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# China's economic embrace of Africa -
## An international comparative perspective
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**Abstract**

This paper discusses the entry of China into the game of foreign finance in Africa. It analyses the scope, destination and sectoral distribution of Chinese financial flows and trade in comparison with Western patterns and trends of aid, foreign direct investment (FDI) and trade. China's foreign aid and manufacturing investment flow to Africa's physical infrastructure and productive sectors of agriculture and manufacturing fill the vacuum which emerged when Western financial flows shifted to other sectors and activities. In contrast, China's trade patterns with Africa highly resemble those of Africa's leading Western trading partners. Africa imports manufactured goods and exports primary goods. Differences in relative factor endowments of labour, capital and natural resources are largely responsible for the pattern of Sino-African trade.

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## 1. INTRODUCTION

While China's rapid embrace of the African continent can be regarded as an important phenomenon in contemporary international economics and politics, it has so far remained an under-researched topic in the development literature. This paper will shed some light on the characteristics of China's rapidly growing economic ties with Africa, namely in the fields of (i) development assistance, (ii) foreign direct investment (FDI), and (iii) international trade.

In contrast to previous contributions that have focused primarily on the domestic origins of China's rapid embrace of the African continent (Alden, 2005; Lee, 2012; J. Y. Lin, 2012; Taylor, 2006; Zweig & Jianhai, 2005), we will discuss Sino-African economic relationships from an international comparative perspective. We will take into account the characteristics of Western foreign finance in the African continent since the 1960s. More specifically, we will discuss the entry of China into the game of foreign finance[1] against the background of changing patterns and trends in development aid, foreign direct investment and trade flows originating from Western countries.

The key questions to be examined in this paper are the following:

How does the volume of Chinese aid, investment and trade compare with that of Western countries? In order to assess these questions, we provide a statistical analysis of China's financial and trade flows to Africa and compare them to those from the West[2].

With regard to foreign aid, we discuss the differences between Chinese and Western development assistance since the early 1990s, in particular with reference to conditionality. Next, we examine whether the geographic and sectoral destination of China's aid flows differs radically from those of traditional donors. We also consider what sectors are targeted by aid flows and how Chinese and Western flows differ in this respect.

With regard to foreign direct investment, we pinpoint the sectors in the economy that are targeted by Western and Chinese investors. Furthermore, we review the main motives driving Western and Chinese firms on the African continent, applying Dunning's (1977, 1979) taxonomy of FDI motives – market seeking, resource seeking, efficiency seeking and strategic asset seeking FDI.

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[1] Foreign finance generally includes foreign aid, foreign direct investment, loans and remittances. In our analysis, if not specified otherwise, we will only refer to foreign aid and foreign direct investment when using the term 'foreign finance'.

[2] If not specified otherwise, the West refers to North America (mainly the US) and Europe. The DAC aid statistics also include Australia, New Zealand, Japan and, since very recently, South Korea.

With regard to trade patterns, we investigate whether there are any systematic differences between the trade patterns between high-income countries from the West and Africa and those of middle-income China and Africa. One of the questions raised is, to what extent patterns of trade depend on the level of income and the economic structure of the African partners?

Finally, a key question is, to what extent are patterns of Chinese trade, aid and investment in Africa related? Do those three primary channels[3] – aid, FDI and trade – on which the intensification of Sino-African relations rests, serve as supplements or as alternatives in Beijing's involvement in the continent? Also, what can we learn from this analysis about the strategic goals of Chinese presence in Africa?

In this paper, we show that China's foreign finance in Africa serves as a significant game changer in the game of foreign finance. We find that China's foreign aid, and to some extent China's investment fill the vacuum created by the current absence of Western aid inflows to productive sectors of many African economies. We observe exponential growth rates of Beijing's aid budget, though the magnitude is still relatively small compared to development assistance from traditional OECD-DAC donors. In contrast to Western development assistance, which is often conditional on political reforms in the recipient country, China's aid often comes with few strings attached as a result of Beijing's non-interference policy. The sectoral distribution of China's development assistance strongly resembles past patterns of Western development assistance in the early 1960s and mid-1970s. Compared to the rather erratic pattern of Western foreign aid with its trends, switches and sudden breaks, however, the pattern and nature of China's development assistance has been relatively stable over time. While resource-rich countries are among the top recipients of China's development assistance, the geographic distribution of its aid expenditures is more diversified than commonly assumed, as geostrategic considerations also play an important role in Beijing's aid allocation.

In terms of the volume of FDI, China competes with Malaysia as the major investor in Africa from the Global South. But Chinese FDI stocks and flows in and to Africa still fall short of FDI levels and stocks from more traditional investors such as the US, France and the UK. The perception of the host environment by traditional and Chinese investors is often radically different. In an environment perceived as risky in political terms, Chinese investors often recognize economic opportunities. While the developed world has accounted for the lion's share of inward FDI flows and stocks in many African countries since the mid-1970s, foreign direct investment carried out by Southern investors including China is growing rapidly. Like Western

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[3] Another channel corresponds to migration characterized by a growing number of Chinese people living and working in Africa.

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*resource-seeking* FDI, the bulk of China's FDI takes place in resource extraction, but there is also substantial investment in infrastructural projects. Those projects are carried out by Chinese state-owned enterprises (SOEs) predominantly. Moreover, Western *market-seeking* FDI mainly targets the service sector of African countries with large market potential, while the ever-growing *market-seeking* investment of Chinese small and medium-sized entities (SMEs) is heavily concentrated in labour-intensive manufacturing industries.

After the European Union, China has not only become the most important trading partner for the continent as a whole, but for many individual African countries as well. While Western and Chinese modes and patterns of development assistance and foreign direct investment are very different, we observe more similarities than differences in the realm of trade. Though trade between China and Africa is often labelled as South-South trade, its structure very much resembles North-South trade patterns. Like the United States and the European Union, China mainly imports natural resources (such as oil, gas or iron ore) from Africa and exports manufactured goods to Africa. While China's trade balance with Africa was largely in China's favour until the early 2000s, Beijing has recorded a trade deficit throughout much of the period thereafter. In a similar vein, both the European Union and the United States ran trade deficits with Africa, although the current EU trade deficit significantly exceeds the trade deficit of both China and the US.

Even though foreign direct investment and trade have rapidly become more important in Western economic relations with the African continent, our analysis shows that foreign aid continues to play a predominant role for many Western countries. Commercial ties clearly dominate China-Africa aid relations, while the findings are more mixed for major Western nations. China's embrace of the African continent through the intensification of all three external flows builds strongly on the various complementarities between development aid, foreign direct investment and international trade.

In this study we will focus on overall trends in Chinese African relationships. While the reader may get the impression that we treat Africa as a monolithic entity, we are well aware that the continent is highly diverse, consisting of 54 countries that vary significantly in their history, endowment structure, political systems and economic growth trajectories. As a result, the characteristics and impact of China's foreign finance and trade on the economic growth trajectory, political system, natural environment and most importantly, civil society may vary from country to country and from industry to industry. Country studies and case studies can provide valuable complementary information on these diverse effects of Chinese presence in

Africa – see for instance Chau (2014), Corkin (2013), Patey (2014), Tang (2010) and van Reybrouck (2010, ch. 15).

The remainder of this paper is structured as follows. Section 2 briefly reviews the emerging literature on China's expanding engagement in Africa. Section 3 examines the magnitude, sectoral distribution and geographic destination of Western and Chinese foreign aid expenditures over time. Sections 4 and Section 5 do the same with regard to Western and Chinese FDI and trade flows, respectively. Section 6 examines whether foreign aid, FDI and trade act as supplements or as alternatives at the country level. Section 7 documents the degree of complementarity and competition between China's and Western external flows to Africa at the sector level. Section 8 concludes.

## 2. REVIEW OF THE LITERATURE

The current focus on the economic relationships between the American and Chinese economies and the emergence of imbalances threatening the macroeconomic stability of the global economy (Arrighi, 2007; Ferguson & Schularick, 2007; Wolf, 2008) has tended to overshadow academic and policy debates about one of the most important contemporary geopolitical and geo-economic developments: China's growing involvement with developing countries, most notably the African economies. When China first established diplomatic relationships with some African countries more than 50 years ago, both continents shared economic miseries such as low levels of development and high incidences of poverty (Ajakaiye & Kaplinsky, 2009). In the 21st century, however, Africa's economic and political fate cannot be analysed without paying attention to the emerging economic, political and strategic role of China on the continent.

Van Dijk (2009) defines 5 different ways to measure China's growing involvement in Africa: (i) the number of Chinese people living and working in Africa (migration), (ii) Chinese goods and services exported to African countries (trade), (iii) Chinese grants, soft loans and debt relief going to Africa (development aid), (iv) Chinese SOEs and SMEs investing in Africa (FDI), and (iv) Chinese loans and export credit facilities (other financial flows). This project will mainly deal with three of the five channels, namely Chinese development aid, Chinese outward foreign direct investment (OFDI) and China's two-way trade with Africa, as the nexus between those three variables is particularly strong (Sanfilippo, 2010).

## 2.1. Causes for China's increasing engagement with Africa

A major reason for China's longstanding relationship with many African countries is political: to garner support for the 'One China Policy' (Wenping, 2007). China's struggle to persuade each African country not to recognize Taiwan (in other words to recognize the People's Republic of China (PRC) as the only legitimate government of China) dates back to the 1960s.[4] The 1960s are also characterized by Beijing's fear of Soviet dominance and the concomitant doctrinal divergence of the two largest Communist states at that time. During much of the Cold War era, Beijing was eager to position itself as a buffer between Moscow and Washington.

While China has frequently emphasized the principle of non-interference in internal affairs, the 'One China Policy' has remained the prominent exception to the rule. The absence of diplomatic ties with Taiwan is a precondition for any fruitful diplomatic relations with Beijing (Bräutigam, 2009). Numerous historical examples have shown that diplomatic ties are cut off and economic aid is suspended if a country establishes diplomatic ties with Taiwan.[5]

A key element of China's rising contemporary engagement with Africa is strategic, namely the need to secure access to natural resources. China's economy currently finds itself in an energy transition manifested by the shift (i) from low efficiency fuels to oil, gas and electric power, (ii) from agriculture to urbanization and rapid industrialization and (iii) from low motorization to an increased use of motor vehicles (Adams & Shachmurove, 2008; Moyo, 2012). While China was the largest oil exporter of East Asia during much of the 1980s, self-sufficiency came to an end in 1993 turning China into a net oil importer (Lee, 2012; Taylor, 2006; Zweig & Jianhai, 2005). In 2003, China became the second largest world consumer of oil after the United States and the third largest net oil importer after the United States and Japan (Taylor, 2006). By 2009, China had become the second largest net oil importer overtaking Japan (Lee, 2012). A study by Yuan, Liu, Fang and Xie (2010) empirically observes a high correlation between industrialization and total energy consumption in China, plus a high correlation between GDP growth and coal consumption. Furthermore, China's secondary sector consumes about 50 per cent of total energy consumption in the economy. Obtaining raw materials and energy is therefore crucial for the Chinese Communist Party (CCP) in order to maintain the impressive domestic economic growth

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[4] While the terms "One-China policy" and "One-China principle" are often used interchangeably by many authors, they differ strictly speaking. While the "One-China policy" acknowledges the existence of two governments claiming to be the legitimate government of one "China", there is disagreement between mainland China and Taiwan which of the two is legitimate. Mainland China would recognize Taiwan in a state of undeclared independence if Taiwan would tacitly acknowledge the Beijing administration as the true leader of China. In contrast, the "One-China principle" views both mainland China and Taiwan as inalienable parts of a single "China" territory.

[5] As of today, only three African countries have diplomatic ties with Taiwan, namely Burkina Faso, Sao Tomé and Principe as well as Swaziland. Very recently, the Gambian government has cut diplomatic ties with Taiwan, namely in late 2013.

trajectory. China's soaring demand for oil and other natural resources has significantly contributed to the major upsurge of world commodity prices. As the scramble for natural resources becomes increasingly competitive, Beijing is eager to secure its natural resource supply for the near and distant future (Moyo, 2012).

Over the last couple of years, however, Chinese motivations have also increasingly been driven by *market seeking* interests as the African continent serves as a lucrative export market and export platform for the Chinese domestic manufacturing industry (Gu, 2009; Wang, 2007). The transformation can partly be attributed to the gradual albeit slow appreciation of the renminbi accompanied by its rise as an international currency (Eichengreen, 2013a; J. Y. Lin, 2012) and the rising labour costs in the domestic Chinese manufacturing sector (Bräutigam & Tang, 2011; Ceglowski & Golub, 2011).

## 2.2.    Characteristics of China's increasing engagement with Africa

As outlined in one of the previous sections, the reasons for China's embrace of the African continent have already been explored in depth in the academic literature. So far, there are only few studies that have tried to quantify the scope and magnitude of flows, and investigate the channels of China's external flows (Bräutigam, 2009; Broadman, 2007; Shen, 2013; Shinn & Eisenman, 2012). The current development literature still lacks a systematic comparison between the key characteristics of Chinese foreign finance and trade and that of its traditional developed country counterparts. This paper aims to fill this gap.

Systematic empirical studies have the potential of "enriching the aid effectiveness agenda with the practices and experiences of South-South cooperation" (DCD-DAC, 2010, p.10). While FDI statistics of emerging economies become increasingly available and more reliable (MOFCOM, 2011; UNCTAD, 2006, 2007, 2010), comprehensive aid statistics from numerous emerging donors are still lacking. China treats its aid allocations as highly confidential and, until very recently, data on foreign aid have been a state secret (Bräutigam, 2011a; Huse & Muyakwa, 2008). In contrast to most Western donors, Beijing has adopted a relatively broad and often imprecise definition of foreign aid. A vibrant debate has emerged in recent years about how much of Chinese foreign aid actually falls under the category of ODA (Bräutigam, 2011b; Davies, Edinger, Tay, & Naidu, 2008; Wang, 2007). Moreover, the paucity of accurate economically relevant statistics on the African continent is a serious cause for concern (Devarajan, 2013; Jerven, 2013).

## 2.3. Consequences of China's increasing engagement with Africa

Beijing's growing ties with the African continent have provoked vigorous and often heated debates about the potential impact of China's footprint on both (i) the economic growth trajectory and (ii) the development path of particular African countries and the continent as a whole.

The role of China's special economic zones (SEZs) located on the African continent in promoting structural transformation is discussed in-depth by Bräutigam and Tang (2011), but also by Corkin, Burke and Davies (2008). In his illustrative case-study, Tang (2010) provides some evidence under what conditions Chinese enterprises can have a positive and long-lasting impact on local employment creation in Angola and the Democratic Republic of Congo (DRC). In contrast, other studies point to the potentially negative consequences of intensified Chinese competition faced by local African firms in industries such as clothing, furniture or shoes (Giovannetti & Sanfilippo, 2009; Kaplinsky & Morris, 2009a, 2009b).

The political consequences of the Chinese presence on the African continent remain another hotly debated issue. Much of current Western aid focuses on improved governance. Tull (2006) argues that the aforementioned endeavours by Western Donors could be negatively affected by the low priority given to governance reforms by the CCP due to its dogma of non-interference. Tull is convinced that "Beijing is prepared to defend autocratic regimes that commit human rights abuses and forestall democratic reforms for narrow ends of regime survival" (p. 476). In a similar vein, Taylor (2007) fears that China's growing presence could undermine current efforts of strengthening good governance and protect human rights in most African regions. While Western aid conditionality has given African political elites less leeway to pursue undemocratic policies, Alden (2005) believes that the rise of Chinese development assistance could theoretically increase the leverage for African autocrats to maintain their hold on power and pursue socially sub-optimal interests. According to the non-profit organization Human Rights Watch (2006), "China's policies [in Africa] have not only propped up some of the continent's worst human rights abusers, but also weakened the leverage of others trying to promote greater respect for human rights" (p. n/d). On the other hand, there are also those that argue that the Chinese stance offers a welcome alternative to the paternalistic streak in Western aid efforts and the tendency to equate good governance with the neo-liberal rules of the Washington consensus (Cimoli, Dosi, & Stiglitz, 2009; Ramo, 2004). Whatever the position taken in this debate, it is clear that the entry of China into the game of foreign finance has increased the bargaining power of African governments and leaders.

## 3. CHINA'S FOREIGN AID

While ODA from traditional DAC donors has until today remained a major part of international development assistance (Tarp, 2006), the share of international development assistance coming from non-DAC contributors has been gradually rising, especially from emerging economies such as China or India (Davies et al., 2008; UN ECOSOC, 2008; UNCTAD, 2010; UNDP, 2009; Woods, 2008).[6] Back in 1960, China's ODA to Africa amounted to "only" $58 million. In 2009, it had reached $1.4 billion. According to our estimates in Table 6, by 2012 the volume of aid was close to $2.5 billion. In absolute terms, however, China's aid budget targeted to African countries is still small compared to the total budget of bilateral DAC Donors ($32.6 billion in 2011).

This section contributes to the literature in three ways: it will first quantify China's development assistance and compare it to traditional development assistance delivered by DAC donors (section 3.1). Next, it will address the question which sectors of the economy have primarily been the targets of China's development assistance in comparison to Western development assistance (section 3.2). Last but not least, it will shed some light on the discussion whether China's development assistance is mainly skewed towards resource-rich and autocratic regimes (section 3.3). Several challenges and obstacles in overcoming the lack of Chinese data will be addressed as well.

### 3.1. Magnitude of Foreign Aid

*The volume of AID from DAC Donors*

Development Assistance from the traditional DAC Donors has expanded over the past 50 years, though with some notable periods of stagnation and decline (Figure 1). Despite the long-run increase of development assistance, aid expenditures have always been subject to short-run volatility. There were three main periods of rapid expansion: the mid- to late 1970s, the mid- to late 1980s and the post-1997 period. Periods of stagnation include the years from the mid-1960s to the mid-1970s, three short periods of decline in the early 1970s and 1980s, in the mid-2000s as well as in the early 2010s and one longer period of decline in development assistance for much of the 1990s. During much of the 1990s, international "donor fatigue" prevailed (Riddell, 2007; Szirmai, 2015).

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[6] The most active providers of South-South Development Cooperation (SSDC) include Brazil, Chile, China, Colombia, Egypt, India, Malaysia, Mexico, South Africa, Thailand and Venezuela.

The five major DAC Donors are, in descending order, the United States, Japan, France, Germany and the United Kingdom (Table 1). Since the five major DAC Donors account for two-thirds of the entire ODA budget, the analysis will mainly focus on the aid policies of these countries.

**Figure 1: Western Bilateral Official Development Assistance, 1960-2012**
(Current and constant US$ billion)
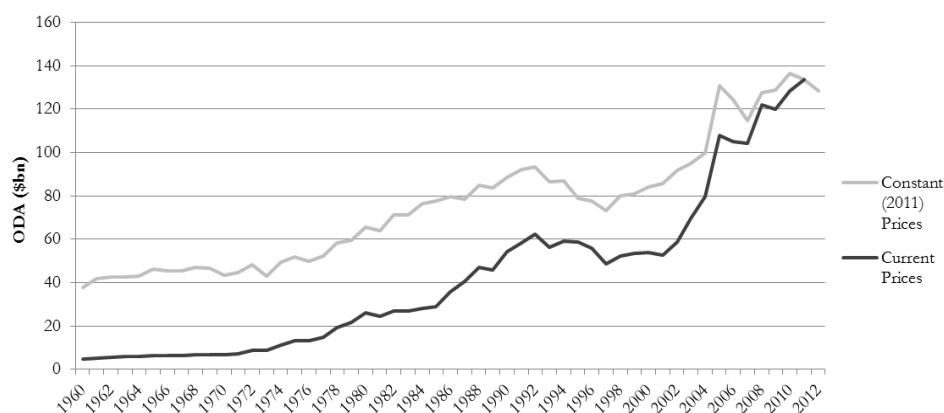


*Source:* OECD/DAC Database

**Table 1: Main Global Bilateral DAC Donors, 1960-2011**
(Current US$ million)

| Country | Net ODA 1960-2011 Volume | Net ODA 1960-2011 % of Total | Net ODA 2011 Volume | Net ODA 2011 % of Total |
|---|---|---|---|---|
| USA | 418,860.83 | 26.75 | 27,075.96 | 28.75 |
| Japan | 219,818.68 | 14.04 | 6,943.01 | 7.37 |
| France | 174,655.33 | 11.15 | 8,494.69 | 9.02 |
| Germany | 154,094.66 | 9.84 | 8,736.22 | 9.28 |
| UK | 110,936.58 | 7.08 | 8,473.54 | 9.00 |
| Netherlands | 80,483.54 | 5.14 | 4,336.26 | 4.60 |
| Canada | 61,154.16 | 3.91 | 4,111.19 | 4.37 |
| Sweden | 52,313.25 | 3.34 | 3,641.76 | 3.87 |
| Italy | 39,891.29 | 2.55 | 1,702.39 | 1.81 |
| Norway | 39,790.45 | 2.54 | 3,561.60 | 3.78 |
| Other DAC Donors | 214,045.86 | 13.67 | 17,106.96 | 18.16 |
| TOTAL | 1,566,044.63 | | 94,183.58 | |

*Note:* Figures are displayed in US$1 million increments and expressed in current prices
*Source:* OECD/DAC Database

Africa as a whole has received a historically unprecedented volume of aid making it the biggest aid recipient over time (see Table 2 below). During the post-Cold War era, Africa was most severely affected by international donor fatigue, when aid flows destined for the continent were cut back by about one-third. The period throughout the 2000s is characterized by surges in aid flows, with Africa being the predominant beneficiary. Yet, calculations by Easterly (2009) show that "even prior to the recent surge in aid, the median African nation was already far more aid dependent than the median non-African developing nation" (p. 383).

**Table 2: DAC Donors' ODA Disbursements by Region, 1960-2012**

(Shares in %)*

| Regional Shares | 1960 | 1970 | 1980 | 1990 | 2000 | 2012 |
|---|---|---|---|---|---|---|
| Europe | 9.1 | 2.7 | 5.3 | 2.0 | 5.8 | 2.3 |
| Africa | 30.3 | 21.9 | 37.3 | 41.1 | 28.7 | 34.4 |
| America | 6.6 | 13.1 | 7.8 | 10.9 | 10.7 | 7.5 |
| Far East Asia | 19.6 | 26.3 | 10.8 | 14.7 | 17.1 | 4.8 |
| South & Central Asia | 25.0 | 23.0 | 14.4 | 8.8 | 9.3 | 14.7 |
| Middle East | 6.0 | 2.2 | 7.2 | 5.7 | 3.6 | 5.6 |
| Oceania | 0.5 | 4.8 | 5.6 | 3.2 | 2.0 | 2.1 |
| *TOTAL* | 97.2 | 94.0 | 88.4 | 86.4 | 77.1 | 71.4 |
| Developing Countries unspecified | 2.8 | 6.0 | 11.6 | 13.6 | 22.9 | 28.6 |
| *Total incl. unspecified* | 100 | 100 | 100 | 100 | 100 | 100 |
| *TOTAL (mln current US$)* | 4238 | 15305 | 32928 | 37965 | 83701 | 88550 |
| *TOTAL (mln constant 2011 US$)* | 33886 | 34946 | 42213 | 62854 | 55960 | 90211 |

*Percentages based on current dollars

*Source:* OECD/DAC Database

Africa's share in total aid disbursements rose from 21.9 per cent in 1970 to 41.1 per cent in 1990, almost doubling within 20 years. The fact that the African share peaked in 1990 and subsequently declined until the late 1990s can partly be explained by the fall of the Iron Curtain in 1989. With the collapse of communist regimes in Eastern Europe, the majority of foreign aid offered by Western aid agencies and international organizations became increasingly conditionality-based. The increasing use of political conditionality attached to foreign aid was regarded as a necessary condition for enhanced aid effectiveness and as a useful tool for promoting democratic governance in the least developed countries (Burnside & Dollar, 1997; Dollar & Pritchett, 1998). The donor agencies' belief that democratization and constitutional change is a sine qua non condition for enhanced aid effectiveness was especially relevant for Sub-Saharan Africa.[7] During the mid-1990s and 2000, the "third wave" of democratization[8] swept across the African continent, as evident by the introduction of multi-party parliaments and the increasing availability of basic political rights for civil society (Ake, 1996; Bratton & Van De Walle, 1997; Meredith,

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[7] By 1989, thirty-eight out of forty-five African countries were being ruled by either (i) an autocrat, (ii) the military or (iii) a single party (Ake, 1996). Before 1990, more than nine out of ten incoming national leaders were appointed to their posts by military or party elites. Moreover, only one sitting chief executive had been democratically voted out of office before the end of the Cold War. In 1982, the independence leader and Prime Minister of Mauritius, Seewoosagur Ramgoolam, succumbed to the opposition alliance headed by Aneerood Jugnauth by means of election (Bratton & Van De Walle, 1997). Bates (2008) remarks that between the early 1970s and 1980s, more than 80 per cent of the yearly country observations did either contain no- or one-party systems, while more than 50 per cent experienced multiparty systems by the mid-1990s. For a recent discussion on the state of democracy in Sub-Saharan Africa, see Bates, Fayad and Hoeffler (2012).

[8] The phrase is borrowed from Huntington (1991). The first wave of democratization refers to the introduction of the suffrage granted for the majority of white males in the United States during the early 19th century. It is commonly known as "Jacksonian democracy". After the end of the Second World War, a second wave of democratization swept across the world.

2005).[9] The transition to democracy in many African countries went hand in hand with an increasing share of foreign aid targeted to African countries from the early 2000s onwards. Table 3 below documents Africa's relatively high aid dependency. Mozambique, Liberia but also relatively small countries like Guinea-Bissau, Sao Tomé and Principe as well as Cape Verde rank among the top, far above African average. Developing countries as a whole are far less aid dependent than the average African economy.

**Table 3: DAC Donors' ODA Disbursements to Africa by Recipient Country, as % of GNI**

| 1960-2012 | | 2010-2012 | |
|---|---|---|---|
| Country | Average Percentage | Country | Average Percentage |
| **Highly aid dependent (top 10)** | | | |
| Guinea-Bissau | 19.69 | Liberia | 35.17 |
| Sao Tome & Principe | 19.12 | Libya | 21.00 |
| Mozambique | 18.90 | Congo, DR | 19.90 |
| Cape Verde | 18.75 | Sao Tome & Principe | 15.87 |
| Liberia | 16.29 | Cape Verde | 13.10 |
| Somalia | 13.81 | Burundi | 11.64 |
| Comoros | 13.78 | Mali | 10.32 |
| Djibouti | 11.51 | Mozambique | 9.86 |
| Eritrea | 11.45 | Togo | 8.58 |
| Tanzania | 10.20 | Malawi | 6.67 |
| **Least aid dependent (bottom 5)** | | | |
| Gabon | 1.94 | Equatorial Guinea | 0.49 |
| Algeria | 1.90 | South Africa | 0.25 |
| Morocco | 1.71 | Angola | 0.16 |
| Mauritius | 1.35 | Egypt | 0.14 |
| Nigeria | 0.82 | Algeria | 0.08 |
| | | | |
| *Africa, Total* | 2.49 | *Africa, Total* | 1.85 |
| *Developing countries, Total* | 0.97 | *Developing countries, Total* | 0.40 |

*Note:* The French overseas department Mayotte and the British Overseas Territory St. Helena are excluded from the analysis. South Africa is deliberately excluded for the period 1960-2012 as data was only available from 1993 onwards.
*Source:* Own calculations based on OECD/DAC Database

Table 4 depicts the top ten ODA Donors in Africa. For the period 1960-2011, the top ten donors have been responsible for almost 87 per cent of official development assistance channelled to the continent. The patterns for 2011 are very similar to those for the whole period.

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[9] By the mid-1990s, several African countries already witnessed electoral competition, constitutionalism and a respectable human rights record: Botswana, Cape Verde, Senegal, Namibia, Mali, Zambia, Gambia, Mauritius, Benin, South Africa and Sao Tome and Principe. Nigeria, Ghana, Cameroon, Angola, Tanzania, Congo Republic, Burkina Faso, Mauritania, Guinea-Bissau, Ivory Coast, Togo, Mozambique, Kenya, Lesotho and the Seychelles have also already made considerable efforts to undergo a democratic transition during the mid-1990s (see Ake, 1996).

**Table 4: Main Bilateral DAC Donors to Africa, 1960-2011**

(Current US$ Million)

| Country | Net ODA 1960-2011 Volume | Net ODA 1960-2011 % of Total | Net ODA 2011 Volume | Net ODA 2011 % of Total |
|---|---|---|---|---|
| USA | 117,083 | 22.0 | 9,407 | 28.8 |
| France | 106,487 | 20.0 | 4,641 | 14.2 |
| Germany | 53,403 | 10.0 | 2,575 | 7.9 |
| UK | 45,507 | 8.6 | 3,409 | 10.5 |
| Japan | 36,319 | 6.8 | 1,708 | 5.2 |
| Netherlands | 25,721 | 4.8 | 979 | 3.0 |
| Italy | 21,398 | 4.0 | 830 | 2.5 |
| Canada | 20,200 | 3.8 | 1,545 | 4.7 |
| Sweden | 19,689 | 3.7 | 1,352 | 4.1 |
| Norway | 15,446 | 2.9 | 1,080 | 3.3 |
| Other DAC Donors | 70,217 | 13.2 | 5,090 | 15.6 |
| TOTAL | 531,469 | 100.0 | 32,615 | 100.0 |

*Source:* OECD/DAC Database

The aid figures presented above provide an interesting paradox: although the African continent has experienced very large aid inflows, a large portion of African territory continues to be haunted by staggering levels of poverty, economic stagnation, civil wars, lack of existing infrastructure and ethnic violence as well as poor health and education records (Ayittey, 2005; Collier, 2007; Easterly, 2006; Mills, 2010; Moyo, 2009). While the incomes in many South-East Asian countries have converged towards the levels of high-income countries since 1973, income levels have stagnated or even diverged on the African continent since the independence era (Easterly & Levine, 1997; Maddison, 2004; Pritchett, 1997; Sala-i-Martin, 2006).[10] Of course, one needs to be careful in drawing causal inferences. Aid typically tends to flow to regions with the highest levels of poverty.

*The Volume of Chinese aid*

Since the early 2000s, a myriad of emerging aid donors have intensified their development assistance on the African continent, of which China can be regarded as one of the most prominent ones. Beijing's mounting international development assistance is documented in Figure 2.

