firms acquiring it and, by extension, to the Chinese economy. Finally, it appears that OFDI is a unique way to make access to natural resources abroad more secure and stable than is possible through pure market mechanisms such as trade.

These complementary and supplementary roles of OFDI may be what the Chinese government has tried to nurture through its targeted OFDI policies. In the past, efforts in China to foster technological change have included purchases of foreign technologies, deals with foreign firms to allow them market entry in exchange for technological know-how, and facilitation of FDI into China (Naughton, 2007, pp. 357-

360). In Naughton's words, "there has been a restless ongoing search for institutions and policies that can effectively support China's ongoing drive to become a technology power" (Naughton, 2007, p. 361). OFDI has been one additional such component in the government's attempt to achieve economic and technological transformation.

5. Conclusions

At present, research is still at the beginning of analysing the contribution OFDI can make to development in the world's less advanced home countries. Taking Chinese OFDI as a case study, this study provided a first comprehensive investigation into the mechanisms through which OFDI by Chinese MNEs has provided benefits that support the development of the Chinese economy. The study finds that, at least in the Chinese case, OFDI has had its distinctive uses and advantages in promoting development, growth and catch-up in China, although many uncertainties remain about the magnitude and actual importance of this development contribution. More research on all of the dimensions found in the analytical framework emerging from this study is of urgent necessity.

Thus, the approach by the Chinese government to promote OFDI through specific development-oriented investment policies appears prudent. Chinese policy has used targeted measures to promote the pursuit of desired assets and advantages abroad that could yield favourable financial, capability, capacity and macroeconomic returns for the Chinese economy. This is in line with China's approach to industrial policy, observable in other areas of the economy, and its developmental state more generally.

Given this study's encouraging findings for the case of China, there is an urgent need for similar examinations of other developing countries. Comparable findings should be expected, especially for those emerging economies that have experienced larger amounts of OFDI (whereas a specific development contribution may not be as observable in the advanced economies, which have already passed through the stages of economic development). The contribution of OFDI to economic development may not be as important as that of inward FDI, given that many least developed countries cannot meet the basic requirement for OFDI: the availability of capital. But the role of

OFDI in supporting development of the home economy requires much more in-depth consideration than it has received to date, especially as the exact nature and magnitude of the impact of *inward* FDI, trade and international migration on economic development also remains an issue of scholarly debate even today. This study has found that OFDI can assume both a complementary and a supplementary role in relation to these other channels of economic interaction with the rest of the world.

The analytical framework emerging from this study will be useful for the examination of other countries. In addition, more detailed examination of each of the individual returns would be of value. Research should also consider in greater depth how the economic motives of firms may differ from the economic and social needs of the Chinese people and its government, and how this may affect the development contribution of OFDI. This is an issue covered only briefly in this study owing to limitations of space and the focus on carrying out an initial investigation of the development contribution rather than weighing the benefits of enterprise activities against any associated costs. In fact, this study followed the approach of many studies on inward FDI and economic development, to focus on the development contribution while acknowledging that there are also negative effects.

This research has important policy implications, as it might redefine the role of government in OFDI policy. Governments might consider the implementation of more targeted, development-oriented OFDI policies similar to the promotion and incentives offered to inward FDI in an economy. The analytical framework of this study can help governments identify the right policies, which should focus on maximizing those returns from OFDI that contribute the most to development of the home economy. In the case of China, government support has been useful, although it has also triggered some resistance from international actors who are concerned about the level of involvement by the State in China's OFDI activities (Antkiewicz and Whalley, 2006). It is important to find the right balance in this area – OFDI should be supported in the interest of economic development, whilst respecting the rules of the international market and global competition. In short, there is no doubt that governments in developing countries would benefit from a better understanding of how OFDI can be harnessed to support economic development.

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Understanding South Africa's current account deficit: The role of foreign direct investment income*

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This article highlights the prominence of net investment income payments made to foreign direct investors in South Africa's current account deficit. After a brief history of South Africa's balance of payments, we describe several factors driving the growth of South Africa's direct investment assets and liabilities, including the roles of China and Africa as investment destinations and the relisting of major South African companies abroad. The slow accumulation of direct investment assets by South African firms before 2006, coupled with the higher returns on South Africa's direct investment liabilities, has contributed to an imbalance in the country's net FDI income, while a compositional shift in the stock of non-FDI liabilities has helped to decrease its payments to non-direct investors. If South African firms continue to invest productively abroad, net FDI income may contribute less to South Africa's current account deficit in the future. The trade deficit remains a major area of concern.

Keywords: FDI; balance of payments; investment income; current account; South Africa

1. Introduction

Since 2003 South Africa has had a growing current account deficit (–5.4 per cent of GDP in 2013) in its balance of payments (BOP) with other countries. A current account deficit is not necessarily a bad thing, especially if it is not caused by a persistent inability to compete in international markets.

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The gap in South Africa's current account is financed by a surplus on its financial account, which relies on investment inflows from abroad. A large part of these inflows consists of portfolio investments, which are short-term and therefore volatile. This much is well known. What is less well understood is what is causing the persistent current account deficit in the balance of payments.

The trade balance tends to receive the most attention in attempts to explain South Africa's current account imbalances (e.g. Draper and Freytag, 2008). Attention is also given occasionally to South Africa's investment income account (Samuel, 2013). Increasingly South Africa's current account deficit is caused by interest and dividend payments to foreign investors. However, little attempt is made to distinguish between foreign direct investors and portfolio investors in this story (Samuel, 2013). The assumption is generally made that the bulk of investment income payments made by South Africa go to portfolio investors; however, contrary to popular belief, this is not the case. Instead, since 2005,[1] payments to foreign direct investors (i.e. long-term investors) have been, by a significant margin the dominant form of investment income payment South Africa makes abroad. This form of payment has often been the immediate cause of the country's current account deficit. On a net basis, this situation is exacerbated by a dearth of direct investment income receipts earned by South African firms abroad (though this is changing). Together this has resulted in *net* foreign direct investment (FDI) income tending to be the largest single burden on South Africa's current account.

This paper shows that post-1994 net investment income payments are the main contributor to South Africa's current account deficit, at 51 per cent of the current account debits. Of this, payments on FDI dominate: on average, 40 per cent of South Africa's annual current account deficit between 2004 and 2013 was a result of net payments to foreign direct investors. During the same period, net investment income payments to non-FDI investors – consisting of portfolio investors and "other" investors (related to trade finance, interbank flows, and short- and long-term loans) – accounted for only

[1] In 2006, this situation was reversed before again reverting to the new normal.

20 of the current account deficit. It is important to highlight that the persistent decline in South Africa's net investment income position is almost entirely attributable to the growing deficit in regard to the FDI income balance. Net payments on non-FDI investment income have in fact steadily decreased (improved) since 2007. Although net FDI income payments were the single largest contributor to South Africa's current account deficit during this period, they were followed by the trade balance, which accounted for almost 16 per cent of the deficit. Current trends indicate that the net FDI income balance should improve as South Africa reaps the returns from its rapidly increasing outward FDI.

The extent to which FDI income payments are contributing to developing economies' current account deficits remains poorly understood, despite the fact that developing economies now receive more FDI than developed economies (UNCTAD, 2014). FDI income in Latin America is now the largest external liability for many economies (Ludeña, 2014). Mencinger (2008) finds similar results for new European Union (EU) member states. We show that the same is generally true for South Africa. Not much academic evidence exists on the situation in other African countries despite FDI into Africa amounting to twice its official development assistance (ODA) in 2008 (UN, 2010).

The rest of this paper proceeds as follows: Section 2 provides a brief historical overview of South Africa's balance of payments; section 3 unpacks the key argument of this paper, focusing on the development of South Africa's direct investment liabilities and assets and comparing it to developments in the country's portfolio investment position. A historical and comparative perspective on South Africa's outward and inward FDI is provided to supplement balance-of-payments figures. I highlight the role of China and Africa as investment destinations for South African firms, as well as the impact of the relisting of major South African companies abroad, especially on South Africa's direct investment liabilities. Section 4 concludes. All data used come from the South African Reserve Bank (SARB), unless stated otherwise. FDI project data based on greenfield FDI comes from the fDi Markets database of the Financial Times.

2. A brief history of South Africa's balance of payments up to the present

South Africa's BOP has three primary accounts: the current account, the financial account and the foreign exchange reserves account. We are concerned only with the first two. For our purposes, we can consider the current account as consisting of two main items: a trade balance which records all the trade that South Africa does with the rest of the world; and an investment income balance which records all investment income payments and receipts between South Africa and the rest of the world.[2] Current transfers[3] and net compensation of employees are also listed in the current account. As this paper will show, when trying to understand a country's economic situation, treating the current account as being synonymous with the trade account leads to serious oversights.

The investment income balance ("net investment income payments") records the balance of investment income earned on various types of capital. Our focus is on direct investment income, which can be distributed as dividends, reinvested,[4] or remain undistributed as branch profits. Hence, investment income in the BOP can be further divided into dividends, interest and branch profits (reported for FDI only).

The investment income balance is linked to the financial account, which records all investment *flows* into and out of a country by three types of foreign investors: direct (foreign direct investors), portfolio and "other". We group the latter two types of investors into a "non-FDI" category. "Other" is a residual category for recording transactions between residents and non-residents, related mainly to loans and

[2] In practice, one usually looks at the broader category called the 'income balance', which consists of the investment income balance + net compensation of employees, defined as compensation paid to non-resident workers or received from non-resident employers.

[3] "Current transfers" refers to unilateral receipts and payments between residents and non-residents that are not related to fixed capital formation.

[4] In practice this can simply be undistributed profits. This is why reinvested earnings can be calculated as the net operating surplus of the direct investment enterprise, plus any income or current transfers receivable, minus any income or current transfers payable.

deposits (banks).[5] The investment income payments made and received by South Africa through its current account are the counterpart to the investment flows going into and out of its financial account.

South Africa's BOP has historically been coloured by three key trends:[6] (i) A trade surplus supported by commodity exports: South Africa's trade balance was in deficit only eight times during the 1960–2003 period as a result of voluminous gold receipts. (ii) Substantial net investment income payments made to non-resident investors: For all but four years between 1960 and 2013, net investment income payments were the largest drag on South Africa's BOP. (iii) Political instability leading to chronic outflows (and hence shortfalls) in the financial account. Other historical studies of South Africa's BOP pay far less attention to the *net* investment income balance, despite its ongoing significance.[7]

On the basis of these three trends, we can identify two key shifts in South Africa's BOP dynamics. The first is a shift in who receives the majority of payments that South Africa makes on its investment liabilities: initially it was non-FDI investors, and now it is foreign direct investors. The year 2005 ushered in a period when, for the first time since 1972, gross investment income payments made to foreign direct investors into South Africa were larger than those made to all other foreign investors. The second major shift is a movement in South Africa's trade balance since 2004 from surplus to almost persistent deficit. The first shift is a sign of the country's return to economic health, as investors see the potential of the South African economy to provide sustained returns over the long-term. In contrast, the growing trade deficit is cause for concern.

Historically, South Africa has been subject to recurring BOP crises (Stals, 1993). Political instability has motivated investors to take their

[5] The BoP manual of the International Monetary Fund (IMF) notes that this includes trade credits, loans (including the use of IMF credit and loans from the IMF), currency and deposits (both transferable and other), and other assets and liabilities (https://www.imf.org/external/pubs/ft/bopman/bopman.pdf).

[6] The analysis that follows is based on data available in SARB (2014c).

[7] For a somewhat different take on South Africa's BoP history, see Mohr, Botha and Inggs (1989) and Mohr (2003). Within the current account, these authors do not clearly disaggregate the trade balance and net investment income payments. They also generally see the current account as the passive (or accommodating) item in the BOP.

money out of the country and eventually divest altogether, leading to large reversals in the financial account. This also drew attention to the large payments that South Africa needed to make on its borrowing from abroad.

Using SARB data (SARB, 2014c), we can identify three distinct periods in South Africa's more recent BOP history (1960–2013).

In the first period, between 1960 and 1976, the current account was in deficit largely because of the net investment income balance, with the financial account and the trade balance taking turns in compensating for this deficit with a surplus. In the second period, 1977–1994, the key dynamic was a trade surplus driven by a boom in the gold price initially (peaking in January 1980). The trade surplus was also driven by constraints placed on the trade balance by net outflows of capital through the financial account: the trade surplus generally compensated for the substantial outflows of capital, as well as for the negative net income payments (with the debt crisis of August 1985 a notable event) (Mohr, Botha and Inggs, 1989; Mohr, 2003). Despite the political unrest, net investment income payments (driven by non-FDI payments) were the largest drag on the BOP, and not net capital flight through the financial account (which was negative between 1985 and 1993). In the third period, 2004–2013, a growing surplus on the financial account both compensated for, and facilitated, South Africa's growing current account deficit. The current account deficit was now driven foremost by a growing deficit in FDI investment income (rather than non-FDI income) and greatly aggravated by a growing trade deficit starting in 2004. The period 1994–2003 might be seen as a bridge between the second and third periods. In 1994, South Africa's first democratic election ushered in a period of positive net capital inflows into the financial account (barring in 2001 and 2003), as well as a consistent trade surplus.[8]

Looking at this narrative in more detail, we see that historically a surplus in South Africa's trade balance relied on commodity exports, in particular gold (all calculations are based on SARB, 2014c). In 1960, net gold earnings accounted for one-third of all foreign exchange earned

[8] The net investment income balance remained persistently negative and significant during this period.

through the trade balance (including service receipts). This peaked in 1980 at 46 per cent before falling gradually to 6 per cent in 2013, as gold was replaced by platinum as the major foreign exchange earner.

