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MANUFACTURING IN AFRICA:
A ROADMAP FOR SUSTAINABLE GROWTH

EXIM Bank's Working Paper Series is an attempt to disseminate the findings of research studies carried out in the Bank. The results of research studies can interest exporters, policy makers, industrialists, export promotion agencies as well as researchers. However, views expressed do not necessarily reflect those of the Bank. While reasonable care has been taken to ensure authenticity of information and data, EXIM Bank accepts no responsibility for authenticity, accuracy or completeness of such items.

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Executive Summary

Africa is one of the richest continents in terms of natural resources, endowed with about 30 per cent of world mineral reserves, 10 per cent of petroleum oil reserves and 8 per cent of natural gas resources. However, despite having abundant natural resources, Africa remains the most under-developed continent in terms of per capita income, literacy, water supply, health conditions, and most importantly infrastructure. As per the United Nations Committee for Development Policy, around 34 out of 54 countries in Africa are classified as Least Developed Countries as of May 2016. Africa's real GDP grew at an average of 5 per cent during 2000-2014 mainly on the back of its dependence on its commodity exports. However, growth was subdued at 3.7 per cent with a fall in commodity prices since 2014. The contribution of manufacturing value added to the GDP of Sub-Saharan Africa stood at an average of 10.5 per cent during 2005 to 2015.

Africa's population is expected to double to 2.4 billion by 2050. The rising population indicates a major need for employment generation for which a strong value-added manufacturing base would be required. At present, the situation is conducive for Africa to emerge as a manufacturing base with the supportive factors like abundant working age population, growing middle class coupled with rapid urbanisation, and significant contribution of services. Rapid urbanisation in turn gives rise to demand for consumer driven goods thus giving boost to industries like agribusiness, apparel and clothing, pharmaceuticals and automobiles.

Dependence on Natural Resources

Lack of economic diversification and excessive concentration on mineral resources makes the economy vulnerable towards global shocks. Crude and petroleum products are among the most important natural resources of Africa and crucial source of foreign exchange earnings for many African countries, and accounted for over 43 per cent of Africa's exports in 2015. Crude petroleum oil and gas accounted for 37.3 per cent of Africa's total exports whereas refined oil exports contributed to only 4 per cent of total exports. Oil producing economies of Africa like Nigeria and Angola, therefore, have been significantly impacted during the commodity price downturn. Other than crude and petroleum products, many African economies are dependent on mining activities. Copper accounted for around half of DR Congo's exports (49 per cent of exports in 2015) followed by cobalt (23.2 per cent). Subdued global demand for these commodities post 2013 led to the fall of GDP rate of Democratic Republic of Congo from 9.5 per cent in 2014 to estimated 3.4 per cent in 2016 revealing its vulnerability. In a similar way, Zambia and Botswana were adversely affected by the fall in copper and diamond price, respectively. South Africa's depleting gold reserves has led to loss of jobs thereby hurting the mining sector.

Potential Manufacturing Industries

Africa currently accounts for just 1.9 per cent of global manufacturing, and over 80 per cent of its workforce is in low productivity sector. Africa can move up the value chain, and thus have a sustainable growth, by focusing on the manufacturing sector, particularly agribusiness, textile and garments, automobile assembling and pharmaceuticals. These sectors have a potential to cater to the growing African market as well as can serve as an export base, making it attractive to international investors.

- ***Agribusiness***

Agribusiness implies commercialisation of agriculture at different levels ranging from supply of inputs, processing, marketing and retail sale thus adding further value to it and driving growth of both forward and backward linked activities. According to the World Bank[1], the size

[1]World Bank, "Growing Africa:Unlocking the Potential of Agribusiness", 2013.

of agriculture and agribusiness industry in Sub-Saharan Africa is projected to be at US$ 1 trillion by 2030. The growing urban population (350 million people are going to be added to the urban population of Africa by 2030) is expected to lead to further demand for processed food products. The potential sectors which are expected to grow in this process are rice, fruit and meat processing along with the traditional agricultural commodities of Africa like cocoa. Most of the African countries have comparative advantage in these commodities.

Rice is the fastest growing staple food in Africa replacing the traditional crops like cassava, sweet potatoes and yams because of its storability. Countries like Nigeria, Côte d'Ivoire, Senegal, Mali, Guinea, Sierra Leone took initiatives post the food crisis of 2008 to become self-sufficient in terms of rice production. Rice processing in Africa has the potential to develop as an industry as the production efficiency has increased with proper implementation of irrigation system. However, the local rice processing plants require investments for installing machineries and purchasing high yielding variety of seeds, among others, to enhance the scale and quality of production.

Cocoa is one of the most important agricultural crops of Africa. Western Africa is the home to major cocoa producing nations in the world and provides seventy per cent of the world supply of Cocoa. Côte d'Ivoire is the leading producer followed by Ghana, Nigeria, Cameroon and Togo. Challenges involved in the processing and final product manufacturing in cocoa industry would include higher freight costs, high tariffs imposed on processed products, inadequate supply of quality cocoa beans for local processors at affordable prices and lack of scale of economies and high energy costs may end up making the African nations less competitive compared to their global counterparts. The cocoa industry being largely unorganised and majorly composed of small landholders requires technological upgradation. With the help of better policy frameworks, African countries like Côte d'Ivoire and Ghana can leverage their international reputation of producing high quality cocoa beans, to move up the global value chains.

A considerable portion of Africa lies in the tropical belt thus serving as an ideal climate for growing "tropical" fruits like orange, banana, pineapple etc. However, due to absence of proper infrastructure like transportation and storage facilities, most of the fruits are consumed locally or get wasted. The challenges faced in this sector include underdeveloped irrigation scheme, limited access to capital, inadequate technological support, lack of cold storage facilities, and inadequate infrastructure to establish rural-urban linkages. Many of the African nations continue to export fruits in raw form as part of intermediate inputs to fruit processing industries in other countries. There is a need to set up such processing industries, as well as to strengthen the existing ones, if any, to help the African countries move up the value chain, which would require attracting foreign investments in the local fruit processing companies.

