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Chinese and Western Development Approaches in Africa: Implications for the SDGs

4

Tobias Broich, Adam Szirmai and Ayokunu Adedokun

Abstract

This chapter discusses the entry of China into the game of foreign finance in Africa in an international comparative perspective. We present an analysis of long-run changes in the allocation of Western aid both globally and in Africa, along with estimates of the global sectoral allocation of Chinese aid. A similar analysis is also applied to China's foreign direct investment and international trade. While previous literature has predominantly attributed China's economic embrace of Africa to domestic factors, we argue that the sectoral distribution of Beijing's foreign aid—and partly foreign direct investment—is also affected by changes in the patterns of Western aid and investment flowing to the African continent. We provide quantitative evidence for long-run trends, switches and breaks in Western development assistance. China's foreign aid typically flows into

Africa's physical infrastructure and productive sectors of agriculture and manufacturing, filling the vacuum which emerged when Western financial flows shifted to other activities, most notably capacity building and good governance reforms. 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. Overall, this chapter shows that financial resources from both the traditional Western donors and emerging donors from the Global South such as China can help African recipient countries to achieve the Sustainable Development Goals. China's development assistance in Africa may serve as a complement to the kinds of foreign aid provided by the traditional donor countries.

Keywords

China–Africa · Development · Foreign aid

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intergovernmental process for developing a set of Sustainable Development Goals (SDGs). Besides the traditional United Nations (UN) agencies, traditional Western donor agencies and international financial institutions, the BRICS countries (Brazil, Russia, India, China and South Africa) and other emerging economies have played an increasing role in shaping the post-2015 development agenda.

Emerging economies from the global south like China have entered the development arena and have positioned themselves as alternative sources of foreign finance to traditional or western donors, including the United States, Germany and United Kingdom. Among the emerging donors, however, China has grown to become Africa's largest development aid donor. China has now become Africa's largest bilateral trading partner and even outspends the US on an annual basis when it comes to development finance. Thus, 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 (Ajakaiye and Kaplinsky 2009).

The goal of this chapter is to shed some light on the characteristics of China's rapidly growing economic ties with Africa—in particular in the field of development assistance/foreign aid—and its implications for the achievement of the SDGs in Africa. While China's deepening engagement with Africa is a complex issue with numerous interpretations, we find evidence that the Sino-African collaboration is based on the global value chain concept of mutual benefit—that is, China's engagement with Africa is a win-win scenario for both sides. The implication of our findings is that China's engagement with Africa provides significant opportunities for both sides and is therefore beneficial to the realisation of the SDGs in African countries.

The remainder of this chapter is structured as follows. Section 4.2 examines the magnitude and sectoral distribution of China's foreign aid, foreign direct investment and trade in Africa. Section 4.3 highlights trends and switches of Western development assistance over time. Section 4.4 discusses the similarities and differences of Chinese and Western foreign aid, foreign

direct investment and international trade. We conclude the chapter by highlighting the main points in Sect. 4.5.

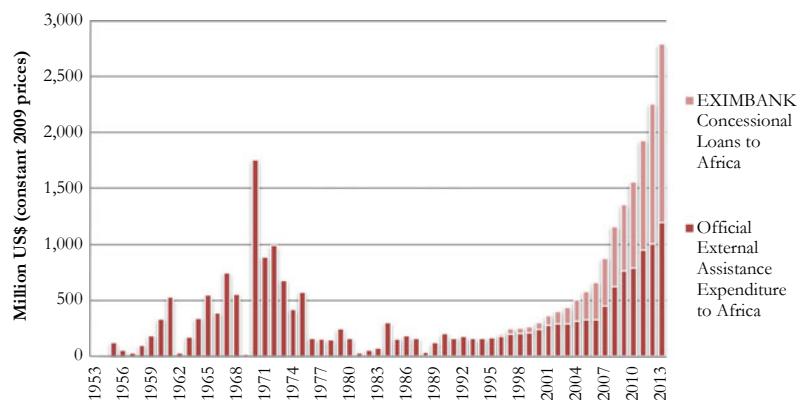
4.2 China's External Flows to Africa

4.2.1 The Magnitude of Chinese Foreign Aid Flows to Africa

Since the early 2000s, a myriad of emerging aid donors has intensified their development assistance on the African continent, of which China can be regarded as one of the most prominent ones. Figure 4.1 provides an overview of the evolution of China's foreign aid to Africa for the time period 1953–2013. China's foreign aid that is comparable to Western Official Development Assistance (ODA) consists of (i) external assistance expenditure and (ii) Export–Import Bank of China (EXIMBANK) concessional loans. At their introduction in 1996, concessional loans only represented 5.6% of the entire aid budget. Over time, however, concessional loans have become an integral part of China's aid budget accounting for more than a third of total aid by the year 2009. As concessional loans increasingly gain prominence as a foreign policy 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).