Exports diversified substantially into manufacturing in the 1980s and early 1990s, but apart from motor vehicles and parts, this was largely confined to resource-based production, such as production of chemicals, paper, and iron and steel (Bell, Farrell and Cassim, 1997). Subsequently exports diversified into machinery and foodstuffs. More generally, the dependence on commodities appears to have stifled the diversification of South Africa's exports (and hence the achievement of a healthier trade balance) through "Dutch disease" type effects, such as notable appreciation of the exchange rate during the 1970s (Bell, Farrell and Cassim, 1997).

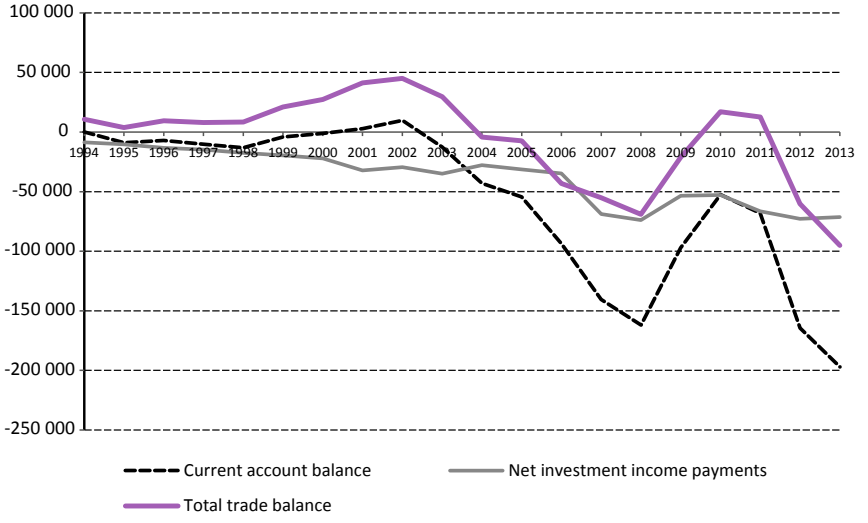
Although historically a trade surplus has been almost guaranteed for South Africa, this is no longer true. In the periods 1960–2003 and 2004–2013, the same number of annual trade deficits were recorded: eight. Historically, trade surpluses balanced the persistent deficit in the financial account arising from political instability. Between 1977 and 1993, the financial account was in permanent deficit, except for the period 1981–1984. The balance on investment income in the current account was also negative – and in fact a larger contributor to imbalances in the country's external payments than capital outflows through the financial account. This negative balance was due mostly to substantial net non-FDI income payments abroad. Net FDI flows and net "other" investment flows were, when aggregated throughout this period, strongly negative, while net portfolio flows remained positive. Net "other" flows played a particularly important role, both in providing capital and then in seeing it flee, as it records the foreign interbank lending that ballooned during this period, as well as the IMF loans to the South African government.

In fact, South Africa ran a constant deficit in its net investment income between 1960 and 2013. In the first four decades, this was caused by payments on non-FDI liabilities. But since 2000 it has been due to net payments on FDI liabilities, as South Africa has attracted greater amounts of valuable FDI while engaging in relatively less FDI abroad. This brings us to the present day.

The contributions of the main items to South Africa's current account deficit during the period 2004–2013 highlight the role of direct investment income. On average, 40 per cent of South Africa's annual current account deficit between 2004 and 2013 was a result of net payments to foreign direct investors. During the same period, net payments to non-FDI investors accounted for only 20 per cent of the current account deficit. Although net FDI income was the single largest contributor to the current account deficit during this period, it was followed by the trade balance, which accounted for nearly 16 per cent of the deficit – despite being in surplus during 2010 and 2011.

When combining all investment payments made abroad, net investment income payments were the main contributors to the current account deficit, except in 2006 and 2013. Figure 1 shows South Africa's growing current account deficit as a whole, along with the deteriorating net *total* investment income payments since 2005.

Figure 1. The balances of the current account, trade and investment income, 1994–2013
(R millions)



Source: SARB (2014c).
Note: The total trade balance equals the sum of the merchandise trade balance, the services trade balance, and the gold trade balance. Net investment income payments = FDI + non-FDI net income payments. Net current transfers are excluded.

Figure 1 graphically depicts what has been already noted several times: that net investment income was the main contributor to South Africa's current account deficit between 2004 and 2013.[9] This is due to South Africa having more investment liabilities than investment assets. This imbalance is compounded by the fact that the returns South Africa receives on its total foreign assets are lower (by more than 2 per cent) than the yield it pays on its total foreign liabilities (SARB, 2013).[10]

Figure 1 shows that the balance on South Africa's current account was positive until the economy started growing more quickly in 2004.[11] Before 2004, the current account was buoyed by South Africa's trade surplus, which helped finance repayments on capital inflows. When the trade balance moved into deficit in 2004, such a luxury was no longer available. The trade balance appears to have been on a marked negative trend (notwithstanding the fluctuation during the financial crisis), despite increasingly favourable (non-gold) terms of trade (SARB, 2014b). If this trend continues, the trade balance may permanently become the largest drag on the current account.

3. Disaggregating the role of investment income in South Africa's current account deficit

When looking more closely at the balance on net direct investment income, one should analyse three sets of variables: assets and liabilities, the frequency with which the holders of these claims receive (or repatriate) payments; and the relative profitability of these claims. We begin by looking at the liabilities side, which represents payment obligations that South Africa has to the rest of the world.

3.1 Liabilities

In 2013, 70 per cent of the gap between the contributions to the current account deficit of the net FDI income balance and the net non-

[9] The contribution of income payments (the largest component of which is investment income) is even greater when compensation and payments of employees is included.

[10] Variables 5386K-5387K

[11] However, the current account begins to deteriorate from 2003 when growth was still relatively low (2.95 per cent), indicating a larger issue at play related to a change in the structure of South Africa's trade.

FDI income balance was due to differences in payments made on their respective domestic investment liabilities. The remaining shortfall (30 per cent) was due to differences in investment income receipts. The liability side is, therefore, the primary reason why South Africa makes large *net* negative FDI payments.

Between 1994 and 2013, South Africa's stock of inward FDI grew dramatically, expanding by more than 3000 per cent. Looking at its growth since 2001, after several major South African conglomerates listed abroad, its inward FDI stock still grew by a respectable 336 per cent. Nevertheless, FDI inflows trailed portfolio inflows, amounting to 63 per cent of those inflows between 1994 and 2013.

In relative terms, the growth in South Africa's stock of inward FDI has been unexceptional: its ratio of inward FDI stock to GDP has grown moderately relative to other countries of the Organization for Economic Cooperation and Development (OECD, 2014). Relative to other African countries, South Africa is receiving a shrinking share of official FDI inflows, as would be expected from the declining contribution of its GDP to the continent's output. In terms of greenfield FDI project numbers, South Africa's relative decline is not as visible: it received by far the largest number of projects destined for Africa in 2013, more than double the number for Kenya and triple that for Nigeria (Financial Times, 2014). South Africa's inward FDI stock relative to GDP is still large but not an outlier: it is higher than the 2012 OECD average and below the median (OECD, 2014).

By way of preliminaries, we now describe several key features of South Africa's growing stock of FDI liabilities, before addressing the puzzling question of why South Africa is making greater payments on its stock of FDI liabilities if its stock of non-FDI investment liabilities is larger in value.

Post-apartheid, South Africa initially attracted very low levels of FDI relative to portfolio flows (see Stals, 1998). In the 1998–2004 period this changed: South Africa's FDI liabilities grew nearly eight times more quickly than its non-FDI liabilities (albeit off a low base). This reflected the diversification of South Africa's economy towards services; the upswing of the commodity cycle, making mineral-related investments relatively more profitable; modest though notable increases in FDI inflows from China (and to a lesser extent Japan); and the relisting of

major South African companies abroad. Low global interest rates were also important: several of the most prominent investments into South Africa were mergers and acquisitions, such as de Beers being taken over by Anglo American in 2001, Barclay's Bank purchasing just over 50 per cent of Absa Bank for R33 billion in 2005, and China's largest bank, the Industrial and Commercial Bank of China (ICBC), purchasing a 20 per cent stake in Standard Bank for R36.7 billion in 2007. We look at these factors in more detail below.

Post-apartheid South Africa has been able to attract FDI into a more diverse range of sectors only in the past decade or so. In 1994, most of the country's FDI liabilities were in services. However, the inward FDI stock held in manufacturing was still larger than that held in finance, insurance and real estate (FIRE) (SARB, 1995). Few FDI liabilities were held in mining at this time. During the commodity boom in the 2000s, FDI appears to have swarmed into mining, peaking at 37 per cent of the total inward FDI stock in 2007 before falling to 25 per cent the following year as prices and equity values fell. During the boom, there was also a strong increase in the retained and reinvested earnings held by the mining sector. The largest impetus to this sector, however, would have been the relisting of Anglo American Corporation abroad. Concurrently, significant FDI was made into South Africa's banking sector, as well as into other services such as call centres, mining and business consulting, and engineering services. As a result, by 2013, FIRE and business services accounted for 40 per cent of South Africa's FDI liabilities. When other service sectors such as transport and retail are included, services accounted for 54 per cent, mining 28 per cent, and manufacturing 16.8 per cent of total inward FDI in South Africa in 2013.

An important subtheme is the slow revival of manufacturing FDI since 2001, after shrinking in absolute terms between 1995 and 2001. Between 2001 and 2013, manufacturing was in fact the largest growth sector (33 per cent), followed closely by FIRE and business services (28 per cent) and mining (27 per cent).

Another factor in the strong growth of South Africa's FDI liabilities was increased interest from Chinese investors. China held a negligible amount of direct investment assets in South Africa in 2001. By 2013, that amount had increased to 3.7 per cent of South Africa's FDI liabilities: more than the whole of Africa's investments into South Africa (3.1 per

cent), more than Japan's investments (2.2 per cent) and half of North America's (7 per cent), but still insignificant compared with Western Europe (78 per cent).[12] China plays a much more prominent role as a destination for South African FDI. However, the South African data on this relationship may not be entirely reliable (Gelb, 2010). Notable investments include those by the Industrial and Commercial Bank of China, Huawei Technologies, Sinosteel and Powerway Renewable Energy. In addition, Chinese firms have established a sizable presence in South Africa's cement and construction sector, and have made several investments in the automotive cluster.

A large part of the increase in South Africa's FDI liabilities was due to the relisting of major South African companies abroad: between 1998 and 1999, the stock of South Africa's FDI liabilities increased almost two and a half times (247 per cent).[13] In 2000, these companies contributed roughly 7.5 per cent of South Africa's GDP (and 15.5 per cent, counting their foreign activities) (Walters and Prinsloo, 2002). After the relisting of the five major South African companies on the London Stock Exchange, the domestic subsidiaries of these (now non-resident) companies became their wholly or partly owned foreign subsidiaries. The relisting also significantly increased South Africa's foreign assets (portfolio and direct) as the holdings in these companies by South African individuals and entities were now holdings in foreign assets. In fact, as a result of the listings, South Africa's *total* foreign asset position increased by more than its total foreign liabilities position between 1997 and 2000 (Walters and Prinsloo, 2002:65).

The impact of the relistings on net *investments* flows is far more complex to disentangle, for reasons we now discuss. At the time of the relistings, corresponding capital movements in South Africa's international financial account were not recorded because the relisting represented only a reclassification of existing assets (Walters and Prinsloo, 2002:65). In the period immediately following the relisting, complex mechanisms were put in place that limited the actual flow of investment income.

[12] The United Kingdom, followed by the Netherlands, accounted for the bulk. Removing Luxembourg from the calculation does not change the shares much.

[13] Billiton plc relisted in London earlier in 1997.

Take the case of Old Mutual, for example: It was demutualized in 1998; a new ultimate parent company (Old Mutual plc) was created and listed on the London Stock Exchange on 12 July 1999. Its shares were also traded on the Johannesburg Stock Exchange (as well as on the miniscule Malawian, Namibian and Zimbabwean stock exchanges). The South African Mutual Life Assurance Society was converted to a public company, namely Old Mutual Life Assurance Company (South Africa) Limited (OMLACSA). The latter became a wholly owned subsidiary of Old Mutual plc. Those who had been policyholders in the Society remained policyholders on the same terms in OMLACSA. They were also issued shares pro rata in the ultimate parent company, Old Mutual. The main asset of the now London-listed Old Mutual, and thus its main source of dividend income, was its wholly owned South African subsidiary, OMLACSA. But at the same time, the majority of the shareholders in Old Mutual (being the policyholders in OMLACSA) were still resident in South Africa. This means that, at least initially, when Old Mutual declared dividends to its shareholders, it would be paying those same dividends received back out to South African residents. Thus, massive flows of money would have to take place out of South Africa and then back into South Africa at particular times of the year, with potentially serious implications for currency volatility. To address these and other implications of the circular flow of dividends, the demutualization scheme incorporated a device called a dividend access trust. Portions of the locally declared dividend would be paid to and retained in this local trust, pending the declaration by Old Mutual of its own dividend to shareholders. Local shareholders in Old Mutual plc would then be paid their dividend out of the funds retained in the trust without the money never leaving the country.