Beef production has been an attractive option in the Sub-Saharan African region due to its domestic demand. It is an important export product for Botswana and Namibia as they have preferential access to the European market. Sub-Saharan Africa accounts for 18 per cent of the global bovine herd and therefore large share of meat demand is met by domestic supply. Meat production still remains below global average leaving significant scope for further increase in productivity. The greatest challenge in the meat processing sector is investment, which limits production to generate export surplus, and therefore the Sub-Saharan region is still a net importer of meat. Processing facilities like slaughterhouses, cold storage warehouses and transportation ensuring proper condition would also be required. Import substitution might be aimed for only short term and once efficiency and scale of production is achieved export markets may be targeted.

- ***Textile and Apparel***

The combined apparel and footwear market of Sub-Saharan Africa is around US$ 30 billion. The African textile industry has started to expand with African designs and fabrics showcased in international platforms like Paris, Milan, New York and London fashion shows. Africa has been the source of cotton production for international textile manufacturers with 10 per cent of global cotton being produced in Africa, but Africa accounts for only 16 per cent of global textile market.

Therefore, the need arises for Africa to produce value added products such as garments. The apparel sector faces challenges like lack of investment to develop production facilities, inadequate industry-specific skills, and lack of access to credit, lack of market information to cope with global market dynamics. Increased support and active participation by the governments of respective Sub-Saharan nations may help in improving the business environment and skill set of the workforce thus enhancing the competitiveness and integrating the industry with the global value chain. It will also result in equity distribution of employment opportunities as a substantial portion of the workforce in the textile industry comprises women.

- ***Automotive Industry***

The African automobile industry is mainly characterised by assembling of vehicles. Africa's automotive market is relatively small compared to its other counterparts like Latin America, Developing Asia, Oceania and Middle East. One of the biggest challenges of the automobile sector of Africa is the heavy import of second hand vehicles as a result of limited purchasing power. At least 8 out of 10 vehicles imported are second hand in countries like Nigeria, Kenya and Ethiopia. Access to credit for purchasing new vehicles is limited across the continent thus reducing the number of potential buyers of new vehicles. Developing a local manufacturing base is required for uninterrupted and price competitive supply of auto components. Considering the overall present scenario, the automotive industry in Africa is still at a nascent stage. The rate of motorisation is low compared to its peer countries. This leaves an immense scope for further development and tapping the untapped potential.

- ***Pharmaceutical industry***

Africa currently accounts for around 2 per cent of global pharmaceutical industry. The African pharmaceutical industry has grown from US$ 4.7 billion in 2003 to US$ 20.8 billion in 2013 and is projected to reach US$ 60 billion by 2020.The African pharmaceutical industry faces the challenge of inadequate capacity for research and design required for producing drugs locally as a result of absence of investment. The African pharmaceutical industry also suffers from long delays in receiving international orders, poor logistics and storage facilities accompanied by high costs involved in transportation and distribution. In addition, with the absence of proper regulatory measures, people tend to settle for poor quality drugs thus adding little to curing the existing health issues. Scaling up of production is necessary to increase the access to essential medicines of standard quality and ensuring sustainable health systems. Focus on industry specific training and education would also be required to get a skilled workforce.

Potential for Enhancing India's Engagements in the Manufacturing Sector of Africa

India's imports from Africa are mainly dominated by primary commodities like mineral fuels, oils and products of their distillation, followed by pearls and precious stones, and ores slag and slash. On the other hand, India mainly exports products like processed petroleum products, pharmaceutical products, automobile components, machinery and mechanical appliances.

During the period 2010-11 to 2016-17, Africa has received investments worth of US$ 21.1 billion in the manufacturing sector, which accounted for 44.6 per cent of the total investment received by Africa (US$ 47.3 billion) from India. Other than Mauritius, countries receiving Indian investment include Tunisia, South Africa, Morocco, Libya and Ethiopia, Ghana, Zambia, Egypt and Nigeria.

Agribusiness is one of the potential sectors where in India can look to invest in Africa. The agricultural sector of both India and Africa are largely characterised by labour intensive farming, small landholders and diverse nature of agricultural production. India's stance on the agricultural sector of Africa has been more towards providing technology expertise to Africa. The African agribusiness sector, though poised to become an US$ 1 trillion industry by 2030, lacks support in terms of availability of finance, market information, logistics etc. Investment in such areas will facilitate agricultural processing in potential countries by India and it could be a win-win situation for both India and African countries.

Indian automobile manufacturers like TATA Motors and TVS Motors have already set up their plants in Nigeria following its implementation of Nigerian Automotive Industry Development Plan (NAIDP), while in Kenya major Indian automobile manufacturers such as TATA Motors and Mahindra & Mahindra have already made their presence. African countries like Nigeria, Kenya or Ethiopia mainly assemble vehicles and lack local auto component manufacturing. Indian auto component manufacturers may establish joint ventures with local companies in countries like Nigeria and Kenya, thus helping these countries establish themselves as manufacturing base of automobiles and not just assemblers. Manufacturing in Nigeria would provide market access to the ECOWAS region, and similarly producing in Kenya and Ethiopia would provide market access to the East African Community (EAC) nations.

Africa has shortage of trained professionals due to absence of educational programmes covering topics like drug discovery to marketing of drugs. Indian companies may step in by investing in training relatively qualified local staffs for engaging them in clinical research in order to manufacture medicines locally at a lower cost, rather than importing active pharmaceutical ingredients. Secondly, African markets vary enormously in terms of size and economic conditions. Indian companies interested in doing business should first target established African cities in order to optimize the initial set up costs. Later they can move on to mid-sized markets or explore rural markets as well. Developing local sales and marketing team helps in gaining market share. The Indian manufacturers setting up units in Africa could, therefore, also focus on training to develop the technical and marketing skills of the workers.

