September 2018

UJ Centre for Africa-China Studies

CACS OCCASIONAL PAPER

6

SINO-ETHIOPIAN TRADE AND INVESTMENT RELATIONS: *Actors, Determinants and Trends*

Dr Messay Mulugeta

College of Development Studies, Addis Ababa University

UNIVERSITY OF JOHANNESBURG

NANJING TECH UNIVERSITY

Oxfam International

In partnership with the Oxfam Pan Africa Programme

UJ Centre for Africa-China Studies

Occasional Paper No 6

Sino-Ethiopian Trade and Investment Relations: Actors, determinants and trends

Dr Messay Mulugeta

Associate Professor, College of Development Studies, Addis Ababa University, and
Visiting Scholar, Fudan Development Institute, Fudan University, Shanghai.
mesay.mulugeta1@aau.edu.et

Series editor: Dr David Monyae

Produced in partnership with the Oxfam Pan Africa Programme, as part of a collaboration on BRICS, Africa and the World.

First published in September 2018 by:
The University of Johannesburg Confucius Institute

Republished in January 2019 by:
The University of Johannesburg Centre for Africa-China Studies
9 Molesey Avenue Kingsway Campus, Auckland Park
Johannesburg, South Africa
www.confucius-institute.joburg

External language editor: Riaan de Villiers
Designed and produced by Acumen Publishing Solutions

For enquiries, contact:
Bhaso Ndzendze, Research Coordinator, UJCI
Tel +27 (01)11 559-7504
Email: bndzendze@uj.ac.za

Cover: The electrified 31.6-kilometre Addis Ababa Light Rail (AALR), the first light rail and rapid transit in eastern and sub-saharan Africa. The lead constructors were Chinese companies.

NOTE: This Occasional Paper was initially published under the aegis of the UJ Confucius Institute. Following the launch of the CACS in November 2018, the Occasional Paper series has been republished to create a unified series under the aegis of the CACS.

TABLE OF CONTENTS

ABSTRACT

This study examines the development of economic relations between China and Ethiopia, and assesses the economic implications for both countries. It is based on both primary and secondary data. Since the late 1990s, extremely strong economic ties have developed between these two countries, with trade flows reaching more than US$3billion a year, and Chinese investment in Ethiopia approaching US$3.5 billion in 2017 from a non-existent base two decades previously. Chinese investments have created vital infrastructure, jobs for thousands of Ethiopians, and valuable skills and technology transfers. This relationship provides Ethiopia with an unprecedented opportunity to benefit from the most rapidly developing economy in the world. Given that the African Union is based in Addis Ababa, it also has major economic implications for Africa as a whole. At the same time, it presents Ethiopia with significant challenges, namely to adapt Chinese resources and technologies to local circumstances and local priorities, ensuring, among others, that development is sustainable, environmentally sound, and protects rather than displaces local communities. This will require transformative and accountable leaders capable of harnessing and channeling the vast opportunities coming in from China.

Keywords: Ethiopia, China, economic relations, job creation, technology transfer, investment.

INTRODUCTION

Ethiopia is a sovereign state on the Horn of Africa. With a population of roughly 105 million (CSA 2017), it is the second most populous country in sub-Saharan Africa, following on Nigeria (186 million). In recent years, Ethiopia has gained an increasingly favourable international reputation for its staggering double-digit rate of economic growth. This has resulted from improved exploitation of its natural resources (including water), the government's commitment to improving the lives of its citizens, economic collaboration with other countries (notably China) and international development agencies, higher levels of security, and higher aspirations among citizens. Foreign direct investment (FDI) has grown to US$2.2 billion in 2015/16 (EIC 2016), and Ethiopia has become a preferred destination for investors from many countries, most notably China.

GDP per capita was US$768 for 2017, pushing Ethiopia to 165th place on the World Bank rankings, and the percentage of the population living in poverty has declined to 22% from 38.7% a decade ago. These indicators show that Ethiopia is on an appropriate and effective development path, which is enhancing its appeal to foreign investors.

In recent years, Ethiopia has made a major effort to establish active economic relations with China. Representatives of high-level government bodies frequently visit China. In May 2017, for example, Hailemariam Desalegn, then prime minster of Ethiopia, visited China and met the Chinese president, Xi Jinping. Xi indicated that Ethiopia played a leading role in Sino-African relations, and spoke of enhanced collaboration in respect of connectivity, production capacity, trade and economy, people-to-people exchanges, and aviation.

At the same time, Chinese companies are increasingly involved in the Ethiopian economy, including manufacturing, construction, real estate, machinery and equipment; and hotel and resort development. This involvement has been encouraged by a range of investment-enhancing measures, including industrial parks; targeted investor recruitment and incentives, including favourable financing arrangements; and higher levels of security.

In contrast with Ethiopia's relationship with most Western countries, both governments should seek to work towards mutual benefits in terms of the principles adopted by the

Forum on China-Africa Co-operation (FOCAC).This relationship should be based on the principle of 'teaching to fish to feed for a lifetime', rather than 'giving a fish to feed for a day'. While investments should create opportunities from which all parties stand to gain, Ethiopia, as a least developed country, should be provided with a meaningful opportunity to learn from China's economic experience, and adapt this to its own circumstances. This will help to place Ethiopia on a path to sustainable, equitable and eco-friendly development.

Such a scenario would be hugely beneficial for both parties – as Ethiopia's economy grows, it will also provide China with a growing market for its manufactured goods, and build the power of Ethiopians to purchase Chinese goods and services. Economic relations between Ethiopia and China should also encompass the technical and vocational training of young people, thus enabling them to work productively for Chinese companies in Ethiopia, and help those companies to make use of cheaper local labour in turn.

All this indicates that numerous factors need to be considered when formulating a strategy for economic relations between Ethiopia and China. These include, but are not limited to, well-designed joint projects, the exchange of researchers, the creation of local employment and market opportunities, local skills development, technology transfer, the involvement of local communities, and sound environmental practices.

PROBLEM STATEMENT AND RATIONALE

While Sino-Ethiopian relations have ancient roots, substantial socioeconomic and political relations between the two countries effectively began with the first Ethiopian Cultural Delegation to China in 1956, at about the time when power was centralised in China, and only two years before the 'Great Leap Forward', or Second Five-Year Plan (Csanadi 2017). Formal diplomatic relations were established in the 1970s, at the time when China was working hard to regenerate the 'Great Leap Forward' (which was halted from the early 1960s until the second half of the 1970s) in a more decentralized way. Subsequently, various bilateral agreements were signed (Damtew and Tsegay 2017), though it took more than two decades for a strong economic relationship to develop.

This took off in the late 1990s. Factors that helped to pave the way included China's economic boom from the late 1970s onwards (Csanadi 2017), and its resultant push towards overseas trade and investment; its accession in 2001 to the World Trade Organization (WTO); and Ethiopia's relative peace and security after 1991, and its determination to accelerate its economic development. The economic nexus between the two countries really began to develop exponentially after the turn of the millennium. As a result, many Chinese companies (such as Tsehay Real Estate Plc, Hua Jian International Light Industry City Plc, Capital Cement Milling and Packing Plc, George Shoe Ethiopia Plc, and CCECC Ethiopia Construction Plc) are currently investing substantially in various economic sectors in Ethiopia, notably construction and manufacturing. However, the impact of Chinese investment has not been systematically researched, particularly in terms of job creation, technology/skills transfers, and the enhancement of trade opportunities. Therefore, the purpose of this study is to systematically assess economic relations between Ethiopia and China, with a particular emphasis on these factors.