The impact of these and subsequent relistings on South Africa's net capital flows (let alone its net direct investment flows) is nearly impossible to disentangle. International investors' interest in these companies grew in the period following the relisting, which saw an increase in non-resident holdings in these companies and a concomitant inflow of capital into the South African economy. As ownership of the parent company became increasingly dispersed internationally, so too did its dividend payments. As a result, the dividends received and the dividends paid by South African entities from offshore equity investments both increased between 1998 and 2001, but the gap between the two widened, increasing the deficit in the net flow of dividends. The net

position related to the London companies specifically was negative (Walters and Prinsloo, 2002:69), such that "in 2000 the net outflow of dividends related to the London listed companies amounted to R4.9 billion or 21.3 per cent of the total net payment of investment income (i.e. mostly dividend and interest payments) to non-residents".

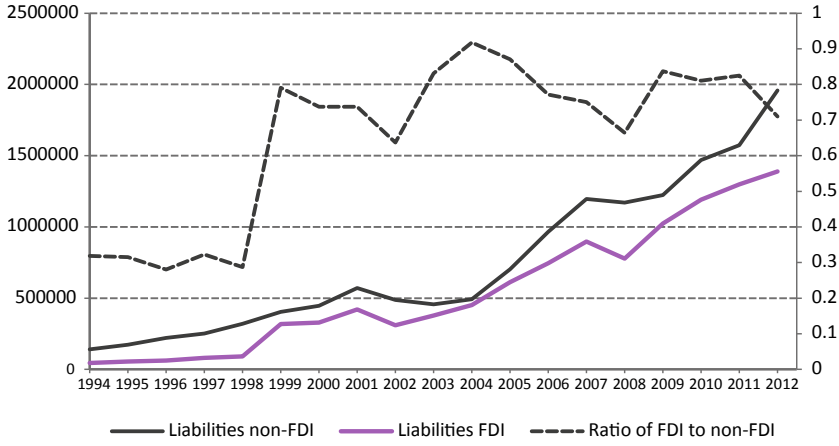
The ownership of some subsidiaries would also have changed hands over time.[14] For example, Anglo America's gold mining operations were spun off into a separate corporation, AngloGold, which merged with Ashanti Goldfields Corporation in 2004 to form AngloGold Ashanti. Anglo American reduced its stake in AngloGold Ashanti to 16.6 per cent in 2008 and then exited the company completely in 2009, selling its remaining 11.3 per cent holdings to investment funds managed by Paulson & Co Inc. The asset base of almost all the relisted companies has also expanded subsequently, making them less reliant on South African subsidiaries for income and the disbursement of profits. As a whole, control in the South African economy has become more dispersed and more international over the past decade (Makhaya and Roberts, 2014), and most major South African companies have pursued a primary or secondary listing abroad. Whereas the South African subsidiaries controlled by SABMiller, Anglo American and Old Mutual represented 36.2 per cent of the market capitalization of the Johannesburg Stock Exchange in 2002, this figure had declined to 21.4 per cent in 2012. Institutional and unallocated ownership doubled to 19.5 per cent by 2012, from 9.1 per cent in 2002. During this period, foreign control in the South African economy, even excluding a dozen major foreign companies such as Anglo American, SABMiller and Old Mutual, tripled, – to 30 per cent in 2012, up from 10.1 per cent in 2002 (Makhaya and Roberts, 2014).[15] A final point is that the relistings brought South African corporate behaviour under the influence of global finance. This led to changes in how profits were distributed to shareholders (Walters and Prinsloo, 2002). The relisted firms became compelled to use their assets to reduce their cost of capital and show a return on capital in line with international norms.

[14] OMLACSA is a life insurer and needs to be systemically sound. Regulatory control of who owns it would be a big factor in any change in ownership.

[15] Control is assessed by McGregor's, taking into account the various cross-holdings of shares and may be associated with a relatively small direct shareholding in any given company.

We now turn to the key fact that needs to be explained: although South Africa's FDI liabilities have grown at a reasonable pace, their total value remain smaller than the stock of non-FDI[16] investment liabilities (figure 2). Moreover, the gap between the two stocks is growing. This poses a conundrum: why would South Africa be making bigger payments on its stock of FDI liabilities if its non-FDI investment liabilities are larger in value?

Figure 2. South Africa's FDI and non-FDI liabilities, 1994–2012
(Left axis: R millions; right axis: ratio of FDI to non-FDI liabilities)



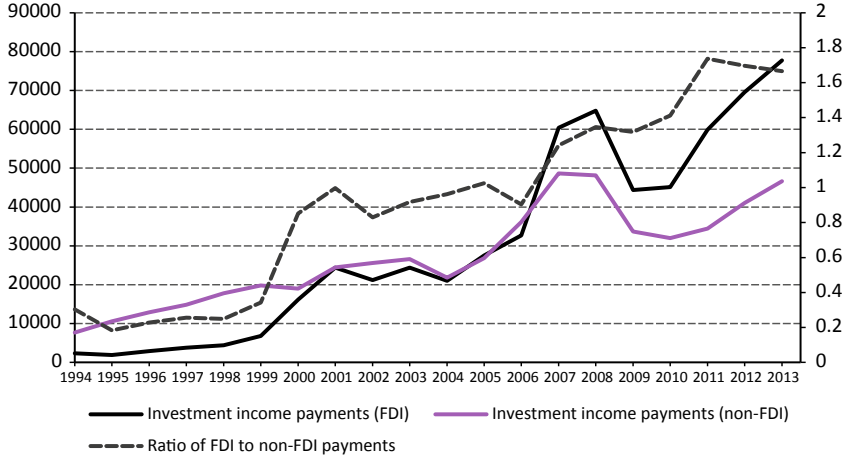
Source: SARB (2014c).
Note: Non-FDI liabilities = portfolio liabilities + other investment liabilities.

Given the substantial (and increasing) difference between the size of the two respective liability stocks, we would expect gross non-FDI income payments to be larger than gross FDI income payments. In fact, the opposite has been the case (Figure 3). In 2005, FDI income payments overtook non-FDI income payments for the first time since 1972.[17] By 2013, payments made by South Africa on its FDI liabilities were 60 per cent more than the payments on its non-FDI liabilities.

[16] Portfolio liabilities accounted for a little less than 80 per cent of total non-FDI liabilities in 2012.

[17] This situation reversed in 2006 before continuing on its "new normal" from 2007.

Figure 3. Payments on South Africa's FDI and non-FDI liabilities, 1994–2012
(Left axis: R millions; right axis: ratio of FDI to non-FDI income payments)



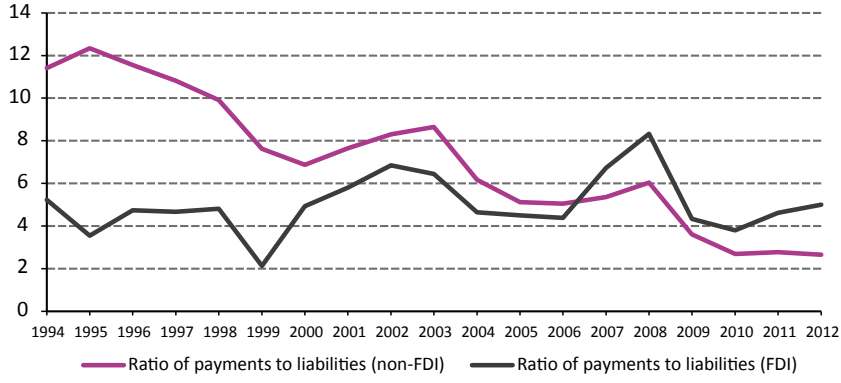
Source: SARB (2014c).

The difference between the two payments may be partly explained by a compositional shift in the stock of non-FDI liabilities (which consists of portfolio plus "other" investments). Since 2006, growth in the liabilities of "other" investments has come from long-term loans taken by the public sector as well as an expansion in the liabilities of the banking sector (SARB, 2014), including low-yielding deposits. More important, relatively speaking, non-resident portfolio investors have shifted out of South African equities and into lower-yielding (government) bonds – with the latter accounting for 78 per cent of all South African debt owned by non-resident investors in 2012. So, although at the end of 2007 the vast majority of portfolio investments into South Africa (82 per cent) were in equities, by the end of 2012, this share was down to 62 per cent (SARB, 2014).

This compositional shift is reflected in changing "payment ratios". Figure 4 shows that there is a tendency for non-FDI payments made abroad relative to its stock to decline. An improved sovereign debt rating[18] and lower domestic interest rates would have contributed to this trend.

18 This rating has now come under pressure.

Figure 4. Ratios of investment payments to FDI and non-FDI stocks, 1994–2012
(R millions)



Source: SARB (2014c).

By contrast, the proportion of FDI payments made abroad relative to the stock of liabilities has been roughly stable, with an increasing trend from 1999 to 2008. As a result, although South Africa's stock of inward FDI has grown more slowly than the stock of its non-FDI investment liabilities, payments on the former are larger than the latter and growing.

3.2 Assets

A relative insufficiency of direct investment assets held abroad by South African firms is also a contributor to the net direct investment deficit. In 2013, 30 per cent of the gap between the contributions to the current account deficit of the net FDI income balance and the non-FDI net income balance was due to differences in receipts received from their respective investment assets abroad. This implies that greater outward FDI by South African firms and greater repatriation of profits by those firms have roles to play in improving the net FDI income balance.

Between 1994 and 2012, South Africa's stock of outward FDI grew by less than half the rate of inward FDI. However, after 2001 its outward FDI stock grew more quickly than its inward FDI stock (440 per cent compared with 336 per cent) and even quicker than non-FDI investment assets accumulated abroad (252 per cent). This is all the more remarkable as FDI assets only began to take off in 2006, increasing

over two and a half times more than FDI liabilities (231 per cent versus 86 per cent) since then.

Despite the significant expansion in outward FDI since 2006, South Africa's FDI assets are not particularly large. Relative to the 2012 OECD average and median, South Africa has a lower level of outward FDI stock to GDP (OECD, 2014). This trend is still noteworthy given that overseas investments by South African firms were limited for many years before 1994, and even after 1994 considerable exchange control restrictions were in place on outward FDI, especially until 2004 (SARB, 2014a: C5). Before 2007, more relaxed regulations applied only to outward FDI projects that had a controlling stake (50 per cent + 1) in the foreign entity (for investments outside the Common Monetary Area). The requirement was lowered to 25 per cent in 2007. Only after 2008 was the minimum investment share requirement dropped to 10 per cent.

I now describe the growth in South Africa's outward FDI assets in more detail before comparing it with the growth in its non-FDI investment assets.

After the relaxation of sanctions and the liberalization of outward FDI, South African firms expanded abroad, especially into Africa (UNCTAD, 2005). Until 1998, South Africa's FDI assets matched, and even surpassed, its FDI liabilities.[19] This achievement was assisted by the lack of restrictions on investments in the Common Monetary Area countries (Lesotho, Namibia and Swaziland) (UNCTAD, 2005), and by the far lower restrictions on the size of investments into the South African Development Community (SADC) countries (SARB, 2014a). During the period 1994–2004, roughly 22 per cent of FDI flows received by the SADC came from South Africa (UNCTAD, 2005).[20] As a result, the proportion of African countries in South Africa's outward direct investment assets doubled between 1994 and 2004, from 5 per cent to nearly 11 per cent. The relisting of major South African companies abroad between 1999 and 2000 appears to also have significantly reoriented South Africa's FDI assets towards the United Kingdom.

[19] Between 1994 and 1999 (inclusive), South Africa's FDI financial outflows (through the financial account) exceeded its inflows for all but one year.

[20] Underlying source is the Business Map Foundation database of announced FDI (millions of dollars).

The limited size of South Africa's domestic market means that outward FDI was always going to be a necessary part of the expansion strategies of its larger firms. The burst in outward FDI should have assisted these firms in expanding domestically and elsewhere: more productive firms tended to invest abroad and in turn received the opportunity to further enhance their competitiveness through economies of scale and new complementary assets.[21]

Despite these benefits, the push to invest abroad appears to have slowed notably in the 2000s. Between 2000 and 2005 (inclusive) South Africa's stock of FDI assets abroad shrank by 5 per cent. Significant restructuring of corporate holdings took place during this period. For example, the major diamond producer De Beers went private in 2001, delisting from the Johannesburg Stock Exchange. This had a complex impact on South Africa's net direct investment position (see South African Competition Tribunal, 2001).

Beginning in 2006, we see a key shift: South African firms engaged in outward FDI at a significantly more rapid rate. Between 2005 and 2012, South Africa's FDI assets increase nearly fourfold, the two most important destinations being China and Africa (figures 5 and 6), though Eastern Europe also played a growing role, accounting for roughly 2.5 per cent of South Africa's outward FDI stock in 2013. The share of assets held in Western Europe dropped by more than half, from 78 per cent in 2001 to 34 per cent in 2013.

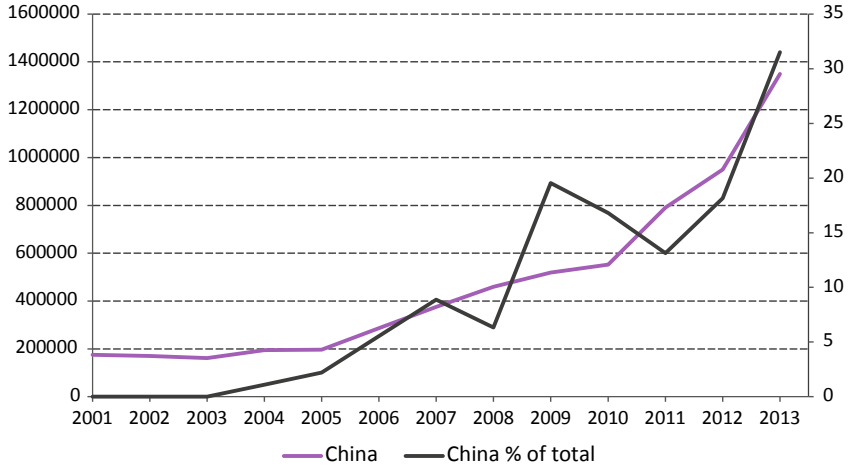
It is, however, difficult to obtain accurate bilateral statistics on FDI between China and South Africa. Gelb (2010) argues that SARB data underestimates the Chinese FDI stock in South Africa but overestimates South African FDI in China.