Africa is positioning itself to move up the textile value chain by increasingly involved in garment manufacturing. Indian garment manufacturers may invest in the sector as the local producers operating at a small scale level lack set up for retail manufacturing. Also, African fabrics and designs have received a lot of appreciation at the global platform in recent times. Joint ventures with African firms may give Indian garment manufacturers added advantage therefore in terms of product and market diversification.

India's Role in Facilitating Manufacturing in Africa

The study on the manufacturing sector of Africa tries to identify the potential manufacturing industries for Indian investors, while at the same time focuses on mutually beneficial outcome from such collaboration. Following are the areas where India can assume a development partnership role to facilitate growth in manufacturing sector of Africa

- **Skill Development:** With a significant increase in working population in the continent, one of the biggest opportunities for Africa would be development of skilled manpower to engage in manufacturing activities. India may engage with other African development institutes to enrich the human resource through various skill development programmes in manufacturing.
- **Knowledge sharing:** India's manufacturing sector is essentially dominated by Small and Medium Enterprises. Indian manufacturing associations could tie up with their African counterparts to develop respective sectors of their specialisation through collaboration. This could include building common resource centres for disseminating market and business related information, common quality testing labs for their products, among others.
- **Designing educational programmes:** One of the important initiatives essential for development of African pharmaceutical industry is building a pool of professionals for clinical research. Similarly, in the case of textile industry, educational programme relating to technical know-how, efficiency in production, designing, packaging and marketing, among others, would be essential to develop countries in the continent as garment manufacturing hubs. India may collaborate with relevant educational institutes in African countries to deliver diploma programmes or vocational training for such sectors to train the workforce.
- **Credit Access:** Another major challenge for the

African manufacturing sector is access to credit for investment, especially in case of textiles and agri-business as these are mainly characterise of small holders. Indian financial institutions and banks could contribute to enhancing credit access by collaborating with financial institutions and banks in the African region.

- **Organising B2B Meets:** Enhancing of two-way trade and investment flows could not be sustained without vibrant people-to-people contacts. There could be various rounds of consultations among business fraternity, with special focus on dedicated sector/s in each round thus promoting exchange of ideas and business propositions among entrepreneurs and investors.

Export-Import Bank of India in Africa

In its endeavour to promote India's international trade, Export-Import Bank of India (Exim India) today seeks to develop commercially viable business relationships with externally oriented companies. The countries in the African continent have always been a focus region for Exim India, and thus a critical component of its strategy to promote and support two-way trade and investment. As a partner institution to promote economic development in Africa, the commitment towards building relationships with the African Region is reflected in the various activities and programmes, which Exim India has set in place. Exim India has representative offices in three countries in Africa viz., Abidjan in Cote d'Ivoire, Addis Ababa in Ethiopia, and Johannesburg in South Africa, which play key roles in facilitating economic cooperation with the African Region, and are closely associated with several of the Bank's initiatives.

- ***Lines of Credit***

To enhance bilateral trade and investment relations, Exim India has in place several lines of credit (LOCs), which are extended especially to priority sectors, identified by GOI for mutual cooperation and benefit. In addition, Exim India extends its own commercial LOCs to various financial institutions and other entities in Africa, such as, PTA Bank (covering 17 countries in the eastern and southern African region), BOAD (covering 8 countries in the west African region), Indo-Zambia Bank, Nigerian Exim Bank and Afreximbank. Many of these LOCs facilitate import of project-related equipment and services from India on deferred credit terms, while many of them are earmarked for infrastructure and related projects. As on April 30, 2017, the total number of operative LOCs to Africa stood at 153 extended to 44 countries and amounting to US$ 7.6 billion. Of these, 148 LOCs aggregating to US$ 7.5 billion, to 41 countries are guaranteed by GOI.

- ***Project Exports***

Exim India has been providing a steady stream of support to project activities in engineering, procurement, and construction (civil, mechanical, electrical or instrumental). This includes the provision of specific equipment related to supplies, construction and building materials, consultancy, technical know-how, technology transfer, design, and engineering (basic or detailed). Exim India also supports existing or new projects, plants or processes that require additional assistance in processes such as international competitive bidding, including multilaterally funded projects in India. During 2016-17, 26 projects amounting to US$ 915.6 million covering 17 countries in Africa were being executed by Indian exporters with the support of Exim India.

- ***Buyer's Credit under National Export Insurance Account (NEIA)***

In order to provide further impetus to project exports from India on medium- or long-term basis, especially in the infrastructure sector, in April 2011, a product called Buyer's Credit under National Export Insurance Account (BC-NEIA) was introduced. Under this programme, Exim India facilitates project exports from India by way of extending credit facility to overseas sovereign governments and government owned entities for import of goods and services from India on deferred credit terms. Indian exporters can obtain payment of eligible value from Exim India, without recourse to them, against negotiation of shipping documents. NEIA is a Trust, set up by Ministry of Commerce and administered by ECGC. As on March 31, 2017, Exim

India sanctioned an aggregate amount of US$ 1.8 billion under BC-NEIA for 15 projects in Africa valued US$ 1.9 billion.

- ***Finance for Joint Ventures Overseas***

Further, Exim India supports Indian companies in their endeavour to globalise their operations, through overseas joint ventures (JVs) and wholly owned subsidiaries (WOS). Such support includes loans and guarantees, equity finance and in select cases direct participation in equity along with Indian promoters to set up such ventures overseas. In the African Region, Exim India has supported several such ventures in countries such as South Africa, Kenya, Mauritius, Ghana, Nigeria, Sudan, Egypt, Zambia, Morocco, Uganda and Tanzania, across a range of sectors like agriculture and food processing, agro-based products, auto and auto components, chemicals, construction, electronics, engineering goods, EPC services, mining and minerals, plastics and rubber products, packaging, pharmaceuticals, software and IT enabled services, and textiles. These ventures serve to promote value addition, as also contribute to capacity building and capacity creation in host countries in Africa. As on March 31, 2017, Exim India has supported 43 such ventures, set up by Indian companies in 15 countries in Africa with an aggregate sanction amount of ₹ 4.9 billion.