METHODOLOGY

Two methods were used to collect data for this study. First, unprocessed secondary data were obtained from various arms of the Federal Democratic Republic of Ethiopia (FDRE) in Addis Ababa, notably the Ethiopian Investment Commission (EIC), the Ethiopian Railway Corporation (ERC), and the Ministry of Foreign Affairs (MoFA). The websites of these institutions were also studied. Secondly, various published and unpublished documents were accessed at Addis Ababa University in Ethiopia and Fudan University in China. I also interviewed a few visiting professors from the Fudan Development Institute (FDDI) at Fudan University in Shanghai, Ethiopian scholars with a sound knowledge of Sino-Ethiopia relations, as well as experts on various development sectors in Ethiopia.

I also drew on insights gained during visits to various historical and contemporary Chinese companies and institutions, including the Shenzhen Metro Group, the Weidong Chinese Cultural Museum (Beijing), the Weidong Cloud Education Group (Beijing),Guangzhou CreativeView Optoelectronics Technology Company, Hauwei

Technologies (Shenzhen), the Shanghai Industrial Investment Corporation (SIIC), Greenport Agriculture, and the International Centre for Higher Education Innovation (ICHEI) under the auspices of UNESCO (Shenzhen).

The data was then described, analyzed and interpreted. The first phase involved identifying and distilling key quantitative indicators such as numbers of projects, volumes of investment, and numbers of jobs created. The second phase involved relating these to qualitative data obtained through field observations and interviews, thereby enabling explanations to be formulated, and conclusions to be drawn.

THEORETICAL FOUNDATION

The most appropriate theoretical orientation for this research was foreign direct investment (FDI) theory, specifically those of Hymer, as well as Nayak and Choudhury. Dunning and Rugman (1985) point to the work of Hymer (1960) as a breakthrough in FDI theory. According to these two authors, this enables us to consider FDI as a modality in terms of which investors extend their territorial horizons to foreign countries. The unique feature of FDI is that the investing agencies retain control over productive activities outside their national boundaries. Based on this understanding, FDI refers to international production and sales, and is more than a process in terms of which goods and services are traded internationally.

The essence of Hymer's theory, as explained by Nayak and Choudhury (2014), is that international production is an imperfect market in which firms operating abroad have to compete with domestic firms that enjoy advantages in terms of culture, language, legal systems, and consumer preferences. Moreover, companies trading abroad are also exposed to fluctuations in rates of foreign exchange, which domestic companies are not.

Nayak and Choudhury (2014) classify FDI theories into five categories, namely perfect competition, imperfect competition, currency strength, international trade, and investment inflows from major emerging economies such as China. Current Sino-Ethiopia investment relations can best be explained in terms of investment inflows from major emerging economies. Other FDI theories deal more effectively with investment flows from developed regions to less developed ones. In recent times, especially the past two decades, China has emerged as a major new player in global economics and international investment, with Chinese corporations entering every sphere of the global economy, particularly in Africa and Eurasia.

According to Nayak and Choudhury (2014), corporations in emerging countries (CECs) tend to appropriate technology from developed regions, particularly the West and/or Japan. Once local demand has been met, they start to export their products as well. As their products become better known in less developed regions, and the markets for those products are established and consolidated, those firms begin setting up similar companies abroad, rather than merely continuing to export their goods and services. At this juncture, their products may be changed to fit the requirements of and preferences in host countries, as a result of which the imported technology may change as well. In fact, this modification processes (either the product or the technology) may allow these firms to gain a competitive edge in other developing countries in similar socioeconomic circumstances.

Besides owning suitable technology, CECs also enjoy other advantages over firms and investments from developed countries, in the form of lower overheads and expatriate costs, familiarity with local conditions, and being politically less threatened in host countries. CECs may escape and benefit from trade barriers raised against multinationals based in developed countries. Lastly, rapid increases in domestic labour costs and stronger domestic currencies can also compel companies to relocate production to other countries.

To conclude, no single FDI theory fits all the different types of investment by corporations or countries in different parts of the world. Several theories have to be considered to adequately understand and explain the pros and cons of FDI in the specific political, socio-economic and environmental contexts of specific countries. Moreover, Chinese FDI in Ethiopia is mostly undertaken by private companies, and follow the rationales indicated in the FDI conceptual framework. The contribution of State-Owned Enterprises (SOEs) is also vital, and also follow the same rationale in Ethiopia.

FINDINGS AND ANALYSIS

A glance at Sino-Ethiopian relations

Chinese relations with Africa, particularly the Horn of Africa, started in ancient times (Geoff 2014; Muna 2015; Gebregeorgis 2016). According to Dent (2011), records of Sino-African trade date back to the 10th century BC, when the Egyptian city of Alexandria started trading with people settling in present-day China. There is also evidence of trade relations between China and Africa at some point during the first major Silk Road period (about 50 BC-250 AD).Gebregeorgis (2016), for example, cites historical sources which point to indirect contact between Chinese merchants and the Aksumite Kingdom of Ethiopia after the Chinese Qin Dynasty (third century BC) and the Han Dynasty (third century BC–third century AD) through the Balkh in Eurasia and Parthia on the Persian Plateau. Geoff (2014) and Muna (2015) point to indirect trade between Chinese and part of the Horn of Africa at some point during the Tang Dynasty (618–907 AD). Dent (2011), Geoff (2014) and Muna (2015) provide substantial evidence of contact between Zheng He, an administrator and diplomat during the Ming Dynasty (1368-1644), with people in present-day sub-Saharan Africa centuries before the arrival of the 16th century European explorer Vasco da Gama. In fact, relations lapsed during the period of Western imperial domination until the latter half of the 20th century.

The modern era of Afro-Asian (specifically Sino-African) relations started in 1955 when 29 African and Asian countries met in Bandung, Indonesia, to promote Afro-Asian economic and cultural cooperation and express their opposition to colonialism or neocolonialism. However, trade and investment relations between Africa and China largely developed in the 1990s, driven by China's rapid industrialization and economic development (Dent 2011). This relationship was cemented with the formation of the Forum on China-Africa Co-operation (FOCAC), which first met in Beijing in 2000. FOCAC next met in Addis Ababa (2003), and then again in Beijing (2006).

FOCAC has devised four principles that have helped African countries to welcome China more warmly than their preceding Western partnerships, namely sincerity, friendship and equality; mutual benefit; mutual support and close co-ordination; and mutual learning and common paths of development. These principles reflect the notion that China has no interest in establishing hegemony in Africa. Taylor (2006) and a veteran FDDI Visiting Scholar, Geoffrey Harris (interviewed in November 2017), also agree that China's interest in Africa is purely economic, at least for the time being, and that it does not wish to dominate African nations politically. In fact, there are many different perspectives on this issue. Mlambo, Kushamba and Simawu (2016) note that, despite widespread media attention and heated debates, China's involvement in Africa is still under-researched.