Before the 1990s, the volume of China's development assistance was rather small, except during the period 1970–1975. During the Cultural Revolution, especially in the early 1970s, the Beijing administration under Mao Zedong increasingly competed with Washington and Moscow for political support from African leaders. As a consequence, China provided large amounts of foreign aid despite significant domestic economic difficulties. The most famous project during that time was the construction of the Tanzania-Zambia Railway (TAZARA) between 1970 and 1975, a 1,860 km long project financed in the form of a long-term interest-free loan. Until today, the TAZARA project had been the largest single development assistance project

Fig. 4.1 Evolution of China's foreign aid to Africa, 1953–2013 (million 2009 US\$) (Lin 1996; Kobayashi 2008; Bräutigam 2009, 2015; Bureau of Economic Analysis 2015; Authors' own estimations)



undertaken by China. Chinese development assistance declined substantially thereafter.

Table 4.1 compares the magnitude of foreign aid between China and Development Assistance Committee (DAC) donors and documents the African share of the total aid budget from the

respective donor group. Since the mid-1990s onwards, Beijing's development assistance to Africa has risen exponentially. The Beijing government delivered US\$ 135 million worth of development assistance in 1990. In 2013, foreign aid amounted to almost US\$ 3 billion, a more than 20-fold increase in real terms since 1990. Note that China's mounting development assistance to Africa has evolved gradually but steadily since the early 1990s. The African share of total Chinese aid has increased over time as well. While China's foreign aid was only minimal compared to the total DAC aid in 1990, its magnitude in 2013 was equal to almost 10% of total bilateral Western aid. Over the last two decades, China has become an important donor country overtaking some of the traditional donor countries (Table 4.2).

Table 4.1 Comparison of Chinese and total western foreign aid to Africa, 1960–2013 (OECD International direct investment database; Bräutigam 2009; Author's own calculations)

Year	China (current US\$ Million)		DAC donors (current US\$ Million)	
	Africa	African share in total aid (%)	Africa	African share in total aid (%)
1960	58.0	20	1,286.1	31.2
1970	400.0	36	1,186.1	23.2
1980	71.0	36	6,344.3	42.0
1990	135.0	36	15,818.1	47.5
1996	152.0	37	12,858.4	38.4
2000	249.0	39	10,401.8	37.0
2005	535.0	40	24,661.8	34.7
2009	1,359.0	43	28,197.6	44.9
2010	<i>1,576.0</i>	44	29,370.6	44.0
2011	<i>1,993.0</i>	44	32,754.0	47.5
2012	2,372.0	45	30,493.7	47.7
2013	2,985.0	45	29,379.2	44.1

Notes Figures in italics are estimates by the authors. Figures are expressed in US\$ Million. The African share in the Chinese aid budget for the years 2010–2013 is an estimation based on extrapolations of China's global and African aid budget

4.2.2 Chinese Trade and FDI

The evolution of China's foreign direct investment (FDI) in Africa compared to that of the major Western economies is portrayed in Table 4.3. Between 1985 and 2011 there was a huge increase in the stock of Western FDI in Africa. But in other parts of the world, FDI stocks were growing even more rapidly so that the share of Africa in global FDI stocks actually declined substantially between 1985 and 2000. After 2000, there was a strong recovery of the African shares. In the case of China, the share in global FDI declined between 1990 and 1995, but

Table 4.2 Comparison of Chinese and individual DAC donors foreign aid to Africa, 1990 versus 2013 (OECD/DAC database, Author's own calculations)

1990			2013		
Donor	Volume	% of DAC donors	Country	Volume	% of DAC donors
France	3,688.30	23.32	United States	9,667.45	32.15
United States	3,529.00	22.31	United Kingdom	3,922.49	13.05
Germany	1,823.31	11.53	France	3,168.33	10.54
Italy	1,294.14	8.18	China	2,985.00	9.93
Japan	1,069.46	6.76	Germany	2,397.41	7.97
Sweden	707.08	4.47	Japan	2,092.05	6.96
Netherlands	705.64	4.46	Canada	1,519.49	5.05
United Kingdom	572.16	3.62	Sweden	1,167.47	3.88
Canada	498.97	3.15	Norway	1,046.03	3.48
Norway	413.49	2.61	Netherlands	858.08	2.85
China	134.86	0.85	Belgium	583.14	1.94
DAC donors Total	15,818.13	100.00	DAC donors Total	30,067.53	100.00

Table 4.3 FDI stock in Africa by major countries of origin, 1985–2011 (OECD International direct investment database; IMF; UNCTAD FDI/TNC Database; UNCTAD 2006, 2013a; MOFCOM 2009, 2011)

	China		USA		France		UK	
	Africa (current US\$ billion)	African share (%)	Africa (current US\$ billion)	African share (%)	Africa (current US\$ billion)	African share (%)	Africa (current US\$ billion)	African share (%)
1985			5.89	2.6	1.62	3.1	6.72	7.2
1990	0.05	1.1	3.65	0.8	1.58	1.4	6.83	5.7
1995	0.06	0.3	6.02	0.9	3.85	1.9	7.68	3.9
2000			11.89	0.9	7.09	1.6	14.00	2.3
2005	1.60	1.9	22.76	1.0	21.51	2.3	35.86	5.2
2011	16.24	3.8	56.63	1.4	57.82	3.6	47.19	4.5

Notes Ministry of Commerce of the People's Republic of China (MOFCOM), Transnational Corporation (TNC), United Nations Conference on Trade and Development (UNCTAD)

from that year onwards the share increased steadily reaching 3.8% in 2011. 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. While China's FDI stock on the continent was virtually zero in the mid-1980s, it rose to more than US\$ 21 billion in 2012.