From 1996 onwards, the Chinese aid system underwent two major policy changes: First, the China Export-Import Bank (EXIMBANK) started to provide medium- and long-term low-interest packages for developing nations, making concessional loans an integral part of China's aid budget from then onwards (China State Council, 2011). EXIMBANK is the only Chinese

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[10] The probably most compelling historical work dealing with Africa's fortune since the independence era are the monumental studies *Africa Betrayed* by George Ayittey (1992) and *The State of Africa: A History of the Continent Since Independence* by Martin Meredith (2005).

institution entitled to carry out concessional lending policies for overseas projects (Foster, Butterfield, Chen, & Pushak, 2009). Second, China's development assistance at the turn of the century started to become heavily shaped by Beijing's "Go Out" Policy.[11] The probably most important platform underlining Beijing's "Go Out" Strategy is the Forum on China-Africa Cooperation (FOCAC) with regular meetings held every five years. The FOCAC serves as a venue for dialogue between China and African countries and as a mechanism for expanding development assistance.[12] Since the early 2000s, Beijing was able to significantly raise financial resources for foreign aid partly thanks to its impressive domestic economic growth rates. From 2004 onwards, China actively pursued development assistance to developing countries not only through traditional bilateral channels, but also increasingly through multilateral channels.[13] Over time, Beijing's development aid has increasingly become dominated by economic and commercial motives. While Egypt was the only African country to receive foreign aid from China in 1956, the FOCAC summit in 2006 was attended by 50 African countries and the African Union Commission, underscoring China's success in forming new strategic partnerships in Africa.[14]

**Figure 2: China's Foreign Aid, 1953-2009**
(Current US$ million)
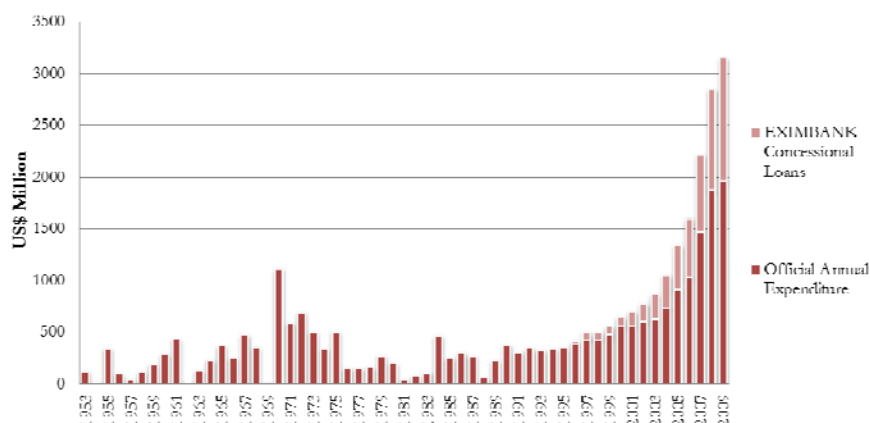


*Sources:* Lin (1996), Kobayashi (2008) and Bräutigam (2009)

Until very recently, China's foreign aid budget has been a state secret and lacked transparency for mainly four reasons: First, China's aid system is multi-layered as it constitutes a labyrinthine

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[11] Initiated in 1999, the "Go Out Policy" (Chinese: 走出去战略; pinyin: Zǒuchūqū Zhànlüè) is also known as "Going Global Strategy". This policy refers to the effort of the Chinese government to actively support Chinese firms to explore international and global market opportunities.

[12] The FOCAC is an official forum between the People's Republic of China and African governments. For more information on the FOCAC, see Taylor (2012).

[13] These multilateral channels include the UN High-Level Meeting on Financing for Development, UN High-Level Meeting on the Millennium Development Goals, Forum on China-Africa Cooperation, Shanghai Cooperation Organization, China-ASEAN Leaders Meeting, China-Caribbean Economic & Trade Cooperation Forum, China-Pacific Island Countries Economic Development & Cooperation Forum, and Forum on Economic and Trade Cooperation between China and Portuguese-Speaking Countries (China State Council, 2011).

[14] All 50 countries which attended have diplomatic ties with China. Countries that have diplomatic ties with Taiwan are not members of the FOCAC.

network of ministries. It is believed to be administered through 23 national, local, provincial and regional ministries and commissions (Huang (2007) cited in Strange, Parks, Tierney, Fuchs, & Dreher, 2013).[15] Second, foreign aid often comes in the form of tied aid since it is often part of a larger investment contracts and trade deals with particular governments (Huse & Muyakwa, 2008). A third reason why the government has treated its aid allocations as highly confidential is that the government is frightened of emerging criticism at home once the aid figures would be published officially (Lancaster, 2007). Despite its recent success in lifting millions of people out of poverty (Chen & Ravallion, 2010), many regions in China, predominantly the West and mountain areas, still suffer from (i) high poverty levels (Ravallion & Chen, 2007) and (ii) large urban-rural income gaps (Wu & Perloff, 2004).[16] As a result, a substantial part of the Chinese population might have strong objections to Beijing's decision to give aid funding to other developing nations. A fourth potential reason why China's aid figures have been kept a state secret for so long, has cultural foundations. In China it may just seem "improper or even immoral" (Bräutigam, 2009, p. 166) to pride oneself on delivering development assistance to other developing countries.

In recent years, however, China's aid figures have become more transparent. The China State Council has issued a white paper on its foreign aid activities in the year 2011 (China State Council, 2011). According to this white paper, China delivers eight different forms of foreign aid: (i) complete projects, (ii) goods and materials, (iii) technical cooperation, (iv) human resource development cooperation, (v) medical teams sent abroad, (vi) emergency humanitarian aid, (vii) volunteer programmes in foreign countries, and (viii) debt relief. The white paper included, for the first time, only aid flows in the form of (i) interest-free loans, (ii) grants, and (iii) concessional loans. As a result, the figures published by the China State Council are becoming comparable to Western development assistance.

Between 1950 and 2009, "China had provided a total of 256.29 billion yuan in aid to foreign countries, including 106.2 billion yuan in grants, 76.54 yuan in interest-free loans and 73.55

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[15] For an excellent discussion of the interaction between China's three central aid institutions (i) Ministry of Commerce (MOFCOM), (ii) EXIMBANK and (iii) the Chinese Ministry of Foreign Affairs (MFA), see Corkin (2011).

[16] Estimates by Chen and Ravallion (2010) reveal that partly thanks to China's impressive economic growth performance, 600 million fewer people lived below the $1.25 per day poverty line in 2005 if compared to 1981. However, the same authors emphasize that the progress against poverty has been uneven. Provinces starting off with relatively high inequality witnessed a much slower poverty reduction (see also Ravallion & Chen, 2007). Moreover, China's economic growth trajectory has been characterized by a widening urban-rural income gap. Based on calculations by Wu and Perloff (2004), the Gini index for China's aggregate population rose by 34 per cent from 0.310 to 0.415, and the Theil index nearly doubled from 0.164 to 0.317 during the period 1981-2001.

billion yuan in concessional loans" (China State Council, 2011, p. 4). With a share of 41 per cent, aid grants constituted the major share of China's foreign aid, followed by interest-free loans (30 per cent) and concessional loans (29 per cent). As mentioned above, concessional loans have only been introduced by EXIMBANK in 1996. China's total foreign aid budget for the period 1950-2009 amounts to approximately US$37.7 billion, of which aid grants equal US$ 15.6 billion, interest-free loans US$11.3 billion and concessional loans yield US$ 10.8 billion (see Figure 3).

**Figure 3: Breakdown of China's ODA-like Foreign Aid, 1950-2009**
(RMB ¥ 256,29 billion = US$ 37.7 billion; RMB/US$ exchange rate=6.8)
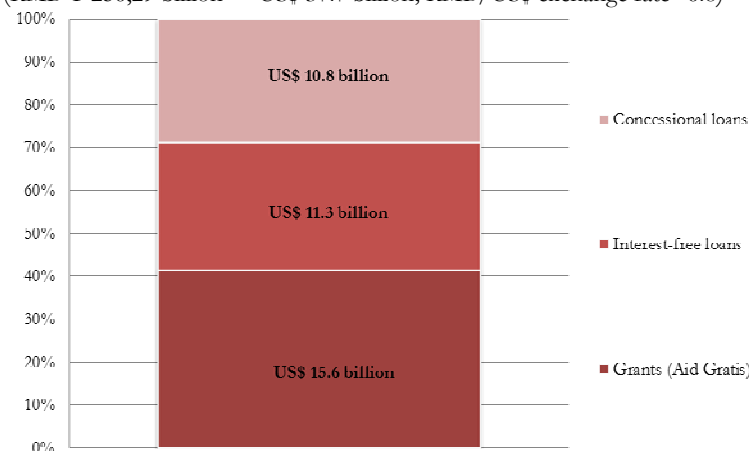


*Source:* China State Council (2011)

Table 5 below portrays the regional distribution of China's foreign aid budget for the time-period 1950-2009. Africa is the biggest recipient of China's aid flows, making up almost half of the entire budget. Asia is ranked as second biggest recipient. The two continents taken together receive almost 80 per cent of Beijing's aid resources. The other three regions, Europe, Latin America and Caribbean and Oceania account for "only" 16.7 per cent, with 4.5 per cent of China's aid budget remaining unspecified.

As ODA flows, China's official aid disbursements are broken down into: (i) grants, (ii) interest-free loans and (iii) concessional (fixed-rate, low interest) loans. Among other things, these instruments finance government scholarships for African students, Chinese medical teams, technical assistance in agriculture, government buildings, telecommunication networks, sport venues, youth volunteers, low-cost housing and short-term training programmes (Bräutigam, 2011b; Wang, 2007). These three instruments, however, only make up a fraction of China's total official financial assistance to Africa. Other major instruments such as preferential export credits, market-rate export buyers' credits or commercial loans issued by Chinese banks, but also military

aid and aid to support joint ventures would all not qualify as ODA, but rather as Other Offical Flows (OOF) (Bräutigam, 2011b).

**Table 5: Regional Distribution of China's ODA-like Foreign Aid Budget, 1950-2009**
(Current RMB¥ billion)

| Sector | Volume | % of TOTAL |
|---|---|---|
| Africa | 117.12 | 45.7 |
| Europe | 0.77 | 0.3 |
| Asia | 84.06 | 32.8 |
| Latin America and Caribbean | 32.55 | 12.7 |
| Oceania | 10.25 | 4.0 |
| Others | 11.53 | 4.5 |
| TOTAL | 256.29 | 100.0 |

*Note:* The share of Africa measured in constant US$ dollars is probably a little bit lower as recent aid disbursements of which Africa has been the largest recipient will be overweighted
*Source:* China State Council (2011)

Table 6 below provides estimates of the magnitude of China's foreign aid for the period 1953-2012. The data for 1996-2009 come from Bräutigam (2009), while the figures before and after that period are based on secondary sources, extrapolations and own estimates. The most noteworthy series is displayed in Column H, which portrays China's total ODA-like aid budget. Beijing's development assistance, comparable to the assistance provided by DAC donors consists of two major sources: One part represents the aid expenditures by MOFCOM (e.g. interest-free loans and grants) as displayed in Column E, while the other part consists of ODA-like concessional loans[17] issued by EXIMBANK (Column G). The data for the years 2010, 2011 and 2012 are estimates based on extrapolated trends or additional data sources.

Two aspects are worth noting here: First, China's aid budget has risen almost exponentially from 1996 onwards. The estimate for 2012 is approximately 14 times larger than that in the year 1996. An equally interesting feature is the change in the composition of China's aid budget. At its introduction in 1996, concessional loans only represented a 5.6 per cent of the entire aid budget. Over time, however, concessional loans became an integral part of China's aid budget accounting for more than a third by the year 2009. As concessional loans gain increasingly prominence as a foreign policy instrument tool, it is likely that concessional loans will take on even greater significance in the aid budget in the near and distant future (Corkin, 2011).[18]

Columns I, J and K provide the estimates of the volume of Chinese Aid to Africa. China's African Aid rose exponentially from US$ 0.15 billion in 1996 to almost US$1.4 billion in 2009, a

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[17] Concessional loans with a grant element of at least 25 per cent are ODA eligible (OECD-DAC, 2013).
[18] For a detailed overview of the magnitude and regional distribution of China's concessional loans, see Hubbard (2007).

more than eight-fold increase. Note that China's mounting development assistance to Africa has evolved gradually but steadily since 1996. The share of Africa in total Chinese aid has been fairly constant as indicated in the last column of Table 6.

Comparing the volume of Chinese aid with that of traditional DAC donors, we can draw two conclusions. First, since 1990, China's aid expenditures have increased rapidly and continuously, with Africa receiving a fairly constant share of total aid (Figure 4). Second, China's foreign aid budget for the world and for Africa is still rather small when compared to the annual ODA disbursements by traditional DAC donors (Figure 5).

## Table 6: Bräutigam's Estimates of China's Foreign Aid
(Current US$ million and RMB billion)

| Year | A. Official Annual Expenditure for China's External Assistance | B. % of Aid Expenditure to Africa (excl. concessional loans) | C. Estimated Annual Expenditure for China's External Assistance to Africa | D. IMF Annual Average Exchange Rate | E. Official Annual Expenditure for China's External Assistance (A/D) | F. Eximbank Concessional Loans, Annual Disbursements | G. Eximbank Concessional Loans, Annual Disbursements (F/D) | H. Total Chinese Aid, Annual (E + G) | I. Official Expenditures for External Assistance to Africa (C/D) | J. Eximbank concessional loans disbursed to Africa | K. Total Chinese Aid Annual Disbursements to Africa (I + J) | L. Total Official Aid Disbursements (K/H) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RMB billion | % to Africa | RMB billion | RMB/US$ | US$ million | RMB million | US$ million | US$ million | US$ million | US$ million | US$ million | % to Africa |
| 1953 | 300 | 0 | 0 | 2.5 | 120 | 0 | 0 | 120 | 0 | 0 | 0 | 0 |
| 1960 | 720 | 20 | 144 | 2.5 | 288 | 0 | 0 | 288 | 58 | 0 | 58 | 20 |
| 1970 | 2778 | 36 | 1000 | 2.5 | 1,111 | 0 | 0 | 1,111 | 400 | 0 | 400 | 36 |
| 1980 | 297 | 36 | 107 | 1.5 | 198 | 0 | 0 | 198 | 71 | 0 | 71 | 36 |
| 1990 | 1800 | 36 | 648 | 4.8 | 375 | 0 | 0 | 375 | 135 | 0 | 135 | 36 |
| 1996 | 3212 | 36 | 1156 | 8.3 | 387 | 190 | 23 | 410 | 139 | 13 | 152 | 37 |
| 1997 | 3552 | 36 | 1279 | 8.3 | 428 | 588 | 71 | 499 | 154 | 39 | 193 | 39 |
| 1998 | 3720 | 36 | 1339 | 8.3 | 429 | 550 | 66 | 516 | 161 | 37 | 198 | 38 |
| 1999 | 3920 | 36 | 1411 | 8.3 | 474 | 660 | 80 | 553 | 170 | 44 | 214 | 39 |
| 2000 | 4588 | 36 | 1652 | 8.3 | 554 | 755 | 91 | 645 | 199 | 50 | 249 | 39 |
| 2001 | 4711 | 41 | 1932 | 8.3 | 569 | 1060 | 128 | 697 | 233 | 70 | 304 | 44 |
| 2002 | 5003 | 41 | 2051 | 8.3 | 604 | 1431 | 173 | 777 | 248 | 95 | 343 | 44 |
| 2003 | 5223 | 40 | 2089 | 8.3 | 631 | 1932 | 233 | 864 | 252 | 128 | 381 | 44 |
| 2004 | 6069 | 38 | 2306 | 8.3 | 733 | 2608 | 315 | 1048 | 279 | 173 | 452 | 43 |
| 2005 | 7470 | 33 | 2465 | 8.2 | 912 | 3485 | 425 | 1337 | 301 | 234 | 535 | 40 |
| 2006 | 8200 | 30 | 2460 | 8.0 | 1028 | 4579 | 574 | 1603 | 309 | 316 | 624 | 39 |
| 2007 | 11154 | 30 | 3346 | 7.6 | 1466 | 5679 | 746 | 2213 | 440 | 411 | 850 | 38 |
| 2008 | 12559 | 33 | 4144 | 6.7 | 1874 | 6502 | 970 | 2845 | 619 | 534 | 1152 | 41 |
| 2009 | 13296 | 39 | 5185 | 6.8 | 1955 | 8117 | 1194 | 3149 | 763 | 597 | 1359 | 43 |
| 2010 | 14716 | 39 | 5786 | 6.77 | 2174 | 10614 | 1568 | 3741 | 855 | 785 | 1639 | 44 |
| 2011 | 16288 | 40 | 6457 | 6.46 | 2521 | 13879 | 2148 | 4670 | 1000 | 1031 | 2031 | 43 |
| 2012 | 18027 | 40 | 7205 | 6.31 | 2857 | 18148 | 2876 | 5733 | 1142 | 1356 | 2497 | 44 |

*Note:* Unless otherwise indicated the figures derive from Bräutigam (2009). The table is updated by the authors. Bold underlined figures are based on authors' own research. Bold underlined figures in italics are estimates by the authors. Underlined non-bold figures for the period 2010-2012 are exponential growth extrapolations based on the Bräutigam figures for the earlier periods. Underlined figures in italics are results based on author's own data, author's own estimates or previous extrapolations. Column A includes grants and zero interest loans and aid in kind, including cash aid, military goods, training expenses, expert salaries, interest subsidies for concessional loans, and fees and administrative costs associated with aid. Eximbank concessional loans between 2002 and 2005 are estimated by Bräutigam on the basis of reported 35 per cent annual growth rate (China Eximbank Annual Report 2005). This rate is assumed to vary between 23 per cent and 35 per cent after 2005. Bräutigam's estimates for percentage of official annual expenditure, Eximbank concessional loan disbursements, and per cent of aid allocated to Africa are based on official sources and interviews. Figures do not include scholarship aid.

*Sources:* Bräutigam (2011) based on China Statistical Yearbook, China Eximbank Annual Reports, Qi Guoqiang, "China's Foreign Aid", estimates and interviews; World Development Indicators; Authors' own calculations.

**Figure 4: ODA Bilateral Disbursements of Major Donors in Africa, 2001-2011**
(Current US$ Billion)
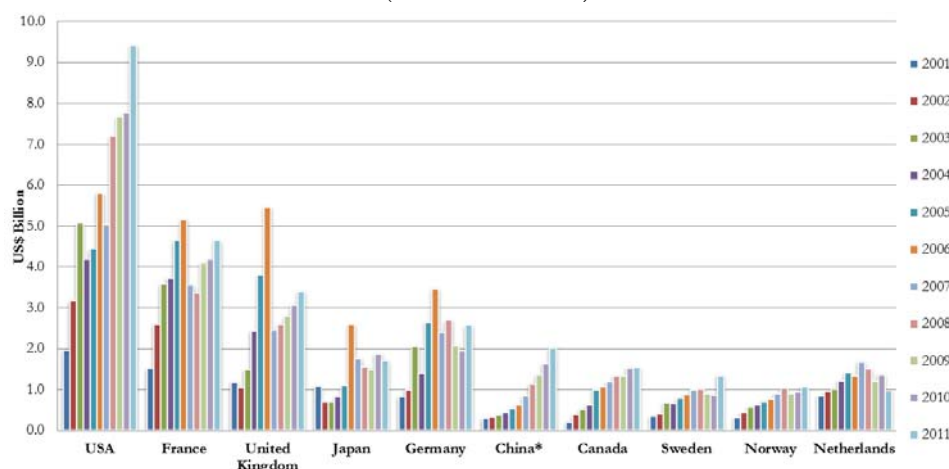
**Figure 5: China's and DAC Donor's Bilateral ODA Net Disbursements in Africa, 2001-2011**
(Current US$ Billion)
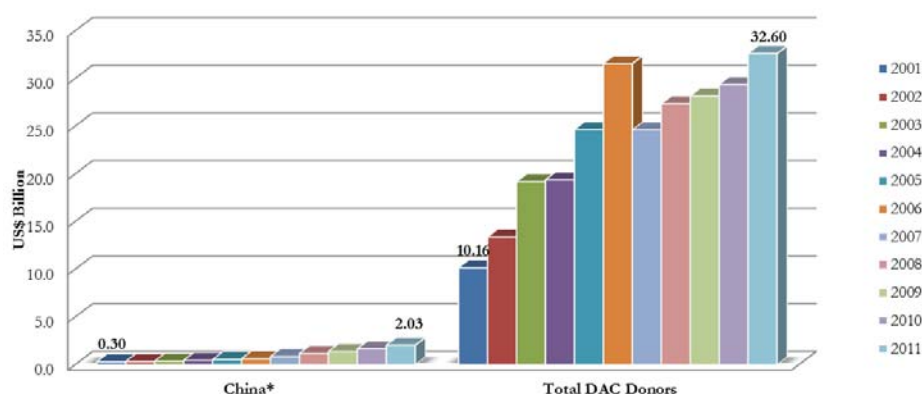
## 3.2. Sectoral Distribution of Foreign Aid

*DAC-ODA*

Influenced by early seminal contributions that examined the role of aid in providing sufficient funds for physical capital investment (Chenery & Strout, 1966; Lewis, 1954; Myrdal, 1957; Nurkse, 1953; Rosenstein-Rodan, 1943, 1961; Rostow, 1959), Western development aid was initially highly focused on infrastructural and industrial development (Figure 6 and Table 7). In 1967, the share of ODA disbursements flowing into physical infrastructure projects (road construction, transport,

telecommunications, electricity supply, etc.) and the production sector accounted for 27.8 and 36.6 per cent, respectively. Meier (1984) provides qualitative evidence that the emphasis on physical infrastructure development was even more pronounced in the early post-war period.

Between the late 1960s and early 1970s, donor countries and international aid agencies started to shift the focus away from (i) infrastructure projects and (ii) production sectors towards an emerging concern for poverty alleviation (Chenery, Ahluwalia, Duloy, Bell, & Jolly, 1974; Ghai & Lee, 1980; The British Ministry of Overseas Development, 1976). Influenced by seminal contributions on agricultural economics (see Schultz, 1956, 1964), agricultural programmes, the adoption of innovations by farmers and rural transformation received increasing attention in Western development strategies in developing countries. As a result, development assistance flowing into the agricultural sector of the economies witnessed a major upsurge in the 1970s, before levelling off in the mid-1980s (Figure 6 and Table 7).

Since then, however, the amount of bilateral official development assistance that went into the agricultural sectors of developing countries dropped to below five per cent in the mid-2000s at a time where approximately 75 per cent of the poor people lived in rural areas (Mills, 2010; World Bank, 2007). Education has been an important sector in the early 1970s but has experienced a significant drop during the mid-1970s. The share of ODA flowing into the educational sector of recipient countries has more or less hovered around 10 per cent thereafter.

During the 1980s, structural adjustment programmes – often called first generation conditionality – were advocated and monitored by the IMF. The contemporary economic school of thought during that period was based on earlier work by Bauer (1972, 1975) and Friedman (1958). Bauer and Friedman were two of the most ardent critics of foreign aid labelling development assistance as a powerful force that undermines economic activity in the private sector. The "golden era" of development aid witnessed in the 1960s and 1970s came to a halt as the focus on development strategy shifted towards internal domestic policy failure and the implementation of prudent macroeconomic policies (Riddell, 2007).

During the post-Cold War era and in accordance with the rediscovery of the importance of a sound political institutional structure for delivering long-run growth (Acemoglu, Johnson, & Robinson, 2001, 2002; North, 1990; Rodrik, Subramanian, & Trebbi, 2004), 'traditional' foreign aid from rich donor countries to low-income countries has become increasingly subject to political conditionality. A very influential World Bank Report by Dollar and Pritchett (1998) concluded that the return to aid was highest in recipient countries with civil liberties as well as sound policy and institutional environments. As a result foreign aid became increasingly linked to second generation

conditionality, namely political reforms at the governing system of recipient countries.[19] While the share of bilateral ODA flowing into civil society strengthening, as well as local and national government support (what we bluntly call "political infrastructure") amounted to only 1.4 per cent in 1975, already 12.2 per cent of total ODA targeted this sector in 2012.

**Figure 6: Sectoral Distribution of Bilateral Total Net ODA Disbursements, 1967-2012**

### Physical Infrastructure
(Transport & Storage, Communications, Energy and Water Supply & Sanitation)



### Industry/Manufacturing



### Production Sectors
(Agriculture, Forestry, Fishing, Industry, Mining, Construction,
Trade Policies & Regulations, Tourism, Banking, Financial Services, Business, etc.)



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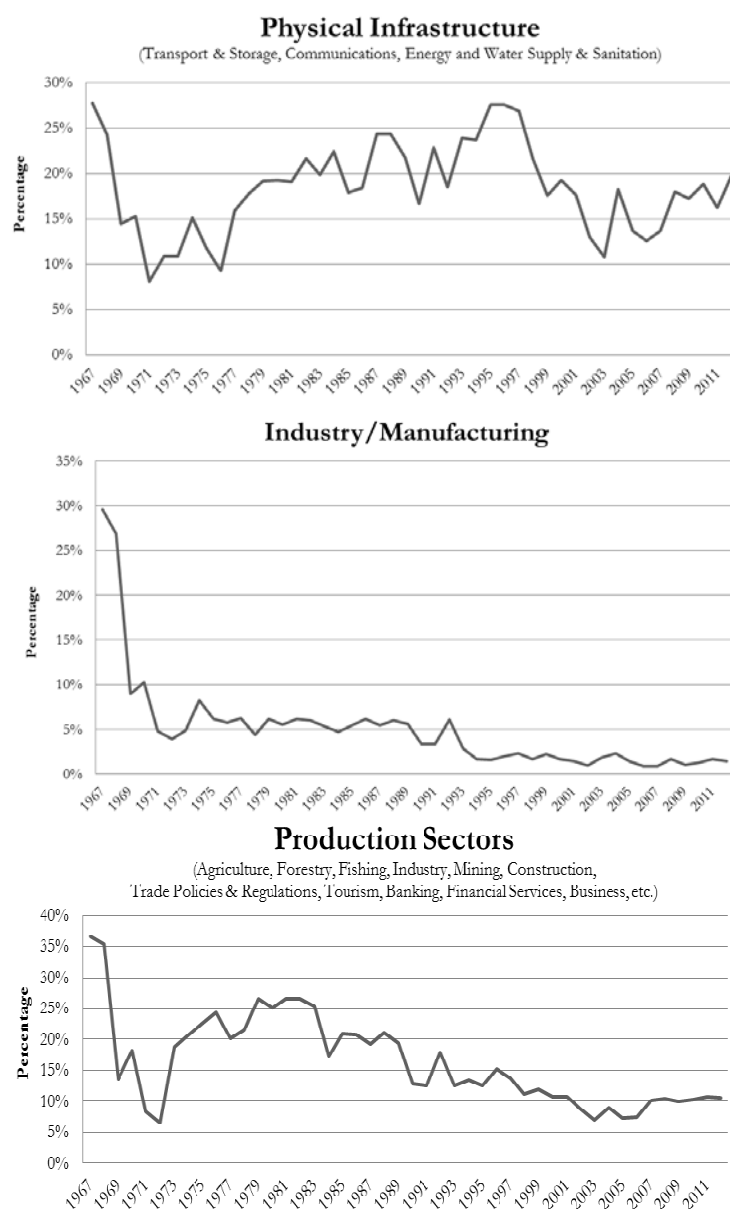
[19] The effectiveness of aid *conditionality* on promoting democratic governance is still heavily debated (Dreher, 2009; Svensson, 2003). Broad consensus exists that aid *selectivity* has become a major concern for donor nations in recent years (Bourguignon & Sundberg, 2007; Dollar & Levin, 2006).

## Agriculture, Forestry and Fishing



## Social Infrastructure
(Education, Health, Population, Reproductive Health, Government & Civil Society, Other Social Infrastructure & Services)
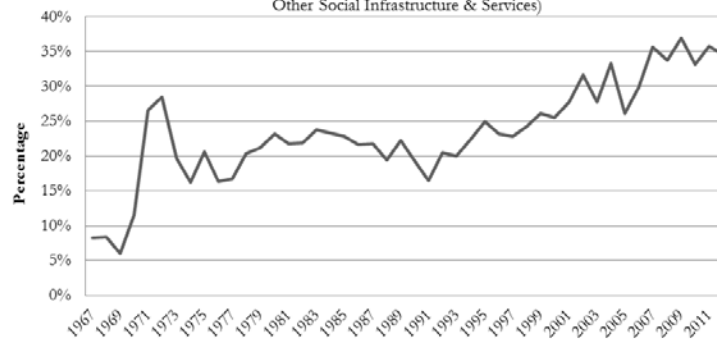


## Education
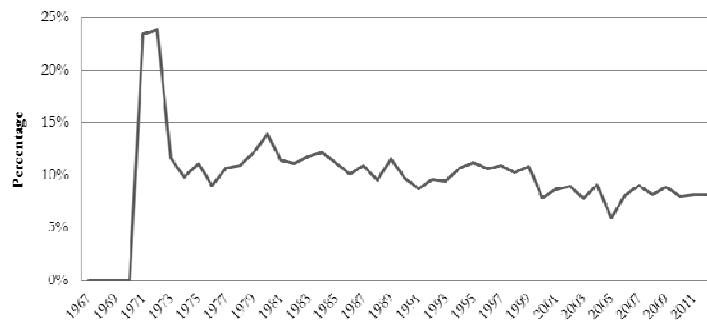


## Government and Civil Society
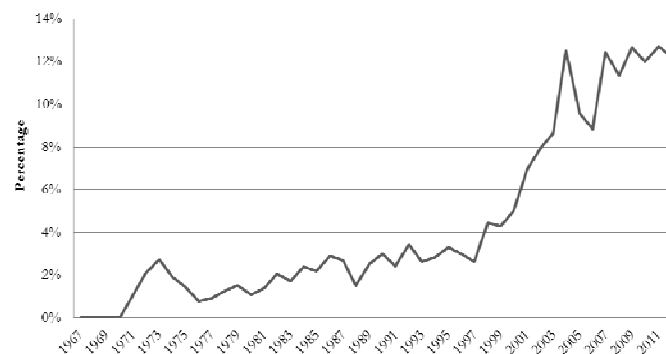


*Note:* The share for *Industry/Manufacturing* are upper bound estimates. The official share with regard to *Industry/Manufcaturing* also contains Mining and Construction. *Source:* Authors' own calculations based on OECD/DAC Statistics.

**Table 7: Sectoral Distribution of Total Bilateral Net ODA Disbursements, 1967-2012**

(Shares in %)

| Sector | 1967 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Social Infrastructure** | 8.3 | 11.5 | 20.6 | 23.2 | 22.8 | 19.3 | 24.9 | 25.5 | 26.1 | 34.6 |
| Education | 0.0 | 0.0 | 11.1 | 13.9 | 11.2 | 9.8 | 11.2 | 7.8 | 5.9 | 8.2 |
| Health | 0.0 | 0.0 | 4.6 | 5.2 | 5.1 | 2.8 | 4.0 | 3.6 | 3.6 | 5.6 |
| Population and Reproductive Health | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.0 | 1.6 | 2.4 | 3.3 | 6.5 |
| Government & Civil Society | 0.0 | 0.0 | 1.4 | 1.1 | 2.2 | 3.0 | 3.3 | 5.0 | 9.6 | 12.2 |
| Other Social Infrastructure & Services | 8.3 | 11.5 | 3.5 | 3.1 | 4.1 | 2.8 | 4.8 | 6.7 | 3.7 | 2.1 |
| **Physical Infrastructure** | 27.8 | 15.3 | 11.8 | 19.3 | 17.9 | 16.6 | 27.6 | 19.3 | 13.7 | 19.8 |
| Transport & Storage | 11.1 | 6.4 | 2.5 | 9.2 | 5.8 | 6.4 | 10.1 | 8.7 | 5.2 | 7.7 |
| Communications | 3.2 | 2.3 | 1.8 | 1.9 | 2.2 | 2.2 | 1.6 | 0.9 | 0.4 | 0.4 |
| Energy | 13.5 | 6.6 | 5.4 | 6.6 | 7.3 | 4.9 | 10.1 | 3.2 | 3.3 | 5.9 |
| Water Supply & Sanitation | 0.0 | 0.0 | 2.1 | 1.5 | 2.6 | 3.2 | 5.7 | 6.4 | 4.7 | 5.8 |
| **Production Sectors** | 36.6 | 18.2 | 22.6 | 25.1 | 20.9 | 12.8 | 12.6 | 10.8 | 7.3 | 10.6 |
| Agriculture, Forestry, Fishing | 7.0 | 8.0 | 8.6 | 11.5 | 13.0 | 7.5 | 7.4 | 5.1 | 3.4 | 5.5 |
| Industry, Mining, Construction | 29.6 | 10.2 | 6.2 | 5.5 | 5.4 | 3.4 | 1.6 | 1.7 | 1.4 | 1.4 |
| Trade Policies & Regulations | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.8 | 0.2 | 0.1 | 0.4 | 0.6 |
| Tourism | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| Banking & Financial Services | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 0.3 | 0.8 | 0.5 | 1.1 | 2.0 |
| Business & Other Services | 0.0 | 0.0 | 0.7 | 0.3 | 0.4 | 0.7 | 1.2 | 3.3 | 0.8 | 1.0 |
| Non-specified by Sector | 0.0 | 0.0 | 7.2 | 7.8 | 0.0 | 0.1 | 1.4 | 0.1 | 0.0 | 0.0 |
| **Multi-Sector / Cross-Cutting** | 0.0 | 1.2 | 2.1 | 2.0 | 1.2 | 3.2 | 4.9 | 8.1 | 6.2 | 9.7 |
| **Commodity Aid / General Prog. Ass.** | 10.1 | 41.1 | 19.1 | 10.5 | 24.5 | 14.2 | 5.8 | 7.0 | 2.6 | 3.1 |
| **Action Relating to Debt** | 6.5 | 4.3 | 4.1 | 5.7 | 2.5 | 23.2 | 7.3 | 7.7 | 26.8 | 2.8 |
| **Humanitarian Aid** | 0.0 | 0.0 | 1.3 | 1.8 | 2.2 | 2.0 | 4.4 | 4.6 | 8.3 | 8.1 |
| **Unallocated / Unspecified** | 10.8 | 8.4 | 18.4 | 12.4 | 7.9 | 8.5 | 12.7 | 16.9 | 9.2 | 11.2 |

*Note:* Our sectoral classification slightly deviates from the sectoral classification by the OECD. We have reallocated "Water Supply & Sanitation" from social infrastructure to physical infrasstructure. "Banking & Financial Services" and "Business & Other Services" have been shifted from social infrastructure to the productive sector.
*Source:* Authors' own calculations based on OECD/DAC Statistics.