The official visit to China by the current president of Djibouti, Ismail Omar Guelleh, on 22-24 November 2017 and the warm welcome by Chinese leaders at the Great Hall (Tiantian 2017) attests to burgeoning Sino-Ethiopian and Sino-African ties. His warm reception also holds important implications for Ethiopia, as about 98% of Ethiopian trade moves through the port of Djibouti. In fact, China's interest in Africa may expand to peacekeeping and strategic missions, aimed at protecting its massive investments as well as Chinese workers in Africa in the years to come.

According to officials in the Ethiopian Ministry of Foreign Affairs (MoFA), the first Ethiopian cultural delegation was sent to China in 1956, only two years before the launch of the 'Great Leap Forward'. This delegation opened the way for socioeconomic and political relations between Ethiopia and China. In 1964, Premier Zhai Enlai of China visited Ethiopia, and formal diplomatic relations between Ethiopia and the People's Republic of China was established in the 1970s, brokered by Emperor Haile Selassie I (Bahru, 2002) of Ethiopia and Mao Zedong, Chairman of the China Communist Party (Walsh 2009).

Besides formal diplomatic relations, various bilateral agreements have been signed, mostly in the areas of trade, investment and education (Damtew and Tsegay 2017). These include the Ethiopia-China Agreements for Economic and Technological Cooperation (1971, 1988 and 2002); Ethiopia-China Trade Agreements (1971 and 1976); Ethiopia-China Trade Protocols (1984, 1986 and 1988); the Ethiopia-China Agreement Concerning the Encouragement and Reciprocal Protection of Investments (1998); the Ethiopia-China Agreement for the Mutual Promotion and Protection of Investment (1988); and the Ethiopia-China Agreement for Trade, Economic and Technological Cooperation (1996). As noted by

Table 1: Indicators of China's current economic performance

Indicators	Fiscal year						
	2010	2011	2012	2013	2014	2015	2016
GDP volume at constant prices (US$ trillion)	6.1	7.5	8.6	9.6	10.6	11.2	11.4
Population (billions)	1.34	1.35	1.35	1.36	1.37	1.37	1.38
Urban population as % of total	49.2	50.6	51.9	53.2	54.4	55.6	–-
GDP per/capita at constant prices (''000' USD)	4.523	5.582	6.329	7.080	7.718	8.140	8.260
Agriculture (% of GDP)	9.6	9.5	9.5	9.4	9.2	9.0	–-
Industry (% of GDP)	46.2	46.1	45	43.7	42.7	40.5	–-
Service (% of GDP)	44.2	44.3	43.5	46.9	48.1	50.5	–-

Source: Drawn from Miklos Losoncz (2017).

Damtew and Tsegay (2017), Sino-Ethiopian relations were transformed into a more strategic partnership with the formation of FOCAC in 2000. Ethiopia also hosted and co-chaired the second FOCAC Ministerial Meeting, held in Addis Ababa in 2003.

The China-Africa Fund was established in June 2007, after the Beijing FOCAC Summit, to support Chinese enterprises expanding into Africa. The fund serves as a bridge between Chinese companies and African projects. It opened an East African branch in Addis Ababa in 2010, reflecting the close relations between China and Ethiopia, as well as the former's confidence in the latter. Ethiopia has also shown an interest in the Belt and Road Initiative (BRI), a wide-ranging Chinese development initiative proposed by president Xi Jinping. Previously known as the One Belt, One Road Initiative (OBOR), the BRI comprises the Silk Road Economic Belt, running through Central Asia, West Asia, the Middle East and Europe, and the Maritime Silk Road, a complementary initiative aimed at fostering economic collaboration along the oceans bordering South East Asia, Oceania and North Africa. Various scholars, including Chin and He (2016), Csizmadia (2017) and Klose, Pepermans and Wang (2017), agree that the BRI is aimed at expanding China's economic and political influence in Asia, Europe and Africa. For Ethiopia, the BRI probably means more infrastructure, bigger markets, more job opportunities, and increased technology transfer.

While concrete cooperation between Ethiopia and China started with the signing of a trade agreement in 1971 (Venkataraman and Solomon 2015), economic and political relations remained insignificant until the coming to power of the Ethiopian People's Revolutionary Democratic Front (EPRDF) in 1991, and China's accession to the WTO in December 2001. Trade boomed, and in 2006 China became Ethiopia's largest trading partner. From 2005 to 2015, bilateral trade grew from negligible levels to more than US$3 billion (Venkataraman and Solomon 2005; Alemayehu and Atnafu 2009).

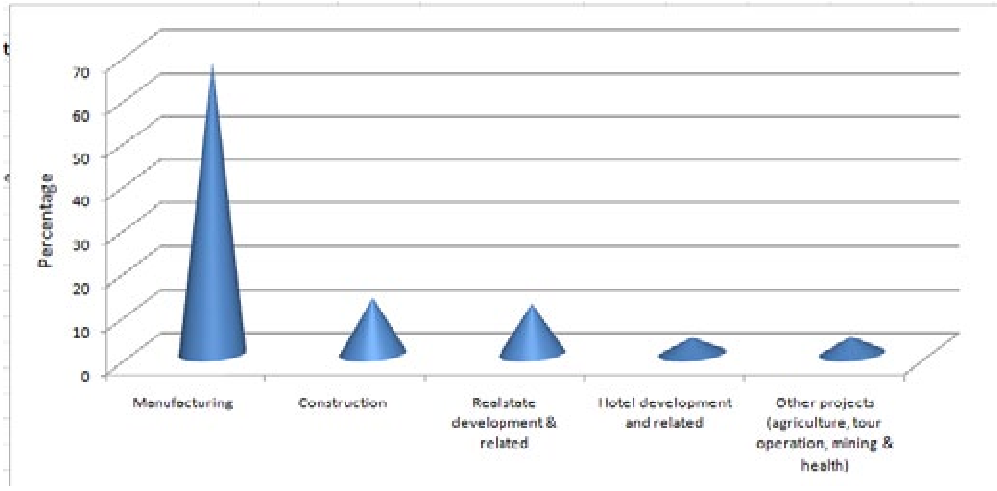
Indeed, over the past decade, Ethiopia has built up closer relations with China than any other African country, resulting in higher levels of economic growth as well as extensive technology transfer in the areas of construction, information technology, railways, and textiles.

The connection between the two countries can be expected to strengthen further. This will include mutual support on issues of culture, trade, investment, agriculture, education, health, human resource development and many more. The visit to Ethiopia by Chinese Premier Li Keqiang in May 2014 was another milestone in strengthening economic ties. Ethiopian Airlines is also playing a prominent role; it started flying between Addis Ababa and Beijing in the 1970s, and currently flies to and from Beijing, Chengedu, Guangzhou, Hong Kong and Shanghai.

Chinese economic performance and investment in Ethiopia

China has achieved such high levels of growth over the past three decades (Yuan and Yu 2014) that this has been widely branded as the 'Chinese Economic Miracle'. Indeed, it is widely agreed that China's tremendous economic development since the second half of the 1970s

Figure 1: Investments of Chinese origin in Ethiopia by economic sector, Aug 1998–Dec 2017



Source: Compiled by the author, based on unprocessed EIC data.

has elevated it to the second largest economic power in the world. Its economy is the largest and most powerful among the new global economic powers of Brazil, Russia, India, China and South Africa (BRICS). Its GDP at constant prices is US$11.4 trillion, and its GDP per capita at constant prices is UD$8260 (Table 1). China has established giant corporations, including the China Civil Engineering Construction Corporation (CCECC), the China Communications Construction Company (CCCC), the China Railway Group, metro companies, manufacturing companies, ICT technology companies, petroleum and chemicals corporations, automotive industries, power plants, and agricultural enterprises.