From the early 2000s onwards, emerging Southern economic giants such as the BRIC countries as well as Malaysia have joined the list of important investors on the African continent. While China has positioned itself as the major emerging donor in Africa, its FDI stock of around US\$ 16 billion in 2011 falls short of Malaysia's foreign direct investment worth around US\$ 19 billion in the same year (UNCTAD 2013b). The actual size of China's FDI stock on the continent may actually surpass

Table 4.4 Trade with Africa for selected countries, 1990 versus 2012 (Current US\$ Million) (Authors' own calculations based on UN COMTRADE Database; Shinn and Eisenman 2012)

	1990		2012			
	Total Trade Volume With Africa (current US\$ mill.)	African share of country's trade volume (%)	Country's share of Africa's trade volume (%)	Total Trade volume with Africa (current US\$ mill.)	African share of country's trade volume (%)	Country's share of Africa's trade volume (%)
France	24,550	5.54	12.43	36,992	6.02	4.83
Germany	14,942	1.89	7.86	30,037	2.26	3.84
UK	7,364	1.79	3.73	32,433	4.33	3.33
USA	21,011	2.31	10.64	68,455	2.61	6.66
Japan	5,578	1.07	1.10	21,265	2.03	2.24
China ^a	1,696	1.02	0.73	113,244	5.13	13.04
India	996	2.39	0.50	43,017	9.03	4.62
Russia				2,224	1.12	0.62
Brazil	1,397	2.59	0.71	14,266	5.68	1.74

^aWe 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% 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% for the same years

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

that of Malaysia as the figures may considerably underestimate the true amount of China's foreign direct investment (Shinn 2013).

China has emerged as the largest bilateral trading partner for Africa (Table 4.4). In the early 1990s, China's total trade volume with Africa was relatively small compared to that of France and the US. In spite of rapid increases, the absolute levels of Chinese foreign aid and foreign direct investment on the African continent remain modest. But with regard to trade, China has already become Africa's largest trading partner over the last couple of years. China's trade volume has surpassed that of Africa's traditional trading partners such as the United States, and the colonial powers France, United Kingdom and (to a lesser extent) Germany.

4.2.3 Sectoral Allocation of Chinese Aid

Table 4.5 provides an overview of the sectoral allocation of China's global foreign aid budget consisting of grants, *interest-free loans* and

concessional loans. According to the figures released by the China State Council, the majority of China's 2025 completed projects financed through grants and *interest-free loans* in developing countries from 1950 until 2009 have either targeted the primary sector of the economy (agriculture but also mining oil and gas), the secondary sector of the economy (industry and manufacturing), public utilities or economic infrastructure. Those four sectors together made up more than 94% of all projects completed by Chinese engineers as well as Chinese workers and delivered as finished products to the recipient country (see Table 4.6).

At the same time, more than 90% of the *concessional loans* issued from 1996 until 2009 have targeted the development of economic sectors. China's high priority sectors have been economic infrastructure (61%) and productive sectors such as industry and agriculture (20%). The share of China's foreign aid flowing into the political and administrative infrastructure is virtually zero which is consistent with Beijing's principle of non-intervention in internal political affairs. The mutual non-interference in each

Table 4.5 Sectoral distribution of China's foreign aid, 1950–2009 (China State Council 2011)

Sector	Grants and interest-free loans, 1950–2009		Concessional loans, 1996–2009	
	Number of projects	% of total	Value (RMB¥ million)	% of total
Economic infrastructure	390	19.3	44.87	61.0
Energy and resources development	–		6.55	9.0
Industry	635	31.4	11.84	16.0
Agriculture	215	10.6	3.16	4.0
Public facilities	670	33.1	2.35	3.0
Others	115	5.7	4.78	7.0
Total	2025		73.55	

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 organise 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)

Table 4.6 Sectoral distribution of China's completed projects, 1950–2009 (China State Council 2011)

Sector	# of projects	Sector (continued)	# of projects
Agriculture	215	Industry	635
Farming, animal husbandry, 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 and 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		

other's internal affairs is one of the Five Principles of Peaceful Coexistence, announced by the first Premier of the People's Republic of China, Zhou Enlai, in 1954.¹

¹The other four principles of Peaceful Coexistence are (i) mutual respect for sovereignty, (ii) mutual non-aggression, (iii) equality and mutual benefit and (iv) peaceful coexistence.

At the time of writing in October 2018, no official information about the sectoral distribution patterns for the African continent has been available for the period under investigation. 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 4.6.