Table 8 portrays the evolution of the sectoral distribution of bilateral ODA disbursements for Africa only. Development assistance flowing into the agricultural sector of African economies rose in the 1970s, before levelling off after 1985. Between 1990 and 2005, the agricultural sector experienced a significant drop but recovered thereafter. The share of ODA flowing into African social infrastructure has steadily increased over the last three decades, while the share of aid flows targeting physical infrastructure and production sectors has steadily decreased between the 1980s and mid-2000s. Similar to the pattern for agriculture, the production sector share and in particular the infrastructure share have bounced back between 2005 and 2012.

Table 9 below displays the evolution of total World Bank lending to Sub-Saharan Africa by sector over time, including both IBRD loans and IDA credits. While approximately 75 per cent of World Bank lending between 1946 and 1960 targeted physical infrastructure development, primarily transport, power generation and telecommunications, the share fell to 38.7 per cent in 2012. Agriculture has become a low-priority sector in the mid-2000s, even though around 82 per cent of

the rural Sub-Saharan population lives in agriculture-based countries (World Bank, 2007). In a similar vein, World Bank lending into industrial projects has slid from only 5.7 per cent in 1977 to a meagre 1.8 per cent in 1991. While the share increased somewhat since then, the amount of funding channelled into industrial related projects remains negligible. Another sector which has witnessed a decline in relative terms is the transportation sector. These declines contrast with the increasing importance of judicial and public administrative capacity building. Both bilateral and multilateral development assistance have increasingly emphasized judicial and public administrative capacity building at the expense of physical infrastructure development and the fostering of productive sectors. But compared to bilateral aid, World Bank lending has focused relatively more on agricultural and infrastructural development.

**Table 8: Sectoral Distribution of Total Bilateral Net ODA Disbursements in Africa, 1973-2012**

(Shares in %)

| | 1967 | 1973 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2012 |
|---|---|---|---|---|---|---|---|---|---|
| **Social Infrastructure** | | 14.1 | 7.6 | 10.7 | 10.0 | 26.3 | 29.8 | 24.7 | 36.1 |
| Education | | 3.9 | 3.0 | 4.3 | 2.5 | 5.1 | 9.1 | 7.3 | 8.3 |
| Health | | 2.0 | 1.8 | 2.5 | 2.4 | 4.8 | 5.4 | *3.1* | *5.9* |
| Population & Reproductive Health | | 0.5 | 0.3 | 1.0 | 1.2 | 2.2 | 5.2 | *2.8* | *6.8* |
| Government & Civil Society | | 6.1 | 0.3 | 2.2 | 2.8 | 9.7 | 6.6 | *8.2* | *12.9* |
| Other Social Infrastructure & Services | | 1.7 | 2.3 | 0.7 | 1.1 | 4.5 | 3.5 | *3.2* | *2.2* |
| **Physical Infrastructure** | | 30.6 | 29.7 | 22.0 | 23.9 | 21.1 | 10.6 | 8.3 | 18.6 |
| Transport & Storage | | 12.5 | 14.8 | 6.6 | 7.9 | 5.6 | 3.3 | 3.9 | 7.2 |
| Communications | | 4.5 | 4.4 | 2.2 | 2.4 | 1.4 | 1.3 | | |
| Energy | | 8.9 | 6.7 | 5.3 | 6.9 | 6.1 | 1.6 | 2.2 | 5.3 |
| Water Supply & Sanitation | | 4.7 | 3.8 | 7.9 | 6.7 | 8.0 | 4.4 | 2.2 | 6.1 |
| **Production Sectors** | | 12.4 | 17.4 | 20.4 | 18.2 | 12.0 | 15.5 | 3.9 | 8.0 |
| Agriculture, Forestry, Fishing | | 6.7 | 11.9 | 12.9 | 12.2 | 8.6 | 7.1 | 2.8 | 6.6 |
| Industry, Mining, Construction | | 2.7 | 5.0 | 6.1 | 3.4 | 1.0 | 2.5 | 0.5 | 0.9 |
| Trade Policies & Regulations | | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.5 | 0.5 |
| Tourism | | 1.5 | 0.1 | 0.1 | 0.4 | 0.0 | 0.0 | | |
| Banking & Financial Services | | 1.4 | 0.3 | 1.3 | 2.1 | 1.3 | 0.9 | 1.7 | 2.3 |
| Business & Other Services | | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 4.8 | | |
| **Multi-Sector** | | 1.0 | 5.1 | 3.1 | 7.2 | 8.1 | 9.2 | 5.2 | 6.3 |
| **Commodity Aid / General Progr. Assist.** | | 32.4 | 26.7 | 33.8 | 22.5 | 13.0 | 13.5 | 5.3 | 5.9 |
| **Debt Relief** | | 1.0 | 10.7 | 4.9 | 16.5 | 14.1 | 13.2 | 36.9 | 8.2 |
| **Humanitarian Aid** | | 0.7 | 1.1 | 3.8 | 1.1 | 4.6 | 7.1 | 11.9 | 12.4 |
| **Unspecified** | | 7.8 | 1.6 | 1.3 | 0.6 | 0.8 | 1.1 | 2.2 | 2.3 |
| **TOTAL** | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Note:* Our sectoral classification slightly deviates from the sectoral classification by the OECD. We have reallocated "Water Supply & Sanitation" from social infrastructure to physical infrasstructure, but also "Banking & Financial Services" and "Business & Other Services" from social infrastructure to the productive sector. Data in italics are estimates by the authors. For the years 2005 and 2012 a detailed sectoral breakdown of social infrastructure does not exist according to our knowledge (with education being the exception). The fraction of social infrastructure <u>except</u> education can be calculated for those two years. This remaining fraction is then divided among the other subcategories of "Social Infrastructure" by applying the same weight for those sub-categories as in Table 7. The shares of several sub-categories are reported together for the years 2005 and 2012, for example Trade & Tourism.
*Source:* OECD (2003) - International Development Statistics. CD-Rom; Authors' own calculations based on OECD/DAC Database

**Table 9: Sectoral Distribution of World Bank Lending to Sub-Saharan Africa, 1946-2011**
(Current US$ Million)

| Sector | 1946-1971 % | 1977 Volume | 1977 % | 1991 Volume | 1991 % | 2003 Volume | 2003 % | 2011 Volume | 2011 % |
|---|---|---|---|---|---|---|---|---|---|
| **Social Infrastructure** | | 52.1 | 5.5 | 3876.5 | 10.0 | 1921.2 | 51.4 | 2944.6 | 41.7 |
| Education | | 52.1 | 5.5 | 2437.3 | 6.3 | 423.6 | 11.3 | 497.6 | 7.0 |
| Population and Health | | - | 0.0 | 1131.5 | 2.9 | 775.9 | 20.8 | 591.4 | 8.4 |
| Government & Civil Society | | - | - | 307.7 | 0.8 | 721.8 | 19.3 | 1855.6 | 26.3 |
| **Physical Infrastructure** | >75.0 | 345.6 | 36.6 | 15753.7 | 40.8 | 1352.6 | 36.2 | 2732.6 | 38.7 |
| Transport & Storage | | 167.6 | 17.7 | 7081.6 | 18.3 | 690.5 | 18.5 | 937.9 | 13.3 |
| Communications | | - | 0.0 | 862.3 | 2.2 | 41.4 | 1.1 | 259.0 | 3.7 |
| Energy | | 112.0 | 11.9 | 4272.3 | 11.1 | 324.4 | 8.7 | 890.1 | 12.6 |
| Water supply and sanitation | | 22.0 | 2.3 | 1735.3 | 4.5 | 296.3 | 7.9 | 645.7 | 9.1 |
| Urbanization | | 44.0 | 4.7 | 1802.2 | 4.7 | - | - | - | - |
| **Production Sectors** | | 489.2 | 51.8 | 13068.7 | 33.8 | 463.3 | 12.4 | 1382.8 | 19.6 |
| Agriculture, Forestry, Fishing | 10.4 | 377.9 | 40.0 | 9347.5 | 24.2 | 303.4 | 8.1 | 843.1 | 11.9 |
| Industry & Trade | | 53.6 | 5.7 | 711.6 | 1.8 | 92.7 | 2.5 | 432.8 | 6.1 |
| Banking & Financial Services | | 57.7 | 6.1 | 2340.2 | 6.1 | 67.2 | 1.8 | 106.8 | 1.5 |
| Business & Other Services | | - | - | 669.4 | 1.7 | - | - | - | - |
| **Nonproject** | | 45.0 | 4.8 | 5071.1 | 13.1 | - | - | - | - |
| **Technical assistance** | | 12.4 | 1.3 | 876.1 | 2.3 | - | - | - | - |
| **TOTAL** | | 944.3 | 100.0 | 38646.1 | 100.0 | 3737.2 | 100.0 | 7060.0 | 100.0 |

*Notes:* Our sectoral classification slightly deviates from the sectoral classification by the World Bank. We have reallocated "Water Supply & Sanitation" from social infrastructure to physical infrasstructure, but also "Banking & Financial Services" and "Business & Other Services" from social infrastructure to the productive sector. Categories have been subject to change due to a new thematic-sectoral coding system installed in the year 2003. Share of Physical Infrastructure for the period 1946-1971 refers to World. Share of Agriculture, Forestry and Fishing refers to World and covers the period 1948-1972. Lending includes both IDA and IBRD lending..
*Sources:* World Bank Annual Reports (various); Krueger, Michalopoulos and Ruttan (1989) – Aid and Development; Lumsdaine (1993) – Moral Vision in International Politics: The Foreign Aid Regime, 1949-1989.

Concluding, the increasing emphasis of Western development assistance, be it bilateral or multilateral, on the political and institutional infrastructure in a recipient country, seen as one of the ultimate sources of growth and development, goes hand in hand with a considerable decline in resources made available for specific productive sectors such as (i) *Industry and Trade*, (ii) *Agriculture, Fishing and Forestry* or (iii) *Transportation*, which belong to the more proximate sources of growth (Abramovitz, 1989; Maddison, 1988; Rodrik, 2003; Szirmai, 2012).

*China*

The sectoral allocation of China's global foreign aid budget differs significantly from that of major the DAC Donors. Table 10 provides an overview of the major sectors targeted by Beijing's *concessional loans*. China's high priority sectors have been economic infrastructure[20] (61 per cent) and productive sectors such as industry and agriculture (20 per cent). According to the figures released

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[20] The concept "Economic Infrastructure" used by the China State Council is very similar, albeit not entirely identical, to our concept "Physical Infrastructure".

by the China State Council, more than 90 per cent of the concessional loans issued from 1996 until 2009 have targeted the development of economic sectors. The share of China's ODA flowing into the political and administrative infrastructure is virtually zero which is consistent with Beijing's principle of non-intervention in internal political affairs. Table 11 shows the sectoral distribution of China's *grants* and *interest-free loans* at the project level. The majority of China's 2025 completed projects in developing countries from 1950 until 2009 have either targeted the primary sector of the economy (agriculture), the secondary sector of the economy (industry and manufacturing), public utilities or economic infrastructure. Those four sectors together made up more than 94 per cent of all projects completed by Chinese engineers as well as Chinese workers and delivered as finished products to the recipient country.[21]

**Table 10: Sectoral Distribution of China's Concessional Loans, 1996-2009**

(Current RMB¥ Million)

| Sector | Total | % of Total |
|---|---|---|
| Economic Infrastructure | 44.87 | 61.0 |
| Energy and resources development | 6.55 | 9.0 |
| Industry | 11.84 | 16.0 |
| Agriculture | 3.16 | 4.0 |
| Public Facilities | 2.35 | 3.0 |
| Others | 4.78 | 7.0 |
| TOTAL | 73.55 | |

*Source:* China State Council (2011)

**Table 11: Sectoral Distribution of China's Completed Projects, 1950-2009**

(# of Projects)

| Sector | Number of projects | Sector (continued) | Number of projects |
|---|---|---|---|
| **Agriculture** | **215** | **Industry** | **635** |
| Farming, animal husbandry and fisheries | 168 | Light industry | 320 |
| Water conservancy | 47 | Textiles | 74 |
| **Public Facilities** | **670** | Radio and electronics | 15 |
| Conference buildings | 85 | Machinery industry | 66 |
| Sports facilities | 85 | Chemical industry | 48 |
| Theatres & Cinemas | 12 | Timber processing | 10 |
| Civil buildings | 143 | Building materials processing | 42 |
| Municipal facilities | 37 | Metallurgical industry | 22 |
| Wells and water supply | 72 | Coal industry | 7 |
| Science, education and health care | 236 | Oil industry | 19 |
| **Economic Infrastructure** | **390** | Geological prospecting | 12 |
| Transport | 201 | **Others** | **115** |
| Power Supply | 97 | **TOTAL** | **2025** |
| Broadcasting and telecommunications | 92 | | |

*Note:* Completed projects refer to "productive or civil projects constructed in recipient countries with the help of financial resources provided by China as grants or interest-free loans. The Chinese side is responsible for the whole or part of the process, from study, survey, to design and construction, provides all or part of the equipment and building materials, and sends engineers and technical personnel to organize and guide the construction, installation and trial production of these projects. After a project is completed, China hands it over to the recipient country" (China State Council, 2011, p. 6).
*Source:* China State Council (2011) - China's Foreign Aid

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[21] As the size of the projects can vary considerable, percentage of projects does not immediately translate into percentage of expenditure. Nevertheless, the focus on physical infrastructure and the productive sectors is clear.

While we have previously discussed the sectoral distribution of China's global foreign aid, we would also like to investigate the sectoral distribution patterns for the African continent only. At the time of this writing, no official information provided by the Chinese government or other Chinese authorities has been available. In an effort to tackle and overcome the problem, Strange et al. (2013) have compiled a database of hundreds and thousands of Chinese-backed projects in Africa from 2000 to 2011. The database tracks Chinese *commitments* (not disbursements) worth US$75 billion including information on 1,673 projects in 50 African countries.

Table 12 depicts the sectoral distribution estimates for China's development assistance in Africa for the time period 2000-2011, both in constant 2009 US dollars and current US dollars, as well as the relative share for each sector. Since the absolute amounts refer to aid commitments, one should not compare those amounts to the ODA disbursements figures for DAC donors discussed above. We are mainly interested in the sectoral shares. A word of caution must be made with regard to the sector *Government and Civil Society*. In accordance with China's non-interference in domestic affairs, this sector does not report funds channelled into capacity building[22] at the governmental level, but it includes projects like the demarcation of the Ethiopia-Sudan border, technical training courses delivered to Kenyan government officials, a laptop donation to the Zimbabwean ministry and even a Chinese design mansion for the president of Zimbabwe, Robert Mugabe.

In contrast to the findings in tables 10 and 11, the results obtained through the media-based collection (MBDC) approach suggest that a bulk of China's aid commitments in Africa is geared towards improving the *social* infrastructure and not towards strengthening the *physical* infrastructure or the productive sector. Those contradictory results underline the severe drawbacks of the MBDC methodology.[23] In our view the real trends in China's sectoral distribution of aid is better captured by the official data from the China State Council. Since the African continent is China's largest aid recipient, it is safe to assume that the sectoral distribution of China's aid in Africa strongly resembles the global pattern illustrated in Table 11.

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[22] While the term *Capacity building* often remains vague as a concept, we refer to assistance in capacity building as those tools that help governments to best meet and execute their daily responsibilities such as, among many others, revenue collection, the creation and implementation of laws, the promotion of civic engagement and the fight against corruption.

[23] For a discussion of the strengths and weaknesses of the MBDC methodology, consult Strange et al. (2013).

**Table 12: China's ODA-like Commitments to Africa by Sector (ESTIMATES), 2000-2011**
(In Current and Constant Million US$)

| Sector | Volume (constant) | Volume (current) | % (constant) | % (current) |
|---|---|---|---|---|
| **Social Infrastructure** | 7,335.0 | 6,215.6 | **44.89** | **45.21** |
| Education | 2,191.3 | 1,396.3 | 13.41 | 10.16 |
| Health | 1,178.2 | 1,114.8 | 7.21 | 8.11 |
| Population Policies / Programmes and Reproductive Health | 1,023.0 | 1,100.4 | 6.26 | 8.00 |
| Government and Civil Society | 2,023.3 | 1,630.5 | 12.38 | 11.86 |
| Other Social infrastructure and services | 909.0 | 962.6 | 5.56 | 7.00 |
| Support to (Non-)Government Organizations | 10.2 | 11.0 | 0.06 | 0.08 |
| **Economic Infrastructure** | 1,183.7 | 1,069.7 | **7.24** | **7.78** |
| Transport and Storage | 643.3 | 691.9 | 3.94 | 5.03 |
| Communications | 184.4 | 113.2 | 1.13 | 0.82 |
| Energy Generation and Supply | 356.0 | 264.6 | 2.18 | 1.92 |
| Water Supply and Sanitation | 0.0 | 0.0 | 0.00 | 0.00 |
| **Production** | 920.6 | 590.2 | **5.63** | **4.29** |
| Agriculture, forestry and fishing | 811.6 | 489.0 | 4.97 | 3.56 |
| Industry, mining and construction | 48.1 | 48.1 | 0.29 | 0.35 |
| Trade and tourism | 34.6 | 37.2 | 0.21 | 0.27 |
| Banking and Financial Services | 16.9 | 10.2 | 0.10 | 0.07 |
| Business and Other Services | 9.3 | 5.6 | 0.06 | 0.04 |
| **Multisector** | 1,133.2 | 1,133.2 | **6.94** | **8.24** |
| **Commodity Aid/General Programme Assistance** | 154.6 | 116.9 | **0.95** | **0.85** |
| General Budget Support | 146.9 | 109.1 | 0.90 | 0.79 |
| Non-food commodity assistance | 7.8 | 7.8 | 0.05 | 0.06 |
| **Debt Relief** | 2,724.9 | 1,613.0 | **16.68** | **11.73** |
| **Humanitarian Aid** | 793.3 | 572.0 | **4.86** | **4.16** |
| **Food aid** | 153.2 | 95.1 | **0.94** | **0.69** |
| **Unallocated/Unspecified** | 1,948.0 | 2,350.0 | **11.92** | **17.09** |
| **TOTAL** | 16,338.8 | 13,747.9 | **100.00** | **100.00** |

*Source:* Own calculations based on dataset by Strange et al. (2013) using a Media Based Data Collection Approach

On the basis of tables 10 and 11, we conclude that a bulk of China's development assistance is aimed at strengthening Africa's infrastructure base. Previous assistance in financing infrastructural projects by traditional donors in the 1960s was often criticized as the financing of "white elephants". This criticism resulted in a gradual declining share of ODA devoted to infrastructure projects on the continent (see also Chaponnière, 2009; Wang, 2007). Nevertheless, Africa's low-quality infrastructure is presently considered as one major obstacle holding back commercial activities on the continent. Investment in infrastructure is therefore critical if African countries want to enjoy sustained socio-economic growth and development (Foster et al., 2009; Kaberuka, Schwab, & Zoellick, 2011; Schwab & Sala-i-Martin, 2011; UNCTAD, 2012a). While over 2.4 million kilometres of roads exist, only 22.7 per cent are paved. Despite the existence of a 90,230 kilometres long rail line system, only approximately 7 per cent of the continent is electrified. Even though the four major rivers on the continent total to 18,000 kilometres, only 6000 kilometres is

navigable (Dhar, 2011). Regardless of the measure of infrastructure coverage (e.g. paved road density, internet density, electricity coverage, generation capacity, or sanitation), African countries score significantly lower than their equivalents in the developing world (Yepes, Pierce, & Foster, 2009). In order to effectively address Africa's infrastructure needs, around $93 billion a year is needed (around 15 per cent of the region's GDP), according to estimates by Foster and Briceño-Garmendia (2010).

Besides the infrastructural sector, the agricultural sector in many African countries has increasingly attracted Beijing's attention as well. Plagued by chronic food insecurity, low agricultural productivity and policies discriminating against agriculture since the early 1970s (Bates, 1981), it is hardly surprising that Africa has become a net food importer since then (Rakotoarisoa, Iafrate, & Paschali, 2011).

China's development cooperation also targets human resource development and educational support. While the Sino-African cooperation in education was once limited to providing scholarships for African pupils and dispatching Chinese teachers to Africa, the recent cooperation is marked by China's willingness (i) to establish 100 new schools in rural sectors in the period 2007-2009, (ii) to increasing the number of the Chinese government's scholarships to African students from 2000 to 4000 in the period 2007-2009 and (iii) to provide in-service training for educational officials and teachers of universities, primary, secondary and vocational schools in Africa (FOCAC, 2006).[24]

With regard to the sectoral distribution of China's and more traditional development assistance in Africa, two major differences have emerged. First, in contrast to much of current Western foreign finance, foreign finance from China is marked by an emphasis on the proximate sources of growth. Ignited by Deng Xiaoping, China's own growth trajectory and development path started with a major agricultural reform boosting productivity in the primary sector while at the same time reducing poverty (J. Y. Lin, 1992; Montalvo & Ravallion, 2010), and later accompanied by large-scale domestic investment in physical capital (Ding & Knight, 2011) as well as human capital (Ding & Knight, 2011; Heckman, 2003), technological upgrading (Fu & Gong, 2011), innovative policy reforms (Lau, Qian, & Roland, 2000; Qian, 2003) and gradual institutional reforms suited to local conditions (Xu, 2011).[25] Second, China's sectoral distribution of foreign aid has been relatively persistent over time, channelling a major share of its aid budget into economic sectors such as

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[24] For more information on the character and peculiarities of China's increasing development cooperation with African countries in the fields of human resource development and education, consult the two insightful case studies on Kenya and Cameroon by King (2010) and Nordtveit (2011), respectively.
[25] Both Qian (2003) and Xu (2011) provide illuminating in-depth historical accounts of the interplay between economic progress and gradual institutional reforms in the Chinese economy.

physical infrastructure (energy, transport, electricity, and telecommunications) or production. Interestingly, Beijing's development assistance is highly reminiscent of the approach of Western foreign aid policy during the 1960s. In contrast to traditional development assistance, however, China's sectoral allocation in Africa has been relatively stable over time compared to the erratic patterns of Western foreign aid with its trends, switches and sudden breaks.

### 3.3.    Regional Distribution of Foreign Aid

*DAC-ODA*

This section portrays the top ODA recipients in Africa, both with regard to bilateral aid (Table 13) and multilateral development assistance (Table 14; Table 15). Egypt has been one of the biggest aid recipients of bilateral aid for the following two main reasons: first, being an important international navigation canal by connecting Europe and the countries bordering the Indian Ocean, the Suez Canal has been of geostrategic importance for Western donors. Furthermore, Egypt plays a major geo-political role in the Arab-Israeli peace process. The biggest recipient of bilateral aid in 2011, however, has been the Democratic Republic of Congo (DRC). Ethiopia, one of the only two African countries that was never colonized, ranks second.[26] Until today, both Ethiopia and the DRC have also been major recipients of multilateral aid from the International Development Association (IDA) of the World Bank but also from EU institutions.[27] Thanks to its geographical proximity to Europe, North African countries like Morocco and Tunisia have also been primary recipients of EU multilateral aid. Ranging from littoral and landlocked states over democratic and authoritarian countries to resource-abundant and resource-scarce nations, the main ODA recipients over time form a relatively heterogeneous group.

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[26] The other African country which has not been colonized is Liberia. While Ethiopia has not been colonized either, it is worth noting that Ethiopia was occupied twice: after Italy's invasion in the mid-1930s and after the British invasion in 1941. A highly readable and concise history of Ethiopia from prehistory to modern times is provided by Marcus (2002).

[27] Epic in scope, the colossal and innovative piece of work by van Reybrouck (2010) provides a comprehensive historical narrative of the Democratic Republic of Congo, including the role of postcolonial cooperation and aid. McVety (2012) provides a brilliant historical account of American foreign aid in Ethiopia. Gill (2010) gives a nuanced view of the relationship between famine in Ethiopia and the corresponding reaction of international key actors.

**Table 13: DAC Donors' Bilateral ODA Disbursements to Africa by Recipient Country**

(Current US$ Million)

| 1960-2011 | | | 2011 | | |
|---|---|---|---|---|---|
| **Country** | **Volume** | **% of Total** | **Country** | **Volume** | **% of Total** |
| Egypt | 50,329.67 | 9.47 | Congo, DR | 4,249.20 | 13.03 |
| Tanzania | 28,821.25 | 5.42 | Ethiopia | 1,975.82 | 6.06 |
| Congo, DR | 25,913.46 | 4.88 | Mozambique | 1,700.96 | 5.22 |
| Nigeria | 24,610.84 | 4.63 | Tanzania | 1,661.69 | 5.09 |
| Mozambique | 23,613.26 | 4.44 | Kenya | 1,563.52 | 4.79 |
| Ethiopia | 22,164.17 | 4.17 | South Sudan | 1,040.78 | 3.19 |
| Sudan | 18,970.88 | 3.57 | South Africa | 1,034.14 | 3.17 |
| Kenya | 18,653.72 | 3.51 | Uganda | 994.51 | 3.05 |
| Zambia | 15,722.49 | 2.96 | Ghana | 901.47 | 2.76 |
| Morocco | 15,000.69 | 2.82 | Nigeria | 855.99 | 2.62 |
| Others | 287,668.31 | 54.13 | Others | 16,636.45 | 51.01 |
| TOTAL | 531,468.74 | 100.00 | TOTAL | 32,614.53 | 100.00 |

Source: Own calculations based on OECD/DAC Database

**Table 14: EU Multilateral ODA Disbursements to Africa by Recipient Country**

(Current US$ Million)

| 1960-2011 | | | 2011 | | |
|---|---|---|---|---|---|
| **Country** | **Volume** | **% of Total** | **Country** | **Volume** | **% of Total** |
| Morocco | 4688.36 | 5.56 | Tunisia | 442.29 | 7.33 |
| Ethiopia | 4361.41 | 5.18 | Morocco | 402.40 | 6.67 |
| Egypt | 3601.12 | 4.27 | South Africa | 322.64 | 5.34 |
| Sudan | 3156.28 | 3.75 | Congo, DR. | 313.47 | 5.19 |
| Mozambique | 2973.73 | 3.53 | Ethiopia | 198.78 | 3.29 |
| Congo, DR | 2921.74 | 3.47 | Uganda | 171.76 | 2.85 |
| Tanzania | 2792.94 | 3.31 | Sudan | 162.86 | 2.70 |
| Tunisia | 2560.24 | 3.04 | Somalia | 155.68 | 2.58 |
| South Africa | 2394.15 | 2.84 | Mozambique | 153.25 | 2.54 |
| Burkina Faso | 2277.37 | 2.70 | Burkina Faso | 143.74 | 2.38 |
| Others | 52542.40 | 62.35 | Others | 3,570.06 | 59.14 |
| TOTAL | 84269.74 | 100.00 | TOTAL | 6,036.93 | 100.00 |

Source: Own calculations based on OECD/DAC Database

**Table 15: IDA Multilateral ODA Disbursements to Africa by Recipient Country**

(Current US$ Million)

| 1960-2011 | | | 2011 | | |
|---|---|---|---|---|---|
| **Country** | **Volume** | **% of Total** | **Country** | **Volume** | **% of Total** |
| Ethiopia | 7359.88 | 9.38 | Ethiopia | 708.53 | 14.95 |
| Tanzania | 7028.98 | 8.96 | Nigeria | 604.25 | 12.75 |
| Ghana | 6029.57 | 7.68 | Ghana | 422.40 | 8.91 |
| Uganda | 5351.53 | 6.82 | Congo, DR | 394.16 | 8.32 |
| Nigeria | 4161.54 | 5.30 | Rwanda | 288.95 | 6.10 |
| Congo, DR | 4071.45 | 5.19 | Tanzania | 258.33 | 5.45 |
| Mozambique | 3697.08 | 4.71 | Burkina Faso | 219.24 | 4.63 |
| Kenya | 3117.98 | 3.97 | Senegal | 172.12 | 3.63 |
| Madagascar | 3065.40 | 3.91 | Uganda | 171.19 | 3.61 |
| Zambia | 2895.03 | 3.69 | Kenya | 165.33 | 3.49 |
| Others | 31698.38 | 40.39 | Others | 1,334.73 | 28.16 |
| TOTAL | 78476.82 | 100.00 | TOTAL | 4,739.23 | 100.00 |

*Source:* Own calculations based on OECD/DAC Database

*China*

These findings can be compared with the regional distribution of China's development assistance in Africa (Table 16). Tanzania has been the main recipient of Chinese development assistance in Africa between 1959 and 1998 followed neighbouring Zambia. It is not coincidental that those two countries have received the biggest share of China's development assistance prior to the New Millennium. The largest single foreign aid project undertaken by Chinese authorities has been the construction and completion of the *TAZARA Railway* between 1970 and 1975, connecting the Tanzanian port of Dar es Salaam with the Copperbelt, the industrial heartland of Zambia. China's non-interference policy is emphasized by the large provision of aid to countries like DRC, Sudan, but also other highly autocratic countries like Mauritania and Somalia during that period. While those seventeen countries received just above US$3.5 billion worth of aid from China over almost thirty years, we lack figures for China's total development assistance during that period which prevents us from assigning relative shares to each particular country. Similar to the lack of official data quantifying the sectoral distribution of China's development assistance in Africa, no official source providing information on China's foreign aid by destination has been available at the time of writing.

We have compiled some first rough estimates for the regional distribution of China's development assistance in Africa for the year 2009. While China's development assistance in Africa is anxious to treating each country equally by not elevating one nation or group of people over another, the resource-rich endowments of countries like Sudan, Angola, DRC and Nigeria make them natural targets for China's rapid economic embrace of the continent. On the grounds of non-interference, Beijing enjoys a comparative advantage in dealing with autocratic elites: China's ability to position itself as an alternative partner enables the Beijing government not only to establish political relationships with the Sudanese and Zimbabwean government but it can also derive direct economic benefits from it (Alden, 2005, 2007; Tull, 2006).

While several resource-rich and authoritarian countries admittedly tend to receive a high portion of China's development assistance, this is only half the story: Ghana, a relatively resource-scarce country – compared to other African countries– and an exemplar for a successful democratic transition during the post-Cold War era in Africa, also receives a considerable portion of Beijing's foreign aid. The importance of another resource-scarce country such as Ethiopia, as well as the position of countries like Egypt and South Africa in the top ranks emphasizes the geo-strategic importance that China attaches to its aid delivery. China recognizes South Africa's important role in maintaining peace and stability on the continent. Egypt has been considered the gateway to

Africa in the eyes of Chinese authorities connecting the Asian and African continent with a coastline facing Europe. Egypt was privileged to host the fourth ministerial conference of the Forum on China–Africa Cooperation (FOCAC), only the second one to be held on African territory, in the year 2009.