China has restored its magnificent tourist sites and features such as the Great Wall, the Forbidden City, the Pearl River Cruise, and the Weidong Chinese Cultural Museum, and its cities feature modern skyscrapers such as the Shanghai Global Financial Centre. In the process, China has become a model for other developing nations in Africa, Asia, Eastern Europe and Latin America, which has extended its economic and soft power influence throughout the developing world, especially Africa. As outlined by Dent (2011), China has established its strongest links with African countries, mainly for mutual benefit.

Figure 1 depicts investments of Chinese origin in Ethiopia by economic sector in the decade from August 1998 to December 2017. It shows that most Chinese investors concentrate on the manufacturing sector – a rapidly growing sector accounting for about 13.8% of GDP, revealing the gradual structural transformation of the country's economy away from agriculture (still accounting for 38.8% of GDP in 2014) to manufacturing (EIC 2016). A total of 67.6% licensed projects were in manufacturing, 13% in construction, 11.6% in real estate, 3.8% in hotel development, and 4% in agriculture, tourism, mining and health. Some 61.7% of registered capital went to manufacturing, 24.6% to construction, and the remaining 13.7% to real estate development, hotels, mining, tourism and health.

Figure 2 (overleaf) depicts the number of Chinese investment projects in Ethiopia from 1995 to 2017. It shows that the number of projects began to increase in 1998, and despite some dips escalated rapidly thereafter.

Figure 3 (overleaf) depicts investment projects undertaken in Ethiopia by the five leading countries from August 1992 to December 2017. It shows that China undertook more than 900 projects in this time, far outstripping the other four countries. According to the EIC data, the total number of investment projects licensed between August 1998 and September 2017 was 1206 – a huge increase over the previous decade. About 60.3% (728 projects) were fully operational, which also greatly exceeded previous trends.

Figure 2: Chinese investment projects in Ethiopia, 1995 to 2020

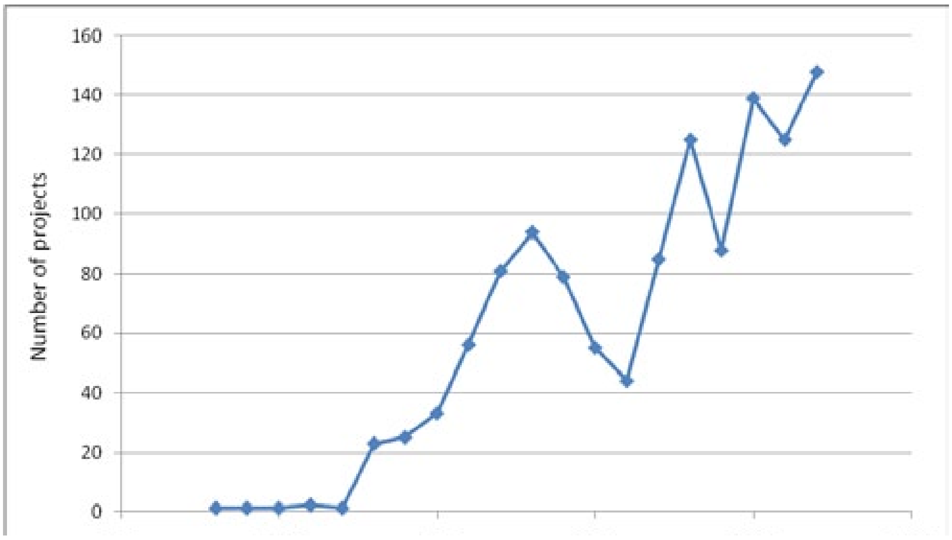


Figure 3: Investment projects in Ethiopia by five leading countries, Aug 1992–Dec 2017

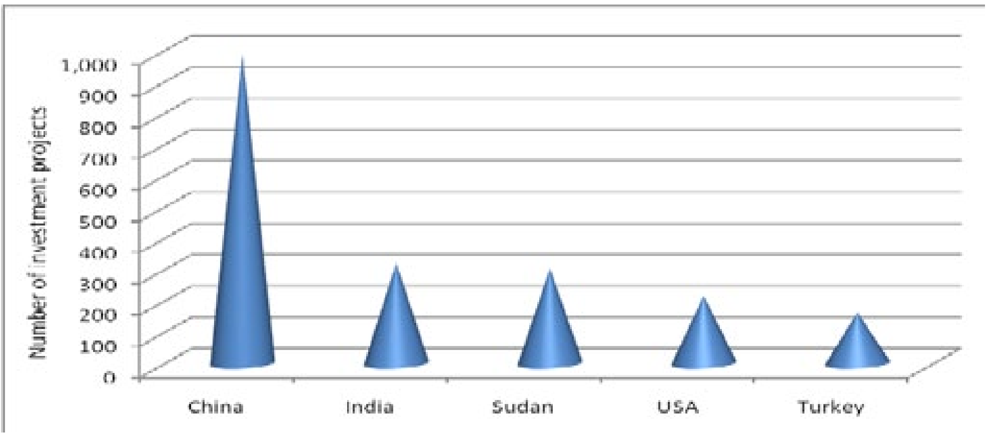
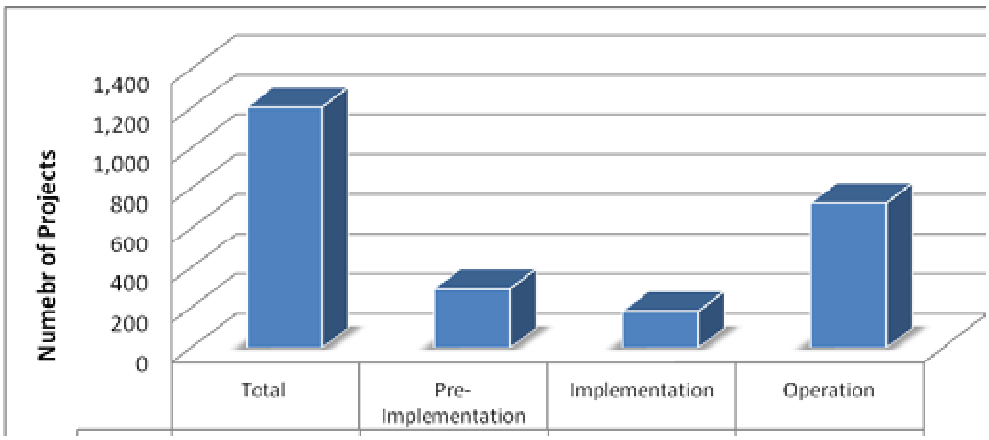


Figure 4: Licensed investment projects by implementation stage, Aug 1998–Dec 2017



Source: Compiled by the author, based on unprocessed EIC data.