4.2.4 Geographical Distribution of Chinese Aid

The resource-rich endowments of countries like Sudan, Angola, Democratic Republic of Congo (DRC) and Nigeria are natural targets for China's rapid economic embrace of the continent (Table 4.7). On the grounds of non-interference in political affairs, Beijing enjoys a comparative advantage in dealing with autocratic elites: China's ability to position itself as an alternative partner to the West enables Beijing not only to establish political relationships with authoritarian governments but it can also derive direct economic benefits from it (Alden 2005; Tull 2006). This is only half the story, however, 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 inclusion of another resource-scarce country such as Ethiopia, as well as countries like Egypt and South Africa in the top ranks of Chinese aid recipients emphasises the importance of geo-strategic considerations in China's aid policy.

More than half of China's FDI is concentrated in oil—or mineral-rich countries such as Nigeria, South Africa, Zambia, Angola, Sudan and more recently the DRC. The distribution of foreign direct investment remains highly skewed, with a few host countries receiving the largest share of investment. Those recipient economies are generally characterised by a relatively high abundance of natural resources, sea access and large

Table 4.7 Regional distribution of China's external flows to Africa, 2011/2012 (Authors' calculations from databases)

Foreign aid 2012			FDI stock 2011			Two-way trade 2012		
Country	Volume (current US\$ million)	% of total	Country	Volume (current US\$ million)	% of total	Country	Volume (current US\$ million)	% of total
Sudan	201.76	8.08	South Africa	4,775.00	21.97	South Africa	59,977.00	30.24
Ethiopia	201.51	8.07	Zambia	1,998.00	9.19	Angola	37,601.10	18.96
Congo, DR	186.78	7.48	Nigeria	1,950.00	8.97	Nigeria	10,570.10	5.33
Nigeria	185.53	7.43	Algeria	1,305.00	6.01	Egypt	9,544.70	4.81
Angola	154.31	6.18	Angola	1,245.00	5.73	Libya	8,760.10	4.42
Ghana	152.07	6.09	Sudan	1,237.00	5.69	Algeria	7,728.60	3.90
Zimbabwe	144.58	5.79	Congo, DR	970.00	4.46	Ghana	5,434.30	2.74
Equat. Guinea	142.58	5.71	Zimbabwe	875.00	4.03	Congo, Rep.	5,076.40	2.56
Cameroon	111.12	4.45	Mauritius	701.00	3.23	Congo, DR	4,364.60	2.20
South Africa	88.89	3.56	Ethiopia	607.00	2.79	Sudan	3,732.90	1.88
Others	927.89	37.16	Others	6,067.00	27.92	Others	45,543.20	22.96
Total	2,497.00	100.00	Total	21,730.00	100.00	Total	198,332.90	100.00

Notes With regard to foreign aid, the country data for the year 2012 is an estimate calculated by the authors based on information provided by Bräutigam (2009) and Strange et al. (2013). With regard to FDI, we use data from MOFCOM (2009, 2011) and UNCTAD (2014). The trade data are authors' own calculations based on data from UN COMTRADE Database

expanding economic markets. The geographical composition of China's trading volume has become highly skewed in favour of a few major trading partners. Thus, South Africa's and Angola's bilateral trade with China accounted for almost 50% of China's total trade volume with Africa in 2012.

4.3 Changing Sectoral Allocation of Western Foreign Aid

Over the last fifty years, Western ODA was characterised by many switches and fluctuations (Riddell 2007; Szirmai 2015). Unfortunately, detailed data at the sectoral level is only available from 1967 onwards for global bilateral aid and from 1973 onwards for Africa (Tables 4.8 and 4.9).

Table 4.8 presents the changing sector structure of global bilateral ODA; Table 4.9 does the same for Western bilateral ODA disbursements for Africa. The global trends in Table 4.8 and the African trends in Table 4.9 are in many ways similar, though the shifts in Table 4.8 are even more marked than those of Table 4.9 focusing on Africa. In Table 4.9, the figures in italics for 2005 and 2012 are estimates and interpolations by the authors. For these years, a detailed

sectoral breakdown of aid to Africa under the heading social infrastructure is not available (with the exception of data for the education sector). By deducting the share of education, we obtain the shares of total other social infrastructure sectors for those two years. These shares are then divided among the sub-sectors of other 'Social Infrastructure' by applying the proportions for these sub-categories from Table 4.8.

Initially, Western development aid was highly focused on infrastructural and industrial development. In the late 1960s, almost 30% of global bilateral ODA flowed into physical infrastructure projects (road construction, transport, telecommunications, electricity supply, etc.). In 1973, the share of African ODA disbursements flowing into physical infrastructure projects and the production sector accounted for 30.6 and 12.4% respectively. By 2005, however, the infrastructure and production sector together only accounted for 13.8%. The share of African bilateral ODA disbursements allocated to the physical infrastructure sector declined even more rapidly than the share of global bilateral ODA disbursements targeting that sector.