The first ministerial conference of the Forum on China–Africa Cooperation (FOCAC) to be held on African territory, however, took place in Addis Ababa, Ethiopia's capital, in the year 2003.[28] According to Gill (2010), Ethiopia is regarded as a unique partner in the eyes of the Chinese government for the following four reasons: First, similar to China, Ethiopia is one of the few developing countries that has never been colonized, thereby representing a symbol of African resistance to European colonialism in the eyes of the Beijing administration. Second, Ethiopia is permanent host to the African Union and the United Nations Economic Commission for Africa. Third, Ethiopia has proved to be the major strategic power in the Horn of Africa which is often characterized as unstable political environment.[29] Last but not least, the political and economic convictions of Ethiopia's charismatic Prime Minister Meles Zenawi, in office from 1995 until 2012 and a firm advocate of the developmental state, have been appealing to the Beijing administration.

Subsequent to the FOCAC in 2006, the Chinese government announced that it would double aid to Africa by 2009 (Taylor, 2012).[30] Moreover, in the year 2007, Ethiopia was the only resource-scarce country out of four African states (besides oil-rich Angola and Nigeria as well as the mineral rich DRC) to receive soft loans from China's financial state institutions, including EXIMBANK. Those soft loans primarily aimed at upgrading Africa's infrastructure. Third, China committed itself to cancel bilateral debt for developing countries, including several from Sub-Saharan Africa. In 2007, China and Ethiopia signed a debt relief agreement worth US$18.5 million (FOCAC, 2007).[31] Ethiopia was the only African country to benefit from all three policies (Thakur, 2009). Altogether, the results presented in Table 13 highlight China's broader engagement and give rise to the notion that China's development assistance strategy is more complex and less deterministic than commonly assumed.

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[28] The first ministerial conference was hosted by Beijing in 2000. 3 years later, the second ministerial conference took place in Addis Ababa, Ethiopia. Beijing was once again the host city in the year 2006. The fourth ministerial conference was held in Sharm el-Sheikh, Egypt, in the year 2009. In 2012, Beijing has hosted for a third time the most recent ministerial conference.

[29] For a very recent critical discussion about the evolution of the political economy in the Horn of Africa, consult Plaut (2013).

[30] The aid figures reported in Table 6 stand up to the claim: China's annual aid expenditures for Africa rose from US$ 624 million in 2006 to US$ 1.4 billion in 2009

[31] This debt relief agreement compares to a debt cancellation totalling US$3.6 billion issued by the World Bank on 1 July 2006 (see Stilwell & Woodeneh, 2006).

**Table 16: China's Aid Disbursements to Africa by Recipient Country, 1959-1998 vs. 2009**

(Current US$ Million)

| Country | Volume | % of Total | Country | Volume (Estimates) | % of Total |
|---|---|---|---|---|---|
| **1959-1998** | | | **2009** | | |
| Tanzania | 534.00 | | Sudan | 111.70 | 8.08 |
| Zambia | 372.00 | | Ethiopia | 109.63 | 8.07 |
| Congo, Dem. Rep. | 303.00 | | Congo, Dem. Rep. | 101.68 | 7.48 |
| Mauritania | 239.00 | | Nigeria | 101.04 | 7.43 |
| Sudan | 230.00 | | Angola | 83.99 | 6.18 |
| Somalia | 220.00 | | Ghana | 82.81 | 6.09 |
| Congo Republic | 205.00 | | Zimbabwe | 78.66 | 5.79 |
| Egypt | 193.00 | | Equatorial Guinea | 77.63 | 5.71 |
| Guinea | 161.00 | | Cameroon | 60.43 | 4.45 |
| Ethiopia | 155.00 | | Mauritania | 53.92 | 3.97 |
| Mali | 148.00 | | South Africa | 48.44 | 3.56 |
| Madagascar | 144.00 | | Mozambique | 46.37 | 3.41 |
| Burundi | 125.00 | | Zambia | 45.33 | 3.34 |
| Cameroon | 124.00 | | Congo Republic | 40.00 | 2.94 |
| Mozambique | 116.00 | | Madagascar | 33.77 | 2.49 |
| Senegal | 108.00 | | Egypt | 30.51 | 2.25 |
| Algeria | 100.00 | | Mauritius | 28.59 | 2.10 |
| Others | - | | Others | 224.51 | 16.66 |
| AFRICA, TOTAL | - | | AFRICA, TOTAL | 1,359.00 | |

*Notes:* Data for the period 1958-1998 is from Bräutigam (1998) and published in Chaponnière (2009). Country data for the year 2009 is an estimate calculated by the authors based on information provided by Bräutigam (2009, 2013) and Strange et al. (2013). Strange et al. (2013) release an average share of China's official finance for the period 2000-2011 for each African country plus an average share of the number of Chinese development projects for the period 2000-2011 for each country. Since Official Finance includes both ODA and OOF, the information provided by Strange et al. (2013) can only serve as a proxy for China's ODA-like foreign aid in each particular African country. We first take the average of the foreign finance share and the number of projects share. Non-published estimates by Bräutigam (2013) rank Angola, DRC, Ethiopia among the top 3 recipients followed by Sudan. Our first estimations based on Strange et al. (2013) rank Ghana by far as highest aid recipient from China, followed by Sudan, Ethiopia, Nigeria and Angola. The DRC does not enter the top 30. Since we have reason to believe that Ghana (DRC) must be classified as severe positive (negative) outlier, we correct those outliers based on unofficial estimates by Bräutigam (2013). The average value for Angola, Ethiopia and Sudan is assigned to the DRC. Ghana is assigned the average value of those three countries that are ranked behind the top recipients (e.g. Sudan, Ethiopia, DRC, Nigeria and Angola), namely Zimbabwe, Nigeria and Equatorial Guinea. The addition and deductions for the shares of DRC and Ghana, respectively, are equally distributed among the 49 countries receiving aid from China (therefore excluding Burkina Faso, Gambia, Sao Tomé and Principe and Swaziland). We have adjusted final shares for the time period 2000-2011 which we then multiply with China's annual aid expenditures to Africa to derive rough estimates. The table reports the value for the year 2009 as the authors only have extrapolated values for China's annual aid expenditures to Africa between 2010 and 2012.

*Sources:* Authors' own calculations; Bräutigam (1998, 2013); Chaponnière (2009); Strange et al. (2013)

The Chinese aid system drastically differs from the Western system in at least two ways: First, Chinese aid funding is embedded into a wider foreign policy framework characterized by the non-interference in internal affairs and Beijing's upholding of political equality with recipient states (Huse & Muyakwa, 2008). While most of the Western development aid in recent years is characterized by political conditionality, the bulk of Southern development assistance comes with relatively 'few strings attached'. In contrast to most 'traditional' donors, Southern donors impose little or even no macroeconomic or governance conditionalities based on the principles of respect

for national sovereignty and non-interference in domestic affairs. In the eyes of authoritarian states, Chinese development aid funds have therefore become an attractive alternative to the 'traditional' aid funds and the underlying policy conditionality attached to it by the West. On the other hand, much of Beijing's development assistance in Africa, however, is tied to (i) the purchase of Chinese goods and services or (ii) Chinese access to African natural and energy resources (Bräutigam, 2009; Corkin, 2013). In fact, the primary commodities serve as collateral for the concessional loans in barter agreements. The barter agreement, also known as "Angola model" (Davies et al., 2008) or 'resource for infrastructure' (R4I) deals (AfDB, 2011), has become China's preferred way of safeguarding its concessional loan packages to the continent. Naidu and Davies (2006) describe this phenomenon as 'coalition investment'.

Second, Chinese and Western development aid flows are based on different core development ideas and ideologies. Among traditional donor countries, aid conditionality and aid selectivity are viewed as necessary condition for enhanced aid effectiveness and as useful tool for promoting democratic governance in the least developed countries. Influenced by theoretical underpinnings by North (1990), the aforementioned approach stresses the significance of the ultimate sources of growth, namely (political) intangibles offered by major West actors, for example capacity building, democratization, adherence to human rights principles and good governance. In contrast, China's development assistance emphasizes the (economic) tangibles of development such as productivity gains in agriculture, industrial processing, or the refurbishment of physical infrastructure. The patterns of China's aid remarkably resemble ideas put forward in Lipset's modernization hypothesis (Lipset, 1959) or in developmental work by Kuznets (1966).

## 4. CHINA'S FDI

In this section we apply Dunning's (1977, 1979) taxonomy of FDI motives – market seeking, resource seeking, efficiency seeking and strategic asset seeking FDI – to China's growing investment in Africa. While China's global FDI stock was virtually zero in 1980, it has risen to $84.2 billion in 2012. Approximately one quarter of China's FDI stock, namely $21.2 billion, is located on the African continent. Since FDI stock figures are generally reported as summation of yearly investment flows over time and not through the perpetual inventory method, we must treat the results with caution.[32] Section 4.1 will first quantify China's foreign direct investment and compare it to FDI delivered by traditional investors from the advanced economies. Afterwards, it

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[32] The perpetual inventory method calculates yearly FDI stock as an accumulation of investment while also taking into account lifetime measures of investment plus a depreciation rate.

will address the question which sectors of the economy have primarily been the targets of China's private investment in comparison to Western FDI (section 4.2). Last but not least, we will examine the regional distribution of China's FDI in comparison to investment by traditional investors (section 4.3).

## 4.1. Magnitude of FDI

Table 17 below provides an overview of the regional distribution of global FDI flows (stocks) for selected years between 1970 (1980) and 2012.[33] Global FDI flows and stock have been on the rise since 1970. From 1980 onwards, the African continent has aligned itself with the global trend: FDI flows *to* and FDI stock *in* Africa has risen since the early 1980s when commercial bank lending to developing economies came to a halt (see also World Bank, 1997).

Around the same time, both the IMF and the World Bank imposed structural adjustment programmes which acted as precondition for delivering international assistance and as necessary condition for facilitating economic growth and global economic integration (see Obstfeld & Taylor, 2004).[34] Moreover, in order to achieve the Millennium Development Goal (MDG) of reducing the poverty level between 1990 and 2015 by half, the continent as a whole needed to fill an income gap of US$ 64 million, about 12 per cent of GDP, during the early 2000s (Asiedu, 2004). Since many African countries have been characterized by low income levels and meagre savings rates, a major portion of finance had to come from abroad. While ODA was once the primary source of foreign finance to the African continent, capital flows into Africa have undergone dramatic changes over the past decade with the volume of foreign direct investment exceeding that of foreign aid in many of the poorest countries both in Africa and the world as a whole (UNCTAD, 2011, 2012b, 2013a). In spite of an increase in the absolute volume of FDI, the African share of global FDI inflows and global FDI stock declined until the mid-2000s. The 1980-2000 period of absolute progress therefore went hand in hand with a period of relative decline. Since the mid-2000s, however, the downward trend has reversed. The African share of stocks bounced back to 2.8 per cent by 2012 and of flows to 3.7 per cent.[35]

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[33] The global figures also include Chinese FDI flows and stock.

[34] For a critical discussion on the ambiguous evidence of a causal link between FDI and economic development, consult either Lall and Narula (2004), Moran, Graham and Blomström (2005), Narula and Dunning (2010) or Narula and Driffield (2012).

[35] According to The Africa Competitiveness Report 2011, the most problematic obstacles for doing business in Northern Africa were similar to those in Sub-Saharan Africa. Out of 15 possible factors, (i) access to financing, (ii) inefficient government bureaucracy, (iii) corruption and (iv) inadequate supply of infrastructure were ranked by investors among the top five obstacles in both regions (see Kaberuka et al., 2011).

Before we will proceed to China's motives, we will first review the driving motives for traditional investment originating from Western investors as it facilitates our understanding of China's investment patterns. Furthermore, by looking at both the sectoral composition and geographic destination of China's investment in Africa, we will discuss the similarities and differences of traditional Western and emerging Chinese investment.

In terms of foreign direct investment on a global scale, the traditional investors have come from the developed world. In the year 1980, five industrialized countries (the United States, the United Kingdom, Canada, the Netherlands and Japan) accounted for a bit more than 72 per cent of global outward FDI flows (Table 18), and almost 70 per cent of global outward FDI stock (Table 19). A remarkable trend since the late 1990s and early 2000s is the appearance of non-traditional home country sources of FDI, mainly from South-East Asia (China, Hong Kong, Korea, Malaysia and Singapore) but also from Brazil. As the emerging economies' share of global outward FDI flows has significantly increased, reverse FDI and South-South investment becomes increasingly prominent. With regard to its sheer magnitude, one of the most important emerging investors is China, as the next few paragraphs will show.

## Table 17: Regional Distribution of Global Inward FDI Flows and Stock, 1970-2011

(Current US$ Million)

### FDI Inflows

| | Asia excl. Central Asia | Africa | Europe | Latin America | North America | Oceania | Eastern Europe and Central Asia | TOTAL |
|---|---|---|---|---|---|---|---|---|
| 1970 | 996.6 | 1266.1 | 5226.0 | 1598.7 | 3083.1 | 1175.2 | 0.0 | 13345.7 |
| 1975 | 5536.5 | 906.1 | 10052.5 | 3514.3 | 5946.9 | 610.7 | 0.0 | 26567.0 |
| 1980 | 819.1 | 400.4 | 21363.2 | 6415.8 | 22725.3 | 2321.4 | 23.6 | 54068.8 |
| 1985 | 6134.1 | 2442.3 | 16755.3 | 6222.9 | 21862.4 | 2410.4 | 15.0 | 55842.4 |
| 1990 | 24600.8 | 2846.2 | 104413.7 | 8924.9 | 56004.3 | 10830.6 | 75.2 | 207695.8 |
| 1995 | 82613.1 | 5907.1 | 136632.7 | 29507.2 | 68026.8 | 17298.6 | 4106.7 | 344092.2 |
| 2000 | 171861.5 | 9621.1 | 728480.5 | 98048.2 | 380869.0 | 17542.8 | 7038.4 | 1413461.5 |
| 2005 | 232597.3 | 30912.6 | 506109.3 | 78054.0 | 130508.3 | -21624.5 | 33611.6 | 990168.6 |
| 2012 | 418914.8 | 50041.1 | 275580.1 | 243861.0 | 213123.1 | 64177.4 | 87382.0 | 1353079.4 |

### FDI Inflows (%)

| | Asia excl. Central Asia | Africa | Europe | Latin America | North America | Oceania | Eastern Europe and Central Asia |
|---|---|---|---|---|---|---|---|
| 1970 | 7.5 | 9.5 | 39.2 | 12.0 | 23.1 | 8.8 | 0.0 |
| 1975 | 20.8 | 3.4 | 37.8 | 13.2 | 22.4 | 2.3 | 0.0 |
| 1980 | 1.5 | 0.7 | 39.5 | 11.9 | 42.0 | 4.3 | 0.0 |
| 1985 | 11.0 | 4.4 | 30.0 | 11.1 | 39.2 | 4.3 | 0.0 |
| 1990 | 11.8 | 1.4 | 50.3 | 4.3 | 27.0 | 5.2 | 0.0 |
| 1995 | 24.0 | 1.7 | 39.7 | 8.6 | 19.8 | 5.0 | 1.2 |
| 2000 | 12.2 | 0.7 | 51.5 | 6.9 | 26.9 | 1.2 | 0.5 |
| 2005 | 23.5 | 3.1 | 51.1 | 7.9 | 13.2 | -2.2 | 3.4 |
| 2012 | 31.0 | 3.7 | 20.4 | 18.0 | 15.8 | 4.7 | 6.5 |

### FDI Stock

| | Asia excl. Central Asia | Africa | Europe | Latin America | North America | Oceania | Eastern Europe and Central Asia | TOTAL |
|---|---|---|---|---|---|---|---|---|
| 1980 | 218690.1 | 41097.2 | 230849.3 | 41789.6 | 137208.6 | 28277.9 | 0.0 | 697912.7 |
| 1985 | 268178.7 | 42897.9 | 292108.8 | 69300.3 | 284652.9 | 29749.3 | 0.0 | 986887.9 |
| 1990 | 354596.5 | 60674.6 | 807223.3 | 111372.9 | 652444.2 | 90303.4 | 1651.6 | 2078266.5 |
| 1995 | 611064.5 | 89308.2 | 1273951.8 | 187086.3 | 1128907.2 | 139539.7 | 11467.7 | 3441325.5 |
| 2000 | 1178920.5 | 153742.5 | 2468222.6 | 507345.6 | 2996215.4 | 146035.2 | 60828.8 | 7511310.7 |
| 2005 | 1834336.8 | 262455.3 | 5016442.2 | 828375.2 | 3160800.1 | 298533.6 | 272902.3 | 11673845.5 |
| 2012 | 5060621.0 | 629632.5 | 8676610.2 | 2310629.7 | 4570442.3 | 716890.2 | 847853.7 | 22812679.6 |

### FDI Stock (%)

| | Asia excl. Central Asia | Africa | Europe | Latin America | North America | Oceania | Eastern Europe and Central Asia |
|---|---|---|---|---|---|---|---|
| 1980 | 31.3 | 5.9 | 33.1 | 6.0 | 19.7 | 4.1 | 0.0 |
| 1985 | 27.2 | 4.3 | 29.6 | 7.0 | 28.8 | 3.0 | 0.0 |
| 1990 | 17.1 | 2.9 | 38.8 | 5.4 | 31.4 | 4.3 | 0.1 |
| 1995 | 17.8 | 2.6 | 37.0 | 5.4 | 32.8 | 4.1 | 0.3 |
| 2000 | 15.7 | 2.0 | 32.9 | 6.8 | 39.9 | 1.9 | 0.8 |
| 2005 | 15.7 | 2.2 | 43.0 | 7.1 | 27.1 | 2.6 | 2.3 |
| 2012 | 22.2 | 2.8 | 38.0 | 10.1 | 20.0 | 3.1 | 3.7 |

*Source:* OECD International Direct Investment Database, IMF, UNCTAD FDI/TNC database

## Table 18: Outward FDI Flows by Major Home Economies, 1980-2010
(Current US$ Million)

| | 1980 | | | 1990 | | | 2000 | | | 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Volume | % | Country | Volume | % | Country | Volume | % | Country | Volume | % |
| United States | 19,230 | 37.28 | Japan | 50,775 | 21.03 | United Kingdom | 235,398 | 18.98 | United States | 304,399 | 20.23 |
| United Kingdom | 7,881 | 15.28 | France | 36,233 | 15.01 | France | 177,449 | 14.31 | Germany | 121,525 | 8.08 |
| Canada | 4,098 | 7.95 | United States | 30,982 | 12.83 | United States | 142,626 | 11.50 | Hong Kong | 98,414 | 6.54 |
| Netherlands | 3,847 | 7.46 | Germany | 24,235 | 10.04 | Netherlands | 75,634 | 6.10 | China | 74,654 | 4.96 |
| Japan | 2,385 | 4.62 | United Kingdom | 17,948 | 7.43 | Hong Kong | 70,005 | 5.64 | Netherlands | 68,332 | 4.54 |
| South Africa | 755 | 1.46 | Netherlands | 13,658 | 5.66 | Germany | 56,557 | 4.56 | France | 64,575 | 4.29 |
| Brazil | 367 | 0.71 | Canada | 5,237 | 2.17 | Canada | 44,678 | 3.60 | Japan | 56,263 | 3.74 |
| Malaysia | 201 | 0.39 | Hong Kong | 2,448 | 1.01 | Japan | 31,557 | 2.54 | Russia | 52,616 | 3.50 |
| Singapore | 98 | 0.19 | Singapore | 2,034 | 0.84 | Singapore | 6,650 | 0.54 | United Kingdom | 39,502 | 2.62 |
| Hong Kong | 82 | 0.16 | Korea Republic | 1,052 | 0.44 | Korea Republic | 4,482 | 0.36 | Canada | 34,723 | 2.31 |
| Korea Republic | 26 | 0.05 | China | 830 | 0.34 | Russia | 3,177 | 0.26 | Korea Republic | 28,357 | 1.88 |
| France | 25 | 0.05 | Brazil | 625 | 0.26 | Brazil | 2,282 | 0.18 | Singapore | 25,341 | 1.68 |
| India | 4 | 0.01 | Malaysia | 129 | 0.05 | Malaysia | 2,026 | 0.16 | India | 15,933 | 1.06 |
| China | 0 | 0.00 | South Africa | 27 | 0.01 | China | 916 | 0.07 | Malaysia | 13,399 | 0.89 |
| | | | India | 6 | 0.00 | India | 514 | 0.04 | Brazil | 11,588 | 0.77 |
| | | | | | | South Africa | 271 | 0.02 | South Africa | 1,151 | 0.08 |
| Others | 12,577 | 24.39 | Others | 55,203 | 22.87 | Others | 386,095 | 31.13 | Others | 494,155 | 32.84 |
| World | 51,576 | 100.00 | World | 241,421 | 100.00 | World | 1,240,316 | 100.00 | World | 1,504,928 | 100.00 |

*Sources:* OECD International direct investment database, IMF; UNCTAD FDI/TNC Database; UNCTAD (2006) World Investment Report 2006; UNCTAD (2013a) World Investment Report 2013; MOFCOM (2009) 2009 Statistical Bulletin of China's Outward Foreign Direct Investment (Chinese version); MOFCOM (2011) 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

## Table 19: Outward FDI Stock by Major Home Economies, 1980-2010
(Current US$ Billion)

| | 1980 | | | 1990 | | | 2000 | | | 2010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Volume | % | Country | Volume | % | Country | Volume | % | Country | Volume | % |
| United States | 215.38 | 39.24 | United States | 731.76 | 34.99 | United States | 2,694.01 | 33.57 | United States | 4,766.73 | 22.56 |
| United Kingdom | 80.43 | 14.65 | United Kingdom | 229.31 | 10.96 | France | 925.92 | 11.54 | United Kingdom | 1,626.89 | 7.70 |
| Netherlands | 41.87 | 7.63 | Japan | 201.44 | 9.63 | United Kingdom | 923.37 | 11.50 | France | 1,517.78 | 7.18 |
| Brazil | 38.54 | 7.02 | Germany | 151.58 | 7.25 | Germany | 541.87 | 6.75 | Germany | 1,463.07 | 6.92 |
| France | 24.91 | 4.54 | France | 112.44 | 5.38 | Hong Kong | 435.79 | 5.43 | Hong Kong | 1,039.04 | 4.92 |
| Canada | 23.78 | 4.33 | Netherlands | 105.09 | 5.02 | Netherlands | 305.46 | 3.81 | Netherlands | 955.87 | 4.52 |
| Japan | 19.61 | 3.57 | Canada | 84.81 | 4.05 | Japan | 278.44 | 3.47 | Japan | 831.08 | 3.93 |
| South Africa | 5.54 | 1.01 | Sweden | 50.72 | 2.43 | Canada | 237.64 | 2.96 | Canada | 636.71 | 3.01 |
| Sweden | 3.57 | 0.65 | Brazil | 41.04 | 1.96 | Sweden | 123.62 | 1.54 | Sweden | 372.96 | 1.77 |
| Singapore | 0.77 | 0.14 | South Africa | 15.00 | 0.72 | Singapore | 56.76 | 0.71 | Russia | 366.30 | 1.73 |
| Malaysia | 0.30 | 0.06 | Hong Kong | 11.92 | 0.57 | Brazil | 51.95 | 0.65 | Singapore | 353.69 | 1.67 |
| Hong Kong | 0.15 | 0.03 | Singapore | 7.81 | 0.37 | South Africa | 32.33 | 0.40 | China | 317.21 | 1.50 |
| Korea Republic | 0.13 | 0.02 | China | 4.46 | 0.21 | China | 27.77 | 0.35 | Brazil | 188.64 | 0.89 |
| India | 0.08 | 0.01 | Korea Republic | 2.30 | 0.11 | Korea Republic | 21.50 | 0.27 | Korea Republic | 143.16 | 0.68 |
| China | 0.00 | 0.00 | Malaysia | 0.75 | 0.04 | Russia | 20.14 | 0.25 | Malaysia | 96.96 | 0.46 |
| | | | India | 0.12 | 0.01 | Malaysia | 15.88 | 0.20 | India | 96.90 | 0.46 |
| | | | | | | India | 1.73 | 0.02 | South Africa | 89.45 | 0.42 |
| Others | 93.85 | 17.10 | Others | 340.94 | 16.30 | Others | 1,331.66 | 16.59 | Others | 6,267.62 | 29.66 |
| World | 548.92 | 100.00 | World | 2,091.50 | 100.00 | World | 8,025.83 | 100.00 | World | 21,130.05 | 100.00 |

*Sources:* OECD International direct investment database, IMF; UNCTAD FDI/TNC Database; UNCTAD (2006) World Investment Report 2006; UNCTAD (2013a) World Investment Report 2013; MOFCOM (2009) 2009 Statistical Bulletin of China's Outward Foreign Direct Investment (Chinese version); MOFCOM (2011) 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

While Africa becomes increasingly attractive as business place for international investors as a whole, investors from emerging economies have increased their share of inward FDI to the continent significantly (UNCTAD, 2013b). The rapid proliferation of Chinese development assistance has gone hand in hand with a surge of Chinese outward foreign direct investment.

Figure 7 and Figure 8 below displaying the evolution of both China's global outward FDI flows and stock refer to official FDI figures released by the Chinese Ministry of Commerce (MOFCOM, 2009, 2011). Since the Beijing administration has only published FDI data in a format consistent with IMF and OECD standards since 2003 (Cheung & Qian, 2009), the data in our analysis has been gathered from various sources. The figures, however, should be treated with caution, as they may considerably understate the true amount of China's foreign direct investment for the following reasons. First, the FDI statistics only contain FDI officially reported to the government. However, there is reason to believe that a certain fraction of private investors do not officially report to Beijing. Second, Chinese foreign direct investment that passes through either Hong Kong or tax havens like the British Virgin Islands or the Cayman Islands is not captured. Third, investment in the financial sector is missing in Beijing's official FDI statistics. And last, China's official FDI statistics do not account for those investments in companies located outside of Africa despite possessing considerable holdings on the continent (Shinn, 2013). As a consequence thereof, the numbers and figures provided for China should be regarded as a lower bound.

During the 1980s, both China's global outward FDI flows and stock have been relatively stable at an almost negligible level while they have witnessed a gradual but steady increase from the 1990s onwards. Towards the beginning of the 21$^{st}$ century, the Beijing administration launched a coordinated effort between the government, the China Council for the Promotion of International Trade (CCPIT), and domestic companies to look for global strategies to realize and exploit economic opportunities in fast-expanding local and international markets. As result of the going-out-policy, China's FDI flows and stock skyrocketed from the early 2000s onwards. Compared to the magnitude of traditional investors, both China's outward FDI flows and outward FDI stocks remain modest in absolute terms, though the pace at which China's global outward investment has risen is unprecedented and is likely to accelerate in the future.

**Figure 7: China's Global Outward FDI Flows, 1980-2012**
(Current US$ Billion)
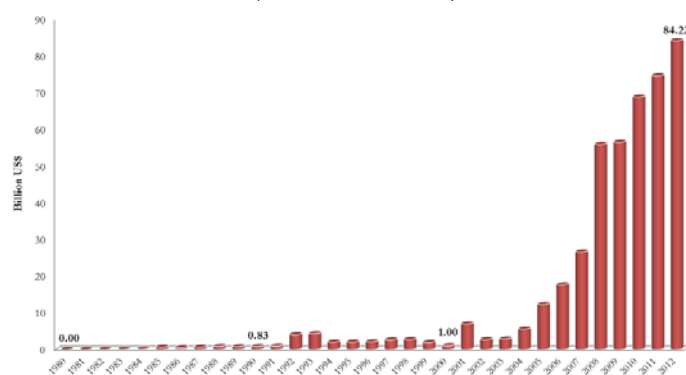


Sources: UNCTAD FDI/TNC database; MOFCOM (2009, 2011); Li (2012); Shen (2013)

**Figure 8: China's Global Outward FDI Stock, 1980-2012**
(Current US$ Billion)
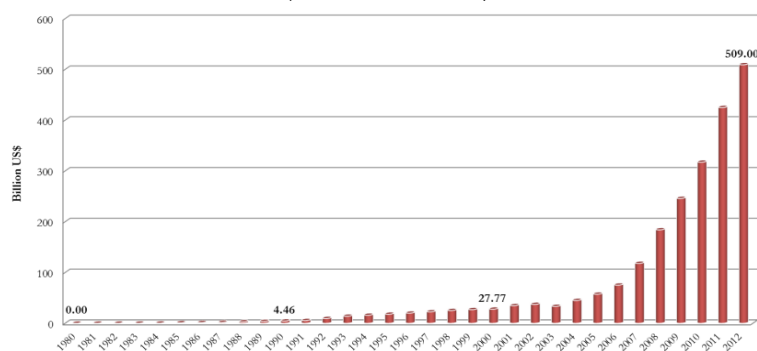


Sources: UNCTAD FDI/TNC database; MOFCOM (2009, 2011); Li (2012); Shen (2013)

While we have up till now investigated the magnitude of foreign direct investment by traditional investors and emerging economies, most notably China, we would like to estimate how much of the total foreign direct investment by those home countries has targeted the African continent. An evolution of the FDI by major home economies (namely USA, France, and UK) in Africa is portrayed in Table 20 for a few selected years. Between 1985 and 2011 there was a huge increase in the stock of Western FDI in Africa, as evidenced by the figures of USA, UK and France. But in other parts of the world FDI stocks were growing even more rapidly, so that the share of Africa in FDI stocks actually declined a lot between 1985 and 2000, with some recovery thereafter. In contrast to Africa's first declining and recently increasing FDI attractiveness among Western investors, the continent has enjoyed a steadily increasing interest by Chinese enterprises (see Table 21). While China's outward FDI has traditionally been highly concentrated in Asia, Beijing's going-global strategy has actively encouraged Chinese enterprises to look for expanding international and global market opportunities in other regions of the world, including Africa (see Figure 9 and Figure

10). Ironically enough, China's growing emergence in Africa happened at around the time when Africa's global FDI attractiveness from a Western investor's point of view was at an all-time low.

Throughout much of the 1990s, the US, UK, France, Japan, Germany and the Netherlands accounted for the lion's share of total inflows to Africa (UNCTAD, 2000, 2013a). The pattern was quite similar with regard to the FDI stock. From the early 2000s onwards, however, emerging Southern economic giants such as the BRIC countries but also Malaysia have joined the list of main investors on the African continent (see Table 22). While China has positioned itself as the major emerging economy donor in Africa, it is, according to the official data, "only" the third biggest emerging investor with respect to the size of its direct foreign investment (FDI), behind Malaysia and South Africa. Since the public FDI statistics released by the Chinese government can only be regarded as a lower bound, the actual amount of China's FDI stock present on the continent may actually surpass Malaysia's FDI stock. Compared to the FDI volume recorded by the aforementioned emerging countries, the official FDI stock of "traditional" investors such as Germany or Japan is significantly lower (see Figure 11). But by far the largest investors are still the UK, the US and France.