Table 2: FDI of Chinese origin in Ethiopia, Aug 1998–Dec 2017

Countries	Capital inflow (operational projects only)	
	ETB billions	US$ millions
Chinese investments	18.570	682.502
Joint investments including China	5.647	207.536
Total	24.217	890.040

Table 3: Licensed Chinese investment projects in Ethiopia by status, Aug 1998–Dec 2017

Project status	Registered capital (Chinese and Chinese joint investment)	
	ETB bn	US$bn
Pre-implementation	34.870	1.281
Implementation	40.531	1.489
Operational	24.217	0.890
Total	99.618	3.660

Source: Calculated by the author, based on EIC data.

Of these, about 24% (295 projects) and 15% (183 projects) were at the pre-implementation and implementation stages (see Figure 4). According to the EIC, projects at the pre-implementation stage are licensed investment projects that have not begun to operate, while those at the implementation stage are projects in which practical steps such as civil works and the acquisition of machinery and equipment are under way, but the production of goods or the provision of services has not yet started. When production has begun, investment projects are classified as operational.

Taken together, these indicators show that Chinese investments in Ethiopia rank first both in terms of the number of projects as well as registered capital, thus underlining its vital economic role.

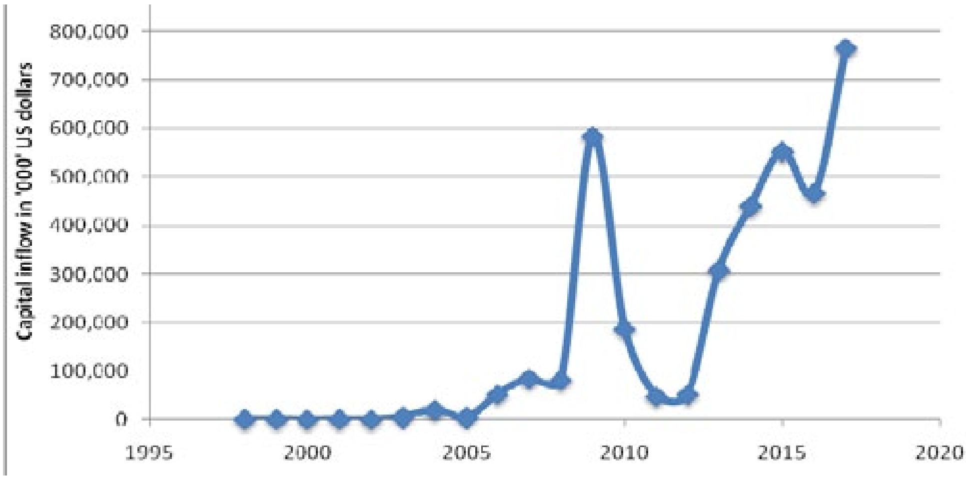
Besides exclusively Chinese companies, investments also involve Chinese joint ventures with partners from some 20 countries, including Australia, Canada, Ethiopia, Finland, France, India, Italy, Malaysia, Netherlands, Sudan, Turkey, South Africa, the United States, and the United Arab Emirates (UAE). The value of joint venture investment at all stages (operational, implementation, and pre-implementation) between August 2017 and December 2017 totalled 30.970 billion ETB (US$1138 billion). However, the vast majority of projects were Ethiopian and Chinese joint ventures, constituting about 84.0% of Chinese joint projects in Ethiopia. Companies of Chinese origin are therefore also helping to bring in investors from other countries.

Besides its huge contribution to job creation, foreign exchange earnings, and technology transfer, the Chinese co-investment approach plays an enormous role in promoting Ethiopia as a favorable investment destination. This will help Ethiopia to achieve its long-term economic vision (NPC 2016) to 'build an economy which has a modern and productive agricultural sector with enhanced technology and an industrial sector that plays a leading role in the economy; to sustain economic development and secure social justice; and, increase the per capita income of citizens so that it reaches the level of those in middle-income countries'.

Capital inflows into Ethiopia

FDI constitutes the bulk of capital inflows into most developing countries (Mileva 2008), reaching about half of total national capital inflows into some. Besides adding to existing national capital stock, FDI stimulates invest-

Figure 5: Value of Chinese investments in Ethiopia, 1998—2017



Source: Compiled by the author, based on unprocessed EIC data.

ments in other sectors of the host economy through 'crowding in' or 'spillover' effects. As Table 2 shows, Ethiopia is attracting a huge amount of FDI as a result of its economic ties with China.

Projects that are still at the pre-implementation and implementation stages are also expected to play vital roles in various parts of the Ethiopian economy. Registered capital investments by purely Chinese projects and Chinese joint investment projects at the pre-implementation and implementation stages in the period August 1998 to December 2017 amounted to 75.40 billion ETB (US$2.77 billion). This makes China the leading source of FDI in Ethiopia, followed by Saudi Arabia, Turkey and India.

Figure 5 shows the growth in Chinese investment over the years, particularly from 2006 onwards. Chinese and joint project owners invested more than US$585 million in 2009 alone, and more than US$766 million in 2017. The dip occurred when the Ethiopian government laid down a new minimum for foreign-based investments in Ethiopia. But the trend line soon shot up again, reaching a new high in 2017.

Sino-Ethiopia trade flows

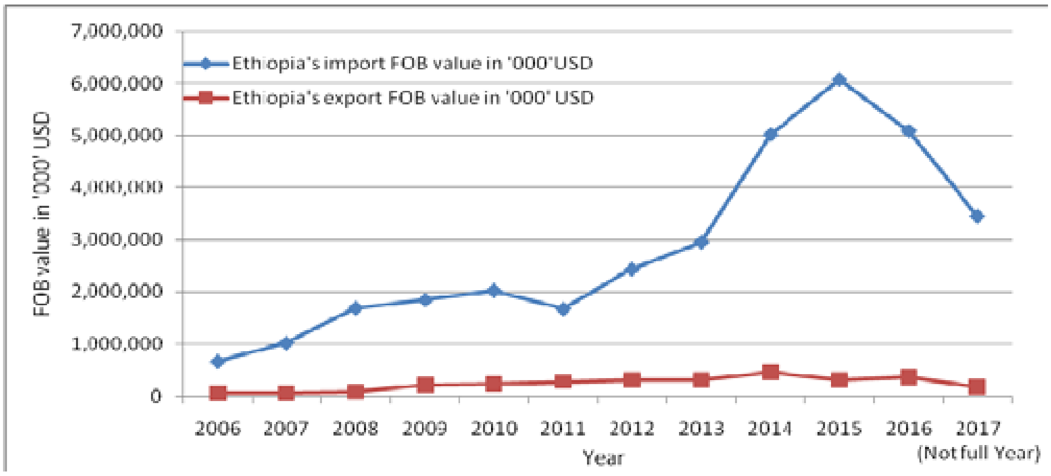
Trade flows between Ethiopia and China began to escalate in 2006, when Ethiopia's import FOB value was US$663570 000 and its export FOB value was US$71688 000, showing a negative balance of US$591 882 000. Imports from China increased tremendously, hitting a high in 2015 when the FOB value mounted to more than US$6 billion (Figure 6).

Ethiopia's exports to China are not only smaller in volume, but also growing more slowly – the coefficient of variation (CV) of its FOB values over the period under review is 0.51, while China's is 0.62. This holds important economic implications for Ethiopia, showing that it should work harder to boost its exports, and make the greatest possible use of its enabling relationship with China.