Meier (1984) provides qualitative evidence that the emphasis on physical infrastructure development was even more pronounced in the early post-war period. Influential writings in the 1950s and 1960s identified lack of capital and

Table 4.8 Sectoral distribution of total bilateral net ODA disbursements to the World, 1967–2012 (Authors' own calculations based on OECD/DAC Statistics)

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 and 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 and 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 and 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 and 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

(continued)

Table 4.8 (continued)

Sector	1967	1970	1975	1980	1985	1990	1995	2000	2005	2012
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 and 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 and financial services	0.0	0.0	0.0	0.0	1.4	0.3	0.8	0.5	1.1	2.0
Business and 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

Table 4.9 Sectoral distribution of total bilateral net ODA disbursements to Africa, 1973–2012 (Authors' own calculations based on OECD/DAC Database and OECD 2003)

infrastructure as developmental constraints and further examined the role of aid in providing sufficient funds for physical capital accumulation (Nurkse 1953; Rosenstein-Rodan 1961). With developing countries seen as being caught in a poverty trap, big-push investment programmes were advocated to address infrastructural obstacles prominent in most low-income countries.

Influenced by Theodore Schultz' (1956) early seminal contributions on agricultural economics, increasing attention was paid to investment in the agricultural sector, resulting in major increases in the share of this sector in total aid allocations till 1985 (both globally and in Africa). Rural development programmes and agricultural production were put at centre stage of Western development strategies, especially in the context of Sub-Saharan Africa. After 1985 (globally) and 1990 (Africa), however, the share of aid going to agriculture rapidly declined.

The second oil shock in 1979 and the debt crisis of 1982 heralded the start of the implementation of structural adjustment programmes by the International Monetary Fund (IMF) and World Bank in a variety of developing countries. Economic thought during that period was heavily influenced by earlier work of Bauer (1972) and Friedman (1958). Bauer and Friedman were two of the most ardent critics of foreign aid, seeing development assistance as a powerful force that undermines economic activity in the private sector. Due to aid flows, governments would face less pressure to build a business environment suitable for private (domestic) enterprises, which were considered to be the ultimate engine of growth in a capitalist economy. 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. As a result, the era just before the end of the Cold War was increasingly characterised by structural adjustment programmes and debt relief. Meanwhile, development projects aimed at health, education and

poverty alleviation were cut back significantly (Riddell 2007).

In the 1990s, the donor community became increasingly disenchanted with the effectiveness of structural adjustment and conditionality. One response to the disappointment with the outcomes of structural adjustment programmes of the 1980s and early 1990s was an increasing emphasis on poverty reduction. The importance of poverty reduction had already been emphasised since the 1970s but gained increasing force in the wake of structural adjustment. Thus, countries were required to draw up poverty reduction strategy papers in order to qualify for debt relief.

A second important response to the perceived failure of structural adjustment was an increased emphasis on far-reaching institutional reform and good governance. Political conditionality was regarded as a necessary condition for enhanced aid effectiveness and as a useful tool for promoting democratic governance and institutional reform in the least developed countries. While the share of African ODA flowing into civil society strengthening, as well as local and national government support (what we could call 'political infrastructure') amounted to only 0.35% in 1980, 12.9% of total ODA flowed into this sector by 2012.

In sum, for a variety of reasons, from the mid-1980s onwards, donor countries started to shift the focus away from (i) infrastructure projects and (ii) production sectors. The share of ODA flowing into African social infrastructure and capability building has steadily increased over the last three decades. This process reached its apex around 2005. Between 2005 and 2012, the shares of production sectors and infrastructure share have bounced back, possibly in response to the Chinese embrace of the African continent. But the long-run trend remains unmistakable.

Table 4.10 displays the evolution of total World Bank lending (both loans and credits) to Sub-Saharan Africa by sector over time. World Bank lending serves as our proxy for the

Table 4.10 Sectoral distribution of World Bank lending to Sub-Saharan Africa, 1946–2011 (World Bank annual reports (various); Krueger et al. 1989; Lumsdaine 1993)

Sector	1946–71	1977		1991		2003		2011	
	%	Volume	%	Volume	%	Volume	%	Volume	%
Social infrastructure		52.1	5.5	3,876.5	10.0	1,921.2	51.4	2,944.6	41.7
Education		52.1	5.5	2,437.3	6.3	423.6	11.3	497.6	7.0
Population and health		–	0.0	1,131.5	2.9	775.9	20.8	591.4	8.4
Government and civil society		–	–	307.7	0.8	721.8	19.3	1,855.6	26.3
Physical infrastructure	>75.0	345.6	36.6	15,753.7	40.8	1,352.6	36.2	2,732.6	38.7
Transport and storage		167.6	17.7	7,081.6	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	4,272.3	11.1	324.4	8.7	890.1	12.6
Water supply and sanitation		22.0	2.3	1,735.3	4.5	296.3	7.9	645.7	9.1
Urbanisation		44.0	4.7	1,802.2	4.7	–	–	–	–
Production sectors		489.2	51.8	13,068.7	33.8	463.3	12.4	1,382.8	19.6
Agriculture, forestry, fishing	10.4	377.9	40.0	9,347.5	24.2	303.4	8.1	843.1	11.9
Industry and trade		53.6	5.7	711.6	1.8	92.7	2.5	432.8	6.1
Banking and financial services		57.7	6.1	2,340.2	6.1	67.2	1.8	106.8	1.5
Business and other services		–	–	669.4	1.7	–	–	–	–
Nonproject		45.0	4.8	5,071.1	13.1	–	–	–	–
Technical assistance		12.4	1.3	876.1	2.3	–	–	–	–
Total		944.3	100.0	38,646.1	100.0	3,737.2	100.0	7,060.0	100.0