**Table 20: FDI Stock in Africa by Major Western Home Countries, 1970-2011**
(Current US$ Million)

|      | USA | | | UK | | | France | | |
|------|--------|----------|----------------------|--------|----------|----------------------|--------|----------|----------------------|
|      | Africa | Volume | African share (%) | Africa | Volume | African share (%) | Africa | Volume | African share (%) |
| 1980 |        | 215375.0 |                    |        | 80434.0  |                    |        | 24910.0  |                    |
| 1985 | 5891.0 | 230287.0 | 2.6                | 6724.3 | 93992.3  | 7.2                | 1619.9 | 51690.2  | 3.1                |
| 1990 | 3650.0 | 430521.0 | 0.8                | 6830.9 | 118935.0 | 5.7                | 1576.3 | 110124.0 | 1.4                |
| 1995 | 6017.0 | 699015.0 | 0.9                | 7681.8 | 196687.0 | 3.9                | 3850.1 | 204432.9 | 1.9                |
| 2000 | 11891.0 | 1316247.0 | 0.9              | 14001.3 | 601692.0 | 2.3               | 7090.4 | 445090.7 | 1.6                |
| 2005 | 22756.0 | 2241656.0 | 1.0              | 35868.9 | 696113.0 | 5.2               | 21514.2 | 918580.6 | 2.3               |
| 2011 | 56632.0 | 4155551.0 | 1.4              | 47186.9 | 1046098.0 | 4.5              | 57816.1 | 1599251.3 | 3.6              |

*Sources:* OECD International direct investment database, IMF; UNCTAD FDI/TNC Database

**Table 21: Regional Distribution of China's Outward Foreign Investment Stock**
(Current US$ Billion)

| 1990 | | | 2003 | | | 2010 | | |
|---------|--------|-----------------------------|---------|--------|-----------------------------|---------|--------|-----------------------------|
| Country | Volume | % of China's total stock | Country | Volume | % of China's total stock | Country | Volume | % of China's total stock |
| Asia |  |  | Asia | 26,603.00 | 80.08 | Asia | 228,145.97 | 71.92 |
| Africa | 49.2 | 1.10 | Africa | 491.23 | 1.48 | Africa | 13,042.12 | 4.11 |
| Europe |  |  | Europe | 487.45 | 1.47 | Europe | 15,710.31 | 4.95 |
| Latin America |  |  | Latin America | 4,619.32 | 13.90 | Latin America | 43,875.64 | 13.83 |
| North America |  |  | North America | 548.50 | 1.65 | North America | 7,829.26 | 2.47 |
| Oceania |  |  | Oceania | 472.26 | 1.42 | Oceania | 8,607.29 | 2.71 |
| TOTAL | 4,455.00 |  | TOTAL | 33,222.22 |  | TOTAL | 317,210.59 |  |

*Sources:* OECD International direct investment database, IMF; UNCTAD FDI/TNC Database; UNCTAD (2006) World Investment Report 2006; UNCTAD (2013a) World Investment Report 2013; MOFCOM (2009) 2009 Statistical Bulletin of China's Outward Foreign Direct Investment (Chinese version); MOFCOM (2011) 2010 Statistical Bulletin of China's Outward Foreign Direct Investment.

**Figure 9: China's Outward FDI Flows into Africa, 1990-2012**

(Current US$ Billion)
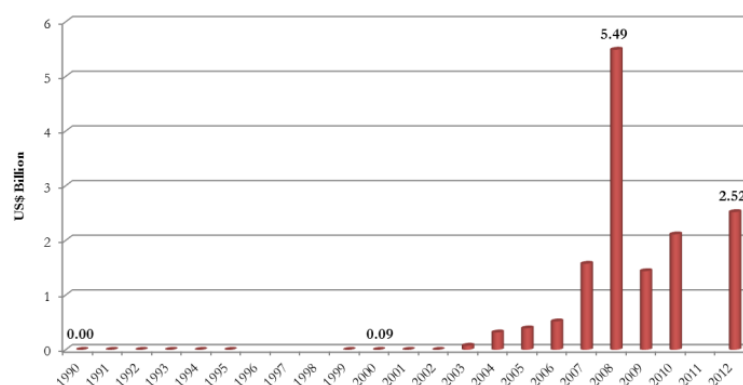
**Figure 10: China's Outward FDI Stock in Africa, 1990-2012**

(Current US$ Billion)
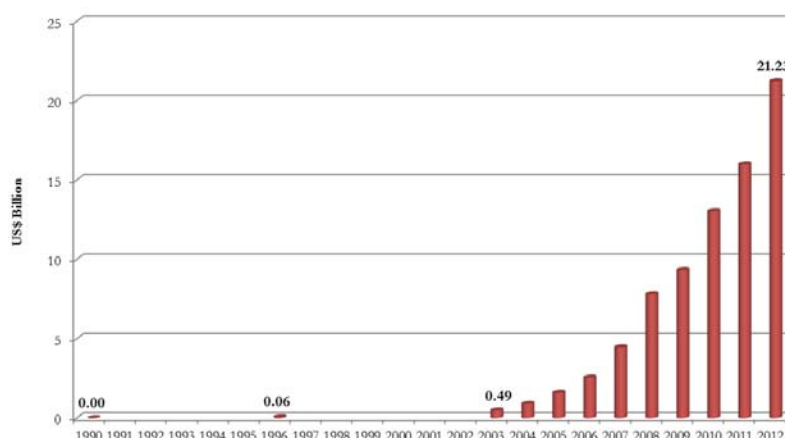
**Table 22: Estimated FDI Flows and Stocks to African Countries, 2010**

(Current US$ Million)

| Home region | Volume | | Share in total (%) | |
|---|---|---|---|---|
| | Flows | Stock | Flows | Stock |
| **Total world** | 39540 | 308739 | 100 | 100 |
| Developed countries | 26730 | 237841 | 68 | 77 |
| European Union | 16218 | 155972 | 41 | 51 |
| North America | 9281 | 53412 | 23 | 17 |
| Developing economies | 12635 | 68890 | 32 | 22 |
| Asia | 9332 | 50077 | 24 | 16 |
| South-East Europe and CIS | 175 | 2007 | 0 | 1 |
| **Memorandum** | | | | |
| BRICS | 10007 | 42583 | 25 | 14 |

**Figure 11: Outward FDI Stock in Africa by country of origin, 2011**
(Current US$ Billion)
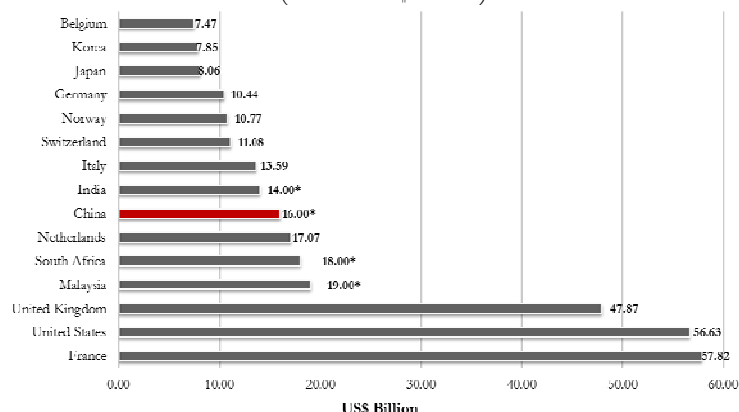


* These numbers are estimates by UNCTAD and are published in the   UNCTAD World Investment Report 2013
Sources: UNCTAD FDI/TNC database: UNCTAD (2013a) World Investment Report   2013

**Table 23: Investment-Aid Ratio in Africa for Major Home Economies, Selected Years**

| Country | Absolute Volume (Current US$ Billion) | | | | Investment-Aid ratio[†] | |
|---|---|---|---|---|---|---|
| | **2003** | | **2011** | | **2003** | **2011** |
| | Aid | FDI | Aid | FDI | | |
| China | 0.38 | 0.74 | 1.77 | 3.17 | 1.95 | 1.79 |
| | **2000** | | **2011** | | **2000** | **2011** |
| | Aid | FDI | Aid | FDI | | |
| France | 1.81 | 1.25 | 4.64 | 5.77 | 0.69 | 1.24 |
| Germany | 0.87 | 0.65 | 2.58 | 2.27 | 0.75 | 0.88 |
| Japan | 1.23 | 0.05 | 1.71 | 0.52 | 0.04 | 0.30 |
| United Kingdom‡ | 1.15 | 2.12 | 3.41 | 12.08 | 1.84 | 3.54 |
| United States | 2.11 | 0.72 | 9.41 | 5.13 | 0.34 | 0.55 |
| Netherlands | 0.60 | 0.30 | 0.98 | 3.32 | 0.50 | 3.39 |
| Denmark | 0.45 | 0.04 | 0.98 | 0.23 | 0.09 | 0.23 |
| Sweden | 0.40 | 0.29 | 1.35 | 1.14 | 0.73 | 0.84 |
| Norway* | 0.34 | 0.05 | 1.10 | 1.68 | 0.15 | 1.53 |
| Italy | 0.24 | 0.06 | 0.83 | 3.93 | 0.25 | 4.73 |
| *TOTAL* | 9.20 | 5.53 | 26.99 | 36.07 | 0.60 | 1.34 |

†: The ratio is equal to the country's yearly FDI flows to Africa divided by the yearly aid disbursements to Africa.
‡: Data with regard to United Kingdom refers to the years 2000 and 2010. FDI inflows in the year 2011 were actually negative (therefore FDI outflows). This observation, however, was a severe outlier in the long-term evolution of British FDI flows to Africa.
*: FDI data with regard to Norway refers to the years 1999 and 2010, respectively
*Sources:* FDI-Aid ratio refers to authors' own calculations; Aid data comes from Bräutigam (2009) and OECD./DAC Database. FDI data comes from MOFCOM and from UNCTAD FDI/TNC database

In Table 23 above we compare the relative importance of investment to aid by dividing investment flows by aid flows. The table provides the results for the major players on the African continent. Comparing the aid budget of DAC donors with the FDI volume of several DAC countries, aid has in most cases been larger than foreign direct investment at the beginning of the 21st century, with

the United Kingdom being a notable exception. In contrast, Chinese investment activities have exceeded development assistance on the continent. Compared to China, Western donors such as Germany, Japan and the USA had investment aid ratios of less than one, indicating a dominance of aid over investment. But perhaps in response to Beijing's strong emphasis on direct investment in the game of foreign finance, the relative importance of investment has been increasing in all Western countries, in particular in the Netherlands and Italy. Adding up aid and FDI of the 10 major Western players, the investment-aid ratio has increased from 0.6 in 2003 to 1.34 in 2011. We conclude that China's commercial activities tend to dominate aid, while until recently the opposite has been true for most Western players (such as Germany, Japan, United States, Denmark, Sweden). Even in 2011, the aid/investment ratio is substantially higher for China than that of most of the advanced economies.

## 4.2. Sectoral Distribution of FDI

The profile of FDI on the African continent varies significantly according to its geographical destination and sectoral distribution. As previously discussed, the main investors in Africa have come from developed countries throughout the 1980s and 1990s, and early 2000s. Before we will proceed to the sectoral distribution of FDI in Africa, we will quickly discuss the global trends for both Western and Chinese FDI.

Table 24 compares the world FDI stock by sector and industry for the year 1990 and 2010 while also distinguishing between developed and developing economies. In 1990, the global FDI stock was highly concentrated in the service and manufacturing sector. Taken together, the manufacturing and service sector accounted for almost 90 per cent of the total global FDI stock, in both developed and developing economies. The primary sector played a less important role for foreign investors. Within the primary sector, however, mining, quarrying and petroleum accounted for the major part of investment activities in the primary sector. Twenty years later, the primary sector share was below eight per cent. At the same time, however, the service sector became increasingly interesting for foreign investors at the expense of the manufacturing sector. The increase in the service share of global FDI stock has been even more pronounced for the developing economies than in the advanced economies.

## Table 24: Estimated World Inward FDI Stock, by Sector and Industry
Sector Shares (in %)

| Sector | 1990 | | | 2010 | | |
|---|---|---|---|---|---|---|
| | World | Developed economies | Developing economies | World | Developed economies | Developing economies |
| **Primary** | 9.28 | 9.48 | 8.37 | 7.12 | 6.73 | 7.54 |
| Agriculture, hunting, forestry and fishing | 0.41 | 0.22 | 1.26 | 0.28 | 0.12 | 0.65 |
| Mining, quarrying and petroleum | 8.76 | 9.26 | 6.55 | 6.81 | 6.56 | 6.89 |
| Unspecified primary | 0.10 | 0.00 | 0.56 | 0.03 | 0.05 | 0.00 |
| **Manufacturing** | 41.08 | 40.51 | 43.57 | 24.61 | 24.70 | 24.44 |
| Food, beverages and tobacco | 4.18 | 4.48 | 2.87 | 2.84 | 3.26 | 1.69 |
| Textiles, clothing and leather | 3.58 | 3.62 | 3.43 | 1.00 | 0.82 | 1.44 |
| Wood and wood products | 1.47 | 1.47 | 1.50 | 0.25 | 0.20 | 0.35 |
| Publishing, printing and reproduction of recorded media | 0.80 | 0.94 | 0.16 | 0.40 | 0.55 | 0.03 |
| Coke, petroleum products and nuclear fuel | 2.85 | 3.29 | 0.88 | 0.80 | 0.69 | 0.96 |
| Chemicals and chemical products | 8.87 | 7.90 | 13.16 | 4.53 | 4.98 | 3.60 |
| Rubber and plastic products | 0.78 | 0.84 | 0.53 | 0.37 | 0.40 | 0.29 |
| Non-metallic mineral products | 1.00 | 1.04 | 0.82 | 0.79 | 0.88 | 0.44 |
| Metal and metal products | 3.40 | 3.21 | 4.27 | 1.79 | 1.87 | 1.05 |
| Machinery and equipment | 3.27 | 3.37 | 2.84 | 1.51 | 1.74 | 0.97 |
| Electrical and electronic equipment | 4.55 | 4.44 | 5.03 | 1.87 | 1.70 | 2.42 |
| Precision instruments | 0.63 | 0.74 | 0.14 | 0.65 | 0.84 | 0.18 |
| Motor vehicles and other transport equipment | 2.95 | 3.10 | 2.27 | 2.15 | 2.28 | 1.89 |
| Other manufacturing | 0.86 | 0.86 | 0.85 | 0.91 | 1.13 | 0.39 |
| Unspecified secondary | 4.12 | 3.49 | 6.91 | 5.11 | 3.45 | 9.83 |
| **Services** | 48.73 | 49.19 | 46.67 | 64.42 | 63.60 | 66.91 |
| Electricity, gas and water | 0.50 | 0.42 | 0.84 | 2.42 | 2.62 | 1.93 |
| Construction | 0.50 | 0.42 | 0.84 | 2.42 | 2.62 | 1.93 |
| Trade | 11.77 | 12.83 | 7.13 | 9.36 | 9.68 | 8.50 |
| Hotels and restaurants | 1.32 | 1.32 | 1.30 | 0.57 | 0.37 | 1.09 |
| Transport, storage and communications | 1.56 | 1.08 | 3.67 | 5.91 | 5.63 | 6.76 |
| Finance | 19.65 | 18.15 | 26.28 | 24.44 | 26.37 | 20.07 |
| Business activities | 7.27 | 7.88 | 4.60 | 17.03 | 13.80 | 24.99 |
| Public administration and defence | 0.00 | 0.00 | 0.02 | 0.39 | 0.45 | 0.24 |
| Education | 0.00 | 0.01 | 0.00 | 0.05 | 0.06 | 0.04 |
| Health and social services | 0.05 | 0.06 | 0.00 | 0.03 | 0.01 | 0.08 |
| Community, social and personal service activities | 0.68 | 0.83 | 0.01 | 0.38 | 0.30 | 0.53 |
| Other services | 2.70 | 3.12 | 0.82 | 0.69 | 0.81 | 0.42 |
| Unspecified tertiary | 2.06 | 2.42 | 0.49 | 1.95 | 2.62 | 0.31 |
| **Private buying and selling of property** | 0.00 | 0.00 | 0.00 | 0.16 | 0.22 | 0.00 |
| **Unspecified** | 0.92 | 0.81 | 1.38 | 3.69 | 4.75 | 1.11 |
| **TOTAL** | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

*Note:* Data should be interpreted with caution. The world total was extrapolated on the basis of data covering 57 countries in 1990 and 97 countries in 2010, or latest year available. They account for over four-fifths of world inward FDI stock in 1990 and 2010. Only countries for which data for the three main sectors were available were included. The distribution share of each industry of these countries was applied to estimate the world total in each sector and industry. In the case of some countries where only approval data were available, the actual data was estimated by applying the implementation ratio of realized FDI to approved FDI to the latter.
*Source:* UNCTAD (2013) World Investment Report 2013

The sectoral composition of FDI stock in Africa throughout the 1990s will be analysed from the perspective of investing economies. Compared to the global figures in Table 24 a far higher percentage of Western investment in Africa went into the primary sector (Table 25). Likewise, a far lower percentage of Western investment in Africa went into the manufacturing sector.

**Table 25: Sectoral Composition of FDI Stock in Africa of Major Home Countries (%)**

|  | United States | | United Kingdom | | France | | Germany | |
|---|---|---|---|---|---|---|---|---|
|  | **1990** | **1997** | **1989** | **1997** | **1990** | **1995** | **1990** | **1996** |
| Primary sector | 57 | 58 | 37 | 37 | 39 | 52 | 25 | 16 |
| Secondary sector | 15 | 14 | 37 | 37 | 43 | 27 | 20 | 20 |
| Tertiary sector | 23 | 18 | 26 | 26 | 17 | 17 | 55 | 64 |
| Unallocated | 5 | 10 | 0 | 0 | 1 | 4 | 0 | 0 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

*Note:* "Unallocated" includes holdings
*Source:* UNCTAD, FDI/TNC database

The interval between the late 1990s and mid-2000s will be analysed from the point of view of African FDI recipient countries. While information on FDI flows and stock published by African host economies is very patchy, we have some data at our disposal for the time period of interest.[36] Table 26 lists the sectoral distribution of FDI *inflows* for twelve African countries. Seven out of those twelve countries provide data for more than one year, making thereby a comparison over time possible.[37] Three major observations can be made: First, the manufacturing share is relatively low for most of the twelve countries. The secondary sector of the recipient economy has been the predominant target for FDI inflows for only two countries, Ethiopia and Zambia. The very high share for Ethiopia in both years can be attributed to the presence of investors from the Global South. While the most important source of FDI flows to developing countries was the developed world, all FDI flows to Ethiopia originated from developing economies in the early 1990s, primarily from the Arab World (UNCTAD, 2008). The same region still accounted for almost 85 per cent of total FDI flows to Ethiopia in 2000, with the remaining 15 per cent coming from Europe and North America. Second, and most importantly, FDI flows targeting the secondary sector have witnessed a significant drop in relative terms. In four out of five of the seven countries for which a significant comparison over time can be made, the share of manufacturing inflows has fallen. Third, and related to the second observation, the relative decline in the importance of the secondary sector has been accompanied by a rising share of either the primary sector, the tertiary sector or both sectors at the same time.

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[36] Government authorities of several countries, for example the DRC (former Zaire), have not compiled any FDI statistics. Moreover, the Investment Code of the DRC does not define FDI specifically (see UNCTAD, 2008). A contribution by Jerven (2013) aims to raise awareness of the shortcomings of national African statistics and its underlying causes.

[37] The figures for Mauritania and Nigeria are severely limited, however, as a large fraction remains unspecified.

The pattern with regard to the sectoral composition of inward FDI *stock* in Africa is very similar, with the advantage of better data availability (Table 27). Once again, we want to stress three interesting findings: first of all, only a few relatively small countries witnessed an increase in the manufacturing share of FDI stocks. In contrast, the relative importance of the manufacturing sector decreased in countries like South Africa, Botswana or Madagascar. Finally, both the primary sector and the tertiary sector have gained in importance over time. The service sector has played an increasingly important role in Morocco, Zambia and Tanzania. The major bulk of investment in the primary sector took place in resource-rich countries, predominantly in extractive industries. Anticipating the discussion in section 4.3, the data show that FDI has been highly concentrated in the period under consideration with South Africa and Nigeria being the top FDI recipients on the continent. In 2006, these two countries accounted for almost 40 per cent of Africa's total inward FDI stock. In line with the general trends, the share of primary sector in inward FDI stock in South Africa increased from 6.3 per cent to 34.5 per cent from 1994 until 2005. In the same period, the share of the manufacturing sector fell by one-third from 41 to 28 per cent. In a similar vein, the attractiveness of Nigeria's primary sector, mainly the oil-industry, rose in relative terms from a little bit less than 43 per cent in 1995 to almost 75 per cent in 2005.

We conclude that the primary sector, particularly the extractive industries, and the service sector have become increasingly attractive for (Western) enterprises around the time when Southern investment in Africa was still in its nascent stage. In the next section we show how the neglected manufacturing sector profited from China's expanding FDI.

**Table 26: Sectoral Distribution of Inward FDI Flows to Selected African Countries, Selected Years**

(Shares are reported in %)

| Sector/Industry | Egypt | | Ethiopia | | Madagascar | Mauritania | | Mauritius | | Morocco | | Mozambique | | Nigeria | | | Tunisia | | Tanzania | | Zambia | Zimbabwe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2001 | 2006 | 1995 | 2000 | 2006 | 1999 | 2006 | 1995 | 2006 | 1996 | 2006 | 1990 | 1994 | 1995 | 1998 | 2005 | 1995 | 2006 | 1999 | 2001 | 1995 | 1995 |
| **Total** | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| **Primary** | 13.7 | 37.7 | 0.8 | 30.1 | 71.4 | 38.4 | 1 | - | - | 8.3 | 0.5 | 2.4 | 62.2 | 37.4 | 5.8 | 78.6 | 80.4 | 21.7 | 59.1 | 19.1 | 27.1 | 32.1 |
| Agriculture, hunting, forestry and fishing | 5.1 | 0.2 | 0.8 | 10.8 | 1.2 | - | - | - | - | 0.3 | 0.1 | 2.4 | -6 | .. | - | .. | - | 0.3 | 4.3 | 10.2 | 26.4 | 10.9 |
| Mining, quarrying and petroleum | 8.6 | 37.5 | - | 19.3 | 70.1 | 38.4 | 1 | - | - | 8 | 0.4 | - | 68.2 | 37.4 | 5.8 | 78.6 | 80.4 | 21.4 | 54.8 | 8.9 | 0.7 | 21.2 |
| **Secondary** | 51.3 | 8.1 | 99.2 | 62.2 | 6.3 | .. | .. | - | - | 48.3 | 34.4 | 76 | 30.9 | .. | 17.9 | .. | 7.9 | 7.9 | 17.5 | 12.3 | 51.3 | 34 |
| Food, beverages and tobacco | 11.7 | - | - | 28 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 0.4 | 11 | 7.2 | - | - |
| Textiles, clothing and leather | 1.2 | - | - | 6.4 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 2.7 | - | - | - | - |
| Wood and wood products | 0.1 | | 39.3 | 0.3 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | - | - | - | - | - |
| Chemicals and chemical products | 38 | - | 31.6 | 13.7 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 0.8 | 2.6 | 3.4 | - | - |
| Rubber and plastic products | | | - | 1.3 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | - | - | - | - | - |
| Non-metallic mineral products | - | - | - | - | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 1.1 | - | - | - | - |
| Metal and metal products | | | | 0.1 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | - | 0.4 | 0.1 | - | - |
| Electrical and electronic equipment | - | - | 20 | 3.2 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 2.1 | - | - | - | - |
| Other manufacturing | - | - | 8.2 | 9.2 | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 0.8 | 3.5 | 1.6 | - | - |
| Unspecified secondary | | 8.1 | - | - | 6.3 | .. | .. | - | - | 48.3 | 34.4 | 76 | 30.9 | .. | 17.9 | .. | 7.9 | .. | - | - | 51.3 | 34 |
| **Tertiary** | 34.9 | 7.7 | 0 | 7.7 | 22.3 | .. | .. | 96.9 | 86.6 | 39.4 | 64.7 | 21.7 | 6.9 | .. | 29.5 | .. | 9.2 | 70.4 | 23.4 | 68.6 | 21.5 | 33.9 |
| Electricity, gas and water | - | - | - | - | .. | .. | .. | - | - | - | - | 0.5 | 0.3 | .. | - | .. | - | - | - | 17.8 | - | - |
| Construction | - | 2.7 | - | 2.7 | 0.2 | .. | .. | - | - | 2.8 | 0.1 | 4.1 | -1.8 | .. | 8.3 | .. | - | - | 5.2 | 1.9 | 2.3 | 0.1 |
| Trade | - | - | - | - | 5.5 | .. | .. | 75.4 | 1.2 | 4.9 | 4 | - | 6.2 | .. | - | .. | - | - | 8.2 | 7.1 | - | 25.2 |
| Hotels and restaurants | - | 4.7 | - | 4.7 | .. | .. | .. | 21.5 | 36.1 | - | - | 1.1 | 2.9 | .. | - | .. | 9.2 | 0.4 | 3.9 | 5.6 | - | - |
| Transport, storage and communications | - | - | - | - | 3.9 | .. | .. | - | 0.6 | 1.8 | 30.3 | - | 4.4 | .. | <0.1 | .. | - | 67.5 | 2.9 | 33.9 | 6.4 | 8.6 |
| Finance | 34.9 | - | - | - | 12.2 | .. | .. | - | 48.6 | 15.3 | 11.8 | - | -4.8 | .. | - | .. | - | - | 1.3 | 1.5 | - | - |
| Business activities | - | 0.2 | - | 0.2 | 0.6 | .. | .. | - | - | 13.8 | 15.8 | 8.3 | -0.3 | .. | 21.1 | .. | - | - | 1.5 | 0.4 | - | - |
| Health and social services | - | - | - | - | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | - | 0.1 | 0.2 | - | - |
| Community, social and personal services | - | - | - | - | - | .. | .. | - | - | - | - | 7.7 | - | .. | - | .. | - | - | 0.3 | 0.3 | - | - |
| Other services | - | - | - | - | - | .. | .. | - | - | 0.9 | 2.6 | - | - | .. | - | .. | - | - | - | - | 12.8 | - |
| Unspecified tertiary | - | - | - | - | - | .. | .. | - | - | - | - | - | - | .. | - | .. | - | 2.5 | - | - | - | - |
| **Unspecified** | - | - | - | - | - | 61.6 | 99 | 3.1 | 13.4 | 4 | 0.4 | - | - | 62.6 | 46.8 | 21.4 | 2.4 | - | - | - | - | - |
| **Total ($ million)** | 509.9 | 13084 | 14 | 135 | 294 | 15 | 155 | 19 | 228 | 327 | 2964 | 255 | 154 | 1271 | 1210.1 | 3403 | 323 | 3308 | 542 | 467 | 194 | 1085 |

*Source:* UNCTAD, based on country profiles and FDI/TNC database (www.unctad.org/fdistatistics)

# Table 27: Sectoral Distribution of Inward FDI Stock in Selected African Countries, Selected Years
(Shares are reported in %)

| Sector/Industry | Botswana | | Cape Verde | | Egypt | Madagascar | | Malawi | Morocco | Namibia | | Nigeria | | | South Africa | | Swaziland | | Uganda | | Tanzania | | Zambia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 2003 | 1990 | 1995 | 1995 | 2002 | 2006 | 2001 | 2004 | 1990 | 1994 | 1992 | 1995 | 2005 | 1994 | 2005 | 1993 | 2005 | 2000 | 2003 | 1998 | 2001 | 2001 |
| **Total** | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| **Primary** | 74.7 | 68.3 | 100 | 25.5 | 4 | 6.9 | 44.1 | 13.1 | 5.5 | 79.4 | 76.6 | 33.1 | 42.9 | 74.8 | 6.3 | 34.5 | 12.6 | 11.5 | 4.9 | 0.7 | 39.8 | 34.7 | 33.9 |
| Agriculture, hunting, forestry & fishing | - | - | - | - | 4 | 4.5 | 5.8 | 13.1 | 0.8 | .. | .. | 1.8 | - | - | 0.9 | 0.2 | 11.4 | 10.1 | 4.5 | 0.7 | 6.2 | 6.7 | 11.7 |
| Mining, quarrying and petroleum | 74.7 | 68.3 | 100 | 25.5 | - | 2.3 | 38.2 | - | 4.7 | .. | .. | 31.3 | 42.9 | 74.8 | 5.4 | 34.4 | 1.2 | 1.5 | 0.4 | - | 33.6 | 28 | 22.2 |
| **Secondary** | 6 | 3.9 | 0 | 24.1 | 47.4 | 13.2 | 11.8 | 41.8 | 33.4 | 2.9 | 5.3 | 47.5 | .. | .. | 41.3 | 27.8 | 60.3 | 72.3 | 36 | 26.6 | 24 | 33.5 | 13.2 |
| Food, beverages and tobacco | .. | .. | 0 | 4.9 | .. | .. | .. | .. | - | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13.9 | .. |
| Textiles, clothing and leather | .. | .. | - | 13.5 | .. | .. | .. | .. | - | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | - | .. |
| Coke, petroleum products and nuclear fuel | .. | .. | - | - | .. | .. | .. | .. | 2.5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | - | .. |
| Chemicals and chemical products | .. | .. | - | - | .. | .. | .. | .. | - | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4.3 | .. |
| Non-metallic mineral products | .. | .. | - | 0.6 | .. | .. | .. | .. | 5.1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | - | .. |
| Machinery and equipment | .. | .. | - | 1 | .. | .. | .. | .. | - | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0.1 | .. |
| Motor vehicles and other transport equipment | .. | .. | - | 3.2 | .. | .. | .. | .. | - | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | - | .. |
| Other manufacturing | | .. | - | 0.9 | .. | .. | .. | .. | - | .. | .. | | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15.2 | .. |
| Unspecified secondary | 6 | 3.9 | - | - | 47.4 | 13.2 | 11.8 | 41.8 | 25.7 | 2.9 | 5.3 | | .. | .. | 41.3 | 27.8 | 60.3 | 72.3 | 36 | 26.6 | 24 | - | 13.2 |
| **Tertiary** | 18.7 | 28 | 0 | 50.4 | 48.5 | 79.2 | 43.4 | 44.7 | 52.9 | 17.7 | 18.1 | 19.3 | .. | .. | 52.4 | 37.7 | 27 | 13.5 | 56.5 | 64.6 | 33.2 | 31.8 | 51.6 |
| Electricity, gas and water | 0.1 | 0.4 | - | - | - | 6.9 | 1.1 | - | - | .. | .. | - | .. | .. | - | 0 | - | - | 1.7 | - | 2.1 | 3.4 | 10 |
| Construction | 0.7 | 0.1 | - | 0.3 | 4.2 | 14.2 | 4.2 | 0.1 | 1.5 | .. | .. | 6.9 | .. | .. | 1.6 | 0.4 | - | - | 2.3 | 2.1 | 5.5 | 2.7 | 0.2 |
| Trade | 9.4 | 10.8 | - | - | - | 22.3 | 10.9 | 24.9 | 2.8 | .. | .. | 7.2 | .. | .. | 18.6 | 3 | - | - | 16.6 | 21.1 | 14.9 | 2.5 | 10.1 |
| Hotels and restaurants | 0.9 | 2 | - | - | - | 0.2 | 0.1 | 0.2 | - | .. | .. | - | .. | .. | - | - | - | - | - | - | - | 8.1 | 4.1 |
| Transport, storage and communications | 0.7 | 2 | 0 | 49.9 | 12.6 | 15 | 8.5 | 7.5 | 28.8 | .. | .. | 1.9 | .. | .. | 1.3 | 1.9 | - | - | 17.4 | 13.7 | 2.8 | 7.5 | 1.4 |
| Finance | 5.5 | 11.4 | - | - | 26 | 14.4 | 15.7 | 11 | 6.5 | .. | .. | - | .. | .. | 30.8 | 32.2 | 2.7 | 6.6 | 17.7 | 27.6 | 3.9 | 4.8 | 25.8 |
| Business activities | 1.3 | 1.2 | - | - | - | 6.3 | 2.9 | 0.3 | 10.3 | .. | .. | - | .. | .. | - | - | - | - | - | - | 3.9 | 1.2 | - |
| Education | - | - | - | - | - | - | - | - | - | .. | .. | - | .. | .. | - | - | - | - | - | - | - | 0 | - |
| Health and social services | 0.1 | - | - | - | - | - | - | 0.1 | - | .. | .. | - | .. | .. | - | - | - | - | - | - | - | 1.4 | - |
| Community, social and personal services | - | - | - | - | - | - | - | 0.4 | - | .. | .. | - | .. | .. | 0.1 | 0.1 | - | - | 0.7 | 0.2 | 0.1 | 0.2 | - |
| Other services | - | - | - | 0.2 | 5.7 | - | - | - | 3 | .. | .. | 3.3 | .. | .. | - | - | 24.4 | - | - | - | - | - | - |
| Unspecified tertiary | - | - | - | - | - | - | - | - | - | 17.7 | 18.1 | - | .. | .. | - | - | - | 6.9 | - | - | - | - | - |
| **Unspecified** | 0.6 | | 0 | - | - | 0.7 | 0.7 | 0.4 | 8.2 | - | - | 0 | 57.1 | 25.2 | - | - | - | 2.7 | 2.7 | 8 | 3 | 0 | 1.3 |
| **Total ($ million)** | 1280 | 1720 | 0 | 0.1 | 13355 | 166 | 503 | 491 | 19883 | 2047 | 1712 | | 8720 | 27270 | 10.166 | 77362 | 456 | 813 | 540 | 724 | 3386 | 3777 | 1085 |

*Source:* UNCTAD, based on country profiles and FDI/TNC database (www.unctad.org/fdistatistics)

The lion's share of China's *global* outward FDI stock targets the tertiary sector, such as IT, wholesale and retail trade, real estate as well as leasing and business services (Table 28). Approximately two-thirds of Chinese investment abroad has been channelled into the service sector. The "Mining" sector more generally refers to activities in extractive industries, including also oil. While this sector made up fourteen per cent of China's total global outward stock, sectors such as manufacturing and construction have received relatively little attention from Chinese investors. However, one should keep in mind that a bulk of China's total outward FDI stock has been concentrated in Asia.