Ethiopia's exports to China are not only smaller in volume, but also growing more slowly – the coefficient of variation (CV) of its FOB values over the period under review is 0.51, while China's is 0.62.This holds important economic implications for Ethiopia, showing that it should work harder to boost its exports, and make the greatest possible use of its enabling relationship with China.

Trade flows between the two countries play a vital role in Ethiopia's economic transformation. In this regard, UNCTAD (2014:1) clearly indicates that '…in the post-2015 development agenda, international trade should be seen as an enabler for achieving a broad range of development goals through promoting inclusive and sustainable economic growth'. Therefore, if properly harnessed, international trade can play a vital role in investment stimulation, job creation, efficient resource utilization, technol-

Figure 6: Trade flows between China and Ethiopia, 2007—2017



Source: Compiled by the author, based on unprocessed EIC data.

ogy transfer, innovation, and production efficiency in developing countries such as Ethiopia, ultimately enhancing the wellbeing of its citizens.

Indeed, rapidly rising trade flows between Ethiopia and China are making significant contributions to both economies, allowing them to access new markets for their raw materials and/or finished/semi-finished goods, and opening up new production possibilities and technologies for both countries.

Although the current trade balance is skewed in China's favour (Figure 6), the vast market in China for Ethiopian raw materials and/or semi-processed goods is providing a valuable opportunity for Ethiopian export diversification, enabling it to create more jobs, and improve its balance of payments. Moreover, these trade flows are enhancing the financial capacity of local enterprises and producers, and giving Ethiopian people access to far cheaper Chinese consumer goods.

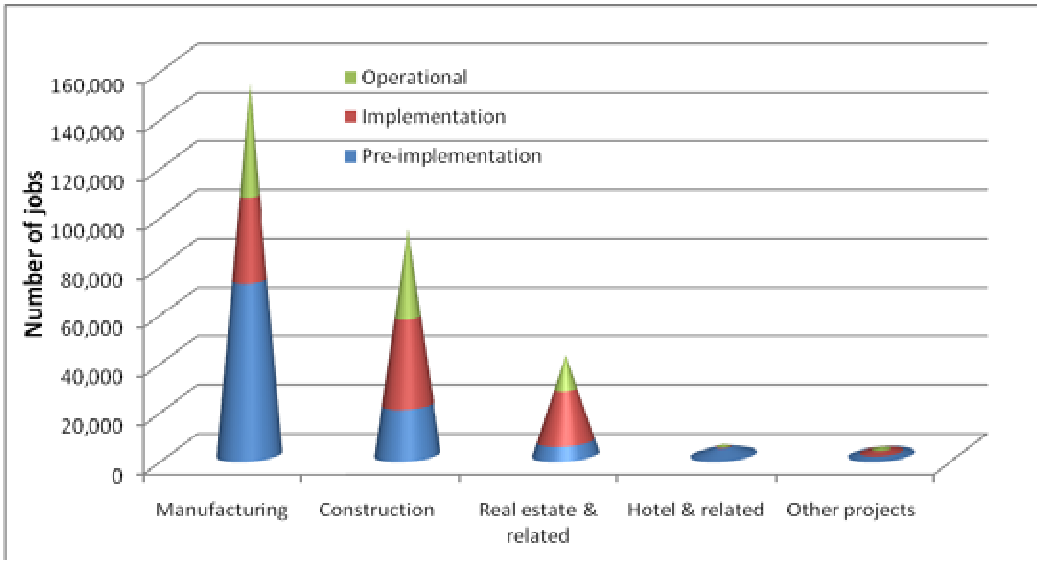
Job creation and technology transfer

According to Glass and Saggi (2008), international technology transfer (ITT) refers to 'any process by which a party in one country gains access to technical information of a foreign party, and successfully absorbs it into its production processes'.

According to UNCTAD (2011), FDI plays a key role in narrowing the technology gap between developed and developing countries. This happens when, as a result of foreign investment, various aspects of foreign operations, both managerial and technical, are transferred and diffused to local firms, or individual members of staff. Glass and Saggi (2008) also point out that FDI plays a key role not only in economic development but also in the adoption of new technology. This reduces the gap between developed and developing countries, and works to develop human potential, create jobs, and enhance livelihoods in the host country.

In this context, Ethiopia is currently benefiting significantly from technology and skills transfers from East Asian countries such as China, Japan and South Korea. To take one example, the huge Chinese manufacturing and construction projects in Ethiopia are introducing new approaches to meeting targets within shorter time frames, using less energy, and producing superior quality. Kaizen, a Japanese business philosophy for the continuous improvement of working practices (Elmsli and William1996), has been implemented in the manufacturing sector in particular, and an Ethiopian Kaizen Institute was opened in October 2010. Moreover, South Korean business management strategies have been applied to the Ethiopian civil service for more than a decade.

Figure 7: Jobs created by Chinese investment projects in Ethiopia by sector and status, Aug 1998–Sept 2017



Source: Compiled by the author, based on unprocessed EIC data.

Figure 7 records the number of jobs created by Chinese investment projects in Ethiopia by economic sector from August 1998 to September 2017. These jobs have been created in numerous sectors; including agriculture, manufacturing, mining, health, hotel and restaurants, tour operations, transport and communication, construction, water well drilling and wholesale trading, creating multiple opportunities for skills and technology transfer and diffusion.

These projects have created job opportunities for 291 924 Ethiopians, with 97 651(33% of the total) already employed on operational projects. Besides the jobs and incomes, thousands of Ethiopians have gained advanced knowledge of electrical installations, metallurgy, construction, railway operation, textile and garment processing, and information and communication technologies (ICT). In and around Addis Ababa, small enterprises started by young people who previously worked for Chinese companies and gained valuable skills and technologies in the process have become a common sight.

One of the most noted sectors for technology and skill transfer is railway construction and management. Following the establishment of the Ethiopian Railway Corporation in 2007, Ethiopia is developing an integrated and high-capacity rail system for freight as well as passengers. The leading contractors are Chinese companies. The electrified 31.6-kilometre Addis Ababa Light Rail (AALR) and 659-kilometre AA-Djibouti railways have been completed and began to operate in 2015 and 2017 respectively. Other rail lines are under construction.

During discussions at the Shenzhen Metro Group headquarters in Shenzhen in August 2017, managers and senior technical staff noted that many Ethiopians had acquired new skills in respect of train driving, maintenance, dispatching, marketing and ticket sales, as well as the provision of customer and station services. These skills had been diffused by the China Railway Group and Shenzhen Metro Group in the course of constructing and operating the AALR. Specifically, the Shenzhen Metro Group made a major contribution by training technicians and operators.

Besides direct job creation and technology transfer, the AA-Djibouti railway is providing Ethiopia with greatly improved access to the coast as well as to world markets, as more than 95% of Ethiopian trade passes through Djibouti.

The development of industrial parks has also led to significant technology and skills transfers. Three Chinese industrial parks are fully operational, and are leasing out

Table 3: Chinese industrial park development projects in Ethiopia

Chinese Industrial Parks (IPs)	Location	Capital investment (US$m)	Area (hectares)	Status
Eastern Industry Park	Dukem town	100	400	Operational
Hua Jian International light industry city (Ethiopia) plc IP	Addis Ababa	34	138	Operational
George Shoes Cluster IP	Mojo town	100	84	Operational
Total		254	622	––

Source: Compiled by the author, based on unprocessed EIC data.

premises to various manufacturing enterprises (Table 4). They represent investments of more than US$254million. Among others, the CCECC) and CCCC have invested more than US$34 million in the government-owned IPs in Dire Dawa and Arerti towns.