FDI into China by South African firms showed little movement before 2004, after which it steadily increased, from 8 per cent of outward FDI stock in 2007 to 18 per cent in 2012. It then jumped to 31.5 per cent in 2013. This jump may be due to a large investment or omissions in the sampling frame used by SARB in its survey method (Gelb, 2010:6).[22]

[21] However, weak domestic growth prospects in South Africa (real or perceived) mean that expansions abroad may occasionally substitute for domestic expansions.

[22] As Gelb (2010:6) notes, "this is likely to be a particular problem for source countries with a relatively large number of new entrants each year relative to firms already present, such as China in South Africa".

Figure 5. South Africa's FDI assets in China, 1994–2012
(Left axis: R millions; right axis: FDI assets in China as per cent of total)

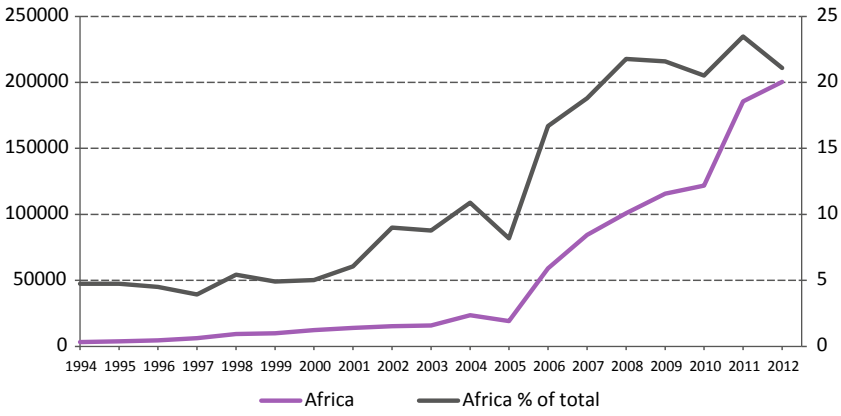


Source: SARB (2014c).

The fDi Markets database of the *Financial Times* indicates that South African firms are mainly, but not exclusively, investing in the mineral sector in China, though the database's coverage is very uneven. Sasol has undertaken half a dozen or more investment projects in China, while De Beers and SRK Consulting (mining) all have made more than one. Two major non-mining firms of South African origin, Naspers and SABMiller, also have a considerable presence in China. SABMiller, then South African Breweries, entered China in 1994 through a partnership with China Resources Enterprise. It is now the largest brewer in China, according to its website. Richemont was another major South African investor in China from early on, acquiring a controlling stake in Shanghai Tang in 1998 (headquartered in Hong Kong, China). Exxaro entered in 1994 to establish port facilities, in order to upload iron ore from its South African activities (Gelb, 2010).

The other major area of expansion for South African firms has been in Africa. Figure 6 shows that although the value of South Africa's direct investment assets held in Africa increased by 280 per cent between 1994 and 2000, all of the net relative increase occurs only after 2000.

Figure 6. South Africa's FDI assets in Africa, 1994–2012
(Left axis: R millions; right axis: African FDI assets as per cent of total)



Source: SARB (2014c).

The proportion of African countries in South Africa's outward direct investment assets nearly doubled again between 2004 and 2012, from almost 11 per cent to 21 per cent (SARB, 2005, 2014), before declining to 17 per cent in 2013. In particular, between 2005 and 2006, the proportion of South Africa's FDI assets held in Africa doubled, owing to a 10-fold increase in assets held in Mauritius and a doubling of assets held in "other".[23] These investments into Mauritius were concentrated in the information technology and business process outsourcing (IT/BPO) services sector (Draper et al., 2010). They appear not to be used by the companies to route FDI back into South Africa.[24] However, in other instances this may be the case, motivated by Mauritius's favourable tax treaties and regulations. As of 2008, the largest South African affiliate in Mauritius was in fact a subsidiary of the European multinational, Munich Re, called Munich Mauritius Reinsurance Company (Draper et al., 2010). A recent review of South Africa's tax system notes that South African investors have clearly used Mauritius as a vehicle for

[23] All African countries apart from Botswana, Lesotho, Mauritius, Mozambique Namibia, Nigeria, Swaziland and Zimbabwe,.

[24] By 2014, 23 per cent of South Africa's "African" FDI liabilities (R10.510 billion) were held by "Mauritian" firms (SARB, 2015). South Africa was the third largest (cumulative) foreign direct investor in Mauritius as of 2012, surpassed in 2013 by France and China. Online: http://www.investmauritius.com/newsletter/2014/march/article4.html.

investing in other countries with which Mauritius has favourable tax treaties, including in Africa (Davis Tax Committee, 2015:41–52). By 2012, four of 17 global funds listed on the Stock Exchange of Mauritius had been established to finance projects developed in Africa (Board of Investment Mauritius, 2012).

Returning to the issue of South Africa's surge in FDI into Africa, greenfield FDI data confirm this trend, despite distortions arising from the country's FDI into Mauritius. Looking at project numbers and capital expenditure, greenfield investments into Africa by South African firms almost doubled between 2003 and 2013 with noticeable increases after 2005: 63 per cent of South Africa's greenfield FDI projects and 85 per cent of its capital expenditure went into Africa in 2013, compared with 38 per cent of projects and 48 per cent of capital in 2003 (Financial Times, 2014).[25] By 2013, South Africa was the second largest investor in Africa by greenfield project numbers when one removes investments from abroad into South Africa itself. This coincided with an uptick in intra-African FDI on the continent as a whole (Krüger and Strauss, 2015).

South African direct investors have been accumulating far fewer direct investment assets abroad than non-resident direct investors have been accumulating in South Africa (Figure 7). Income receipts from the country's outward direct investments have been unable to compensate for the outflow of income payments.

An imbalance between inward and outward FDI is not necessarily a bad thing for a developing economy. However, in order to ensure that inward FDI can over time relax the BOP constraint it needs to assist in expanding exports and improving the capabilities of domestic enterprises.

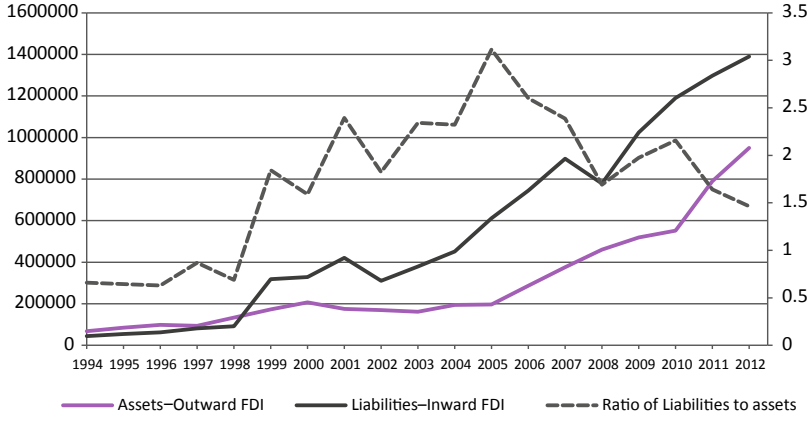
In contrast to the situation with outward FDI flows, South African residents have managed to consistently accumulate both *portfolio* assets (where a narrowing deficit exists) and "other" investment assets (where a growing and sizable surplus exists).[26] As a result, the non-FDI assets accumulated abroad have broadly tracked the non-

[25] These figures are exaggerated because of the fDi Markets database's poor coverage of FDI investments between China and Africa, including South Africa.

[26] Portfolio assets accounted for a little less than 63 per cent of total non-FDI assets in 2012. "Other" investment assets accounted for the remainder.

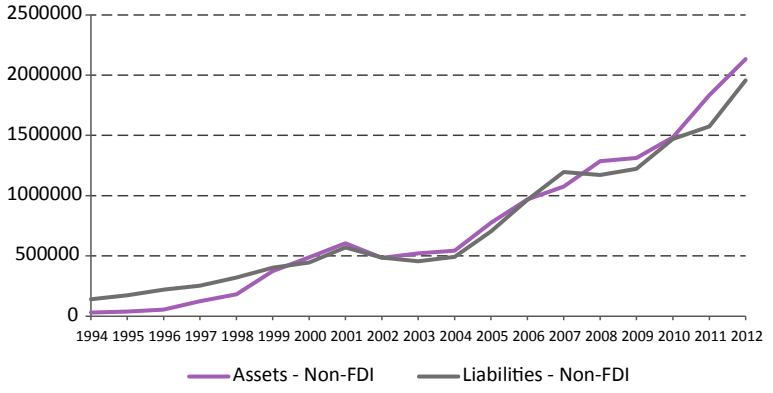
FDI liabilities accumulated by non-residents in South Africa (Figure 8). This has guaranteed a steady inflow of non-FDI income receipts for South Africa and has been crucial in helping to balance net non-FDI investment income in the current account. The gradual (and then sudden) depreciation of the rand meant that external portfolio assets (and income) increased considerably in rand terms during much of this period.

Figure 7. South Africa's FDI assets and liabilities, 1994–2012
(Left axis: R millions; right axis: ratio of FDI liabilities to assets)



Source: SARB (2014c).

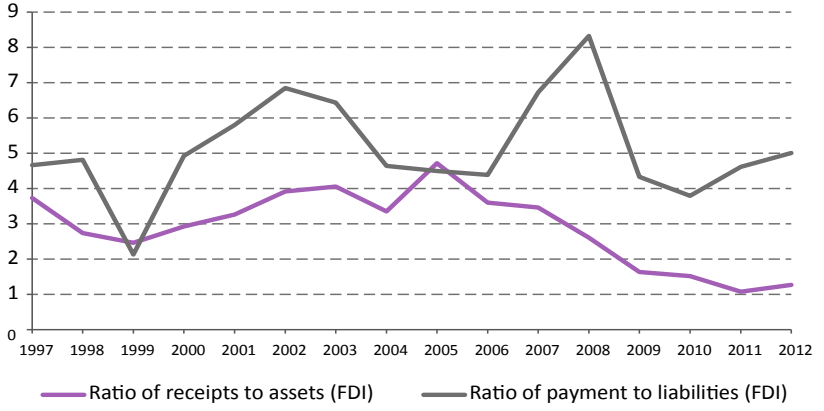
Figure 8. South Africans' non-FDI assets and liabilities, 1994–2012
(R millions)



Source: SARB (2014c).

Again, what is peculiar is that the increase in FDI assets abroad since 2006 has not yet decreased the net contribution of FDI income to the current account deficit. This is because the payment ratio of investment receipts received by South African firms on their direct investment assets has undergone a change downwards (Figure 9). Furthermore, in 2007 and 2008, direct investors into South Africa received a much larger portion of investment income than usual. The sudden depreciation of the rand in the second half of 2008 (or its expectation) may have played a part in these movements.

Figure 9. Returns on investment for South Africa's FDI assets and liabilities, 1994–2012
(R millions)



Source: SARB (2014c).

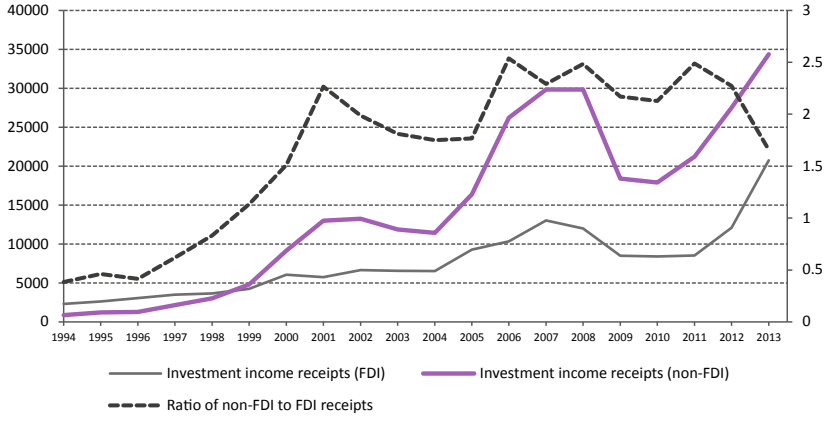
The implication of this situation is that South Africa's BOP should improve in the future if its firms, which have now accumulated a fair amount of direct investments abroad, begin to return a greater portion of earnings on equity back home.

3.3 Combining the liabilities and asset sides

The continued imbalance between South Africa's FDI assets and its much greater FDI liabilities has created a deficit in net investment income on FDI. This situation is aggravated by the return on South Africa's direct investment assets being on the order of 2 per cent

lower than the return on its direct investment liabilities.[27] As a result, investment income receipts from the country's outward FDI have been far lower than receipts from its non-FDI positions (Figure 10) – even though the gap has stabilized since 2006 and even declined somewhat.