**Table 28: Sectoral Distribution of China's Outward FDI Stock, 2010**
(Current US$ Million)

| Sector | Volume | % of China's total outward stock |
| --- | --- | --- |
| Mining | 44661 | 14.1 |
| Manufacturing | 17802 | 5.6 |
| Construction | 6173 | 2.0 |
| Transport, Storage and Post | 23188 | 7.3 |
| IT | 8406 | 2.7 |
| Wholesale and Retail Trade | 42007 | 13.2 |
| Finance | 55253 | 17.4 |
| Real Estate | 7266 | 2.3 |
| Leasing and Business Services | 97246 | 30.7 |
| Others | 15209 | 4.8 |
| TOTAL | 317211 | |

*Source:* MOFCOM (2011) 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

In order to compare Chinese FDI and Western FDI in Africa, we need to distinguish investment by Chinese SOEs and Chinese SMEs. The sectors targeted by SOEs differ remarkably from those targeted by SMEs. China's SOEs have traditionally acted as backbone for the domestic economy. Owned by local, provincial and national governments, SOEs dominate key sectors like the oil or telecommunications industry back home. Operating with distinctive long-run horizons, SOEs generally enjoy access to cheap and often subsidized long-term capital and are consequently less risk-averse (Gu, 2009). In contrast, China's SMEs make up the lion's share of the country's private investors. In total, SMEs accounted for 99 per cent of China's registered enterprise. In 2012, 4.3 million registered SMEs had been recorded in the domestic economy contributing to 58.5 per cent of GDP, 50 per cent of tax revenues, 68 per cent of exports and 75 per cent of new jobs every year (MOFCOM, 2012). In contrast to Chinese SOEs, Chinese SMEs tend to be more risk-averse, short-term profit oriented therefore resembling a bulk of Western private firms (Kaplinsky & Morris, 2009a).

During the time period 1979-2000, industrial processing has been the most important target for Chinese investors in Africa. Those investors possessed comparatively advanced technology in

machinery, textiles and garments or light industry such as consumer electronics or home appliances (Table 29). Both with regard to the number of projects and investment value, the manufacturing share constituted almost fifty per cent of their investments.[38] In terms of the number of projects, most of China's FDI has flowed into the service sector (UNDP, 2007). Since investment in extractive industries, such as the oil or gas sector, are usually considered higher-value activities, the primary sector naturally ranks a lot higher when looking at the investment value of China's FDI projects. While the share of the primary sector (agriculture plus mining) totalled 34 per cent, the lion's share of Chinese investment activities took place in resource extraction. Those figures show that the Beijing administration has been eager to secure its access to raw materials on the continent not only very recently but far earlier than commonly assumed.

**Table 29: Sectoral Distribution of China's FDI Flows to Africa, 1979-2000**

| Sector | Number of projects | | Investment value | |
|---|---|---|---|---|
| | Volume | % of TOTAL | Volume (Current US$ Million) | % of TOTAL |
| Resource extraction | 44 | 8.8 | 188 | 27.6 |
| Manufacturing | 230 | 46.1 | 315 | 46.3 |
| *Machinery* | 20 | 4.0 | 16 | 2.4 |
| *Home appliances* | 36 | 7.2 | 25 | 3.7 |
| *Light industry* | 82 | 16.4 | 87 | 12.8 |
| *Textiles* | 58 | 11.6 | 102 | 15.0 |
| *Other manufacturing* | 34 | 6.8 | 86 | 12.6 |
| Agriculture | 22 | 4.4 | 48 | 7.1 |
| Services | 200 | 40.1 | 125 | 18.4 |
| Others | 3 | 0.6 | 6 | 0.9 |
| TOTAL | 499 | 100.0 | 681 | 100.0 |

*Source:* UNDP (2007) - Asian Foreign Direct Investment in Africa: Towards a New Era of Cooperation among Developing Countries

China's accelerating outward FDI in Africa since the mid-2000s can be explained by both pull- and push-factors: Resource-seeking and market-seeking motives are the most prominent pull-factors while the eroding competitive advantage of specific sectors and industries as well as intensified competition in the Chinese market are notable push-factors.

The probably most widely discussed pull factor is the rich resource endowment of many African countries. As a result of its resource-intensive model of economic growth, Beijing becomes increasingly dependent on the extraction of foreign natural resources to fuel its domestic economic growth.[39] Since several African resource-rich economies are plagued by stagnant economic growth,

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[38] The figures have been published by UNDP (2007) based on official data from MOFCOM.

[39] Out of the total global energy consumption growth taking place in emerging economies in 2011, China alone accounted for 71 per cent. In terms of global oil consumption, the largest increment to global consumption growth in 2011 was attributed to China (+505,000 b/d, +5.5 per cent). In 2011, China also accounted for almost two-thirds of growth in global oil trade. Outside North America, China has recorded the largest volumetric gains in world natural gas consumption (+21.5 per cent). In comparison, the EU recorded a decline in gas consumption by 9.9 per cent (see BP, 2012). More than half of global liquids demand growth can be assigned to China. Based on predictions by British

a high degree of political instability, high levels of corruption and weak property right enforcement (Gylfason, 2001; Ross, 1999; Sachs & Warner, 1995, 2001)[40], several Western firms have increasingly been reluctant to invest in African resource-rich economies with dismal governance records over the last two decades, either deliberately or due to greater domestic and international NGO pressure (Patey, 2014).[41] Beijing's adherence to the principle of non-interference in internal affairs puts the country at a competitive advantage to carry out large-scale investment in resource-extractive industries, filling the vacuum in some countries left by traditional Western investors (see Table 30). When comparing China's resource extractive activities as a proportion of both its global and African FDI stock (14 per cent versus 29.2 per cent), we see that investment in resource-extractive sectors is twice as important on the African continent. Over time the relative importance of the resource extractive industries has been fairly constant, even during the 2000s when China's energy security and the urgent need to secure access to raw materials in Africa become an even greater concern (Lee, 2012; Moyo, 2012; Wenping, 2007). But the relative slow rise in the share is primarily due to the simultaneous increases in investment levels in in all other sectors.

One of the most prominent sectors of several African economies which has witnessed a major influx of investment flows from China is the manufacturing sector. While Chinese investors have paid relatively little attention to investments in manufacturing industries on a global scale, manufacturing FDI from China has played a much more important role on the African continent. We have reasons to believe that the manufacturing share reported in the table above can only be regarded as a lower bound for two reasons.

First, there are remarkable differences between the sectoral distribution of Chinese government FDI and Chinese private-led projects (see Table 31 below). The bulk of investment by Chinese SOEs tends to be assigned to big projects related to natural resource-extraction, contracting and service sectors such as telecommunications or the large-scale refurbishment of physical infrastructure. These projects are often linked to concessional loans and economic cooperation projects thereby signifying the strong nexus to aid funding. Manufacturing FDI only plays a

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Petrol, China's growing coal import requirements will outperform the ones from India, OECD and non-OECD countries and will not level off before 2030. Until 2030, China will account for 67 per cent of global coal growth and will remain the largest coal consumer increasing its share from 47 per cent to 53 per cent. By 2030, China will be the world's largest energy consumer. As the Chinese economy will gradually experience a structural transformation from resource intensive industry activities towards less energy intensive service activities, China's energy demand growth could slow down significantly after 2020 (see BP, 2012b).

[40] The phenomenon is also known as "resource curse". The concept has emerged in the 1980s and has become popular through the resource curse thesis put forward by British economist Richard Auty in his book *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (Auty, 1993). He argues that regions with natural resource abundance tend to have worse economic growth trajectories and development outcomes compared to countries with relative resource scarcity.

[41] Sudan is a prominent example in this respect. For more information, see Patey (2014).

negligible role for Chinese SOEs. In contrast, small or medium-sized private companies tend to be concentrated in manufacturing and wholesale trade (see also Kaplinsky & Morris, 2009a; Shen, 2013; Wang, 2007). Two country examples are very telling: In 2008, out of 336 investment projects taking place in Ghana, more than 100 took place in manufacturing industries (Gu, 2009). A case study by Geda and Meskel (2009) suggests that approximately two-thirds of Chinese companies present in Ethiopia were to be found in the manufacturing sector. As previously mentioned, however, most Chinese SMEs do not officially report their FDI activities to Beijing.

**Table 30: Sectoral Distribution of China's FDI Stock in Africa, 2009 and 2011**
(Current US$ Million)

| Sector | 2009 | | 2011 | |
|---|---|---|---|---|
| | Per cent | Volume[†] | Per cent | Volume[†] |
| Mining | 29.2 | 2,724.94 | 30.6 | 4,896.00 |
| Manufacturing | 22.0 | 2,053.04 | 15.3 | 2,448.00 |
| Construction | 15.8 | 1,474.46 | 16.4 | 2,624.00 |
| Financing | 13.9 | 1,297.15 | 19.5 | 3,120.00 |
| Commercial services | 5.4 | 503.93 | 5.0 | 800.00 |
| Wholesale and retail | 4.0 | 373.28 | 2.7 | 432.00 |
| Scientific research, technological services and geological prospecting | 3.2 | 298.62 | 4.1 | 656.00 |
| Agriculture, forestry, animal husbandry and fishery | 3.1 | 289.29 | 2.5 | 400.00 |
| Real Estate | - | - | 1.1 | 176.00 |
| Others | 3.4 | 317.29 | 2.8 | 448.00 |
| **TOTAL** | | 9,332.00 | | 16,000.00 |

†: The volumes with respect to each sector are estimated by multiplying the sectoral share with China's total FDI stock in Africa in 2009 and 2011, respectively. The FDI stock for the year 2011 is an estimate taken from the UNCTAD World Investment Report 2013.

The FDI stock for the year 2011 is an estimate taken from the UNCTAD World Investment Report 2013.

*Sources:* China State Council (2010) - China-Africa Economic and Trade Cooperation; China State Council (2013) - China-Africa Economic and Trade Cooperation.

**Table 31: Sectoral Distribution of China's FDI in Africa, 2011:**
**Government- vs. Private-led Projects**

| Sector | Government-Led Projects (in %) | Private-Led Projects (in %) |
|---|---|---|
| Manufacturing | 6.0 | 36.0 |
| Mining | 25.0 | 16.0 |
| Contracting | 35.0 | 5.0 |
| Trade | 9.0 | 22.0 |
| Agriculture | 4.0 | 6.0 |
| Other | 21.0 | 15.0 |
| TOTAL | 100.00 | 100.00 |

*Source*: Shen (2013)-Private Chinese Investment in Africa: Myths and Realities

The second reason why the manufacturing share is probably underestimated has to do with to the changing landscape of the Sino-African investment relations. Wang (2007) views the private sector acts as primary engine of strengthened economic ties between China and Africa rather than Beijing's government ministries. Small and medium-sized Chinese privately-owned enterprises working across industries such as agriculture, fishing, forestry, textile and garment production, footwear, food processing, pharmaceuticals, and services gain significant influence in Africa despite the existence of numerous Chinese SOEs activities on the continent (Gu, 2009). According to calculations by Shen (2013), the number of private Chinese OFDI projects in Africa amounted to 55 per cent of all Chinese FDI projects carried out on the continent by the end of 2011. Based on data from the Chinese EXIMBANK, Gu (2009) concludes that approximately 85 per cent of all Chinese enterprises in Africa are privately owned. Since the number of private-led projects is likely to increase, investments in the industrial sectors of many African economies are likely to expand in the future as well. Taking those two aspects into consideration, the assumption that the real share of manufacturing is higher than suggested by our figures, seems to be justified.

Two of the most notable push factors that can partly explain the increasing attractiveness of African manufacturing for Chinese SMEs have to do with the trajectory of China's domestic economy. Both the rising labour costs in many coastal provinces (Bräutigam & Tang, 2011; Ceglowski & Golub, 2011) and the gradual, albeit slow, currency appreciation of the renminbi (Eichengreen, 2013b; J. Y. Lin, 2012) have contributed to some erosion of China's comparative advantage in several manufacturing industries and sectors. Closely related to this recent development is the intensified competition in the Chinese home market. As a result, many Chinese firms are forced to venture offshore transferring excessive domestic production capacity to other regions, including Africa, as do many Western firms.

Until the early 2000s, Western investors constituted the lion's share of investment in Africa. Before China's expanding investment agenda on the continent, FDI was highly concentrated in a few sectors and few countries, mainly resource-seeking FDI in resource-rich countries (Asiedu, 2004; Mlambo, 2005), and to some extent market-seeking FDI in service sectors partly due to emergence of a middle class in particular host economies (UNCTAD, 2012b). The sectoral distribution of China's investment in African industries differs greatly from China's global investment patterns since resource-extraction and manufacturing industries play a relatively more important role on the African continent in the eyes of Chinese enterprises. At the risk of gross oversimplification, the sectors in which Chinese SOEs are concentrated are clearly distinguishable from those in which SMEs operate. In the majority of cases, major projects related to (i) natural resource extraction and (ii) infrastructural development are assigned to SOEs. In contrast, the vacuum in the

manufacturing sector of many African economies left by the absence of Western investors has been filled by small or medium-sized private companies from China. These SMEs, often receiving little or even no direct state support, tend to be concentrated in the manufacturing sector and wholesale trade. The sectoral distribution of China's FDI is therefore highly dependent on the firm structure. Finally, China's investment on the African continent is more diversified than commonly assumed.

## 4.3. Regional Distribution of FDI

The distribution of global FDI inflows to Africa has been highly unequal from the early 1970s until the early 2000s (Table 32). The bulk of FDI host economies are resource-rich and littoral. Since FDI flows are highly unstable on a year-to-year basis, we complement the analysis by looking at the geographical composition of global FDI stock. The results presented below, however, are remarkably in line with the findings discussed above. Similar to FDI flows, the FDI stock is very unequally distributed. With regard to the geographic patterns, we can conclude that FDI has and still does mainly target resource-rich, littoral states, while landlocked, resource-scarce countries have almost entirely been cut off from FDI inflows. In addition, foreign investments activities have also been highly concentrated in a few countries only, namely South Africa, Nigeria, Egypt, Morocco and Tunisia. While all those five countries meet the criteria (i) resource-abundance and (ii) sea access, they provide yet some other major interesting features. First, Nigeria and South Africa are regarded as the two biggest economies on the continent. Thanks to their geographical proximity to Europe, North African countries have been another priority target for foreign direct investment.

Finally we will look at the geographical composition of one particular Western investor, namely the United States (Table 34). While the United States treats its FDI data relatively transparently, many recent FDI activities in Africa carried out by the UK or France remain highly confidential. The bulk of US FDI stock has been concentrated in resource-rich countries. Having developed itself as a country with "relatively strong and transparent public institutions, with clear property rights, strong judicial independence, and an efficient government" (Schwab & Sala-i-Martin, 2012, p. 41), the resource-scarce economy of Mauritius has very recently joined the top ranks. In the year 2011 12.9 per cent of total US FDI stock has been allocated to Mauritius, thereby becoming the second most attractive investment location in the eyes of American enterprises.[42]

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[42] Zafar (2011) provides an informative account about the successful economic growth trajectory in Mauritius.

## Table 32: Main Host Countries of World's Outward FDI Flows to Africa
(Current US$ Million)

| 1970 | | | 1990 | | | 2001 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Volume | % of total flows to Africa | Country | Volume | % of total flows to Africa | Country | Volume | % of total flows to Africa | Country | Volume | % of total flows to Africa |
| South Africa | 333.61 | 26.35 | Nigeria | 1002.50 | 35.22 | South Africa | 6,783.9 | 34.02 | Nigeria | 7,028.85 | 14.05 |
| Libya | 317.22 | 25.05 | Egypt | 734.00 | 25.79 | Morocco | 2,807.1 | 14.08 | Mozambique | 5,218.14 | 10.43 |
| Nigeria | 205.00 | 16.19 | Liberia | 225.24 | 7.91 | Angola | 2,145.5 | 10.76 | South Africa | 4,572.49 | 9.14 |
| Algeria | 80.12 | 6.33 | Zambia | 202.78 | 7.12 | Nigeria | 1,277.4 | 6.41 | Côte d' Ivoire | 3,312.14 | 6.62 |
| Ghana | 67.80 | 5.36 | Morocco | 165.00 | 5.80 | Algeria | 1,107.9 | 5.56 | Ghana | 3,294.52 | 6.58 |
| Liberia | 57.14 | 4.51 | Libya | 158.91 | 5.58 | Equat. Guinea | 940.7 | 4.72 | Morocco | 2,835.55 | 5.67 |
| Congo, DR | 30.70 | 2.42 | Botswana | 95.90 | 3.37 | Egypt | 509.9 | 2.56 | Egypt | 2,797.70 | 5.59 |
| Morocco | 20.00 | 1.58 | Tunisia | 88.70 | 3.12 | Tunisia | 486.5 | 2.44 | Congo, Republic | 2757.934 | 5.51 |
| Zimbabwe | 18.67 | 1.47 | Gabon | 73.46 | 2.58 | Tanzania | 467.2 | 2.34 | Sudan | 2466.357 | 4.93 |
| Cameroon | 16.00 | 1.26 | Benin | 62.38 | 2.19 | Chad | 459.9 | 2.31 | Equat. Guinea | 2115.073 | 4.23 |
| Others | 119.84 | 9.47 | Others | 37.36 | 1.31 | Others | 2,956.94 | 14.83 | Others | 13,642.30 | 27.26 |
| AFRICA | 1266.10 | | AFRICA | 2846.23 | | AFRICA | 19,942.99 | | AFRICA | 50,041.06 | |

*Source:* UNCTAD FDI/TNC Database

## Table 33: Main Host Countries of World's Outward FDI Stock in Africa
(Current US$ Million)

| 1980 | | | 2001 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|
| Country | Volume | % of total flows to Africa | Country | Volume | % of total flows to Africa | Country | Volume | % of total flows to Africa |
| South Africa | 16459.47 | 18.20 | South Africa | 30,569.00 | 20.26 | South Africa | 138,964.05 | 22.07 |
| Tunisia | 3340.61 | 15.17 | Nigeria | 25,063.81 | 16.61 | Nigeria | 76,369.00 | 12.13 |
| Nigeria | 2457.30 | 14.07 | Egypt | 20,465.00 | 13.56 | Egypt | 75,410.00 | 11.98 |
| Morocco | 2283.13 | 12.55 | Morocco | 11,649.40 | 7.72 | Morocco | 48,175.55 | 7.65 |
| Egypt | 2260.38 | 4.96 | Tunisia | 11,519.44 | 7.63 | Tunisia | 33,634.34 | 5.34 |
| Zambia | 1997.97 | 4.50 | Angola | 10,123.39 | 6.71 | Sudan | 30,368.16 | 4.82 |
| Namibia | 1934.60 | 4.38 | Algeria | 4,486.77 | 2.97 | Algeria | 23,264.07 | 3.69 |
| Libya | 1855.43 | 3.37 | Zambia | 4,037.70 | 2.68 | Congo Republic | 21,011.86 | 3.34 |
| Algeria | 1525.17 | 2.57 | Liberia | 3,254.86 | 2.16 | Ghana | 16,621.80 | 2.64 |
| Liberia | 868.23 | 2.16 | Tanzania | 2,867.20 | 1.90 | Libya | 16,334.00 | 2.59 |
| Others | 6114.92 | 14.88 | Others | 26,867.29 | 17.80 | Others | 149,479.65 | 23.74 |
| AFRICA | 41097.21 | | AFRICA | 150,903.85 | | AFRICA | 629,632.47 | |

*Source:* UNCTAD FDI/TNC Database

**Table 34: US FDI Stock in Africa by Destination, 1970-2011**

(Current US$ Million)

| | 1990 | | 2000 | | 2011 | |
|---|---|---|---|---|---|---|
| | Volume | % of TOTAL | Volume | % of TOTAL | Volume | % of TOTAL |
| Egypt | 1246.0 | 34.1 | 1998.0 | 16.8 | 14581.0 | 25.7 |
| South Africa | 868.0 | 23.8 | 3562.0 | 30.0 | 6546.0 | 11.6 |
| Nigeria | 529.0 | 14.5 | 1283.0 | 10.8 | 4994.0 | 8.8 |
| Gabon | 334.0 | 9.2 | 268.0 | 2.3 | | |
| Libya | 232.0 | 6.4 | | | 2061.0 | 3.6 |
| Angola | | | 1321.0 | 11.1 | 5696.0 | 10.1 |
| Nigeria | | | 1283.0 | 10.8 | | |
| Chad | | | 276.0 | 2.3 | | |
| Mauritius | | | | | 7330.0 | 12.9 |
| Algeria | | | | | 5214.0 | 9.2 |
| TOTAL | 3650.0 | | 11891.0 | | 56632.0 | |

*Sources:* OECD International direct investment database, IMF; UNCTAD FDI/TNC Database

Similar to the geographical distribution patterns of Chinese development aid, a majority of China's FDI is concentrated in oil- or mineral-rich countries such as Nigeria, South Africa, Zambia, and more recently the DRC. Around the time when China's foreign direct investment in Africa took off, a majority of FDI flows benefitted the two economic heavyweights Nigeria and South Africa, exactly those two host nations which have also enjoyed major FDI inflows from Western investors (Table 35). Likewise, the resource-scarce economy Mauritius has been attractive from the very beginning of China's growing investment agenda on the continent. The Mauritian government has followed a growth and development strategy that involves the attraction of foreign capital for a large variety of sectors, for example, fisheries, textiles, garment, business services, tourism, or telecommunications software and equipment (Zafar, 2011). Located in the Indian Ocean where the African and Asian continents meet, Mauritius with its actively trading ethnic Chinese community and its economic integration in South-East Asian business has developed itself as a strategic platform and ideal gateway for Chinese investors to penetrate the African market (Ancharaz, 2009; Davies et al., 2008).[43] In a very similar fashion to the geographical destination of Western FDI in Africa, the distribution of China's investment is highly skewed. Across the board, the major five recipients of FDI inflows in 2010 were well endowed with exploitable natural resources.

The two biggest economies in Africa, South Africa and Nigeria, were not only among those countries witnessing major FDI inflows, but the two economic heavyweights have also accounted for the largest share of China's FDI stock since 2003 onwards (Table 36). Especially South Africa whose international importance as one of the BRICS countries and its status as key player in Sub-

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[43] Mauritius hosts one of six Chinese special economic zones (SEZs) in Africa. The construction of the *Jin Fei Trade and Economic Cooperation Zone* began in 2009 and completion is expected in 2016. The US$ 550 million project is the biggest investment by a foreign entity to date. Covering up to 500 hectares, experts expect an influx of US$ 750 million creating around 34,000 jobs (of which 8,000 will be reserved for contractors from China) over the upcoming five years. Around 40 Chinese businesses will operate in the zone generating an estimated annual volume of US$ 220 million worth of export earnings (Dwinger, 2010).

Saharan Africa makes it a strategically important investment hub for Chinese firms. Nigeria is currently the only African country that hosts two of China's overseas special economic zones (SEZs), namely the *Ogun-Guangdong Free Trade Zone* and the *Lekki Free Trade Zone* (Mthembu-Salter, 2009). Preceding the country's transformation into a manufacturing hub for a majority of China's key industrial firms, Nigeria has witnessed a collapse in manufacturing activities throughout the 1990s, with per capita value-added in manufacturing declining during that period (Söderbom & Teal, 2002).[44] Deindustrialization in parts of post-independence Sub-Saharan Africa, however, have not been the exception but rather the norm (Lall & Wangwe, 1998; Page, 2013; Tregenna, 2013). The country, however, that has attracted the largest portion of Chinese FDI in 2003 was Zambia. One of China's six special economic zones in Africa is located in Zambia. The Chambishi Copper Mine owned by the state-owned Chinese Non-Ferrous Company-Africa (NFCA) is considered the largest nonferrous metal mine overseas approved by Chinese government for development and construction (CNMC, 2009). Countries with an abundance of natural resources such as Algeria, DRC or Sudan have very recently become priority targets for Chinese FDI attraction, besides the usual suspects South Africa, Nigeria and Zambia.

The results presented above complements the findings of Shen (2013). While we have listed the top FDI recipients with regard to the *investment value*, Shen provides figures with respect to the *number of investment projects*. The top-ten Sub-Saharan recipients of FDI – both state-owned and private companies – make up roughly two-thirds of all Chinese investments projects on the African continent with the rest unevenly distributed across the rest.

**Table 35: Main African Host Countries of China's Outward FDI Flows, Selected Years**
(Current US$ Million)

| 2003 | | | 2010 | | |
|---|---|---|---|---|---|
| Country | Volume | % of China's total flows to Africa | Country | Volume | % of China's total flows to Africa |
| Nigeria | 24.40 | 32.62 | South Africa | 411.17 | 19.47 |
| Mauritius | 10.27 | 13.73 | Congo, DR | 236.19 | 11.18 |
| South Africa | 8.86 | 11.84 | Niger | 196.25 | 9.29 |
| Zambia | 5.53 | 7.39 | Algeria | 186.00 | 8.81 |
| Mali | 5.41 | 7.23 | Nigeria | 184.89 | 8.75 |
| Ghana | 2.89 | 3.86 | Kenya | 101.22 | 4.79 |
| Algeria | 2.47 | 3.30 | Angola | 101.11 | 4.79 |
| Egypt | 2.10 | 2.81 | Zambia | 75.05 | 3.55 |
| Benin | 2.09 | 2.79 | Ethiopia | 58.53 | 2.77 |
| Mauritania | 1.70 | 2.27 | Ghana | 55.98 | 2.65 |
| Others | 9.09 | 12.15 | Others | 505.60 | 23.94 |
| AFRICA, TOTAL | 74.81 | | AFRICA, TOTAL | 2,111.99 | |

*Source:* MOFCOM (2011) - 2010 Statistical Bulletin of China's Outward Foreign Direct Investment (English version); MOFCOM (2010) - 2009 Statistical Bulletin of China's Outward Foreign Direct Investment (Chinese version)

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[44] In fact, Nigerian per capita value-added in manufacturing stood at US$13 dollars in the late 1990s, 10 per cent of the level of Botswana and less than 50 per cent of that of Ghana and Kenya (see Söderbom & Teal, 2002).

**Table 36: Main African Host Countries of China's Outward FDI Stock, Selected Years**
(Current US$ Million)

| | **2003** | | | **2010** | |
| --- | --- | --- | --- | --- | --- |
| Country | Volume | % of China's total stock in Africa | Country | Volume | % of China's total stock in Africa |
| Zambia | 143.70 | 29.25 | South Africa | 4,152.98 | 31.84 |
| South Africa | 44.77 | 9.11 | Nigeria | 1,210.85 | 9.28 |
| Zimbabwe | 36.74 | 7.48 | Zambia | 943.73 | 7.24 |
| Nigeria | 31.98 | 6.51 | Algeria | 937.26 | 7.19 |
| Madagascar | 28.13 | 5.73 | Congo, DR | 630.92 | 4.84 |
| Kenya | 25.53 | 5.20 | Sudan | 613.36 | 4.70 |
| Gabon | 24.05 | 4.90 | Niger | 379.36 | 2.91 |
| Guinea | 14.34 | 2.92 | Ethiopia | 368.06 | 2.82 |
| Egypt | 14.29 | 2.91 | Angola | 351.77 | 2.70 |
| Mauritius | 12.59 | 2.56 | Egypt | 336.72 | 2.58 |
| Others | 115.11 | 23.43 | Others | 3,117.11 | 23.90 |
| AFRICA, TOTAL | 491.23 | | AFRICA, TOTAL | 13,042.12 | |

*Source:* MOFCOM (2011) - 2010 Statistical Bulletin of China's Outward Foreign Direct Investment (English version); MOFCOM (2010) - 2009 Statistical Bulletin of China's Outward Foreign Direct Investment (Chinese version)

Until now, we have focused on the absolute volume of Chinese investment. A more meaningful measure of a host economy's dependency on China's FDI is China's investment stock as a per cent of GDP. Zambia is not only one of the main recipients of China's FDI, but its degree of dependence on China's foreign capital also ranks among the top (Table 37). Two other countries with their economies being highly dependent on Chinese investment are resource-rich Liberia and Niger. While Niger's economy is mainly centred on subsistence crops and livestock, the country has sizeable reserves of oil and gas, but also minerals like coal and iron. Moreover, Africa's highest grade uranium ores come from two uranium mines located in Niger. By providing 7.5 per cent of world mining output, Niger is currently one of the largest uranium producers worldwide (WNA, 2014). With Beijing's uranium demand on the rise, Niger has become an attractive investment location for Chinese enterprises.[45] All in all, we can observe a major trend: Between 2003 and 2010, a considerable amount of African economies in their present state have become increasingly dependent on Chinese investment. The relative importance of China's FDI in many poverty-stricken and/or landlocked countries (such as Mali, Niger, DRC, Sudan or Sierra Leone) provides another not to be underestimated push factor, namely the strong entrepreneurial spirit of Chinese SME's. According to Kaberuka et al. (2011), the move into fragile states is perceived as too risky for much of the private sector. Where Western firms tend to perceive the business environment as "risky", Chinese entrepreneurs realize "opportunities" (Gu, 2009). In contrast to many Western companies, Chinese enterprises are more likely to explore areas with relatively low profit margins, weak supply chains as well as politically and economically unstable environments.

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[45] In their revealing narrative of China's growing investment in Africa, Michel, Beuret & Woods (2010) devote one full chapter to the "Uranium Mania" in the Sahara, most importantly Niger.

**Table 37: Main African Host Countries of China's Outward FDI Stock, as % of GDP**

| 2003 | | 2010 | | 2003-2010 Average | |
|---|---|---|---|---|---|
| Country | % of GDP | Country | % of GDP | Country | % of GDP |
| Zambia | 3.31 | Niger | 7.01 | Zambia | 3.92 |
| Liberia | 1.42 | Liberia | 6.32 | Liberia | 3.78 |
| Zimbabwe | 0.64 | Zambia | 5.83 | Niger | 2.33 |
| Madagascar | 0.51 | Congo, DR | 4.81 | Guinea | 1.84 |
| Niger | 0.46 | Guinea-Bissau | 3.23 | Congo, DR | 1.45 |
| Guinea | 0.42 | Mauritius | 2.92 | Mauritius | 1.40 |
| Gabon | 0.40 | Guinea | 2.88 | Madagascar | 1.36 |
| Equatorial Guinea | 0.29 | Madagascar | 2.60 | Sierra Leone | 1.16 |
| Togo | 0.28 | Central African Republic | 2.34 | Zimbabwe | 1.10 |
| Mali | 0.28 | Seychelles | 1.99 | Sudan | 0.98 |
| AFRICA | 0.07 | AFRICA | 0.78 | AFRICA | 0.35 |

*Source:* Authors' own calculations. FDI figures are based on MOFCOM's (2011) 2010 Statistical Bulletin of China's Outward Foreign Direct Investment (English version) and MOFCOM's (2010) 2009 Statistical Bulletin of China's Outward Foreign Direct Investment (Chinese version). Nominal GDP figures are taken from the World Development Indicators (WDI) published by the World Bank.