Notes Volumes are expressed in current US\$ million. Our sectoral classification slightly deviates from the sectoral classification by the World Bank. We have reallocated 'Water Supply and Sanitation' from social infrastructure to physical infrastructure, but also 'Banking and Financial Services' and 'Business and 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 the World Share of Agriculture, Forestry and Fishing refers to World and covers the period 1948–1972. Lending includes both IDA and IBRD lending

evolution of Western multilateral development assistance over time. The results are very similar to our findings for Western bilateral development assistance.

While approximately 75% of World Bank lending between 1946 and 1960 targeted physical infrastructure development, primarily transport, power generation and telecommunications, the share fell to 36.6% in 1977 and stayed at around that level till 2011. The share of agriculture dropped from a peak of 40% in 1977 to 8.1% in 2003, before rebounding to 11.9% in 2011. It had become a relatively low-priority sector in the mid-2000s, even though around 82% 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% in 1977 to a meagre 1.8% 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 transport sector. These declines contrast with the increasing importance of judicial and public administrative capacity building. While only 0.8% of World Bank lending went into judicial and public administrative capacity building shortly after the fall of the Iron Curtain, the share rose to 26.3% in 2011.

Thus, both bilateral and multilateral development assistance have increasingly emphasised judicial and public administrative capacity building at the expense of physical infrastructure development and the fostering of productive sectors.

The increasing emphasis of Western development assistance on the political and institutional infrastructure in a recipient country, seen as one of the ultimate sources of growth and development and key to the implementation of the Sustainable Development Agenda, goes hand in hand with a considerable decline in resources made available for specific productive sectors such as industry and trade, agriculture, fishing and forestry or (iii) transportation, which belong to the more proximate sources of growth (Maddison 1988; Szirmai 2012).

4.4 Aid, Investment and Trade: Similarities and Differences

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 characterised by the non-interference in internal affairs and Beijing's upholding of political equality with recipient states. While most of the Western development aid in recent years is characterised by political conditionality and aid selectivity, 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 conditionality based on the principles of respect for national sovereignty and non-interference in domestic affairs.² In the eyes of African recipient governments, China's aid is viewed as a welcome alternative to Western aid linked to political conditionality and aid selectivity—despite the fact that much of Beijing's development assistance in Africa is tied to the purchase of Chinese goods and services or to

Chinese access to African natural and energy resources.

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 nowadays viewed as necessary condition for enhanced aid effectiveness and as useful tool for promoting democratic governance and institutional reform in developing countries. Influenced by theoretical underpinnings by authors such as North (1990), or Acemoglu, Johnson and Robinson (2001), the aforementioned approach stresses the significance of the ultimate sources of growth, namely (political) intangibles offered by major Western actors, for example capacity building, democratisation, adherence to human rights principles, rule of law and good governance.

The increasing emphasis of Western development assistance on the (political) intangibles of development, such as capacity building and governance, is in marked contrast to Beijing's emphasis on 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 the big-push literature which claims that publicly coordinated investment can break the cycle of poverty (Nurkse 1953; Rosenstein-Rodan 1943, 1961).

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 the 1960s. In contrast to traditional development assistance, however, China's sectoral allocation has been relatively stable over time compared to the erratic patterns of Western foreign aid with its trends, switches and sudden breaks. Chinese authorities have spotted the vacuum and actively contribute to filling the gap by aiding the majority of African countries in the productive sectors of the economy. This makes China a major financier and builder of infrastructure and holds promise for the provision of the necessary financial resources to attain the SDGs in the area of physical infrastructure. The

²The notable exception from China's rejection of political demands is Beijing's One China Policy.

divergent development ideologies utilised by both Western donors and emerging partners correspond to an expansion of the choices available for African development of how specific SDGs can be attained.

Regarding FDI, we observe some similarities between Chinese and Western FDI in Africa, but also some distinct differences. Before China's surge of private investment on the African continent, most of Western FDI has taken place in resource extractive industries, and in recent years increasingly in service sectors. The majority of Western firms has disengaged from African manufacturing. Like Western resource-seeking FDI, a large fraction of investment carried out by Chinese state-owned enterprises predominantly takes place in resource extraction. Beijing becomes increasingly dependent on the extraction of foreign natural resources to fuel its domestic economic growth. When comparing China's resource extractive activities as a

proportion of both its global and African FDI stock (14% vs. 29.2%), we see that investment in resource extractive sectors are twice as important on the African continent (Table 4.11).