Figure 10. The gap between FDI and non-FDI income, 1994–2012
(Left axis: R millions; right axis: ratio of non-FDI to FDI income receipts)



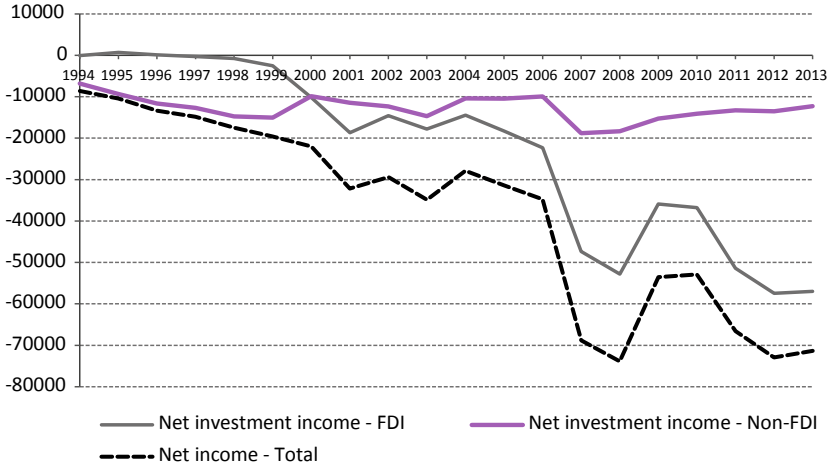
Source: SARB (2014c).

FDI income may contribute less to the current account deficit in the future if current trends continue. The rate of growth of FDI liabilities has been on a noted downward trend since 2009, while the growth in FDI assets has picked up again after falling to a low in 2010.

Combining the asset and liability sides, Figure 11 shows that South Africa's *net* investment income payments position is negative when it comes to both non-FDI and FDI payments. However, the deficit on net FDI income payments is by far the larger of the two. Furthermore, the persistent deterioration in the total net investment income position is almost entirely attributable to the growing deficit with regard to the FDI income balance; net payments on non-FDI income have in fact steadily decreased since 2007.

[27] Calculated as annual FDI income for year *t* divided by the average of the final FDI positions for years *t* and *t – 1*.

Figure 11. South Africa's net investment income, 1994–2013
(R millions)



Source: SARB (2014c), seasonally adjusted. Total income balance includes balance on FDI and non-FDI investment income, as well as net compensation of employees.

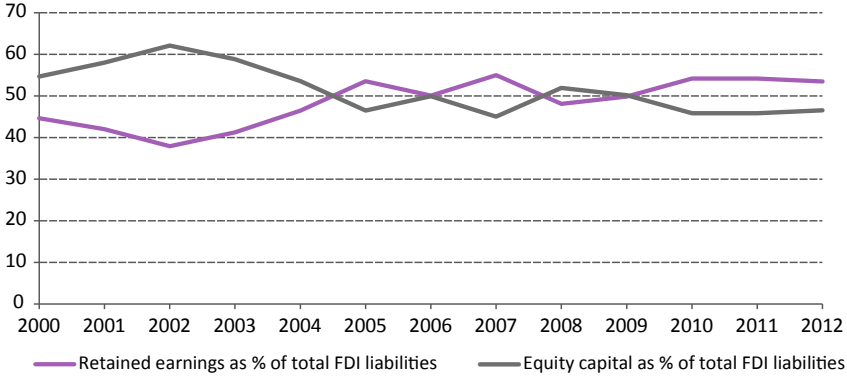
3.4 Should policymakers be concerned?

First, when retained earnings are recorded in the BOP, FDI income outflows through the current account will, by definition, be covered by corresponding imputed FDI capital inflows into the financial account and so pose no immediate threat to the sustainability of any current account deficit. Nevertheless, this may still artificially inflate the size of a country's current account deficit. But this is not the case for South Africa. SARB does not include reinvested earnings in the current or financial accounts of the BOP. Reinvested earnings are included only in the stock levels of South Africa's International Investment Position (IIP).[28]

In general, retained earnings constitute an important part of FDI in developing-economy hosts (UNCTAD, 2013:34). This is also true for South Africa. Figure 12 shows that about 50 per cent or more of South Africa's inward FDI liabilities consist of retained earnings, but this is not entirely relevant for the deficit in South Africa's investment income discussed in this paper.

[28] For emerging markets that do record reinvested earnings in line with IMF recommendations, this may be a significant issue and the primary contributor to the perceived lack of sustainability of their current account deficits.

Figure 12. The shares of equity and retained earnings in South African FDI liabilities, 2000–2012
(Per cent of total FDI liabilities)



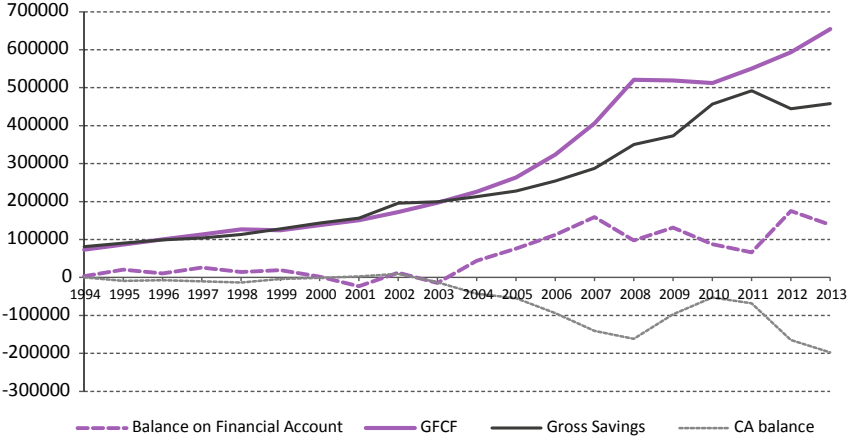
Source: SARB (2002, 2007, 2014).
Note: In retained ("reinvested") earnings I include short- and long-term FDI capital.

Second, FDI has a number of additional benefits for an economy, which need to be taken into account when evaluating its cost to the current account. FDI can enhance a country's ability to export competitively and thus achieve a sustainable balance in foreign trade. Whether the so-called negative "direct effects" of FDI on the income account outweigh the positive "indirect effects" on the trade balance in any specific instance remains a matter for further exploration (Mencinger, n.d.). Inward FDI flows could positively affect South Africa's trade balance, through both direct means (setting up entities that are net exporters), and indirect means such as technology and knowledge spillovers to local firms and workers, increased demand for domestic inputs, and reductions in input costs through competition. These benefits often need to be drawn out from investments, given their propensity to procure inputs and technology from abroad.

Third, in an intertemporal framework (often associated with "consumption smoothing") financial inflows provide access to funds not only to meet present demand but to alleviate savings imbalances in the future by raising the rate of investment. Therefore, a current account deficit, reflecting an imbalance between savings and investments, may not be a bad thing if it assists a country in raising its investment rate over the long term above what it would have been absent the deficit.

In South Africa's case, gross fixed capital formation (GFCF) has, since 2004, overtaken savings (Figure 13). This shift was enabled or driven by the growing current account deficit, and more specifically the surplus on the financial account. As a percentage of GDP, GFCF rose from 16 per cent in 2004 to a peak of 23 per cent in 2008, before falling to 19 per cent in 2013 (SARB, 2014c). We cannot, however, easily isolate the effect of the FDI inflows from the other flows into South Africa's financial account.

Figure 13. South Africa's saving-investment gap, 1994–2012
(R millions)



Source: SARB (2014c).

If the increase in investment leads to sustained increases in domestic output and productivity growth, then it will reduce the burden on the financial account over time. We know that part of the investment boom was in construction, a chunk of which was related to South Africa's hosting of the Soccer World Cup. Construction as a percentage of investment increased from 16 per cent in 2006 to 28 per cent in 2013 (down from 31 per cent in 2009). Part of these investments would have improved output and economy-wide efficiency (public infrastructure) while other investments may not have (soccer stadiums).

The underlying question remains how to improve the effect of inward FDI on South Africa's current account. Doing so requires creating a greater scope for the productive reinvestment of FDI (and other) earnings domestically. The less the scope for reinvestment of earnings

domestically, the greater the tendency for earnings to flow out and for investments by domestic and foreign direct investors to favour foreign markets.

4. Conclusion

The alternative to encouraging FDI inflows offers no way out of South Africa's growing current account deficit. In principle, local economic development through FDI inflows adds to locally generated surpluses, which are then available both for domestic investment and for investments abroad – which in turn produces additional FDI income inflows. If the rate of local development in South Africa is faster than elsewhere, there will be an overall rebalancing tendency.

Taking advantage of foreign capital to transform how South Africa grows is vital, as without a different pattern of growth, simply more of it – while necessary – may be insufficient to alleviate the present BOP constraints. So although FDI inflows currently present a challenge to South Africa's BOP, over the long term they provide the country with perhaps the best opportunity through which to alleviate its external imbalances. That they have the potential to do so does not mean that, if left to their own devices, they will.

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ASEAN INVESTMENT REPORT 2015: INFRASTRUCTURE INVESTMENT AND CONNECTIVITY

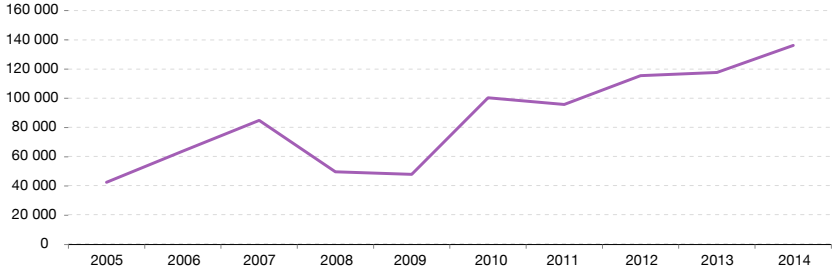
OVERVIEW

FDI DEVELOPMENT AND CORPORATE INVESTMENT STRATEGIES

FDI flows to ASEAN rose for the third consecutive year, from $117.7 billion in 2013 to $136.2 billion in 2014, despite a 16% decline in global flows (figure 1). This level exceeded inflows to China for the first time since 1993, making ASEAN the largest recipient of FDI in the developing world. Most Member States witnessed an increase in FDI flows last year.

A number of key developments contributed to the further annual rise in FDI. Foreign MNEs and other ASEAN companies continued to expand their operations in the region in a range of industries for a number of various reasons. Regional expansion strategies of foreign and ASEAN companies remain a key aspect of the region's investment landscape in 2014 and 2015. FDI in services increased significantly last year. The region's investment environment also improved further as more regional and national measures favourable to FDI were introduced or announced. Behind these motives are strong regional economic fundamentals such as cost advantages and market factors, including regional integration, attracting investment and influencing corporate

Figure 1. **FDI flows to ASEAN rose by 16%, to $136 billion in 2014 overtaking China as the largest FDI recipient**
(Millions of dollars)



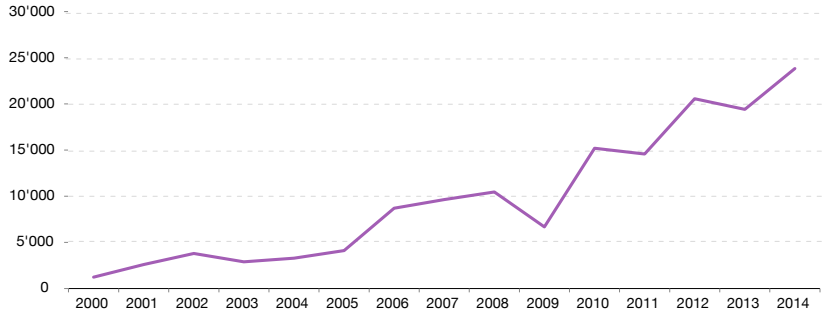
Source: ASEAN Secretariat, ASEAN FDI Database (accessed 1 July 2015).

strategy in ASEAN. The major sources of investment in 2014 remained largely the same as in 2013, with two-thirds of FDI continuing to come from the top five investment source regions and economies, namely the European Union (EU), intra-ASEAN and Japan, the United States as well as Hong Kong (China).

The rise in FDI in 2014 was also driven by an increase in intraregional investment and strong FDI flows from a majority of ASEAN's Dialogue Partners. They include Australia, China, the EU, the Republic of Korea and the United States. However, FDI flows from Japan to the region plummeted by 39%, to $13.4 billion, reflecting the general downward global FDI trend of Japanese investment in 2014. Notwithstanding the FDI decline, Japan remained the largest investor in manufacturing activities in the region last year. The EU was the largest investor as a whole, followed by ASEAN. Increased FDI from France, Luxembourg and the United Kingdom contributed to the rise in the EU's investment.

Intra-ASEAN investment rose by 26%, from $19.4 billion in 2013 to $24.4 billion in 2014 – accounting for 18% of total inflows into the region (figure 2). This upward intraregional investment trend suggests a growing interest of ASEAN companies in establishing a stronger regional presence, in particular in recent years, in light of emerging opportunities and the influence of the impending ASEAN Economic Community (AEC) 2015.

Figure 2. **Intra-ASEAN investment rose by 26% to $24.4 billion in 2014**
(Millions of dollars)



Source: ASEAN Secretariat, ASEAN FDI Database (accessed 1 July 2015).

Manufacturing FDI declined to $22.2 billion from $33.3 billion in 2013 but this was compensated for by a strong surge in FDI in finance, from $28.3 billion in 2013 to $43.1 billion. FDI in agriculture also rose from $2.3 billion to $4.5 billion, while investment in the extractive industries declined from $8.0 billion to $7.3 billion. FDI from the EU and the United States dominated in finance, while investments by ASEAN companies were to the fore in the primary sector (agriculture and mining activities) and real estate.