In sum, Chinese companies have created major opportunities for skills and technology transfers via their huge investments in Ethiopia, from which growing numbers of Ethiopians have benefited.

Ethiopia now faces the challenge of adapting these technologies to its national conditions and objectives. It can learn more from China in areas including, but not limited to, the construction of urban subways, eco-city development (such as the SIIC Dongtan Greenport Agriculture in Shanghai), urban agriculture, e-commerce (such as the application of WeChat electronic marketing), tourism development and management, online teaching and learning (such as Massive Open Online Courses, MOOCs), innovation and entrepreneurship, research and technology, urban planning and development, foreign trade, and agricultural productivity.

As noted by Losoncz (2017), China's shift to a knowledge, research and technology-intensive growth path provides Ethiopia with invaluable opportunities to draw on these innovations, and adapt them to its domestic circumstances and policy objectives. This will require responsive, accountable, capable and transformative leaders, from local to federal levels, who can develop an understanding of China's rapid transformation, and divert this to Ethiopia in the most appropriate ways. Given this, the election of Dr Abiy Ahmed as prime minister in April 2018 is a promising development. Despite powerful opposition in some quarters, he is forging ahead with essential political, governance, economic and social reforms, and has promised more in the future. His major constraints are poor education levels, corruption, and a lack of national unity.

CONCLUSIONS, AND THE WAY FORWARD

As noted in UNCTAD (2014), FDI and enhanced trade flows are vital enablers of economic development. A key OECD report (2002) also argues that FDI is an integral part of an open and effective international economic system and a major catalyst of local development, particularly in developing countries. In this context, it is clear that the economic cooperation between Ethiopia and China is benefiting both countries in various ways. It creates new opportunities for Chinese investors, while benefiting Ethiopia in terms of job creation, resource use, entrepreneurship, and technology/skills transfers. If properly harnessed, these factors could play a vital role in achieving inclusive and sustainable economic growth in Ethiopia, and increasing the prosperity of its people.

However, various challenges have to be addressed if the benefits of this relationship are to be maximized. This includes putting in place competent, accountable and transformative leaders, from local to federal levels, who can develop an understanding of the rapid economic and technological changes in China, and how to gear up Ethiopian society to make the best out of it, among others by selecting the most beneficial aspects, and adapting them to local circumstances. Put differently, Ethiopian leaders should ensure that they develop an understanding of the technological dynamics in China, as well as the ability to align them with local development policies and strategies.

Another key challenge is related to land tenure and human displacement. Development projects invariably require land. In turn, the acquisition of land in developing countries in particular often leads to the displacement of local people, and this has happened in Ethiopia as well. New developments have resulted in social disarticulation, the disruption of livelihoods, broken families, public violence, and even deaths in various parts of the country, both in rural and urban areas, may be except in Tigray region in northern Ethiopia.

Therefore, should the displacement of local people be inevitable, they should be adequately compensated, and enabled to continue their livelihoods in more sustainable ways than previously. In fact, they should be compensated not only for the resources and land they are losing, but also for psychosocial damage, as displacement by its very nature results in psychological trauma and social disruption. Similarly, the government should play a proactive role in attracting and regulating investments in environmentally and socially sensitive sectors such as agriculture, though Chinese investment in this regard have been minimal thus far.

Despite growing evidence that investment in the agricultural sectors of developing countries is one of the best ways of reducing food insecurity, some forms of large-scale agriculture carry risks for both the host and investing countries. For example, Zwerg and Arango (2008) as well as Liu (2014) show that large-scale land acquisition often has adverse consequences in that it forces poor communities to embark on environmentally destructive practices in order to survive. Reduced access to natural resources and the loss of livelihoods tend to generate harsh local opposition, and ultimately damage the project itself. For these reasons, land acquisition is also a less attractive option for investors, due to the high potential for conflict as well as reputational damage.

Given this, the Ethiopian government should develop a comprehensive strategy for involving local farmers in investment projects, giving them an active role, and leaving them in control of their land, thereby enabling positive and sustainable impacts on local economies and communities. This approach also requires the support of the investing country (China in this case), aimed at establishing strong and healthy investor-farmer relationships.

As regards the broader interface between investment and the environment, China has made huge strides in establishing eco-friendly projects that can be adapted to African conditions in general and Ethiopia in particular. A case in point is the SIIC Dongtan Low-Carbon Agriculture and Eco-City Development Project in Shanghai, featuring carbon-neutral, recycling, reuse, integration and zero-waste dumping technologies. Ethiopia should adopt this approach in order to make investment projects more sustainable, more efficient, and ultimately more socially beneficial. It needs to acquire the relevant technology, and learn to use it to the full.

To effectively leverage FDI as a means of achieving technology transfer and diffusion, Ethiopia needs to establish an effective national innovation system that provides an interface for technology-related activity, supports the development of the absorptive capacities of domestic enterprises and their linkages with Chinese investment projects, and provides a relevant regulatory framework, including a framework for intellectual property, that will enable the development of a knowledge base and technological capacities in Ethiopia.

The coherence between FDI policy and other relevant policies (especially education policy, trade policy, agricultural development policy, industrial policy, technical and vocational education, and innovation and technology policy) will play an important role.

Most importantly, Ethiopia should enhance its capacity to benefit from the high-tech developments in China. Put plainly, only transformative, accountable, capable, and dedicated leadership will sustainably benefit both countries. As noted by Taylor (2009), Ethiopia cannot fully benefit from Chinese investment and technology transfers if its leaders are corrupt, or do not have the capacity to get the best out of this relationship. The commitment of both countries to positive social, environmental and governance standards is also vital.

The recommendations in this study broadly apply to all African countries, but need to be adapted to their individual circumstances. Other African countries should also enhance their capacity to benefit from developments in China. Africa cannot fully benefit from Chinese investment and technology transfers with a 'business as usual' mentality. The leaders of every African country need to commit themselves anew to getting the best out of this relationship.

ACKNOWLEDGEMENTS

I am very grateful to the Fudan Development Institute (FDDI) of Fudan University in Shanghai for granting me an FDDI Visiting Research Scholarship in November-December 2017. I would also like to thank Ms Haregewoin Mirotaw, IT and Data Centre Director at the EIC, for tolerating my frequent requests for data and other information.

A station in the Addis Ababa Light Rail system.

REFERENCES

Alemayehu, Geda and G Meskel Atnafu. 2009. 'The Impact of China-Africa Investment Relations: Case Study of Ethiopia'. African Economic Research Consortium Collaborative Research on the Impact of Chain on Africa, Final Draft.

Bahru, Zewde. 2002. *A History of Modern Ethiopia*, 1955-1991, 2nd Edition. Ohio University Press.

Central Statistical Agency (CSA). 2013. *Population Projection of Ethiopia for All Regions at Wereda Level from 2014-2017.* Federal Democratic Republic of Ethiopia, Addis Ababa.

Chin, H and W He. 2016. *The Belt and Road Initiative: 65 Countries and Beyond*. Global Sourcing Fung Business Intelligence Centre.