Summarizing, while the developed countries have accounted for the lion's share of inward FDI stock and of flows to many African countries since the mid-1970s, the foreign direct investment carried out by Southern investors is growing rapidly. Before the emergence of China, development assistance outperformed direct investment among many Western players. Beijing's strong emphasis on direct investment in the game of foreign finance, however, led to a paradigm shift of the composition of foreign finance among at least a few traditional players, with FDI inflows to Africa originating from Western players outstripping annual development assistance.

Before China's upward momentum of private investment on the African continent, a majority of Western FDI has taken predominantly taken place in resource extractive industries, and increasingly in service sectors, while a bulk of Western firms has pulled out of African manufacturing. Similarly to previous Western resource-seeking FDI, a large fraction of investment carried out by Chinese *state-owned* enterprises predominantly takes place in resource extraction but also in infrastructural projects. Business activities of Chinese SOEs are much less driven by short-term profit-maximizing motives and enjoy relatively easy access to cheap capital provided by China's large state-owned banks. Large state-owned enterprises became increasingly active in the late 1980s and mid-1990s for resource-seeking reasons on the African continent. Securing access to natural resources has been a primary concern of the Beijing administration witnessed by the high concentration of Chinese FDI in African economies with exploitable natural resources. Chinese SOEs have increasingly invested strategically putting less focus on corporate financial issues and shareholder value compared to Western firms (see Alden & Davies, 2006).

As a result of the emergence of a middle class in many African countries, Western companies have recognized increasing market opportunities in the service sector of those economies. The vacuum left in the manufacturing sector, however, has not gone unnoticed among Chinese SMEs. In contrast to Chinese SOEs, the ever-growing investments of Chinese *small or medium-sized* private companies are characterized by market-seeking FDI. Being heavily concentrated in labour-intensive manufacturing industries, Chinese small and medium-size privately owned firms are mainly driven by commercial motives. As their business and cultural links to the region are relatively weak, Chinese *small or medium-sized* private companies are widely dispersed and regionally less concentrated (see also Henley, Kratzsch, Külür, & Tandogan, 2009). With regard to the geographic destination, we observe more similarities than differences between traditional Western investors and emerging Chinese firms. The distribution of foreign direct investment remains highly skewed, with a few host countries receiving the largest bulk of investment. Those recipient economies are generally characterized by a relatively high abundance of natural resources, sea access and large expanding economic markets.

## 5. CHINA'S TRADE

Similar to FDI, the magnitude and pace at which trade flows between China and Africa evolve are unprecedented in recent history. While China-Africa trade volume stood at $128 million in 1960, the figure rose to between $168 billion and $198 billion in 2012 according to various sources. This compares to a EU-Africa and US-Africa trade volume of $423 billion and $101 billion, respectively, in 2012. Section 5.1 will first quantify China's trade volume and compare it the trade volume of Africa's other main trading partners from the West. Section 5.2 will examine the sectoral composition of Western and Chinese trade flows with Africa. Finally, we will investigate the regional patterns of China's trade flows in comparison to those by Western trading partners (section 5.3).

### 5.1. Magnitude of Trade Flows

In contrast to aid and FDI figures which must still be interpreted with caution, trade data is readily available from various sources. China's total trade volume with Africa has been rapidly increasing from the beginning of the 21st century (see Figure 12). More revealing, however, is another trend: between 2000 and 2010, China has become one of the most important trading partners for Africa (Figure 13). While China's share of Africa's global trade has stagnated from the 1930s until the late

1990s, it soared from 3.48 per cent in 2000 to almost 15 per cent in 2013. The attractiveness of Africa as trade partner for China has been highly fluctuating over time. Nevertheless, speaking in relative terms, Africa has been a more attractive trading partner for China from the 1930s until the early 1990s, than vice-versa. In contrast, the relative attractiveness of China as trading partner for Africa languished at around 1 or 2 per cent until the mid-1990s (see also Shinn & Eisenman, 2012). Since then, however, China has become a more important trading partner for Africa than vice-versa, despite the fact that both shares have surged in the 21$^{st}$ century. Based on the evolution of expanding trade relationships between China and Africa, Broadman (2008) views Chinese-African Trade as "vanguard of South-South Commerce in the Twenty-First Century" (p. 87).

While China is currently one of the largest trading nations worldwide, ranking behind the EU-27 and competing with the US for second place, the country has also become the largest individual trading partner for Africa as Table 38 demonstrates. In the early 1990s, China's total trade volume with Africa was relatively small compared to the French and US trading volume. While China's rapidly increasing foreign aid and foreign direct investment on the African continent remains modest in absolute terms China has already become Africa's largest trading partner over the last couple of years, surpassing Africa's traditional trading partners such as the United States, and the colonial powers France, United Kingdom and (to a lesser extent) Germany. If we take the European Union as an independent entity, however, the EU-27 positions itself as largest trading partner with Africa.

**Figure 12: Trade between China and Africa, 1938-2013 (Absolute Volume)**
(Current US$ Million)
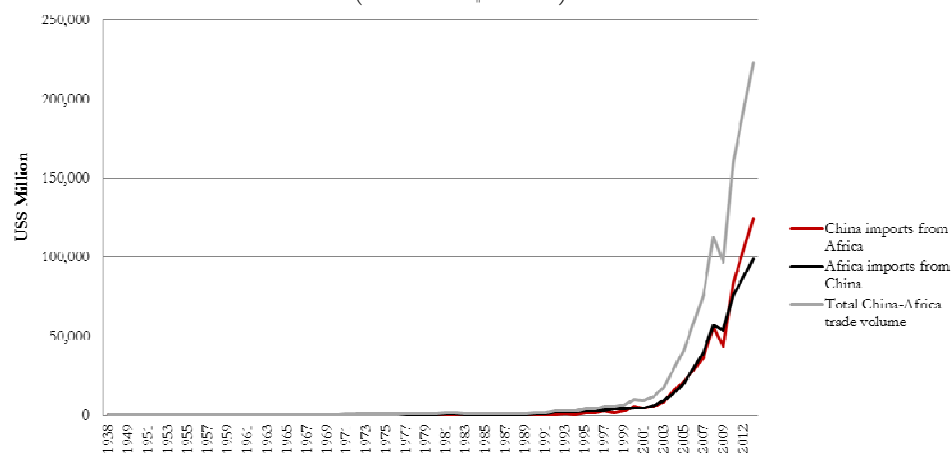


*Source:* Shinn and Eisenman (2012) - China and Africa: A Century of Engagement, UN COMTRADE Database

**Figure 13: Trade between China and Africa, 1938-2013 (Trade Shares)**

(in %)
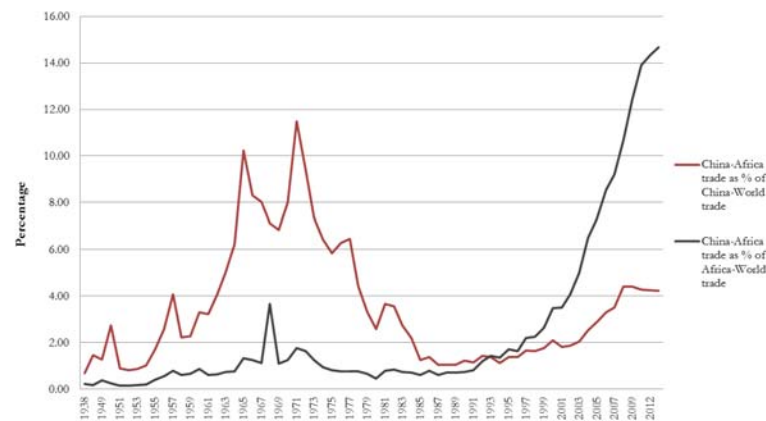


*Source:* Shinn and Eisenman (2012) - China and Africa: A Century of Engagement, UN COMTRADE Database

**Table 38: Trade with Africa for Selected Countries, Selected Years (Absolute Volume)**

(Current US$ Million)

| Country | 1990 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Imports from Africa | Exports to Africa | Two-way trade volume | Imports from Africa | Exports to Africa | Two-way trade volume | Imports from Africa | Exports to Africa | Two-way trade volume |
| EU-27 | | | | 73,585 | 59,840 | 133,425 | 237,418 | 185,324 | 422,742 |
| France | 11,085 | 13,465 | 24,550 | 12,485 | 16,845 | 29,330 | 36,992 | 36,499 | 73,491 |
| Germany | 8,448 | 6,494 | 14,942 | 10,832 | 9,322 | 20,153 | 30,037 | 28,360 | 58,397 |
| UK | 3,241 | 4,123 | 7,364 | 8,512 | 6,809 | 15,322 | 32,433 | 18,265 | 50,698 |
| USA | 15,071 | 5,940 | 21,011 | 29,066 | 10,937 | 40,003 | 68,455 | 32,853 | 101,307 |
| Japan | 1,861 | 3,717 | 5,578 | 4,626 | 4,877 | 9,504 | 21,265 | 12,890 | 34,155 |
| China | 482 | 1,214 | 1,696 | 4,823 | 4,849 | 9,672 | 113,244 | 85,160 | 198,405 |
| India | 583 | 413 | 996 | 3,452 | 2,104 | 5,556 | 43,017 | 27,315 | 70,332 |
| Russia | | | | 349 | 941 | 1,289 | 2,224 | 7,205 | 9,429 |
| Brazil | 557 | 840 | 1,397 | 2,907 | 1,343 | 4,250 | 14,266 | 12,210 | 26,476 |

*Note:* The data for Germany and China correspond to the years 1991 and 1992, respectively.

*Sources:* UN COMTRADE Database

Besides analysing the absolute trade volume of other major trading partners with Africa, we are also interested in the relative importance of Africa in trading considerations of Western and emerging economies over time. As previously discussed, Africa has gained in importance for China, but China has become an even more attractive trading partner for the African continent. Let us first investigate the relationship between Western trading partners and Africa. From the perspective of Western trading partners, the African share of total trade volume was fairly low in 1990. The pattern is very similar with regard to the year 2000. Twelve years later, Africa became increasingly attractive (again)[46], albeit by a small margin. If we take the European Union as an aggregate entity, it is considered to be the most important trading bloc for the African continent,

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[46] While we have no data on Africa's trade volume with the European colonial powers during the 1950s readily available, we are almost certain that the African share of Europe's total global trade was a lot greater before, during and shortly after the African independence era.

with almost 50 per cent of Africa's trade flows being connected to the EU. Very recently, however, the shares for all traditional Western trading partners listed in the table decreased significantly. In the eyes of particular African countries, other trading partners have increasingly become more important, namely a bulk of emerging economies from the Global South (e.g. China, India, Russia and Brazil).

**Table 39: Trade with Africa for Selected Countries, 1990-2012 (Shares)**

| Country | 1990 | | 2000 | | 2012 | |
|---|---|---|---|---|---|---|
| | African share of country's trade volume | Country's share of Africa's trade volume | African share of country's trade volume | Country's share of Africa's trade volume | African share of country's trade volume | Country's share of Africa's trade volume |
| EU-27 | | | 7.87 | 46.52 | 9.46 | 27.78 |
| France | 5.54 | 12.43 | 4.90 | 10.23 | 6.02 | 4.83 |
| Germany | 1.89 | 7.86 | 1.92 | 7.03 | 2.26 | 3.84 |
| UK | 1.79 | 3.73 | 2.46 | 5.34 | 4.33 | 3.33 |
| USA | 2.31 | 10.64 | 1.96 | 13.95 | 2.61 | 6.66 |
| Japan | 1.07 | 1.10 | 1.11 | 3.31 | 2.03 | 2.24 |
| China[†] | 1.02 | 0.73 | 2.04 | 3.37 | 5.13 | 13.04 |
| India | 2.39 | 0.50 | 5.83 | 1.94 | 9.03 | 4.62 |
| Russia | | | 0.94 | 0.45 | 1.12 | 0.62 |
| Brazil | 2.59 | 0.71 | 3.83 | 1.48 | 5.68 | 1.74 |

†: We obtain only slightly different shares for China if compared to those obtained by Shinn and Eisenman (2012). With regard to the African share of China's trade volume, Shinn and Eisenman obtain values equal to 1.23, 2.10 and 4.25 per cent for the years 1990, 2000 and 2012, respectively. With regard to the Chinese share of Africa's trade volume, Shinn and Eisenman obtain values equal to 0.73, 3.48 and 14.33 per cent for the same years.
*Note:* The data for Germany and China correspond to the years 1991 and 1992, respectively.
*Sources:* Authors' own calculations based on UN COMTRADE Database. Shinn and Eisenman (2012) - China and Africa: A Century of Engagement

## 5.2.   Sectoral Distribution of Trade Flows

As the trade volume with Africa has grown, the composition of that trade has been subject to change as well (Table 40). The total China-Africa trade volume has skyrocketed from $1.6 billion in 1992 to almost $169 billion in 2012.[47] Focusing on exports for now, we observe that the lion's share of Chinese exports to Africa constitutes manufacturing goods since the early 1990s, with the skewness becoming more pronounced over time (Table 41). With regard to China's imports from Africa, a similar trend towards a highly skewed composition can be observed, albeit in a different sector: since the late 1990s and early 2000s, China's imports became highly concentrated in the narrow band of energy and mineral resource extraction.

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[47] The figures come from the World Bank WITS database. Data from UN COMTRADE database estimates China-Africa trade volume in 2012 at around $198 billion.

The global trade patterns for the EU-27, the US and China for the year 2012 are displayed below (Table 42). On a global scale, manufacturing goods formed the bulk of American, Chinese and European imports and exports. Looking at the African trade patterns only (Table 43), the picture is somewhat different. Similarly to the global pattern, exports to Africa centre on manufactured products. But with regard to imports from Africa we observe that the relative importance of manufacturing goods versus natural resources is exactly reversed if compared to the global pattern. The primary sector with its resource extractive industries comprising both mineral fuels and crude materials accounted for the largest share of imports from Africa for all three players. The African share in the countries' global trade flow within that sector is portrayed in Table 44. Among the three players, Africa turns out to be the most important source of energy acquisition for the European Union in relative terms. With regard to exports, a major interesting finding is the relatively high share of crude materials and mineral fuels being exported from the EU to Africa. Thanks to its geographical proximity, the African market plays a relatively more important role for the European Union if compared to the US and China.

**Table 40: China-Africa Trade Volume by Sector, Selected Years (Absolute Volume)**
(Current US$ Million)

| Sector | 1992 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume |
| Agriculture and Fishing | 155.3 | 223.3 | 378.5 | 526.6 | 151.4 | 678.0 | 3,769.2 | 410.6 | 4,179.9 |
| Mining and Quarrying | 159.6 | 4,129.1 | 163.7 | 3,350.1 | 30.9 | 3,381.0 | 68,177.7 | 45.6 | 68,223.3 |
| Manufacturing | 155.2 | 905.8 | 1,061.0 | 621.8 | 4,639.0 | 5,260.8 | 11,882.1 | 84,571.7 | 96,453.8 |
| TOTAL | 470.0 | 1,133.2 | 1,603.2 | 4,498.4 | 4,821.3 | 9,320.0 | 83,829.1 | 85,028.0 | 168,857.1 |

*Source:* Own calculations based on World Bank WITS database

**Table 41: China-Africa Trade Volume by Sector, Selected Years (% of total trade flow with Africa)**

| Sector | 1992 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume |
| Agriculture and Fishing | 33.0 | 19.7 | 23.6 | 11.7 | 3.1 | 7.3 | 4.5 | 0.5 | 2.5 |
| Mining and Quarrying | 34.0 | 0.4 | 10.2 | 74.5 | 0.6 | 36.3 | 81.3 | 0.1 | 40.4 |
| Manufacturing | 33.0 | 79.9 | 66.2 | 13.8 | 96.2 | 56.4 | 14.2 | 99.5 | 57.1 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source:* Own calculations based on World Bank WITS database

While the increasing trade relationships between China and Africa are often described as South-South trade, the pattern highly resembles the typical North-South trade patterns predicted by Ricardo (1817). The evolution of Sino-African trade patterns mirror Ricardo's law of (static) comparative advantage. Relative factor endowments of labour, capital and natural resources are

largely responsible for the dichotomous nature of Sino-African trade patterns: Similar to the North-South pattern observed between the European Union, the United States and Africa, China largely exports manufactured goods and transport equipment, while it mainly imports energy and mineral resources from Africa in return. But while China's exports to Africa tend to be at least a little bit more diversified, African exports to China are highly concentrated in the primary sector.

**Table 42: Trade of Major Countries with World by Sector, 2012**
**(% of Total Trade Flow with World)**

| Sector | EU-27 | | | USA | | | CHINA | | |
|---|---|---|---|---|---|---|---|---|---|
| | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume |
| Agriculture and Fishing | 3.3 | 0.7 | 2.0 | 2.1 | 6.4 | 3.6 | 5.2 | 0.8 | 2.7 |
| Mining and Quarrying | 26.6 | 1.5 | 14.6 | 15.1 | 2.6 | 10.8 | 26.0 | 1.5 | 12.2 |
| Manufacturing | 69.9 | 97.6 | 83.2 | 82.8 | 91.0 | 85.6 | 68.8 | 97.5 | 85.0 |
| Others | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.2 | 0.1 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source:* Own calculations based on World Bank WITS database

**Table 43: Trade of Major Countries with Africa by Sector, 2012**
**(% of Total Trade Flow with Africa)**

| Sector | EU-27 | | | USA | | | CHINA | | |
|---|---|---|---|---|---|---|---|---|---|
| | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume | Imports | Exports | Two-way trade volume |
| Agriculture and Fishing | 5.7 | 0.9 | 3.6 | 2.7 | 10.8 | 5.1 | 4.5 | 0.5 | 2.5 |
| Mining and Quarrying | 67.0 | 1.5 | 38.6 | 67.8 | 2.0 | 48.6 | 81.3 | 0.1 | 40.4 |
| Manufacturing | 27.3 | 97.5 | 57.7 | 29.5 | 87.2 | 46.3 | 14.2 | 99.5 | 57.1 |
| Others | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source:* Own calculations based on World Bank WITS database

**Table 44: Trade of Major Countries with Africa by Sector, 2012**
**(% of Global Trade Flow within sector)**

| Sector | EU-27 | | | USA | | | CHINA | | |
|---|---|---|---|---|---|---|---|---|---|
| | Imports | Exports | Total volume | Imports | Exports | Total volume | Imports | Exports | Total volume |
| Agriculture and Fishing | 18.4 | 11.1 | 17.2 | 3.9 | 4.0 | 4.0 | 4.7 | 2.6 | 4.3 |
| Mining and Quarrying | 26.9 | 8.9 | 26.0 | 13.5 | 1.8 | 12.5 | 16.7 | 0.1 | 15.6 |
| Manufacturing | 4.2 | 8.9 | 6.8 | 1.1 | 2.2 | 1.5 | 1.1 | 4.3 | 3.2 |
| Others | 0.1 | 6.3 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 10.7 | 8.9 | 9.8 | 3.0 | 2.3 | 2.8 | 5.3 | 4.2 | 4.7 |

*Source:* Own calculations based on World Bank WITS database

## 5.3.    Regional Distribution of Trade Flows

Before we look at the geographical destination of China's trade volume with Africa, let us first analyse the regional distribution of the US and EU trade volume with Africa. While Nigeria, Egypt, Angola, Algeria and post-apartheid South Africa have been the main US trading partners over

time, the geographical distribution of US trade flows became a less skewed over time (Table 45). The main importing countries were (i) countries from the Maghreb, (ii) rapidly growing Sub-Saharan countries like Nigeria and more recently Angola and (iii) economic heavyweight South Africa (Table 46). Very recently, more than three-quarters of total US imports from Africa came from five countries only, namely South Africa, Egypt, Nigeria, Morocco and Angola. Throughout the time period 1990-2012, the US suffered from a significantly worsening trade deficit (Table 47).

Likewise, South Africa has been one of Europe's largest trading partner over the last decade as well. It is not surprising to see that Maghreb countries rank among the top trading partners as well, given its geographic peculiarities and proximity to Europe (Table 48). Both the main importers and main exporters have been fairly constant between 2000 and 2012 (Table 49). The evolution of Europe's trade balance follows similar trends to the one of the United States (Table 50). At the turn of the 21st century, Europe recorded a negative trade balance. In 2000, total imports surpassed total exports by roughly US$8.2 billion. Only twelve years later, Europe's trade deficit stood at US$ 52.1 billion, an almost 7-fold increase. While the main trading partners of the United States and Europe have varied only marginally, China's leading trading partners have changed quite substantially between 1992 and 2012 (Table 51).

During the mid-2000s and after the end of the apartheid regime, South Africa has emerged as China's main trading partner on the continent. The geographical composition of China's trading volume has become highly skewed in favour of the major trading partners. At the very top, the uneven geographical distribution of China-Africa trade volume has reached unprecedented heights: South Africa and Angola accounted for almost fifty per cent of China's total trade volume with Africa in 2012. In contrast to the uneven geographical distribution of China's imports from Africa, China's exports to Africa have been fairly divided across a majority of African countries (Table 52). Around the early 1990s, China enjoyed a significant trade surplus with Africa. In recent years, however, China had a very large trade deficit with Africa (Table 53). This contrasts with the global pattern in which Africa has an aggregate trade deficit while China has a trade surplus.

## Table 45: USA's Main Trading Partners in Africa, Selected Years (Total Trade Volume)

(Current US$ Million)

| 1990 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|
| Country | Two-Way Trade Volume | % of TOTAL | Country | Two-Way Trade Volume | % of TOTAL | Country | Two-Way Trade Volume | % of TOTAL |
| Nigeria | 6,946.9 | 33.14 | Nigeria | 11,770.2 | 29.42 | Nigeria | 24,637.5 | 24.35 |
| Algeria | 3,795.2 | 18.11 | South Africa | 7,443.9 | 18.61 | South Africa | 16,367.9 | 16.18 |
| Egypt | 2,684.1 | 12.81 | Egypt | 4,270.1 | 10.67 | Algeria | 11,563.6 | 11.43 |
| Angola | 2,249.1 | 10.73 | Angola | 3,984.8 | 9.96 | Angola | 11,519.7 | 11.39 |
| Gabon | 853.9 | 4.07 | Algeria | 3,746.2 | 9.36 | Egypt | 8,589.7 | 8.49 |
| Morocco | 614.4 | 2.93 | Gabon | 2,396.2 | 5.99 | Morocco | 3,252.9 | 3.22 |
| Congo, Rep. | 531.2 | 2.53 | Morocco | 996.1 | 2.49 | Libya | 3,101.8 | 3.07 |
| Congo, DR | 469.9 | 2.24 | Congo, Rep. | 625.8 | 1.56 | Chad | 2,750.5 | 2.72 |
| Ghana | 316.8 | 1.51 | Cote d'Ivoire | 516.1 | 1.29 | Gabon | 2,253.4 | 2.23 |
| Cote d'Ivoire | 302.7 | 1.44 | Ghana | 409.9 | 1.02 | Equat. Guinea | 1,976.4 | 1.95 |
| Others | 2,196.2 | 10.48 | Others | 3,846.3 | 9.61 | Others | 15,159.1 | 14.98 |
| TOTAL | 20,960.4 | 100.00 | TOTAL | 40,005.5 | 100.00 | TOTAL | 101,172.6 | 100.00 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

## Table 46: USA's Main Trading Partners in Africa, Selected Years (Imports and Exports)

(Current US$ Million)

| 1990 | | | | 2000 | | | | 2012 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Main Exporters to USA | Main Importers from USA | % of TOTAL | Country | Main Exporters to USA | Main Importers from USA | % of TOTAL | Country | Main Exporters to USA | Main Importers from USA | % of TOTAL |
| Nigeria | 6,395.6 | | 42.4 | Nigeria | 11,051.8 | | 38.02 | South Africa | 19,523.4 | | 28.53 |
| Algeria | 2,847.5 | | 18.9 | South Africa | 4,359.1 | | 15.00 | Egypt | 10,201.3 | | 14.90 |
| Angola | 2,099.4 | | 13.9 | Angola | 3,758.7 | | 12.93 | Nigeria | 10,030.3 | | 14.65 |
| Gabon | 804.9 | | 5.3 | Algeria | 2,878.8 | | 9.90 | Morocco | 8,814.6 | | 12.88 |
| Congo, Rep. | 441.4 | | 2.9 | Gabon | 2,332.7 | | 8.03 | Angola | 3,104.6 | | 4.54 |
| Others | 2,482.4 | | 16.5 | Others | 4,685.6 | | 16.12 | Others | 16,768.7 | | 24.50 |
| TOTAL | 15,071.1 | | 100.0 | TOTAL | 29,066.8 | | 100.00 | TOTAL | 68,442.9 | | 100.00 |
| Egypt | | 2,248.8 | 38.2 | Egypt | | 3,329.3 | 30.44 | Nigeria | | 7,553.3 | 23.08 |
| Algeria | | 947.7 | 16.1 | South Africa | | 3,084.7 | 28.20 | Algeria | | 5,485.1 | 16.76 |
| Nigeria | | 551.4 | 9.4 | Algeria | | 867.4 | 7.93 | Angola | | 5,114.1 | 15.63 |
| Morocco | | 497.0 | 8.4 | Nigeria | | 718.5 | 6.57 | South Africa | | 2,257.6 | 6.90 |
| Tunisia | | 178.5 | 3.0 | Morocco | | 524.7 | 4.80 | Egypt | | 1,489.5 | 4.55 |
| Others | | 1,465.9 | 24.9 | Others | | 2,414.2 | 22.07 | Others | | 10,830.1 | 33.09 |
| TOTAL | | 5,889.3 | 100.0 | TOTAL | | 10,938.8 | 100.00 | TOTAL | | 32,729.7 | 100.00 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

## Table 47: USA's Trade Balance with Selected African Countries, Selected Years

(Current US$ Million)

| 1990 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|
| Country | Positive Trade Balance | Negative Trade Balance | Country | Positive Trade Balance | Negative Trade Balance | Country | Positive Trade Balance | Negative Trade Balance |
| Egypt | 1,813.5 | | Egypt | 2,388.4 | | Egypt | 2,380.5 | |
| Morocco | 379.5 | | Tunisia | 188.7 | | Morocco | 1,262.4 | |
| Tunisia | 144.7 | | Ethiopia | 134.3 | | Ethiopia | 1,098.0 | |
| Kenya | 52.7 | | Kenya | 122.7 | | Ghana | 1,004.4 | |
| Zambia | 51.0 | | Senegal | 77.2 | | Benin | 572.3 | |
| Congo, Rep. | | -351.6 | South Africa | | -1,274.4 | Libya | | -2,006.6 |
| Gabon | | -756.0 | Algeria | | -2,011.4 | Chad | | -2,678.4 |
| Algeria | | -1,899.8 | Gabon | | -2,269.3 | Angola | | -8,540.8 |
| Angola | | -1,949.6 | Angola | | -3,533.7 | Algeria | | -8,839.0 |
| Nigeria | | -5,844.2 | Nigeria | | -10,333.3 | Nigeria | | -14,409.3 |
| TOTAL | | -9,181.9 | TOTAL | | -18,128.0 | TOTAL | | -35,713.2 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

**Table 48: EU's Main Trading Partners in Africa, Selected Years (Total Trade Volume)**

(Current US$ Million)

| | 2000 | | | 2012 | |
| Country | Two-Way Trade Volume | % of TOTAL | Country | Two-Way Trade Volume | % of TOTAL |
|---|---|---|---|---|---|
| South Africa | 23,882.4 | 18.68 | Algeria | 66,926.0 | 15.83 |
| Algeria | 17,209.0 | 13.46 | South Africa | 58,084.8 | 13.74 |
| Libya | 14,370.7 | 11.24 | Nigeria | 56,812.2 | 13.44 |
| Tunisia | 11,821.9 | 9.25 | Libya | 49,931.7 | 11.81 |
| Egypt | 10,692.0 | 8.36 | Morocco | 32,293.3 | 7.64 |
| Nigeria | 9,512.6 | 7.44 | Egypt | 29,466.2 | 6.97 |
| Morocco | 7,137.9 | 5.58 | Tunisia | 26,131.8 | 6.18 |
| Cote d'Ivoire | 3,159.3 | 2.47 | Angola | 16,777.7 | 3.97 |
| Cameroon | 2,413.0 | 1.89 | Ghana | 8,744.9 | 2.07 |
| Angola | 2,349.7 | 1.84 | Equatorial Guinea | 7,710.2 | 1.82 |
| Others | 25,324.7 | 19.80 | Others | 69,863.4 | 16.53 |
| AFRICA, Total | 127,873.1 | 100.00 | AFRICA, Total | 422,742.1 | 100.00 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

**Table 49: EU's Main Trading Partners in Africa, Selected Years (Imports and Exports)**

(Current US$ Million)

| | 2000 | | | | 2012 | | |
| Country | Main Exporters to EU-27 | Main Importers from EU-27 | % of TOTAL | Country | Main Exporters to EU-27 | Main Importers from EU-27 | % of TOTAL |
|---|---|---|---|---|---|---|---|
| South Africa | 13,215.1 | | 19.42 | Nigeria | 42,371.5 | | 17.85 |
| Libya | 12,029.4 | | 17.68 | Libya | 42,113.7 | | 17.74 |
| Algeria | 11,553.6 | | 16.98 | Algeria | 41,880.4 | | 17.64 |
| Nigeria | 5,891.3 | | 8.66 | South Africa | 25,027.8 | | 10.54 |
| Tunisia | 5,098.2 | | 7.49 | Tunisia | 12,225.1 | | 5.15 |
| Others | 20,245.7 | | 29.76 | Others | 73,799.8 | | 31.08 |
| TOTAL | 68,033.3 | | 100.00 | TOTAL | 237,418.3 | | 100.00 |
| South Africa | | 10,667.3 | 17.83 | South Africa | | 33,057.0 | 17.84 |
| Egypt | | 7,486.0 | 12.51 | Algeria | | 25,045.6 | 13.51 |
| Morocco | | 7,137.9 | 11.93 | Morocco | | 20,789.6 | 11.22 |
| Tunisia | | 6,723.7 | 11.24 | Egypt | | 18,732.8 | 10.11 |
| Algeria | | 5,655.3 | 9.45 | Nigeria | | 14,440.6 | 7.79 |
| Others | | 22,169.6 | 37.05 | Others | | 73,258.1 | 39.53 |
| TOTAL | | 59,839.8 | 100.00 | TOTAL | | 185,323.8 | 100.00 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

**Table 50: EU's Trade Balance with Selected African Countries, Selected Years**

(Current US$ Million)

| | 2000 | | | 2012 | |
| Country | Positive Trade Balance | Negative Trade Balance | Country | Positive Trade Balance | Negative Trade Balance |
|---|---|---|---|---|---|
| Morocco | 7,137.9 | | Morocco | 9,285.9 | |
| Egypt | 4,280.0 | | South Africa | 8,029.2 | |
| Tunisia | 1,624.5 | | Egypt | 7,999.5 | |
| Liberia | 1,509.1 | | Togo | 3,789.6 | |
| Senegal | 567.6 | | Senegal | 3,629.0 | |
| Cameroon | | -715.4 | Botswana | | -3,659.9 |
| Nigeria | | -2,269.9 | Equatorial Guinea | | -5,790.3 |
| South Africa | | -2,547.8 | Algeria | | -16,834.7 |
| Algeria | | -5,898.3 | Nigeria | | -27,930.9 |
| Libya | | -9,688.0 | Libya | | -34,295.6 |
| TOTAL | | -8,193.4 | TOTAL | | -52,094.5 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