A notable aspect of the changing landscape of FDI in ASEAN is the growing frequency of transfers of labour-intensive manufacturing activities from higher-cost locations in other Asian economies and within ASEAN to the CLMV (Cambodia, Lao PDR, Myanmar and Viet Nam) countries, as well as other ASEAN Member States such as Indonesia. This development is strengthening further regional production networks and regional value chains – boosting connectivity between CLMV countries and the other ASEAN Member States as production from the former is supplied to affiliates or customers based in the latter. This industrial connectivity is contributing to the development of supporting industries and increasing the region's manufacturing competitiveness, which draws on the complementary locational advantages increasingly being tapped by multinational enterprises (MNEs) and ASEAN companies. Furthermore, the rise in regional economic activities by MNEs and companies from the other ASEAN Member States is helping bridge the development divide in the region through investment.

In 2014–2015, ASEAN Member States continued to introduce measures favourable to investment. They included measures to make investing easier, increase transparency and improve the investment environment. Others included national investment policy reforms, industrial development policies, incentives and tax reforms, investment facilitation, streamlining of investment procedures, strengthening of institutional support for investors, establishment of more economic zones and infrastructure development. The ASEAN Member States are also involved with other investment-related agreements at the bilateral, plurilateral and regional levels, at various stages of negotiation and development. They include investment agreements for ASEAN free trade agreements with Dialogue Partners and the Regional Comprehensive Economic Partnership. Some Member States continue to negotiate and implement bilateral and plurilateral free trade agreements that include

investment agreements or chapters, and bilateral investment treaties.

Achieving a fourth consecutive year of higher FDI inflows in 2015 is likely to pose a challenge for the region. Cross-border merger and acquisition (M&A) sales and FDI flows to ASEAN in the first half of 2015 were down, against the backdrop of global economic fragilities and slower regional growth. However, the level of inflows will remain high – close to the level of 2014. The outlook for 2016 is cautiously optimistic, but much depends on the health of the global economy and corporate investment plans as well as the delivery of the AEC benefits in both depth and scope. Supporting further investment into the region in 2016 and beyond are the region's strong macroeconomic fundamentals, economic resilience, increasingly affluent consumers and influences of regional integration, as well as the cost competitiveness of the region, the strong cash holdings of ASEAN companies and the continued regional investment expansion plans of investors. Various recent surveys of companies highlight that a growing number of MNEs have favourable perceptions of the region that have translated into investment. Many have investment plans that target the region in the next few years.

ASEAN is also a major source of FDI for other developing countries. Outward FDI flows from the region to the world rose by 19% in 2014, to $80 billion. In perspective, this is greater than the outward flows of France and Spain combined, and more than 2.5 times those of the Republic of Korea in 2014. Companies from the region are expected to continue to internationalize in 2015 and beyond, including using more M&A strategies in accessing markets – further strengthening South–South partnerships. The increasing financial strength of ASEAN MNEs – their strong profitability and cash holdings – is encouraging them to regionalize and internationalize. Emerging investment opportunities abroad are also driving investment overseas. The top 100 ASEAN companies by market capitalization had combined cash holdings of $228 billion and combined assets of nearly $3 trillion in 2014. Most of them have operations in other ASEAN Member States (table 1).

Table 1. Top 100 ASEAN companies have strong assets and significant cash holdings, 2014 (Millions of dollars)

Company	Country	Industry	2014			
			Net income	Total assets	Market capitalization	Cash or near cash holding
Singapore Telecommunications	Singapore	Telecommunication	2,901	31,249	46,219	410
DBS Group Holdings	Singapore	Banks	3,194	332,653	38,447	14,733
Overseas-Chinese Banking Corp	Singapore	Banks	3,033	302,881	31,457	19,109
United Overseas Bank	Singapore	Banks	2,565	231,551	29,678	26,484
PTT	Thailand	Oil, gas and consumable fuels	1,718	54,062	28,120	6,199
Bank Central Asia	Indonesia	Banks	1,391	44,443	26,034	4,710
Malayan Banking	Malaysia	Banks	2,053	182,864	24,405	18,858
Bank Rakyat Indonesia	Indonesia	Banks	2,045	64,518	23,121	5,935
Advanced Info Service	Thailand	Telecommunication (wireless)	1,110	3,839	22,675	434
Telekomunikasi Indonesia	Indonesia	Telecommunication	1,235	11,335	22,629	1,424
Tenaga Nasional	Malaysia	Electric utilities	2,000	34,993	22,093	2,565
Avago Technologies	Singapore	Semiconductors	263	10,491	21,936	1,604
Bank Mandiri	Indonesia	Banks	1,676	68,788	20,227	5,746
Public Bank	Malaysia	Banks	1,381	98,735	20,181	3,220
Siam Commercial Bank	Thailand	Banks	1,642	82,033	18,771	1,282
Sime Darby	Malaysia	Industrial conglomerates	1,034	15,871	18,271	..
Axiata Group	Malaysia	Telecommunication (wireless)	718	14,030	17,279	1,457
Kasikornbank	Thailand	Banks	1,421	72,596	16,653	1,'764
Siam Cement	Thailand	Construction materials	1,035	14,154	16,335	579
Wilmar International	Singapore	Food products	1,156	43,558	15,642	3,127
Maxis	Malaysia	Telecommunication (wireless)	525	5,172	14,685	437
SM Investments Corp	Philippines	Industrial conglomerates	640	15,912	14,506	1,546
Philippine Long Distance Tel	Philippines	Telecommunication (wireless)	768	9,752	14,030	596
Digi.Com	Malaysia	Telecommunication (wireless)	621	1,229	13,700	150
PTT Explor & Prod Public Co	Thailand	Oil, gas and consumable fuels	662	23,328	13,511	3,947
CIMB Group Holdings Bhd	Malaysia	Banks	950	118,280	13,376	10,332
Thai Beverage	Thailand	Beverages	668	5,226	13,079	68
Petronas Gas	Malaysia	Gas utilities	563	3,787	12,523	182
Petronas Chemicals Group	Malaysia	Chemicals	754	8,129	12,452	2,584
Keppel Corp	Singapore	Industrial conglomerates	1,488	23,820	12,104	4,330
Perusahaan Gas Negara	Indonesia	Gas utilities	723	6,215	11,719	1,216
CP	Thailand	Food and staples retailing	313	9,918	11,601	980
IHH Healthcare	Malaysia	Health care	231	8,179	11,258	704
Bangkok Bank	Thailand	Banks	1,119	83,862	11,252	1,822
SM Prime Holdings	Philippines	Real estate	414	8,691	10,999	788
Ayala Land	Philippines	Real estate	333	8,693	10,689	641
Capitaland	Singapore	Real estate	916	33,301	10,641	2,043
Airports of Thailand	Thailand	Transportation infrastructure	379	4,741	10,525	216
IOI Corp	Malaysia	Food products	1,040	4,777	10,396	..
JG Summit Holdings	Philippines	Industrial conglomerates	411	12,489	10,352	838
Global Logistic Properties	Singapore	Real estate	685	13,947	10,025	1,446
Genting Singapore	Singapore	Hotels, restaurants and leisure	501	9,566	9,870	2,791
Singapore Airlines	Singapore	Airlines	286	17,995	9,786	3,826
Krung Thai Bank	Thailand	Banks	1,022	83,238	9,640	2,269
Ayala Corporation	Philippines	Diversified financial services	419	16,228	9,609	2,030
Genting	Malaysia	Hotels, restaurants and leisure	553	20,932	9,419	4,681
Gudang Garam	Indonesia	Tobacco	453	4,684	9,396	128
MISC	Malaysia	Marine	674	11,876	9,204	1,382
Bank Negara Indonesia	Indonesia	Banks	910	33,514	9,152	2,904
Universal Robina Corp	Philippines	Food products	262	1,734	9,078	224
BDO Unibank	Philippines	Banks	514	41,655	8,788	6,951
Great Eastern Holdings	Singapore	Insurance	694	49,579	8,572	2,457

Table 1. Top 100 ASEAN companies have strong assets and significant cash holdings, 2014 (Millions of dollars) (concluded)

Company	Country	Industry	2014			
			Net income	Total assets	Market capitalization	Cash or near cash holding
Bank of the Philippine Islands	Philippines	Banks	406	32,414	8,262	5,598
Bangkok Dusit Med Service	Thailand	Health care	228	2,833	8,096	109
Singapore Tech Engineering	Singapore	Aerospace and defense	420	6,280	8,003	1,104
Sapurakencana Petroleum	Malaysia	Energy equipment and services	343	7,948	7,856	345
Hong Leong Bank	Malaysia	Banks	648	53,079	7,735	..
Semen Indonesia	Indonesia	Construction materials	469	2,761	7,731	397
Intouch Holdings	Thailand	Telecommunication (wireless)	455	1,662	7,672	90
Telekom Malaysia	Malaysia	Telecommunication	254	6,461	7,308	853
Aboitiz Power Corp	Philippines	Independent power producers	376	4,845	7,056	900
City Developments	Singapore	Real estate	608	14,872	7,050	2,817
PTT Global Chemical	Thailand	Chemicals	463	12,299	7,021	469
Dynasty Ceramic	Thailand	Building products	38	158	7,005	6
Total Access Communication	Thailand	Telecommunication (wireless)	330	3,234	6,943	177
Kalbe Farma	Indonesia	Pharmaceuticals	174	1,'000	6,901	153
Kuala Lumpur Kepong	Malaysia	Food products	307	3,928	6,842	395
AMMB Holdings	Malaysia	Banks	557	40,643	6,646	3,771
Genting Malaysia	Malaysia	Hotels, restaurants and leisure	363	5,940	6,591	791
Aboitiz Equity Ventures	Philippines	Industrial conglomerates	414	6,281	6,524	1,129
Manila Electric Company	Philippines	Electric utilities	407	6,014	6,449	1,553
Petrovietnam Gas Joint Stock	Viet Nam	Gas utilities	667	2,516	6,249	1,126
Central Pattana	Thailand	Real estate	225	2,705	6,205	76
Sembcorp Industries	Singapore	Industrial conglomerates	632	12,966	5,994	1,254
Singapore Exchange	Singapore	Finance	254	1,316	5,963	..
Big C Supercenter	Thailand	Food and staples retailing	223	3,123	5,941	347
RHB Capital	Malaysia	Banks	623	62,646	5,598	6,185
Charoen Pokphand	Thailand	Food products	325	12,664	5,472	1,021
Starhub	Singapore	Telecommunication (wireless)	292	1,500	5,412	199
Singapore Press Holdings	Singapore	Media	322	5,326	5,371	355
Capitaland Mall Trust	Singapore	Real estate investment trusts	489	7,442	5,332	853
Siam Makro	Thailand	Food and staples retailing	150	1,327	5,287	139
Hong Leong Financial Group	Malaysia	Banks	526	59,256	5,268	..
International Container Terminal Services	Philippines	Transportation infrastructure	182	3,401	5,235	194
YTL Corp	Malaysia	Multi-utilities	479	19,020	5,231	..
Sembcorp Marine	Singapore	Machinery	442	6,219	5,143	813
Globe Telecom	Philippines	Telecommunication (wireless)	301	4,012	5,133	375
Jollibee Foods Corp	Philippines	Hotels, restaurants and leisure	121	1,210	5,127	170
Alliance Global Group	Philippines	Industrial conglomerates	298	9,156	5,114	1,835
Metropolitan Bank & Trust	Philippines	Banks	453	35,864	5,092	5,594
Charoen Pokphand Indonesia	Indonesia	Food products	147	1,678	4,987	71
Petronas Dagangan	Malaysia	Oil, gas and consumable fuels	153	2,725	4,857	525
PPB Group	Malaysia	Food products	280	5,313	4,842	194
DMCI Holdings	Philippines	Industrial conglomerates	243	3,066	4,659	341
Astro Malaysia Holdings	Malaysia	Media	141	2,121	4,564	372
Vietnam Dairy Products Jsc	Viet Nam	Food products	286	1,205	4,467	71
Golden Agri-Resources	Singapore	Food products	114	14,667	4,458	323
Ascendas Real Estate Investment Trust	Singapore	Real estate investment trusts	383	5,848	4,317	30
SIA Engineering	Singapore	Transportation infrastructure	211	1,357	4,291	44
Comfortdelgro Corp	Singapore	Road and rail	224	3,949	4,199	623
Total			70,553	2,928,468	1,131,906	228,137

Source: UNCTAD 2015b, based on Bloomberg.

INFRASTRUCTURE INVESTMENT AND PRIVATE SECTOR PLAYERS IN ASEAN

Infrastructure plays an important role in the region's economic, social and environmental development, including through boosting connectivity. As the backbone of the economy in all the ASEAN Member States, it contributes to improving the region's investment environment for attracting FDI. Greater connectivity of national transport infrastructure enhances logistical efficiency and supports the growth of investment, trade and commerce. Investment in power infrastructure increases energy security, provides electricity to industrial estates in rural areas and is essential for achieving universal access for all. As with other infrastructure sectors, the provision of information and communication technology (ICT) infrastructure supports downstream businesses such as e-commerce and connects Member States with each other, as well as with the world. Infrastructure development plays an important role in reducing the transaction costs of doing business in the region.

ASEAN Member States have invested in infrastructure to varying degrees in terms of spending and development. However, further infrastructure investment is needed across a wide range of economic, social and environmental sectors if Member States are to achieve their economic plans and other objectives, including those related to national and regional connectivity. The private sector has been a significant player in the region's infrastructure development. The roles of banks, other financial institutions and donors of official development assistance (ODA) in supporting infrastructure development have also been important.