- ***Association with African Development Bank (AfDB)***

India is a member of the African Development Bank (AfDB) Group. Many Indian companies participate in projects funded by the AfDB Group. Exim India works very closely with AfDB and has an active programme which offers a range of information, advisory and support services to Indian companies to enable more effective participation in projects funded by multilateral funding agencies, including AfDB. Exim India assists Indian companies in projects supported by AfDB by not only fund and non-fund based assistance, but also by providing advance alerts on upcoming opportunities. With support from Exim India, Indian project exporters have secured a number of overseas contracts in Africa in sectors such as power, telecommunications, transport, water supply & sanitation. Exim India and AfDB have also signed an agreement for co-financing projects in Africa. The agreement envisages joint financing of projects (priority being given to support projects of small and medium enterprises) in regional member countries of AfDB. Exim India also organizes Business Opportunities seminars in Projects funded by AfDB across various centres in India.

- ***Africa – India Partnership Day***

Exim India together with FICCI (Federation of Indian Chambers of Commerce and Industry) organizes the Africa – India Partnership Day, on the sidelines of AfDB's Annual Meeting, with an objective of sharing India's developmental experiences with Africa, particularly in Public-Private Partnership model of financing infrastructure development. Exim India, along with FICCI, has so far hosted three such events.

- ***Exim India's engagements in ITC's SITA***

On March 9, 2014, Department for International Development (DFID) United Kingdom mandated the International Trade Centre (ITC) Geneva, to design and implement a project, called 'Supporting India's Trade Preferences for Africa' now called 'Supporting Indian Trade and Investment for Africa' (SITA). SITA is a six-year (2014- 2020) project that aims at promoting exports from five East African countries – Ethiopia, Kenya, Rwanda, the United Republic of Tanzania and Uganda – to India through investment and skills transfer from the Indian side. Exim India had entered into an MOU with ITC in Geneva on March 26, 2014, under which it was associated with ITC's SITA initiative. The Project was in its inception Phase during March 2014 to March 2015, where a roadmap for SITA, which include key focus sectors, was defined. The implementation phase of SITA (March 2015-March 2020) was officially launched in New Delhi, India, during March 19-20, 2015.

- ***Member of Association of African Development Finance Institutions (AADFI)***

Exim India is a member of Association of African Development Finance Institutions (AADFI), a forum of institutions/ banks with the objective of creating co-ordination and economic solidarity among the development finance institutions in the African continent. The membership of AADFI helps to provide a platform for building linkages with other institutions in Africa, which are members of AADFI.

- ***Partner in Institutional Building in Africa***

Exim Bank has taken active participation in the institutional building process in a number of countries in Africa. Besides being associated in the setting up of the Afreximbank, Exim India undertook an assignment to design, develop, and implement a programme on Film Financing for Nigerian Export-Import Bank (NEXIM Bank) for expanding its exposure in financing films (under Film Financing Programme). Exim India has also been involved in the design and implementation of Export Finance Programmes for Industrial Development Corporation, South Africa; Consultancy Assignment for the Government of Mauritius on 'Projecting Mauritius as an investment hub for Indian Firms'; establishment of Export Credit Guarantee Company in Zimbabwe; and preparing a blue print for setting up of Export-Import Bank of Zimbabwe. In 2015, ITC, Geneva, under the SITA Project, awarded Exim India with Phase - 1 of an assignment for 'Institution Capacity Building for Export Credit and Insurance' to enhance trade competitiveness in Rwanda. The objective of the assignment is to establish a rationale and suggest a broad framework for establishing an Export Credit Insurance Corporation in Rwanda.

- ***Institutional Linkages***

Exim India has been consciously forging a network of alliances and institutional linkages to help further economic co-operation with the African Region. Towards this end, Exim India has taken up equity in Afreximbank, West African Development Bank (BOAD), and Development Bank of Zambia. These endeavours are supplemented by the various Memoranda of Cooperation (MOCs) / Memoranda of Understanding (MOUs), the Bank has in place, with key institutions in the African Region.

1. Background

Africa is one of the richest continents in terms of natural resources, endowed with about 30 per cent of world known reserves of minerals, 10 per cent of petroleum oil reserves and 8 per cent of gas resources[2]; the continent has the largest cobalt, diamond, platinum and uranium reserves in the world. However, despite having abundant natural resources, Africa remains the poorest and most under-developed continent in terms of per capita income, literacy, water supply, health conditions, and most importantly infrastructure.

Often a line of comparison is drawn between Sub-Saharan Africa and the South East Asian nations (Indonesia, Malaysia and Thailand) because of their similar situation in terms of economic structure and social context in the 1960s. Both the group of countries had started off their growth path with similar level of GDP, rich natural resource coupled with relatively weaker human capital and political instability.

However, Africa today has lagged behind struggling with inadequate infrastructure, unskilled workforce and most importantly poor policymaking[3]. As per the United Nations Committee for Development Policy, around 34 out of 54 countries in Africa are classified as Least Developed Countries as of May 2016[4].

Over the three decades spanning from 1960s to 1990s, the South-East Asian and East Asian nations (Hong Kong, Indonesia, China, Japan, Malaysia, the Republic of Korea, Singapore and Taiwan) have achieved high and sustainable economic growth. This has been attributed to fundamentally strong development policies by the government implemented through multiple channels in a systematic way. Although private domestic investment and human capital have been the major building blocks, policy interventions played a major role in driving the growth engine in these countries. Government's specific focus on certain industries in the form of subsidized credits, providing protection to the domestic import substitutes and establishing industry specific export targets provided impetus for successful industrialisation[5].

African manufacturing too demonstrated sprouts of growth in the early 1990s. However, the vigorous competition faced from China and other South- East Asian nations led to its fall. Since 2000, Africa's real GDP grew at an average of 5 per cent during 2000-2013 mainly on the back of its excessive dependence on its commodity exports (mainly raw materials). However, growth was subdued at 3.7 per cent with a fall in commodity prices since 2014[6]. Per capita income (at PPP) in current international Dollars for the last ten years shows that, across the world, Sub-Saharan Africa had the lowest per capita income during these years, and the gaps compared to other regions have been increasing every year **(Table 1.1)**.