Csanadi, M. 2017. 'The Chinese power structure and its transformation in comparative perspective'. *Financial and Economic Review*, Scientific Journal of the Magyar Nemzeti Bank, Special Issue 16.

Csizmadia, Norbert. 2017. *Geofusion: Mapping of the 21st Century.* PADA Foundation, Hungary.

Damtew, Rabia Yimam and Samson Maekele Tsegay. 2017. Developing South-South cooperation: the case of the Ethiopia-China economic relationship. *International Journal of Research Studies in Management,* 6 (1), 75-89DOI: 10.5861/ijrsm.2017.1757.

Dent, Christopher M. 2011. 'Africa and China: a new kind of development partnership'. In Christopher M Dent (ed), *Africa and China Relations.* Routledge Contemporary China Series. Routledge: London.

Desta, Asayehgn. 2014. 'The art of the Kaizen approach for sugar production in Ethiopia: Lessons from the Methara Sugar Factory'. *International Journal of Operations and Logistics Management,* 3 (3), pp 212-221.

Dunning, J H and A M Rugman. 1985. 'The influence of Hymer's dissertation on the theory of Foreign Direct Investment'. *American Economic Review*, 75 (2), pp 228-232.

Elmslie, Bruce and William Milberg. 1996. 'The productivity convergence debate: a theoretical and methodological reconsideration'. *Cambridge Journal of Economics,* 20 (2), pp 153-182.

Ethiopian Investment Commission (EIC). 2016. *Ethiopian Investment Report*. Addis Ababa.

Feenstraa, R C and G H Hanson. 1997. 'Foreign Direct Investment and relative wages: evidence from Mexico's Maquiladoras'. *Journal of International Economics*, Elsevier, 42 (3-4), pp 371-393.

Gebregeorgis Abraha Kahissay. 2016. 'Ethiopia-China Economic Relations: The Nature of China's Foreign Direct Investment in Ethiopia'. MA Thesis submitted to the Department of Political Science and International Relations, School of Graduate Studies, Addis Ababa University.

Geoff Wade. 2014. *Ming China and South East Asia in the 15th Century: A Reappraisal.* Asia Research Institute Working Paper Series No 28. National University of Singapore.

Glass, A J and K Saggi. 2008. 'The role of Foreign Direct Investment in international technology transfer'. In Amitava Dutt and Jaime Ros (eds), *International Handbook of Development Economics*, Volumes I and II.

Klose, S, A Pepermans and L Wang. 2017. 'An uphill struggle? Towards co-ordinated EU engagement with China's Belt and Road Initiative'. European Policy Brief No 48, November 2017, Edmont Royal Institute for International Relations, at http://www.egmontinstitute.be/content/uploads/2017/11/EPB-48.pdf?type=pdf

Liu, P. 2014. 'Impacts of Foreign Agricultural Investment on Developing Countries: Evidence from Case Studies'. FAO Commodity and Trade Policy Research Working Paper No 47. Rome: FAO.

Losoncz, M. 2017. 'The dilemmas of China's shift in growth trajectory and economic governance'. *Financial and Economic Review*, Scientific Journal of the Magyar Nemzeti Bank. Special Issue, Vol 16.

Messay Mulugeta. 2012. 'Resettlement and the Food Security Nexus in Ethiopia: A Case Study from Nonno Resettlement Sites, Central Ethiopia'. PhD Thesis Submitted to Addis Ababa University, College of Social Sciences.

Mileva, E. 2008. 'The Impact of Capital Flows on Domestic Investment in Transition Economies'. Working Paper Series No 871, European Central Bank.

Morrison, W M. 2017. *China's Economic Rise: History, Trends, Challenges, and Implications for the United States*. Congressional Research Service, 15 September 2017.

National Planning Commission (NPC). 2016. Federal Democratic Republic of Ethiopia Growth and Transformation Plan II (GTP II) (2015/16-2019/20) Volume I, Main Text. Addis Ababa.

Nayak, Dinkar and Rahul N Choudhury. 2014. 'A Selective Review of Foreign Direct Investment Theories'. Asia-Pacific Research and Training Network on Trade (ARTNeT) Working Paper No 143, Bangkok, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).

Organization for Economic Co-operation and Development (OECD). 2002. *Foreign Direct Investment for Development: Maximizing the Benefits, Minimizing Costs, Overview*. PRis: OECD Publications Service.

Organization for Economic Co-operation and Development (OECD). 2011. *China's Emergence as a Market Economy: Achievements and Challenges*. OECD contribution to the China Development Forum held in Beijing on 20-21 March 2011.

Rippel, G. 2017. 'China – rebalancing and sustainable convergence'. *Financial and Economic Review*, Scientific Journal of the Magyar Nemzeti Bank, Special Issue, Vol 16.

Rugman, A M. 1980. 'Internalization as a general theory of Foreign Direct Investment: A re-appraisal of the literature'. *Review of World Economics,* 116 (2), pp 365-379.

Taylor, Ian. 2009. *China's New Role in Africa.* London: Lynne Rienner.

Taylor, Ian. 2006. *China and Africa: Engagement and Compromise*. Routledge Contemporary China Series. London: Routledge.

Tiantian, Bai. 2017. 'African interests expand beyond business'. *Global Times*, 9 (2446), 23 November 2017, at www.globaltimes.com.cn

United Nations Conference on Trade and Development (UNCTAD). 2011. *Foreign Direct Investment, the Transfer and Diffusion of Technology, and Sustainable Development Trade and Development.* Geneva. 16–18 February.

United Nations Conference on Trade and Development (UNCTAD). 2014. 'The Role of International Trade in the Post-2015 Development Agenda'. Trade and Development Board and Trade and Development Commission, 6th Session, Geneva, 5–9 May.

Venkataraman, Manickam Solomon and M Gofie. 2015. 'The dynamics of China-Ethiopia trade relations: economic capacity, balance of rrade & trade regimes. *Journal of the Global South*, 2(8), DOI 10.1186/s40728-014-0007-1

Walsh, Ben. 2009. 'Mao's China, circa 930-1976'. *GCSE Modern World History.* London: Hodder Education.

Yuan, Zhingang and Yuxian Yu. 2014. 'China's economic growth under globalization'. In *Economic Transition in China, Long-Run Growth and Short-Run Fluctuations.* Series on Chinese Economics Research, 8. World Scientific Publishing.

Yuan, Zhingang and Yuxian Yu. 2014. 'Potential economic growth of China in transition. *In Economic Transition in China, Long-Run Growth and Short-Run Fluctuations*, Series on Chinese Economics Research, 8. World Scientific Publishing.

Zwerg, A M and L C Arango. 2008. 'The impact of Foreign Direct Investment dn Developing economies and the environment'. AD-MINISTER Univesidad EAFIT Medellin No 13.

Websites

Craig Benjamin. 'The First Silk Road: Trade routes connect the vast continent of Afro-Asia'. At https://www.khanacademy.org. Retrievede on 13 November 2017.

Melaku Mulualem. file:///C:/Users/user/Downloads/attachment-53-Ethiopia-China-For_EIIPD_Web.

Muna Abdulkhalef. 2015. 'Ethiopia-China ties, 45 years and growing ever strong'. At http://aigaforum.com.

UNIVERSITY
OF
JOHANNESBURG

NANJING TECH UNIVERSITY