One of the sectors in 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. The bulk of investment by Chinese State-Owned Enterprises (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

Table 4.11 Sectoral distribution of China's outward FDI stock, 2010 (China State Council 2010, 2013; MOFCOM 2011)

	Africa ^a		World	
Sector	Volume ^b (current US\$ mill.)	% of China's total outward stock in Africa	Volume (current US\$ mill.)	% of China's global outward stock
Mining/resource extraction	2,724.9	29.2	44,660.6	14.1
Manufacturing	2,053.0	22.0	17,801.7	5.6
Construction	1,474.5	15.8	6,173.3	1.9
Finance	1,297.2	13.9	55,253.2	17.4
Transport, storage and post	503.9	5.4	23,187.8	7.3
Leasing and business services			97,246.1	30.7
Wholesale and retail trade	373.3	4.0	42,006.5	13.2
IT	298.6	3.2	8,406.2	2.7
Real estate	–	–	7,266.4	2.3
Others	317.3	3.4	15,208.8	4.8
Agriculture	289.3	3.1		
Total	9,332.0		317,210.6	

^aFigures for Africa refer to the year 2009

^bThe volumes with respect to each sector are estimated by multiplying the sectoral share with China's total FDI stock in Africa for the year 2009

Table 4.12 China's trade with selected African countries by sector, 2012 (%) (Authors' calculations based on World Bank WITS database)

	Imports from Africa (in % of total imports)						Exports to Africa (in % of total exports)		
	Extraction of oil and gas			Mining			Manufacturing		
	China	EU	USA	China	EU	USA	China	EU	USA
Algeria	99.8	84.8	56.7	0	0.3	0	99.4	98.7	88.6
Angola	99.4	90.4	94.3	0.4	5.8	0.8	99.7	99.4	98.3
Cameroon	56.1	52.9	15.0	0	0	0	98.9	99.0	96.5
DRC	20.5	0	0	11.5	28.6	40.2	98.5	99.5	91.2
Egypt	66.6	44.2	45.7	18.4	1.3	0.4	98.1	97.3	74.7
Ethiopia	0	0	0	3.7	0	3.6	99.9	99.5	59.5
Ghana	52.9	68.6	0	28	5.5	0.7	99.9	99.6	97.0
Kenya	0	0	0	24.2	1.9	0	99.7	99.3	87.6
Libya	100.0	95.3	90.2	0	0	0	98.7	97.0	97.4
Morocco	0	0	0	30.1	5.1	33.9	99.3	96.3	76.0
Mozambique	0	0	0	35.1	9.0	46.3	99.7	99.8	91.2
Nigeria	81.8	96.2	92.9	5.5	0	0	99.9	99.6	79.9
South Africa	2.4	0	0	60.3	18.0	7.2	99.3	94.8	96.9
Sudan	96.8	0	0	0.3	0	0	99.3	98.4	33.6
Tanzania	0	0	0	58.3	20.1	1.2	99.9	99.7	97.1
Zambia	0	0	0	1.6	8.8	2.6	100.0	99.6	99.9

only plays a negligible role for Chinese SOEs. In contrast, small or medium-sized private companies tend to be concentrated in manufacturing and wholesale trade.

Compared to remarkable differences in the sectoral distribution 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 remarkably similar. Table 4.12 shows the sectoral distribution of Chinese, European and US trade flows at the *country level* for the year 2012. European 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. 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 United States and the European Union. 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. The evolution of Sino-African trade patterns mirrors 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.

4.5 Concluding Remarks

As mentioned above, the SDGs can deepen the interactions between Africa and its development partners. Overall, this chapter shows that financial resources from both the traditional Western donors and emerging donors from the Global South such as China can help African recipient countries to achieve the SDGs. While Western development assistance remains strong in social sectors such as education and health, it increasingly focuses on

political and institutional development as well. Political and institutional factors can be regarded as ultimate sources of growth and development. Chinese development finance, in turn, focuses specifically on physical infrastructures such as transportation as well as industry and trade, which can be considered as proximate sources of growth and development. Consequently, China's development assistance in Africa may serve as a complement to the kinds of foreign aid provided by the traditional donor countries.

Development finance can make an important, albeit limited, contribution to the developmental progress in developing countries. But the exaggerated expectations that development finance acts as a fundamental tool to meet the SDGs only further undermines the effectiveness of development finance. Increased development cooperation in the realms of foreign aid, trade and investment is a necessary but not sufficient condition for progress on development indicators in the developing world, as domestic policy factors play the most fundamental role in achieving developmental progress. The Millennium Development (MDG) agenda [as well as the post-2015 development agenda] have implied and will imply 'fundamental transformations in society, which are invariably driven by domestic politics and local actors' (Vandemoortele 2011, p. 1). With regard to the post-2015 UN Development Agenda, the most pressing question is not (i) whether both traditional donors and non-traditional donors will strengthen their cooperation in developing countries or (ii) whether Western and BRICS development finance will become increasingly competitive or complementary, but rather whether developing countries will be able to fully exploit the advantage of their new sources of funding, ideas and cooperation.