## Table 51: China's Main Trading Partners in Africa, Selected Years (Total Trade Volume)

(Current US$ Million)

| 1992 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|
| Country | Two-Way Trade Volume | % of TOTAL | Country | Two-Way Trade Volume | % of TOTAL | Country | Two-Way Trade Volume | % of TOTAL |
| Libya | 176.4 | 10.40 | South Africa | 2,050.9 | 21.21 | South Africa | 59,977.0 | 30.24 |
| Egypt | 175.6 | 10.36 | Angola | 1,876.4 | 19.40 | Angola | 37,601.1 | 18.96 |
| Morocco | 144.6 | 8.53 | Egypt | 907.4 | 9.38 | Nigeria | 10,570.1 | 5.33 |
| Zimbabwe | 125.3 | 7.39 | Nigeria | 856.1 | 8.85 | Egypt | 9,544.7 | 4.81 |
| Liberia | 115.7 | 6.82 | Benin | 371.5 | 3.84 | Libya | 8,760.1 | 4.42 |
| Tanzania | 108.7 | 6.41 | Congo, Rep. | 342.1 | 3.54 | Algeria | 7,728.6 | 3.90 |
| Nigeria | 97.0 | 5.72 | Gabon | 341.7 | 3.53 | Ghana | 5,434.3 | 2.74 |
| Togo | 77.0 | 4.54 | Morocco | 336.1 | 3.47 | Congo, Rep. | 5,076.4 | 2.56 |
| Mozambique | 59.1 | 3.49 | Equat. Guinea | 323.0 | 3.34 | Congo, DR | 4,364.6 | 2.20 |
| Gambia | 52.0 | 3.07 | Cote d'Ivoire | 230.0 | 2.38 | Sudan | 3,732.9 | 1.88 |
| Others | 564.5 | 33.29 | Others | 2,035.8 | 21.05 | Others | 45,543.2 | 22.96 |
| TOTAL | 1,696.0 | 100.00 | TOTAL | 9,671.0 | 100.00 | TOTAL | 198,332.9 | 100.00 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

## Table 52: China's Main Trading Partners in Africa, Selected Years (Imports and Exports)

(Current US$ Million)

| 1992 | | | | 2000 | | | | 2012 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Main Exp. to China | Main Imp. from China | % of TOTAL | Country | Main Exp. to China | Main Imp. from China | % of TOTAL | Country | Main Exp. to China | Main Imp. from China† | % of TOTAL |
| Zimbabwe | 97.9 | | 20.31 | Angola | 1,842.7 | | 38.20 | South Africa | 44,653.7 | | 39.42 |
| Libya | 89.8 | | 18.63 | South Africa | 1,037.3 | | 21.50 | Angola | 33,561.9 | | 29.63 |
| Gabon | 48.2 | | 10.01 | Gabon | 337.3 | | 6.99 | Libya | 6,375.9 | | 5.63 |
| Morocco | 40.5 | | 8.40 | Congo, Rep. | 323.7 | | 6.71 | Congo, Rep. | 4,555.4 | | 4.02 |
| Mozambique | 38.4 | | 7.96 | Equat. Guinea | 319.5 | | 6.62 | Congo, DR | 3,527.1 | | 3.11 |
| Others | 167.2 | | 34.69 | Others | 963.2 | | 19.97 | Others | 20,612.3 | | 18.19 |
| TOTAL | 482.0 | | 100.00 | TOTAL | 4,823.7 | | 100.00 | TOTAL | 113,286.4 | | 100.00 |
| Egypt | | 174.6 | 14.38 | South Africa | | 1,013.6 | 20.91 | South Africa | | 15,323.3 | 18.02 |
| Liberia | | 115.7 | 9.53 | Egypt | | 805.3 | 16.61 | Nigeria | | 9,296.3 | 10.93 |
| Tanzania | | 108.0 | 8.89 | Nigeria | | 548.8 | 11.32 | Egypt | | 8,223.9 | 9.67 |
| Morocco | | 104.1 | 8.58 | Benin | | 370.4 | 7.64 | Algeria | | 5,416.7 | 6.37 |
| Nigeria | | 91.0 | 7.50 | Morocco | | 277.8 | 5.73 | Ghana | | 4,790.8 | 5.63 |
| Others | | 620.6 | 51.12 | Others | | 1,831.4 | 37.78 | Others | | 41,995.6 | 49.38 |
| TOTAL | | 1,214.0 | 100.00 | TOTAL | | 4,847.4 | 100.00 | TOTAL | | 85,046.6 | 100.00 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

## Table 53: China's Trade Balance with Selected African Countries, Selected Years

(Current US$ Million)

| 1992 | | | 2000 | | | 2012 | | |
|---|---|---|---|---|---|---|---|---|
| Country | Positive Trade Balance | Negative Trade Balance | Country | Positive Trade Balance | Negative Trade Balance | Country | Positive Trade Balance | Negative Trade Balance |
| Egypt | 173.5 | | Egypt | 703.2 | | Nigeria | 8,022.5 | |
| Liberia | 115.7 | | Benin | 369.3 | | Egypt | 6,903.2 | |
| Tanzania | 107.3 | | Nigeria | 241.5 | | Ghana | 4,147.2 | |
| Nigeria | 85.0 | | Morocco | 219.6 | | Togo | 3,298.3 | |
| Togo | 73.7 | | Cote d'Ivoire | 215.5 | | Liberia | 3,216.5 | |
| Mozambique | | -17.7 | Cameroon | | -115.4 | Congo, DR | | -2,689.6 |
| Angola | | -20.9 | Congo, Rep. | | -305.4 | Libya | | -3,991.7 |
| Mali | | -29.5 | Equat. Guinea | | -315.9 | Congo, Rep. | | -4,034.4 |
| Gabon | | -46.7 | Gabon | | -332.8 | South Africa | | -29,330.4 |
| Zimbabwe | | -70.5 | Angola | | -1,809.0 | Angola | | -29,522.7 |
| TOTAL | 731.9 | | TOTAL | 23.7 | | TOTAL | | -28,239.8 |

*Source:* Authors' own calculations based on data from UN COMTRADE Database

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While we have previously discussed the *sectoral* composition and *regional* distribution of Africa's trade relationship with its leading trade partners, we will now examine the sectoral distribution of the latter's trade flows at the *country level* for the year 2012. EU and US imports from several African countries mainly comprise crude materials and mineral fuels. Manufactured goods form the lion's share of exports in many African trading countries (Table 54 and Table 55). With regard to our selected countries, we observe that China's imports are even more highly concentrated in the resource sector compared to those of the US and the EU (Table 56). Like US and European exports, manufactured products form the bulk of Chinese exporting goods. Overall, we observe that the sectoral patterns of Africa's leading trading partners at a regional level resemble those at a national level, especially for those African countries that are well-endowed with natural resources.

**Table 54: USA's Trade with Selected African Countries by Sector, 2012 (%)**

| | Imports from Africa (in % of total imports) | | | Exports to Africa (in % of total exports) | |
|---|---|---|---|---|---|
| | Extraction of oil and gas | Mining of coal, metal ores, uranium, etc. | Others | Manufacturing | Others |
| Algeria | 56.7 | 0.0 | 43.3 | 88.6 | 11.4 |
| Angola | 94.3 | 0.8 | 4.8 | 98.3 | 1.7 |
| Cameroon | 15.0 | 0.0 | 85.0 | 96.5 | 3.5 |
| Congo, DR | 0.0 | 40.2 | 59.8 | 91.2 | 8.8 |
| Egypt | 45.7 | 0.4 | 53.9 | 74.7 | 25.3 |
| Ethiopia | 0.0 | 3.6 | 96.4 | 59.5 | 40.5 |
| Ghana | 0.0 | 0.7 | 99.3 | 97.0 | 3.0 |
| Kenya | 0.0 | 0.0 | 100.0 | 87.6 | 12.4 |
| Libya | 90.2 | 0.0 | 9.8 | 97.4 | 2.6 |
| Morocco | 0.0 | 33.9 | 66.1 | 76.0 | 24.0 |
| Mozambique | 0.0 | 46.3 | 53.7 | 91.2 | 8.8 |
| Nigeria | 92.9 | 0.0 | 7.1 | 79.9 | 20.1 |
| South Africa | 0.0 | 7.2 | 92.8 | 96.9 | 3.1 |
| Sudan | 0.0 | 0.0 | 100.0 | 33.6 | 66.4 |
| Tanzania | 0.0 | 1.2 | 98.8 | 97.1 | 2.9 |
| Zambia | 0.0 | 2.6 | 97.4 | 99.9 | 0.1 |

*Source:* Authors' own calculations based on World Bank WITS database

**Table 55: EU's Trade with Selected African Countries by Sector, 2012 (%)**

| | Imports from Africa (in % of total imports) | | | Exports to Africa (in % of total exports) | |
|---|---|---|---|---|---|
| | Extraction of oil and gas | Mining of coal, metal ores, uranium, etc. | Others | Manufacturing | Others |
| Algeria | 84.8 | 0.3 | 14.9 | 98.7 | 1.3 |
| Angola | 90.4 | 5.8 | 3.8 | 99.4 | 0.6 |
| Cameroon | 52.9 | 0.0 | 47.1 | 99.0 | 1.0 |
| Congo, DR | 0.0 | 28.6 | 71.4 | 99.5 | 0.5 |
| Egypt | 44.2 | 1.3 | 54.5 | 97.3 | 2.7 |
| Ethiopia | 0.0 | 0.0 | 100.0 | 99.5 | 0.5 |
| Ghana | 68.6 | 5.5 | 25.9 | 99.6 | 0.4 |
| Kenya | 0.0 | 1.9 | 98.1 | 99.3 | 0.7 |
| Libya | 95.3 | 0.0 | 4.7 | 97.0 | 3.0 |
| Morocco | 0.0 | 5.1 | 94.9 | 96.3 | 3.7 |
| Mozambique | 0.0 | 9.0 | 91.0 | 99.8 | 0.2 |
| Nigeria | 96.2 | 0.0 | 3.8 | 99.6 | 0.4 |
| South Africa | 0.0 | 18.0 | 82.0 | 94.8 | 5.2 |
| Sudan | 0.0 | 0.0 | 100.0 | 98.4 | 1.6 |
| Tanzania | 0.0 | 20.1 | 79.9 | 99.7 | 0.3 |
| Zambia | 0.0 | 8.8 | 91.2 | 99.6 | 0.4 |

*Source:* Own calculations based on World Bank WITS database

**Table 56: China's Trade with Selected African Countries by Sector, 2012 (%)**

| | Imports from Africa (in % of total imports) | | | Exports to Africa (in % of total exports) | |
|---|---|---|---|---|---|
| | Extraction of oil and gas | Mining of coal, metal ores, uranium, etc. | Others | Manufacturing | Others |
| Algeria | 99.8 | 0.0 | 0.2 | 99.4 | 0.6 |
| Angola | 99.4 | 0.4 | 0.2 | 99.7 | 0.3 |
| Cameroon | 56.1 | 0.0 | 43.9 | 98.9 | 1.1 |
| Congo, DR | 20.5 | 11.5 | 68.0 | 98.5 | 1.5 |
| Egypt | 66.6 | 18.4 | 15.0 | 98.1 | 1.9 |
| Ethiopia | 0.0 | 3.7 | 96.3 | 99.9 | 0.1 |
| Ghana | 52.9 | 28.0 | 19.1 | 99.9 | 0.1 |
| Kenya | 0.0 | 24.2 | 75.8 | 99.7 | 0.3 |
| Libya | 100.0 | 0.0 | 0.0 | 98.7 | 1.3 |
| Morocco | 0.0 | 30.1 | 69.9 | 99.3 | 0.7 |
| Mozambique | 0.0 | 35.1 | 64.9 | 99.7 | 0.3 |
| Nigeria | 81.8 | 5.5 | 12.7 | 99.9 | 0.1 |
| South Africa | 2.4 | 60.3 | 37.3 | 99.3 | 0.7 |
| Sudan | 96.8 | 0.3 | 2.9 | 99.3 | 0.7 |
| Tanzania | 0.0 | 58.3 | 41.7 | 99.9 | 0.1 |
| Zambia | 0.0 | 1.6 | 98.4 | 100.0 | 0.0 |

*Source:* Authors' own calculations based on World Bank WITS database

Compared to remarkable differences between Western and Chinese development assistance, but also to some extent with respect to Western and Chinese FDI, the trade patterns of both the West and China with Africa tend to be very similar. Both the advanced economies US and the European Union from the Global North, but also the emerging economy China from the Global South trade

with Africa in a North-South fashion exchanging processed goods and services for primary products. The highly uneven spatial distribution of these trade flows are characterized by (i) the transfer of vast amounts of energy and mineral resources from the African continent to Western countries and (ii) the arrival of Western manufactured goods and services as well as machinery and transport equipment on African domestic markets. According to our findings, the pattern of trade depends to a certain extent on the endowment structure of the African partner, but not on its development level: the North-South trade pattern based on comparative advantage considerations is more pronounced for resource-rich African countries, regardless of the development level in the host economy.

# 6. THE RELATIONSHIPS BETWEEN AID, FDI AND TRADE AT COUNTRY LEVEL

Until now, we have analysed aid, FDI and trade flows separately. This section will analyse how the three external flows are interlinked at the country level, both for the West and China. Are the countries that receive most aid also (i) the countries that receive most FDI and (ii) engage most heavily in trade? Is there any difference in this respect between China and the Western countries?

We have ranked all 53 African countries (excluding South Sudan) according to the magnitude of aid received from China, the size of the FDI stock[48] originating from China, and Chinese imports from and exports to the respective African nation; once for the year 2003 and once for the year 2011. We assign ranks for each African country: rank 1 for the country with the highest inflow[49], rank 2 for the country with the second highest inflow and so on. In case where two or more countries occupy the same rank, we took the average of the ranks that they would have otherwise occupied. The same procedure has been used for aid, FDI and trade with regard to Western countries. We examine the pairwise relationships between aid, FDI, imports and exports using Spearman's rank correlation coefficient $\rho$.[50]

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[48] We are using FDI stock for the analysis because data concerning Western FDI flows to African countries lacks transparency. More precisely, we take the *overall* inward FDI stock by each African country as proxy for Western outward FDI stock in Africa for the following reason: in 2010, almost 80 per cent of the cumulative FDI stock on the African continent originated from the Global North, most prominently the European Union and the US.

[49] Outflow with respect to exports.

[50] Since there are some tied ranks in our analysis, we cannot use the standard Spearman's Rank Correlation Coefficient formula. The formula to use when there are tied ranks is:

$$\rho = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x^2)][n\sum y^2 - (\sum y)^2]}}$$

where x and y refer to ranks of the two respective external flows; n is the sample size.

The results for the West are presented in Table 57. Regardless of which of the two external flows are analysed, the rho coefficient is always positive and fairly high. We conclude that Aid, FDI, imports and exports are complements rather than alternatives.[51]

The positive relationship between foreign aid and FDI has become weaker between 2003 and 2009, as has the relationship between aid and exports and in particular aid and imports. The relationship between FDI and trade has become considerably more positive. In sum, the rhetoric of the Aid-for-Trade Initiative by Western donors that seeks to interlock the aid and trade policies is reflected in the positive correlations between aid and trade, even though the positive relationship between the two has somewhat declined over time.

The results for China are very similar (Table 58). The correlation between two particular external flows is always positive and fairly high. Chinese aid, for example, complements its foreign direct investments and its trade relationships with African recipient countries. In contrast to the Western trend, however, the positive correlation has become even more pronounced over the last few years, regardless of which of the two external flows analysed. This finding suggests that the Beijing administration is engaged in a strategic bundling of trade, investment and aid.

**Table 57: Spearman's Rank Order Correlation, ϱ, between Western Aid, FDI and Trade**

|  | Aid 2003 | Aid 2009 | FDI 2003 | FDI 2011 | Imports 2003 | Imports 2011 | Exports 2003 | Exports 2011 |
|---|---|---|---|---|---|---|---|---|
| Aid 2003 | - | - | 0.524 | - | 0.524 | - | 0.524 | - |
| Aid 2009 | - | - | - | 0.484 | - | 0.271 | - | 0.463 |
| FDI 2003 | 0.524 | - | - | - | 0.524 | - | 0.584 | - |
| FDI 2011 | - | 0.484 | - | - | - | 0.806 | - | 0.615 |
| Imports 2003 | 0.524 | - | 0.524 | - | - | - | 0.524 | - |
| Imports 2011 | - | 0.271 | - | 0.806 | - | - | - | 0.806 |
| Exports 2003 | 0.524 | - | 0.524 | - | 0.524 | - | - | - |
| Exports 2011 | - | 0.463 | - | 0.762 | - | 0.744 | - | - |

*Source:* Authors' calculations

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[51] Negative values of rho would suggest that flows are alternatives. Thus if the Pearson correlation between aid and FDI is negative, high volumes of aid go hand in hand with lower volumes of FDI.

**Table 58: Spearman's Rank Order Correlation, ϱ, between Chinese Aid, FDI and Trade**

| | Aid 2003 | Aid 2009 | FDI 2003 | FDI 2011 | Imports 2003 | Imports 2011 | Exports 2003 | Exports 2011 |
|---|---|---|---|---|---|---|---|---|
| Aid 2003 | - | - | 0.521 | - | 0.418 | - | 0.349 | - |
| Aid 2009 | - | - | - | 0.687 | - | 0.596 | - | 0.537 |
| FDI 2003 | 0.521 | - | - | - | 0.531 | - | 0.584 | - |
| FDI 2011 | - | 0.687 | - | - | - | 0.605 | - | 0.615 |
| Imports 2003 | 0.418 | - | 0.531 | - | - | - | 0.580 | - |
| Imports 2011 | - | 0.596 | - | 0.605 | - | - | - | 0.630 |
| Exports 2003 | 0.349 | - | 0.584 | - | 0.580 | - | - | - |
| Exports 2011 | - | 0.537 | - | 0.615 | - | 0.630 | - | - |

*Source:* Authors' calculations

# 7. CHINESE AND WESTERN EXTERNAL FLOWS AT SECTORAL LEVEL: COMPETITION OR COMPLEMENTARITY?

The African continent remains a prominent battleground for global competition between international players over natural resources, business opportunities, diplomatic relationships and security interests. Over recent years, emerging economies from the South have entered the arena and positioned themselves as alternative sources of foreign finance and trade, most notably China. This section will discuss the degree of static complementarity or competitiveness between Chinese and Western economic activity in Africa.

*Complementarity* between Chinese and Western economic activity implies that their activities focus on different sectors at the same point in time. *Competition* occurs when China and the West are active in the same sectors competing for the same kind of activities and the same resources in the same countries. From a dynamic perspective one can distinguish between substitution and non-substitution over time. *Substitution* means that an activity by one player replaces an activity by the other player. This substitution can be the result of voluntarily decisions, when the different actors decide to focus on different sectors because of different objectives (*complementarity driven)*, or involuntary because one actor outcompetes the other one (i.e. *competition driven).*

We first analyse Western and Chinese external flows in Africa from a static perspective. First of all, China's growing development assistance in Africa has broken the Western donor cartel. In the eyes of African recipient government, China's aid with almost no strings attached is viewed as welcomed alternative to Western aid linked to political conditionality.[52] At the same time, however,

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[52] The notable exception from China's rejection of political demands is Beijing's 'One China Policy'.

China's "no conditionality" aid could increase the leverage for autocratic states and therefore undermine previous Western efforts in the area of capacity building, governance reforms and human rights protection (Taylor, 2007; Tull, 2006). We interpret this as a competitive advantage for China.

Chinese activities in the primary and secondary sector can be seen as a competitive threat for Western firms. The international competitiveness of Chinese firms is visible in the African construction industry. Between 1999 and 2009, Chinese contractors have won up to 20 percent of African infrastructure contracts awarded by the International Development Association. In the area of civil works, as many as 20 percent of all contracts is won by Chinese construction enterprises. Often the second most highly ranked bidder was also a Chinese firm (Foster et al., 2009).[53] While the highly successful contract bidding of Chinese SOEs in the construction sector can in part be attributed to low-cost and low quality production operations, another important factor should not be overlooked: A majority of Chinese construction enterprises are state-owned. As a result, Chinese multinationals often receive additional public sector backing from the Beijing administration for strategically important deals that are considered too costly by global competitors (Bräutigam, 2009; Wang, 2007).

Next, anecdotal evidence suggests that China's corporate governance model in Africa provides the Beijing administration with a competitive edge vis-à-vis Western enterprises. A combination of factors including the almost exclusive hiring of Chinese labour in some countries and industries, low wages paid to local African workers, little pressure from the CCP to adopt environmental, health and safety regulatory standards as well as speedy provision of subsidy by the Chinese government has contributed to Chinese firms outcompeting Western companies on the continent (Besada, Wang, & Whalley, 2008). The recent trend is especially relevant for the labour intensive and low-value added parts of the manufacturing sector (such as clothing, textile, furniture, garment).

Resource-seeking FDI is strongly linked with the growing resource hunger of Africa's leading trading partners. Most of Western as well as Chinese investment takes place in the primary sectors of African economies, predominantly in the field of resource extraction. In order to fuel its domestic growth back home, securing access to natural as well as mineral resources has become a priority for the Beijing administration (Moyo, 2012). The resource-backed financing agreements

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[53] Chinese construction enterprises are particularly successful in the fields of transport (mainly roads) and water. In terms of the sectoral distribution of civil works contracts won by Chinese firms, 97 percent of their value went to transport and water services between 2005 and 2006.

between Chinese SOEs and African governments often lack transparency and accountability (Corkin, 2013; Taylor, 2006). This is a clear case of competition.

China's emergence as one of the leading buyers of natural resources has transformed China into one of the most important trading partners of Africa, just ahead the United States but behind the European Union. The fact that energy and mineral resources form the bulk of imports from Africa for all three international players underlines the enhanced geo-economic competition between China and traditional Western trade partners in the scramble for scarce global natural resources. The countries of Angola, Algeria, DRC, Nigeria or Sudan serve as good examples (Chau, 2014; Corkin, 2013; Patey, 2014; Van Reybrouck, 2010)

The African continent has also become increasingly attractive as export platform. China's low cost manufacturing exports, such as machinery and electronics, textile and apparel, hi-tech products and finished goods, increasingly compete with high value luxury products from Western firms. The increasingly easy availability of low-priced Chinese consumer products has become a welcomed alternative for price-sensitive markets in Africa.

Chinese market-seeking manufacturing FDI acts as a complement to Western market-seeking FDI in the service sector. As previously discussed, an increasing share of Western FDI flows has gone in the tertiary (service) sector of developing economies since the late 1990s. Concomitant with the continent's emerging middle class and its growing purchasing power, Western FDI in services such as banking, retail sales and telecommunications is beginning to rise (Radelet, 2010; UNCTAD, 2013a).

In a similar vein, the increasing emphasis of Western development assistance on the (political) intangibles of development, such as capacity building and governance, is completed by Beijing's emphasis on the (economic) tangibles of development such as industrial processing or physical infrastructure refurbishment. The balance between competition and complementarity is summarised in table 59.

**Table 59: Chinese and Western External Flows – A Static View**

|  | Aid | FDI | Trade |
|---|---|---|---|
| **Competition** | China's non-interference in domestic affairs versus Western political conditionality | Resource-seeking FDI | Scramble for Dwindling Natural Resources |
|  |  | Contract Bidding in Construction Sector | Export market: Western high value luxury products versus Chinese low cost goods |
|  |  | Chinese Corporate Governance Model |  |
| **Comple-mentarity** | Increasing Western focus on capability building and governance versus Chinese focus on productive sector and infrastructure | Chinese FDI in manufacturing sector as complement to Western FDI in service industries |  |

In the following paragraphs we examine patterns of Western and Chinese external flows from a dynamic perspective (Table 60). The question whether and for what reasons one player has filled a gap left by another player is central for the analysis. In the realm of foreign trade, China's exporting firms have increasingly become more competitive after Beijing's Going-out policy. Chinese SMEs vigorously compete with Western exporting firms for profits and market shares on the African continent. With the economic take-off of several African countries and their burgeoning middle classes, Western companies have increasingly focused on providing higher priced export goods to the highest income segments of African states. China's exports to Africa, in turn, enable lower income segments to get access to cheaper, if sometimes lower quality, goods. This voluntarily driven substitution can be regarded as division of labour according to Ricardian comparative advantage.

The competition between established Western players and emerging investors from the Global South is most fierce in the resource industry, be it mining, oil or gas. China's investment in the natural resource sector either competes with or acts as substitute for voluntary withdrawal of Western resource-seeking FDI. When Western governments imposed sanctions against the Sudanese government in 2003 because of human rights violation in Darfur, a bulk of Western companies pulled out of resource-rich Sudan (Patey, 2014). Some Western firms were forced to exit because Western civil societies have exerted pressures on their respective governments for the adherence of (civil and political) human rights norms. Yet a few companies deliberately chose to exit because they were no longer willing to invest in a politically and economically risky environment. Beijing's quiet diplomacy, its frequent insistence on respect for national sovereignty

and non-interference in internal affairs has served as comparative advantage in doing business in such autocratic resource-rich regimes (Alden, 2005; Tull, 2006). In table 60, the increasing presence of resource seeking FDI is categorised as both competition driven and complementarity driven.

With regard to non-resource seeking FDI, there is more complementarity than substitution. Chinese manufacturing FDI acts as a clear substitute for the decline of Western manufacturing FDI since the late 1990s. Part of the vacuum left by shrinking Western manufacturing FDI is filled with Chinese investment in labour-intensive industries in Africa. This is an example of substitution rather than competition. With the arrival of capital goods, the transfer of technology, and the potential for integration in global value chains (clothing, textile industry), Chinese manufacturing FDI could potentially act as catalyst for industrial development (Bräutigam, 2003). However, even though China's FDI in Africa is on the rise, its African FDI stock is still significantly smaller than that of traditional investors such as France, the US or the UK.

Similar to Chinese manufacturing FDI, increasing Beijing's development assistance in the productive sectors of African recipient economies acts as complement to the increasing Western focus on capability building. Beijing's present foreign aid with its focus on infrastructure and the productive sector is highly reminiscent of the approach of Western foreign aid policy in much of the 1960s. Over time, the share of bilateral (and multilateral) Western ODA flowing into some productive sectors of recipient economies such as agriculture, manufacturing and infrastructure has steadily declined. Chinese authorities have spotted the vacuum and actively contribute to filling the gap by aiding a majority of African countries in the productive sectors of the economy. Consequently, China's development assistance may serve as a complement to kinds of foreign aid provided by the traditional donor countries, even though Beijing's foreign aid budget is still relatively small compared to that of DAC donors.

**Table 60: Chinese and Western External Flows – A Dynamic View**

| | Aid | FDI | Trade |
|---|---|---|---|
| **Competition-driven Substitution** | | Forced pulling out of Western energy firms in the natural resource sector | |
| **Comple-mentarity -driven Substitution** | Chinese aid filling the vacuum left by Western donors in physical infrastructure and productive sectors | Deliberate pulling out of Western energy firms in the natural resource sector | Chinese exports serve lower income segments, Western exports higher income segments |
| | | Chinese FDI in manufacturing sector filling the gap left by Western investors | |

## 8. CONCLUSION

The main objective of this paper was to shed some light on the characteristics of China's rapidly growing economic ties with Africa, namely in the fields of (i) development assistance, (ii) foreign direct investment, and (iii) international trade. We have discussed China's rapid embrace of the continent from an international comparative perspective. More specifically, we have analysed China's entry into the game of foreign finance against the background of changing patterns and trends in development aid, foreign direct investment and trade flows originating from Western countries. Our findings can be summarized as follows:

First, with regard to development assistance, we can conclude that the Chinese aid system differs markedly from the Western system in at least two ways. First, Chinese aid funding is embedded into a wider foreign policy framework characterized by non-interference in internal affairs. While most Western development aid is characterized by political conditionality, the bulk of Southern development assistance comes with relatively "few strings attached". Since the collapse of communism in 1989, Western ODA has increasingly focused on the (political) intangibles of development, such as capacity building, democratization efforts, adherence to human rights principles and good governance. In contrast, China's development assistance emphasizes the (economic) tangibles of development such as productivity gains in agriculture, industrial processing, or the refurbishment of physical infrastructure (comparable to Western aid in the 1960s to 1970s). Compared to the unstable pattern of Western foreign aid with its ups and downs and sudden breaks, however, China's development assistance has been relatively consistent and less varying over time.[54]

Second, while resource-seeking FDI is a major motive for both Western and Chinese investors on the African continent, the sectoral destination of market-seeking FDI of the two respective players differs. In the view of the emergence of middle class consumers in many African countries, Western companies have recognized increasing market opportunities in the service sector of those economies. Chinese small or medium-sized private companies, however, are characterized by market-seeking FDI in manufacturing sectors across the African territory. Those Chinese companies have spotted a vacuum that has been left by a majority of Western firms who pulled out of manufacturing activities to a large extent during the late 1990s.

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[54] The comparison may be a little bit biased as we only discuss a rather short time period of China's foreign aid. Moreover, part of our Chinese data is based on exponential extrapolation.

With regard to the geographic destination of FDI, we observe more similarities than differences between traditional Western investors and Chinese entrants. The distribution of foreign direct investment remains highly skewed, with a few host countries receiving the largest bulk of investment. Those recipient economies are generally characterized by a relatively high abundance of natural resources, coastal location and large expanding economic markets.

Third, African trade patterns with the West and China are rather similar. Though trade between China and Africa is often labelled as South-South trade, its structure very much resembles North-South trade patterns. The evolution of Sino-African trade patterns follow Ricardian (static) comparative advantage. Relative factor endowments of labour, capital and natural resources are largely responsible for the nature of both Sino-African and Western African trade patterns. Africa mainly imports low technology, labour-intensive manufactured goods from China, but also from the US and the EU. Africa's exports to their leading trading partners consist mainly of exports of natural resources. With the increasing thirst for African oil, gas and other mineral resources, the trade deficits of the key international players have widened in recent years, while the African continent as a whole has enjoyed major trade surpluses with its leading trading partners. The trade pattern based on comparative advantage considerations is more pronounced for resource-rich African countries, which underscores that the pattern of trade depends more on the endowment structure of the African partner than its levels of per capita income. Moreover, compared to Western imports from Africa, Chinese imports are geographically more concentrated. Compared to Western exports to Africa, however, Chinese exports are more diverse in terms of destination countries.

When analysing the connections between aid, FDI and trade at the country level we found empirical evidence that the three primary flows on which the intensification of Sino-African relations rests - aid, investment and trade - are correlated. The correlations are not extreme, but unmistakable. The countries that receive more aid are those that receive more FDI and have more imports and exports. The picture is very similar for relations between African and Western countries. But in contrast to the West, the correlation between Chinese external flows has increased over the last few years, highlighting the complementarity of China's different activities on the African continent.

With regard to sectors in which they operate, the relationships between Chinese and Western activities on the African continent are primarily competitive (i.e. the resource and construction sector, trade exports and development assistance. When taking a dynamic perspective, we see more complementarity. Many Chinese activities fill gaps created by the withdrawal or change of focus of

Western actors. Thus, Chinese development assistance and FDI directed at productive and infrastructural sectors of the African economies fills gaps created by the voluntary withdrawal of Western donors and investors. The same is true for the provision of low-cost manufactured goods.

In this study we have collected and analysed data on the increasing presence of China on the African continent. Though some progress has been made, further improvement of the data on China's foreign finance in Africa, also allowing for the use of more sophisticated econometric techniques, is a promising and challenging avenue for further research.

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