At the same time, growth of the region has witnessed a slow down as well. The real GDP growth of Sub-Saharan Africa, which stood at 3.3 per cent in 2015 moderated to an estimated 1.4 per cent in 2016 **(Chart 1.1)**.

The last 10 years also witnessed stagnancy in the contribution of manufacturing value added to the GDP of Sub-Saharan Africa, which stood at an average of 10.5 per cent during 2005 to 2015 as per World Bank. This is significantly low compared to South Asia and LAC, region, whose manufacturing shares in GDP stood at 17 per cent and 18 per cent, respectively.

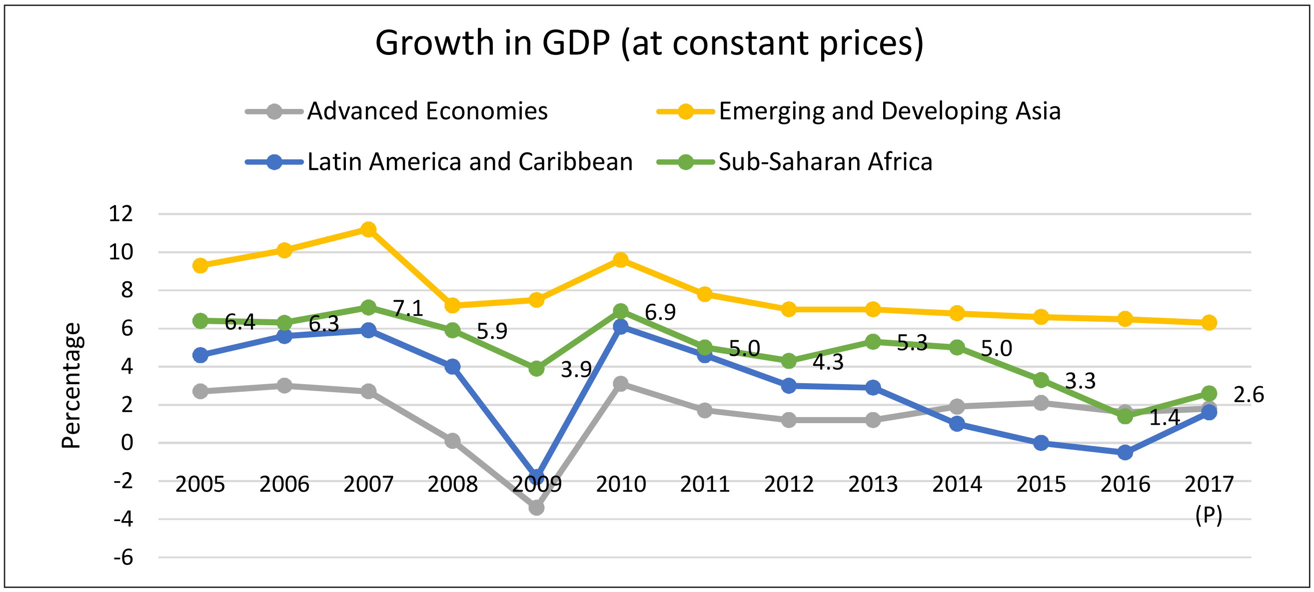
[2]Africa Natural Resource Centre (ANRC)
[3]Julius Court and Toru Yanagihara, Asia and Africa into the Global Economy, United Nations University Research Project, August 1998
[4]According to United Nations, Least developed countries (LDCs) are low-income countries confronting severe structural impediments to sustainable development. They are highly vulnerable to economic and environmental shocks and have low levels of human assets. There are currently 48 countries on the list of LDCs, which is reviewed every three years by the Committee for Development (CDP).
[5]The East Asian Miracle: Economic Growth and Public Policy, World Bank, 1993.
[6]African Economic Outlook 2017

Table 1.1: Comparison of Per Capita Income (at PPP) at Current International Dollar

Years	Advanced Economies	Emerging and Developing Asia	Latin America and Caribbean	Sub-Saharan Africa
2007	39,552.6	5,426.4	12,426.7	2850.2
2008	40,104.8	5,870.8	13,011.8	2996.5
2009	38,794.0	6,294.5	12,701.6	3,053.6
2010	40,244.6	6,914.1	13,463.4	3,220.1
2011	41,544.1	7,516.8	14,214.1	3,366.6
2012	42,595.7	8,008.6	14,736.2	3,469.7
2013	43,650.1	8,704.0	15,237.9	3,615.0
2014	45,037.5	9,363.8	15,517.8	3,768.6
2015	46,240.6	10,004.5	15,510.0	3,835.6
2016	47,382.5	15,517.8	15,358.1	3,837.1

International dollar is a hypothetical unit of currency having same purchasing power parity as the U.S Dollar at any point of time (World Bank)
Source: IMF, World Economic Outlook Database, April 2017

Chart 1.1: Comparison of GDP Growth Rates across Regions



P – Projected
Source: IMF, World Economic Outlook Database, April 2017

The structural transformation an economy goes through shapes its economic growth trajectory, and the reallocation of its economic resources to different sectors over a period of time ensures sustainable economic growth in the long run. Manufacturing is usually considered as a way for employment generation and overall economic growth. The economic growth of a country in this case is measured by how diverse and complex a product it manufactures, which necessarily require logistics, finance and involve high technology. Most of the African economies produce things which require low level of complexity. This largely reflects in the export structure of these economies which is majorly dominated by basic agricultural or mining products rather than finished goods. Therefore, in the case of most African economies, the structural transformation

[7]Francois Steenkamp & Christopher Rooney, "Can Africa grow its manufacturing sector & create jobs '', Jobs and Development Blog, World Bank, February 2017

has not been manufacturing led[7]. Among African countries, large economies such as Egypt, Morocco, South Africa and Tunisia have comparatively developed manufacturing base, while countries like Kenya, Mauritius, Nigeria, and Uganda are coming up with emerging manufacturing sectors. **(Table 1.2)** shows the share of manufacturing, value added to GDP of the African economies as per World Bank data in 2015.