The infrastructure investment needs for the region through 2025 – covering power, transport, ICT, and water and sanitation – are huge. Some $110 billion a year will be needed for infrastructure investment in these sectors. Given the current spending by Member States, the infrastructure investment gap will be equally huge but resources need to be found if the gap is to be filled and future demand is to be met. The private sector can play a greater role to help bridge the gap. There is a need for a more concerted effort by all stakeholders to mobilize and channel investment from additional potential resources to

infrastructure in the region. Filling the gap is possible. For instance, in addition to resources outside the region that can also be tapped, there is at least $10 trillion worth of assets in ASEAN Member States – mostly with the private sector – that can be potential sources of funding.

The private sector participates in the region's infrastructure development through a number of modalities. They include FDI, M&As, privatization, non-equity modalities (concessions and contracts), and partnership or consortium arrangements. Some modalities are more significant than others for private sector participation. The privatization of public infrastructure and the maturity of the M&A environment, including opportunities to acquire assets in a host country, can influence private sector participation. Firms' experience, skill sets and ability to win contracts are additional influences. MNEs from developed and developing economies, including from ASEAN, are participating in infrastructure development in the region through contractual arrangements, whether as engineering, procurement and construction (EPC) contractors or subcontractors (table 2). They also invest, build, operate and manage infrastructure assets. Concessionary arrangements and contracts, a form of NEM, continue to be key features of MNEs' participation in infrastructure development in ASEAN.

MNEs from developed countries have been involved in infrastructure development in ASEAN for a long time. More recently, Chinese infrastructure-related companies have become notable players in building infrastructure in ASEAN in a very short period of time. These Chinese players not only operate as contractors, but also invest in, own and operate infrastructure. Some have an extensive regional presence through contracts and subsidiaries. In 2014, 62 Chinese companies were among the top 250 international contractors in terms of revenues, and a majority of these companies are in or are expanding their operations in ASEAN.

The number of ASEAN companies involved in infrastructure development is increasing; such companies are also investing outside the region and building infrastructure in other developing countries. In addition to winning contracts, infrastructure-related companies from Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam have established subsidiaries in other ASEAN Member States (table 3).

Table 2. MNEs from both developed and developing economies participate in ASEAN infrastructure development
(Selected cases)

MNEs	Home country	Industry
Sumitomo Corporation	Japan	Power and electricity
Mitsubishi Corporation	Japan	Power and electricity
Itochu Corporation	Japan	Power and electricity
Kyushu Electric Power	Japan	Power and electricity
Toshiba	Japan	Power and electricity
Electric Power Development Company	Japan	Power and electricity
Marubeni	Japan	Power and electricity
Ormat International	United States	Power and electricity
APR Energy	United States	Power and electricity
AES Corporation	United States	Power and electricity
GE	United States	Power and electricity
Xylem	United States	Power and electricity
ACO Investment Group	United States	Power and electricity
SunEdison	United States	Power and electricity
Open Systems International	United States	Power and electricity
Alstom	France	Power and electricity
Prysmian Power Link SRL	Italy	Power and electricity
Conergy AG	Germany	Power and electricity
Statkraft Norfund Power Invest AS	Norway	Power and electricity
China Southern Grid International	China	Power and electricity
China Huadian Corporation	China	Power and electricity
China National Heavy Machinery Corporation	China	Power and electricity
China Datang Corporation	China	Power and electricity
Hydrolancang International Company	China	Power and electricity
Southern Power Grid Company Limited	China	Power and electricity
China Power International Holdings Limited	China	Power and electricity
Korean Electric Power Corporation	Republic of Korea	Power and electricity
Hyundai Engineering Company	Republic of Korea	Power and electricity
Daelim Industrial Company	Republic of Korea	Power and electricity
Doosan Heavy Industries and Construction	Republic of Korea	Power and electricity
SK Engineering and Construction	Republic of Korea	Power and electricity
South Korea Electric Power Corporation	Republic of Korea	Power and electricity
Korea Western Power	Republic of Korea	Power and electricity

Table 2. **MNEs from both developed and developing economies participate in ASEAN infrastructure development** (Selected cases) (concluded)

MNEs	Home country	Industry
Sumitomo Mitsui Construction	Japan	Transport
Mitsui Company Limited	Japan	Transport
Tokyu Corporation	Japan	Transport
Obayashi Corporation	Japan	Transport
Shimizu Corporation	Japan	Transport
Takenaka Corporation	Japan	Transport
GE	United States	Transport
Alstom Transport	France	Transport
Invensys Rail	United Kingdom	Transport
Damen	Netherlands	Transport
A.P. Moeller-Maersk	Denmark	Transport
Fraport AG	Germany	Transport
Vinci Group	France	Transport
TUV Rheinland Group	Germany	Transport
China Railway Group	China	Transport
Guangxi Beibu International Port Group	China	Transport
China Merchants Group	China	Transport
China CAMC Engineering Company	China	Transport
China Harbour Engineering Company	China	Transport
Shanghai Tunnel Engineering Company	China	Transport
China Railway No. 5 Engineering Group Company	China	Transport
Yunnan Sunny Road and Bridge Company	China	Transport
Lotte Engineering and Construction	Republic of Korea	Transport
Samsung C&T Corporation	Republic of Korea	Transport
Daelim Industrial Company	Republic of Korea	Transport
Daewoo Engineering and Construction Company	Republic of Korea	Transport
NTT Docomo	Japan	Telecommunication
KDDI	Japan	Telecommunication
Huawei	China	Telecommunication
ZTE	China	Telecommunication
China Telecom Global Limited	China	Telecommunication
China Telecommunications Corporation	China	Telecommunication

Source: UNCTAD, based on Table 2.9.

Various types of infrastructure financiers have been playing an important role in providing or arranging finance for infrastructure development in ASEAN. They include ODA donors, MDBs, specialized infrastructure funds, private equity investors, commercial banks and sovereign wealth funds. A significant part of financing for infrastructure projects in the region comes from these sources.

Table 3. Increasing regional presence from some infrastructure–related companies from ASEAN, 2014

Name of company	Home country	Industry	Market capitalization ($ million)	Total revenues ($ million)	ASEAN locations of selected subsidiaries or contract operations
Adhi Karya	Indonesia	Construction, engineering	249	698	Singapore
Axiata Group	Malaysia	Telecommunication	12,583	5,398	Cambodia, Singapore
Ayala Land	Philippines	Real estate	10,898	2,011	Malaysia
Bangkok Dusit Medical Services	Thailand	Hospitals	8,347	1,720	Cambodia, Singapore
Banpu	Thailand	Mining, electricity	1,607	3,098	Indonesia, Singapore, Thailand
Bukit Asam	Indonesia	Mining, electricity	948	1,053	Other ASEAN Member States
CapitaLand	Singapore	Real estate	8,438	3,376	Malaysia, Viet Nam
City Developments	Singapore	Real estate	5,275	3,118	Indonesia, Malaysia, Myanmar, Philippines, Thailand, Viet Nam
EGAT	Thailand	Electricity	..	16,508	Lao PDR, Myanmar
EGCO	Thailand	Electricity	..	78	Indonesia, Lao PDR, Philippines and Thailand
Enco Holdings	Malaysia	Engineering	..	..	Indonesia and Thailand
First Philippine Holdings Corporation	Philippines	Conglomerate	2,260	874	Indonesia, Singapore, Thailand
Gamuda	Malaysia	Infrastructure	2,675	775	Viet Nam
Genting Berhad	Malaysia	Conglomerate (Electricity)	6,912	5,486	Indonesia
Gunkul	Thailand	Electricity	660	91	Singapore
IHH Healthcare	Malaysia	Hospitals	11,457	2,175	Indonesia, Singapore
International Container Terminal	Philippines	Harbour facilities	3,945	1,119	Indonesia
Intouch Holdings	Thailand	Telecommunication	6,893	315	Cambodia, Singapore
Italian-Thai Development	Thailand	Infrastructure	1,231	1,477	Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Viet Nam
Keppel Corporation	Singapore	Conglomerate[a]	9,190	10,086	Indonesia, Malaysia, Myanmar, Philippines, Thailand, Viet Nam
KPJ Healthcare	Malaysia	Hospitals	1,056	766	Indonesia, Singapore, Thailand

Table 3. Increasing regional presence from some infrastructure–related companies from ASEAN, 2014 (concluded)

Name of company	Home country	Industry	Market capitalization ($ million)	Total revenues ($ million)	ASEAN locations of selected subsidiaries or contract operations
Malaysia Airports	Malaysia	Airports	2,252	991	Manages airports in Cambodia and outside ASEAN
Manila Water	Philippines	Water	918	367	Singapore, Viet Nam
Maxis	Malaysia	Telecommunication	11,985	2,429	Indonesia, Singapore
Metro Pacific Investments Corp.	Philippines	Road construction	2,997	932	Indonesia, Thailand, Viet Nam
Muhibbha	Malaysia	Infrastructure, engineering	..	..	Cambodia, Philippines, Singapore
Nusa Konstruksi Enjiniring Tbk	Indonesia	Construction, engineering	27	165	Malaysia
Philippine Long Distance Telephone	Philippines	Telecommunication	12,006	3,832	Malaysia
Port of Singapore Authority	Singapore	Ports	..	2,877	Indonesia, Thailand, Viet Nam
PTT	Thailand	Oil and gas	20,174	86,545	Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Viet Nam
Ratchaburi Electricity Generating Holding	Thailand	Electricity	2,135	1,702	Cambodia, Lao PDR, Singapore
Salcon	Singapore	Engineering	106	77	Singapore, Viet Nam
San Miguel	Philippines	Conglomerate[a]	2,328	17,569	Malaysia, Singapore, Thailand, Viet Nam
Sembcorp Industries	Singapore	Conglomerate[a]	4,432	8,317	Indonesia, Malaysia, Philippines, Viet Nam
Semen Indonesia	Indonesia	Building materials	4,243	2,182	Viet Nam
Siam Cement	Thailand	Building materials	1,384	14,945	Cambodia, Indonesia, Malaysia, Philippines, Lao PDR, Singapore, Viet Nam
Singapore Telecommunication	Singapore	Telecommunication	42,060	12,618	Indonesia, Philippines, Malaysia, Philippines, Thailand
Supalai PCL	Thailand	Real estate	882	566	Philippines, Singapore
Telekom Malaysia	Malaysia	Telecommunication	6,097	3,256	Indonesia, Singapore
Telekomunikasi Indonesia	Indonesia	Telecommunication	20,081	7,307	Singapore
Tenaga Nasional	Malaysia	Electricity	16,103	13,760	Cambodia, Indonesia, Lao PDR, Thailand, Viet Nam
Total Access Communication	Thailand	Telecommunication	4,445	2,752	Malaysia, Singapore
Truba Alam Manunggal Engineering	Indonesia	Construction, engineering	57	105	Singapore
United Envirotech	Singapore	Engineering	1,224	267	Malaysia
UPP Holdings	Singapore	Electricity	89	88	Malaysia
Viettel	Viet Nam	Telecommunication	..	..	Cambodia, Lao PDR
YTL	Malaysia	Utilities	4,043	6,245	Cambodia, Indonesia, Singapore, Thailand

Source: UNCTAD 2015b, based on companies' information and Orbis.

Note: real estate includes commercial and industrial estates.

[a] Includes various infrastructure.

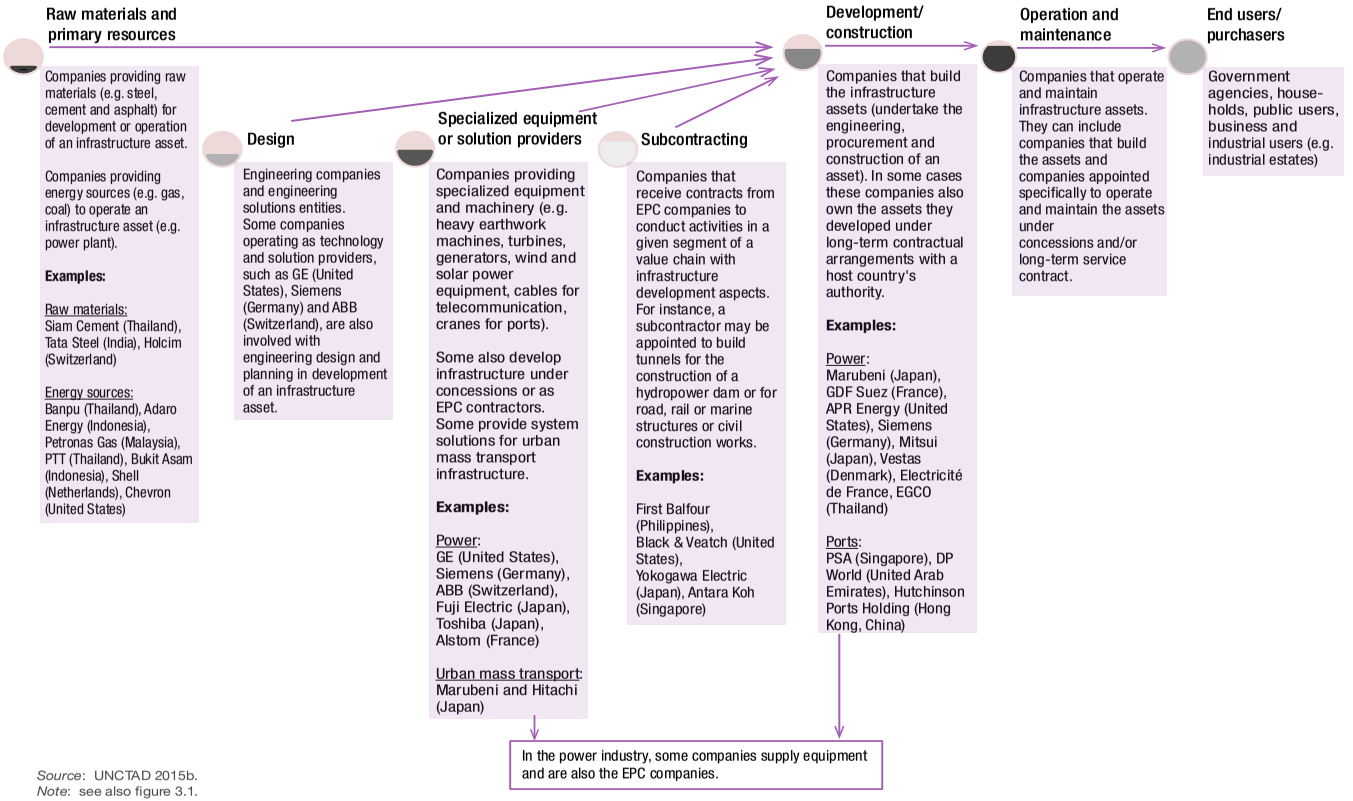
INFRASTRUCTURE VALUE CHAINS AND MOTIVATIONS OF MNES IN ASEAN

Infrastructure value chains in ASEAN are complex and involve networks of players. In segments of these chains, MNEs contribute specific technology and skill sets that support the delivery of infrastructure. Among other roles, MNEs participate as equipment and material suppliers; solution providers; engineering, procurement and construction (EPC) companies; subcontractors; owners or sponsors; and project financiers (figure 3).