References

Acemoglu D, Johnson S, Robinson JA (2001) The colonial Origins of comparative development: an empirical investigation. *Am Econ Rev* 91(5):1369–1401

Ajakaiye O, Kaplinsky R (2009) China in Africa: a relationship in transition. *Eur J Dev Res* 21(4):479–484

Alden C (2005) China in Africa. *Survival* 47(3):147–164

Bauer PT (1972) *Dissent on development: studies and debates in development economics*. Harvard University Press, Cambridge, MA

Bräutigam DA (2009) *The Dragon's gift: the real story of China in Africa: the real story of China in Africa*. Oxford University Press, New York, NY

Bräutigam DA (2015) Chinese aid. <http://www.chinaafricanrealstory.com/p/chinese-aid.html>. Accessed 18 October 2015

China State Council (2010) *China-Africa economic and trade cooperation*. People's Republic of China, Beijing

China State Council (2011) *China's foreign aid*. People's Republic of China, Beijing

China State Council (2013) *China-Africa economic and trade cooperation*. People's Republic of China, Beijing

Corkin L (2011) Redefining foreign policy impulses toward Africa: the roles of the MFA, the MOFCOM and China Exim Bank. *J Curr Chin Aff* 40(4):61–90

Friedman M (1958) Foreign economic aid: means and objective. *Yale Rev* 47(4):500–516

Kobayashi T (2008) Evolution of China's aid policy. *JBICI working paper no. 27*. Japan Bank for International Cooperation Institute, Tokyo

Krueger AO, Michalopoulos C, Ruttan VW (1989) *Aid and development*. Johns Hopkins University Press, Baltimore, MD

Lin T (1996) Beijing's foreign aid policy in the 1990s: continuity and change. *Issues Stud* 32(1):32–56

Lumsdaine DH (1993) *Moral vision in international politics: the foreign aid regime, 1949–1989*. Princeton University Press, Princeton, NJ

Maddison A (1988) Ultimate and proximate growth causality: a critique of Mancur Olson on the rise and decline of nations. *Scand Econ Hist Rev* 36(2):25–29

Meier GM (1984) *Emerging from poverty: the economics that really matters*. Oxford University Press, New York, NY

Ministry of Commerce of the People's Republic of China (MOFCOM). (2009) Statistical bulletin of China's outward foreign direct investment. People's Republic of China, Beijing

Ministry of Commerce of the People's Republic of China (MOFCOM) (2011) Statistical bulletin of China's outward foreign direct investment. People's Republic of China, Beijing

North DC (1990) *Institutions, institutional change and economic performance*. Cambridge University Press, New York, NY

Nurkse R (1953) *Problems of capital formation in underdeveloped countries*. Basil Blackwell, Oxford

Organisation for Economic Cooperation and Development (OECD) (2003) *International development statistics CD Rom*. Organisation for Economic Cooperation and Development, Paris

Riddell RC (2007) *Does foreign aid really work?*. Oxford University Press, Oxford

Rosenstein-Rodan PN (1943) Problems of industrialisation of Eastern and South-Eastern Europe. *Econ J* 53 (210):202–211

Rosenstein-Rodan PN (1961) International aid for underdeveloped countries. *Rev Econ Stat* 43(2):107–138

Schultz TW (1956) Reflections on agricultural production: output and supply. *J Farm Econ* 38(3):748–762

Shinn DH (2013) Foreign direct investment in Africa. <http://davidshinn.blogspot.nl/2013/03/foreign-direct-investment-in-africa.html>. Accessed 20 Jan 2018

Shinn DH, Eisenman J (2012) China and Africa: a century of engagement. University of Pennsylvania Press, Philadelphia, PA

Strange AM, Parks B, Tierney MJ, Fuchs A, Dreher A (2013) China's development finance to Africa: a media-based approach to data collection. CGD working paper no. Center for Global Development, Washington, DC, p 323

Szirmai A (2012) Proximate, intermediate and ultimate causality: theories and experiences of growth and development. UNU-MERIT working paper no. 2012-032. UNU-MERIT, Maastricht

Szirmai A (2015) *Socio-economic development*, 2nd edn. Cambridge University Press, Cambridge

Tull DM (2006) China's engagement in Africa: scope, significance and consequences. *J Mod Afr Stud* 44 (3):459–479

United Nations Conference on Trade and Development (UNCTAD) (2006) *World investment report 2006*. UNCTAD, Geneva

United Nations Conference on Trade and Development (UNCTAD) (2013a) The rise of BRICS FDI and Africa. UNCTAD, Geneva

United Nations Conference on Trade and Development (UNCTAD) (2013b) *World investment report 2013—global value chains: investment and trade for development*. UNCTAD, Geneva

United Nations Conference on Trade and Development (UNCTAD) (2014) *Bilateral FDI statistics 2014*. UNCTAD, Geneva

Vandemoortele J (2011) The MDG story: intention denied. *Development and Change* 42(1):1–21

World Bank (2007) *Agriculture for development*. The World Bank, Washington, DC

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