Table1.2: Contribution of Manufacturing to Gross Domestic Product of African Countries in 2015

Country	Nominal GDP (current US$ million)	Manufacturing Value added as a percentage of GDP
Swaziland	4,118.5	36.0
Djibouti	1,727.0	21.8
Congo, DR	35,237.7	19.0
Cabo Verde	1,603.2	18.7
Morocco	100,593.3	18.0
Egypt	330,778.5	17.0
Tunisia	43,015.1	17.0
Madagascar	9,738.6	15.7
Equatorial Guinea	35,237.7	14.9
Mauritius	11,681.8	14.7
Cameroon	28,415.9	14.0
Benin	8,291.0	13.7
Guinea-Bissau	1,056.8	13.6
South Africa	314,571.9	13.2
Senegal	13,610.0	13.0
Mali	12,746.7	12.9
Cote d'Ivoire	31,759.2	12.5
Kenya	63,398.0	11.4
Zimbabwe	14,419.2	11.4
Lesotho	2,278.0	10.7
Malawi	6,403.8	10.6
Mozambique	14,807.1	10.0
Burundi	3,097.3	9.6
Nigeria	481,066.1	9.5
Uganda	27,529.2	9.2
Namibia	11,491.5	9.1
Mauritania	5,442.3	9.0
Seychelles	1,437.7	8.0
Zambia	21,154.4	7.9
Comoros	565.7	7.5
Somalia	5,925.0	7.5
Congo, Republic	8,553.1	7.3
Central African Republic	1,583.8	7.2
Guinea	6,699.2	6.7
Burkina Faso	10,678.2	6.5
Botswana	14,389.7	6.3
São Tomé and Príncipe	317.7	6.2
Eritrea	2,607.7	6.0
Niger	7,142.9	5.7
Tanzania	45,628.2	5.6
Ghana	37,543.4	5.3
Gambia	938.8	5.1
Togo	4,087.9	4.9
Rwanda	8,096.0	4.8
Sudan	97,156.0	4.7
Ethiopia	61,539.7	4.1
Libya	34,669.4	4.0
Liberia	2,053.0	4.0
Algeria	166,838.6	3.2
Gabon	14,262.0	3.1
Chad	10,888.8	2.9
Angola	102,626.9	1.9
Sierra Leone	4,214.8	1.8
South Sudan	9,015.2	-

Note: Latest available data as per World Bank for Eritrea (2009), Libya (2008), Mauritania (2014), Senegal (2014), Seychelles (2014) and Swaziland (2014).
Countries are arranged in descending order as per the manufacturing value added data
"-" - Data not available
Source: World Bank, EIU Country Reports

Africa's population is expected to double to 2.4 billion by 2050[8]. The rising population indicates a major need for employment generation for which a strong value-added manufacturing base would be required. At present the situation is conducive for Africa to emerge as a manufacturing base with the supportive factors like young working age population, growing middle class coupled with rapid urbanisation, and significant contribution of services[9]. The rising middle class population backed by rapid urbanisation in turn gives rise to demand for consumer goods thus facilitating industries like agro-business, apparel and clothing, pharmaceuticals and automobiles.

Challenges faced by Africa

However, in the whole process, there are certain challenges involved at different levels which Africa needs to overcome in order to develop as a manufacturing base –

- **Low productivity:** Despite wage rates being low, cheap labour cannot be used as an advantage unless productivity that is output per worker increases which is at present on one of the lowest across the world
- **Lack of scale:** African countries lack the size or scale of production required to compete with the scale of imports from Asian or European countries.
- **Lack of skill set:** Limited education or insufficient skill set makes majority of the vast young working age population unemployable
- **Infrastructure bottlenecks:** Supply of utilities like power, water and connectivity issues have been a chronic problem with the African manufacturing industry

The above stated factors are reflected through the position of the African countries at the global level. The following table illustrates such two parameters - Ease of Doing Business ranking and Global Competitiveness index for African economies. The Ease of Doing Business ranking 2017 evaluates 190 economies being ranked on the basis of their regulatory environment suitable for setting up and operating a new business. The Global Competitiveness Index 2016-17 published by the World Economic Forum ranks 138 economies on the basis of set of institutions, policies and factors that determine the level of productivity in an economy. **Table 1.3** shows the position of the African countries with respect to the rest of the world in terms of business environment as well as competitiveness. Mauritius, Botswana, Morocco, Rwanda and South Africa are the top five countries in terms of both Ease of Doing Business and Global Competitiveness Indices.

[8]Tracking Africa's Progress in Figures, African Development Bank
[9]Manufacturing in Africa: An Awakening Giant, The Economist, February 2014
[10]World Bank
[11]Ibid.

Table1.3: Africa's Position in Doing Business and Global Competitiveness Rankings

Country	Ease of Doing Business Rank	Global Competitiveness Index
Algeria	156	87
Angola	182	-
Benin	155	124
Botswana	71	64
Burkina Faso	146	-
Burundi	157	135
Cameroon	166	119
Cape Verde	129	110
Central African Republic	185	-
Chad	180	136
Comoros	153	-
Congo, Dem Rep	184	129
Congo, Rep	177	-
Cote d'Ivoire	142	99
Djibouti	171	-
Egypt	122	115
Equatorial Guinea	178	-
Eritrea	189	-
Ethiopia	159	109
Gabon	164	108
Gambia	145	123
Ghana	108	114
Guinea	163	-
Guinea-Bissau	172	-
Kenya	92	96
Lesotho	100	120
Liberia	174	131
Libya	188	-
Madagascar	167	128
Malawi	133	134
Mali	141	125
Mauritania	160	137
Mauritius	49	45
Morocco	68	70
Mozambique	137	133
Namibia	108	84
Niger	150	-
Nigeria	169	127
Rwanda	56	52
São Tomé and Príncipe	162	-
Senegal	147	112
Seychelles	93	-
Sierra Leone	148	132
Somalia	190	-
South Africa	74	47
South Sudan	186	-
Sudan	168	-
Swaziland	111	-
Tanzania	132	116
Togo	154	-
Tunisia	77	95
Uganda	115	113
Zambia	98	118
Zimbabwe	161	126