MNEs' motives for investing in infrastructure in ASEAN vary. Winning an infrastructure contract is an important consideration that can influence the establishment of a subsidiary or representative office in a host country or in a region. Most motives are related to market and strategic considerations. Some MNEs invest in infrastructure to support their core business; for instance, shipping companies develop port terminals or telecommunication service providers establish ICT infrastructure in order to achieve overall operational efficiency. Some upstream MNEs invest in downstream infrastructure to establish an integrated business – for example, from mining to power generation. Others invest to diversify into or across infrastructure chains or segments to generate revenues, reduce risk or increase corporate valuation. Yet others pursue a horizontal expansion strategy, investing overseas in order to maximize returns from exploiting their proprietary advantage, knowledge or skill sets (e.g. airport companies invest in or build airport infrastructure abroad).

In general, the value chain of infrastructure industries ranges from design, construction and development to operation and management (O&M). Different companies may be involved at each stage. In some cases, the same company may be involved across a number of segments from development to O&M, which reflects such companies' integrated business strategy, diversified skills and ability to win multiple contracts. Other companies might be involved at the construction or development stages; and, in a similar vein, companies may also provide only equipment or solutions to EPC contractors in the value chain. Each infrastructure sector has its own specific features and interconnections of different players, involving both local and foreign-owned entities. In

Figure 3. **Players in different segments of an infrastructure value chain are interconnected (a simplified illustration)**



Source: UNCTAD 2015b.
Note: see also figure 3.1.

some countries and sectors, key value chain segments are dominated by MNEs (e.g. EPC contractors, equipment suppliers, solution providers).

In electricity infrastructure across ASEAN, MNEs frequently operate as EPC contractors of power plants, transmission lines and power stations. Some also invest in and own power plants. These MNEs come from both developed and developing economies.

The telecommunication value chain can be broadly segmented into the provision and construction of infrastructure, the operation of telecommunication services and the provision of value added services. Of particular importance are the inputs used for investment in telecommunication infrastructure. Operators are at the centre of the telecommunication sector value chain. They make the decisions regarding infrastructure investment, users subscribe to their services, and third parties use their networks to provide add-on applications. The starting point for an analysis of ASEAN's telecommunication segmentation is the operators themselves, particularly retail operators that have facility-based licenses. The ASEAN telecommunication service market has two salient features. One is a relatively high level of privatization. Almost 60% of telecommunication operators are private or partly private entities. The second is foreign involvement with major telecommunication MNEs investing in the region, including supplying ICT equipment and system solutions.

The transport infrastructure value chain is also complex. In ports, for instance, it involves engineering design, construction, development, equipment and material supply, and road and rail construction both in and linking to the port. In road infrastructure, a similar sequence of value chain segments exists. Aside from investors in ports, other players also contribute to ports development by designing or building them. Foreign and local companies in ASEAN also play an important role in airports development in the region. For urban mass rapid transportation systems in the region, a portfolio of local and foreign companies with different skill sets work together to deliver the infrastructure. They include companies contracted for engineering design, rail network construction, station development, civil construction works, tunneling and production of equipment and system solutions, including train sets. A combination of players is also involved at different stages of the road and bridge development process. They include companies providing

services for technical design, materials, construction, subcontracting, tunneling, equipment manufacturing and supply, and technology or solution systems.

The strong interconnection of ICT and other downstream businesses has been well documented. The value chain of ICT, in particular telecommunication infrastructure, extends to downstream business operations such as e-commerce. Without ICT infrastructure, e-commerce would not exist in its present form. E-commerce is increasingly an important platform for trade, commerce and business development in the region, which is an important channel for promoting entrepreneurship and small and medium-size enterprises. More and more goods and services are delivered over ICT networks in ASEAN.

Understanding the value chain of infrastructure, the interconnection of different players and their motives for participation is essential. Understanding who plays what roles in which segments of the chains can help governments design or package infrastructure projects for fund raising or skill-acquiring purposes.

INFRASTRUCTURE AND ECONOMIC CONNECTIVITY IN ASEAN

Infrastructure is an important driver of regional connectivity in ASEAN. But connectivity is not confined to just physical aspects or through infrastructure. Regional economic connectivity through production, investment and trade carried out by MNEs and ASEAN companies operating in the region is just as important.

Regional physical connectivity in the region is shaped by development taking place at three levels: nationally, subregionally and regionally. It is also taking shape in three interrelated sectors or clusters of industries: infrastructure, infrastructure-enabled industry and infrastructure services, which have implications for attracting investment. These three levels are not just closely related but also mutually connected. In each of these infrastructure-related areas, foreign and local companies are involved. They help build, own, invest, manage and finance projects. Other sources of regional connectivity are also important: they include institutional and people-to-people connections, which are not covered in this report.

Aside from contributions from national and subregional infrastructure development, ASEAN is also increasingly connected through various regional projects and infrastructure cooperation arrangements among Member States. They include the ASEAN Power Grid, the Trans-ASEAN Gas Pipeline, the ASEAN Highway Network, the ASEAN Single Aviation Market, and the many intra-country bridge and road links. Other developments – such as the growing number of power purchase agreements, the Singapore–Kunming Rail Link (SKRL) network and the ICT cable links, including undersea cable connection projects that involve various ASEAN Member States – are providing further impetus for regional physical connectivity.

ASEAN is also increasingly connected through economic development, in particular through regional value chains and regional production networks of MNEs and ASEAN companies operating in the region. These companies are tapping the complementary locational advantages offered by the region, which are also made possible by strong institutional development that has helped lower transaction costs (e.g. zero tariffs for intra-ASEAN imports). In achieving production efficiency,

MNEs and ASEAN companies operating through a web of producers, contract manufacturers, suppliers and through intra- and inter-firm linkages – where many of these players operate in different ASEAN Member States or also have multiple operations across the region – are contributing to regional connectivity.

A 'connected ASEAN' has important implications. It will increase further the competitiveness of the region, enhance production efficiency, reduce transaction costs and attract FDI. Infrastructure connectivity facilitates easier movement of people and goods, reduces travel time, enables access to interconnected grid-based electricity, ensures energy security and provides cost-saving solutions to meeting the region's growing energy needs. Infrastructure connectivity also generates spillover impacts on the development of downstream businesses and other economic activities that are dependent on the provision of quality infrastructure. They contribute to downstream infrastructure-enabled business development such as in logistics, business process outsourcing, tourism and e-commerce, all of which have implications for business-to-business and regional connectivity.

With completed projects, significant plans and ongoing infrastructure development across the region, the landscape of ASEAN physical connectivity is expected to be considerably more densely drawn by 2030 than it is today. For example, the electrification rate is expected to reach nearly 100%, providing universal access to all in the region by 2030. More grid interconnections have been agreed and most are to be completed by 2026, which involves various ASEAN Member States. The ICT penetration rate is expected to rise significantly, providing modern connections to more homes and industries, and thus supporting development of more competitive downstream infrastructure-led businesses. In transport, the SKRL – which involves several ASEAN Member States – is expected to significantly reduce travel time and generate benefits along the route. With the completion of the last missing national roads in the AHN in 2015, ASEAN Member States are now physically interconnected by 38,400 km of road routes. Air transportation is expected to grow rapidly as a consequence of the increasingly affluent society, greater ASEAN connectivity and growing regional cooperation to realize a single ASEAN aviation market. ASEAN Member States are upgrading and expanding their major airports to cope with rising demand. The numbers of ASEAN based carriers

including budget airlines have grown and the numbers of planes operated by them increased rapidly in recent years – supporting greater movement of people across the region.

On regional economic connectivity, local firms and foreign MNEs have been key actors – contributing through their activities in regional production networks and regional value chains involving different ASEAN Member States. The interrelationship of MNEs, suppliers, contract manufacturers, and inter- and intra-firm linkages will further strengthen regional connectivity. With a connected ASEAN, the environment for regional value chain and production network operations will become even more conducive, which in turn will encourage more such activities, strengthening further ASEAN's integration.

In summary, ASEAN Member States are increasingly interconnected, both physically and economically. This growing regional connectivity has important implications for building competitiveness, for achieving regional integration and for realizing the goals of the AEC. The private sector – MNEs and ASEAN companies – has been and will remain a central contributor to a progressively connected ASEAN in the future.

BOOK REVIEW

Reports of Overseas Private Investment Corporation Determinations

Edited by Mark Kantor, Michael D. Nolan and Karl P. Sauvant
(New York, Oxford University Press, 2011)

Globalization, and its concomitant foreign direct investment (FDI), could not have succeeded to the extent that they did without the existence or framework for (a) analysing political risk in both the home and host countries engaged in FDI transactions, and (b) a system of insuring political risks at an affordable price, and mutually agreed and enforceable arbitration mechanisms for dispute resolution.

The cumulative positive effect of these phenomena is easily envisaged from the growth in FDI which increased from roughly US$50 billion per year during 1980-85 and currently stands at US$1.4 trillion per year. Another positive influence of their FDI flows has been increasing liberalization and harmonization in investment and lax regimes in various parts of the world and most notably among the developing countries and emerging economies of the world.

From the United States perspective, Overseas Private Insurance (OPIC) – a United States government agency – has played a critical role in expanding its outward FDI through insurance coverage for foreign expropriation-related risks. Their process has generated a large volume of cases and investment treaties.

These cases have been thoughtfully organized and analysed in *Reports of Overseas Private Investment Corporation Determinations*, edited by Mark Kantor, Michael D. Nolan and Karl P. Sauvant, which is the object of this review.

The two-volume report is an extremely important reference source, which contains a comprehensive cataloguing of 281 cases and 289 treaties. The strength of the compendium lies in the fact that for the first time, these cases provide access to the complete set of OPIC determinations. OPIC has the broadest set of political risk insurance (PRI) determinations by a public

institution in the world. It also has one of the oldest PRI programmes in the world.

These volumes provide important analysis through classification of contextual materials in the beginning of volume 1 where readers can understand how political risk issues are resolved from the insurance perspective and how the appreciation of political risk factors developed and was refined through different international crisis. In many instances, the insurance determinations addressed risks that were not otherwise captured by growing investment arbitration jurisprudence in anywhere near the same detail such as, for example, in the context of political violence and inconvertibility claims. Where similar risks are at issue, as is the case with expropriation claims, the decisions develop arguably different approaches in the PRI and investment treaty world (both with their own cohesive policy underpinnings) that are worthy of further examination. The data are easily accessed and expand on the basis of countries, corporations and types of disputes.

By making this primary material readily accessible for the first time, the editors have provided scholars and practitioners alike with tools to refine their own approaches to present day political risk issues such as the losses caused by the political violence in the Middle East and potential foreign exchange issues that could be created by the euro and the United States debt crisis.

From the perspective of this reviewer, I feel that the editors have missed a valuable opportunity to add three more steps to their analysis.

1. The current analysis is essentially classificatory in nature. Although, quite useful in its own right, it deprives the readers of the insights that the editors must have gained through their yeoman work in reviewing these materials.

2. The review focuses on the past, i.e., what has happened, but it does not look at what should have happened, but did not happen. For example, the editors could point out to some of the emerging areas of political (social) risks that could and should have been covered, or should not have been covered. For example, many syndicated loans from IFC and other multilateral organizations require that lenders comply with the Equator Principles and thereby certify whether

such loans – especially in infrastructure projects – would exclude environmentally unsustainable and potentially harmful projects.

3. The review could also use the editors' perspective as some of critical emerging issues of political risk where pre-emptive thought and action could save potential harm to the projects and to the funding and insuring organizations. For example, a significant number of projects in war-torn countries in Africa and other emerging economies that deal with extractive industries are facing extreme opposition from the indigenous people in the impacted region while the national governments have been highly supportive of these projects. These conflicts have resulted in frequent instances of violence, sabotage to the companies' facilities, and an overall increase of costs and thus lowering the potential for economic gain.

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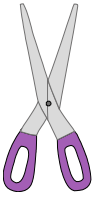

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