Source: Global Competitiveness Report 2016-17 by World Economic Forum and Doing Business Index 2017 by World Bank Database accessed on May 1, 2017

2. Dependence on Natural Resources

Africa is rich in mineral reserves. It is also the continent with largest arable land area with more than half of the population employed in the agricultural sector. This has resulted in heavy dependence on exports of primary commodities. Africa's exports in 2015 comprise mostly primary commodities, which include mineral fuels (43.4 per cent), pearls and precious stones (9.4 per cent), ores, slag and ash (3.4 per cent), cocoa and cocoa preparations (2.5 per cent), edible fruit and nuts (1.4 per cent), metals like copper (3 per cent), and iron and steel (1.5 per cent)[12]. Although the extractive sector contributes significantly to the government revenue, the employment generation capacity is relatively lower compared to other sectors due to its capital intensive nature and focus on export of raw materials[13].

According to a study conducted by McMillan and Rodrik (2011)[14] on the relationship between structural change and productivity growth covering regions such as Latin America, Asia, Sub-Saharan Africa, Europe and North America during the period 1990-2005, countries in Latin America and Africa specialise in primary products and therefore are having a larger share of natural resources in exports; the study also observed strong negative correlation with contribution to growth by structural transformation. Unlike manufacturing, mineral resources do not generate much employment. The structural transformation achieved by movement of labour from agriculture to mining therefore is not productivity inducing. In order to achieve a sustainable and more inclusive growth, labour should move from low productivity sector to high productivity sector. Movement of labour from agriculture to agro based industries or from mining to metal processing would help the economy achieve sustainable growth.

This section discusses the traditional industries in Africa based on natural resource extraction and their present situation and vulnerability towards external shocks. This in turn emphasises on the need for developing Africa through manufacturing in order to generate employment and move towards a more inclusive growth.

Petroleum Products

Petroleum products are among of the most important natural resource of Africa and crucial source of foreign exchange earnings for many African countries. Over 43 per cent of Africa's exports in 2015 are composed of petroleum products[15].

Disintegrating the exports further reveals it is mostly composed of crude petroleum oil and gas (37.3 per cent of total exports whereas refined oil exports comprise only 4 per cent of total exports as shown in **Table 2.1**). As a result, oil producing economies of Africa are highly sensitive to international oil price movement and have been significantly impacted during the commodity price downturn.

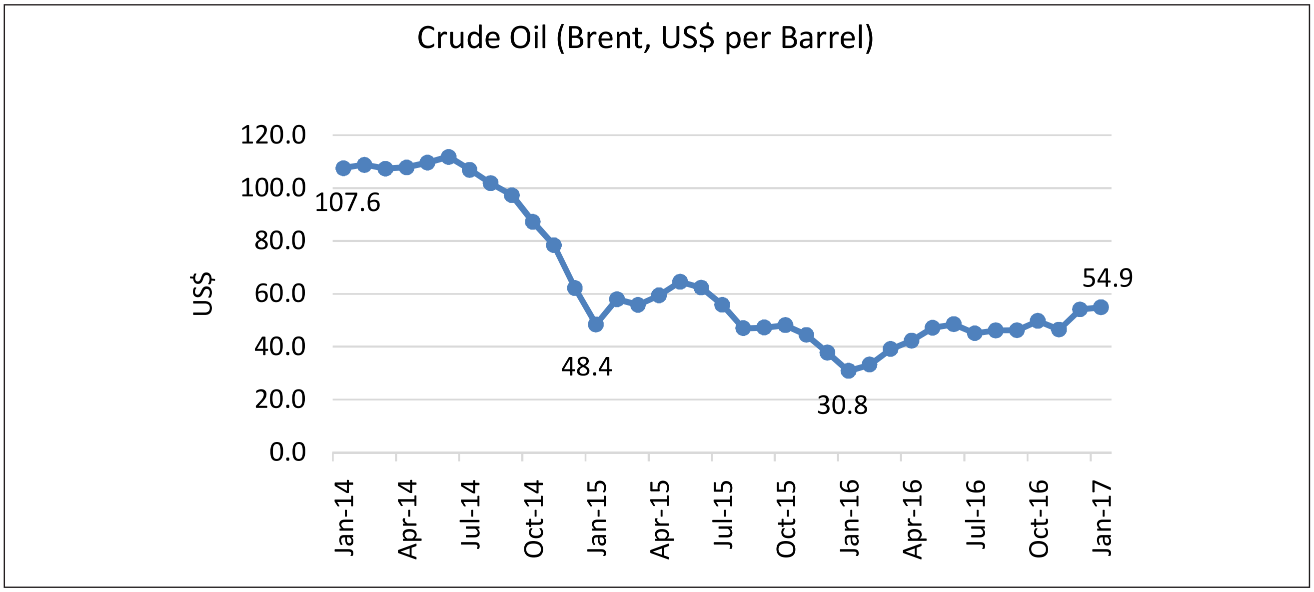
Table 2.1: Components of Petroleum Products Exported by Africa in 2015

HS Code	Item	Exported Value (US$ billion)	Share in total exports of Africa (%)
2709	Petroleum oil and oils obtained from bituminous minerals	118.6	30.3
2711	Petroleum gas and other gaseous hydrocarbons	27.2	7.0
2710	Petroleum oils and oils obtained from bituminous minerals (excluding crude)	16.3	4.1

Source: ITC Trade Map

[12] ITC Trade Map
[13] Natural Resource Generation Strategy Report 2015-2020, African Development Bank (AfDB)
[14] McMillan and Dani Rodrik, Globalization, Structural Change and Productivity Growth, NBER, Working Paper 17143 June 2011
[15] ITC Trademap

Chart 2.1: Trends in Crude Oil Price (Brent, US Dollar per barrel)



Source: World Bank as accessed on may 1, 2017

Chart 2.1 illustrates the oil price movement during January 2014 to January 2017. Oil prices fell from US$ 107.6 per barrel in January 2014 to US$ 30.8 per barrel in January 2016.

Nigeria, Algeria and Angola were the top three exporters in 2015. Nigeria is the 12th largest oil producing nation in the world and the largest in Africa (2.9 per cent share in world exports). It is also the largest economy of Africa with a GDP size of US$ 481.1 billion in 2015[16].

However, the share of manufacturing, value added (as a percentage of GDP) was just 9.5 per cent in 2015. Oil production in Nigeria contracted by 13.6 per cent and was estimated to be at 1.833 mb/day in 2016 compared to 2.13 mb/day in 2015 as a result of the fall in oil prices during the corresponding period.

Other oil dependent economies like Angola also witnessed a fall in GDP growth rate from 4.8 per cent in 2014 to 2.5 per cent in 2016 a result of fall in oil prices. Oil exports of Angola also decreased. In 2014 the foreign exchange reserves earned from exporting oil stood at US$ 60.2 billion. In 2015, it declined by 44.5 per cent to US$ 33.4 billion. The average price of Angolan crude oil declined from US$ 85 in December 2014 to US$ 30 in February 2016[17]. South Africa also witnessed a fall in growth rate of GDP from 1.7 per cent in 2014 to 0.2 per cent in 2016[18]. However, South Africa has a larger share of value added by manufacturing and is relatively less vulnerable to global commodity price movements.

Mining

Several African countries depend on non-oil extractive resources, and have witnessed significant slowdown in their growth rates in recent times as a result of the commodity price downturn worldwide. One such example is of Botswana. Botswana is a small landlocked economy located in Southern Africa. Since its independence in 1966, from being one of the poorest countries in Africa, it has become part of the upper middle income country group. Its stable economic growth with an average growth rate remaining above 5 per cent has been supported by export of diamonds. However heavy reliance on mining and exporting diamonds have dragged down the real GDP growth rate from 9.9 per cent in 2013 to a contraction of 0.2 per cent in 2015 as a result of fluctuations in diamond price in the international market. Mining production of diamond declined due to subdued demand for diamond mainly China in 2015. Mining accounts for nearly 30 per cent of government revenues[19] of Botswana and diamonds, accounted nearly 80 per cent of Botswana exports in 2015.

[16]World Bank Country Overview: Nigeria
[17]World Bank Country Overview: Angola
[18]IMF World Economic Outlook, April 2017
[19]Botswana and AfDB, African Development Bank

Lack of economic diversification and excessive concentration on mineral resources makes the economy vulnerable towards global shocks. Not only it adversely affects the GDP, it also hurts the local economic development as income and employment reduces. While most of the African economies witnessed growth in the last decade owning to foreign direct investment (FDI), large amount of such investment was in the extractive sector. However, this results in high sectoral concentration, exposing such economies to global uncertainties. For example, the DR Congo is highly dependent on mining activities. Copper accounted for around half of its exports (49 per cent of exports in 2015) followed by cobalt (23.2 per cent), crude petroleum oil (5.3 per cent) and diamonds (4.6 per cent)[20]. However, many of the mines have been closed due to subdued global demand post 2013 thereby affecting thousands of families dependent on the mining sector for their livelihood. GDP growth rate of DR Congo fell from 9.5 per cent in 2014 to estimated 3.4 per cent in 2016 revealing its vulnerability. In a similar manner, Zambia's growth prospects have also been hurt by the fall in price of copper with 72.9 per cent of exports being unrefined copper and copper alloys in 2015. Accordingly, the real GDP growth rates of Zambia fell from 7.6 per cent in 2012 to just 3 per cent in 2016.

The problem with an economy being dependent on exporting non-renewable natural resources is the fact that not only it is sensitive to global price movements but also the commodity itself stands a chance of being depleted over time. South Africa, despite being one of the most established economies in Africa, is also dependent on mining of gold, platinum, coal and iron ore. South Africa was one of the biggest gold producers in the world with more than 75 per cent of the world's reserves in 1970.. However, with time, the reserves have depleted and many of the gold mines have therefore closed. One-third of the gold industry's 180, 000 workers lost their jobs during 2004 to 2015[21]. With the slowing down of China, demand for coal and iron ore has also declined thus adversely affecting the country's mining sector. Accordingly, real GDP growth of South Africa has also significantly moderated from 3.9 per cent in 2013 to an estimated 0.6 per cent in 2016.

The following table shows the major minerals and precious stones produced by Africa in the year 2015 and the top exporting countries in the region. Major minerals and stones cumulatively account for 15.8 per cent of Africa's exports; second highest after mineral oils and fuels **(Table 2.2)**.

Table 2.2: Major Minerals and Stones Exported by Africa in 2015

HS Code	Items	Top exporting countries	Share in total exports of Africa (%)
7108	Gold including gold plated platinum, unwrought and not further worked	Ghana, South Africa, Tanzania, Burkina Faso, Egypt	5.0
7102	Diamonds whether or not worked, but not mounted or set	Botswana, South Africa, Angola, Namibia, DR Congo	2.6
7402 & 7403	Copper unrefined and copper alloys	DR Congo, Zambia, Congo Rep, South Africa, Namibia	2.5
7110	Platinum	South Africa, Zimbabwe	1.7
2701	Coal	South Africa	1.1
2601	Iron ore and concentrates	South Africa, Mauritania, Liberia	0.8
7202	Ferro Alloys	South Africa, Zimbabwe, Zambia	0.7
2602	Manganese ores	South Africa, Gabon, Ghana, Cote d'Ivoire, Morocco	0.5
7601	Unwrought aluminium	South Africa, Mozambique, Egypt, Cameroon, Nigeria	0.3
2610	Chromium ores and concentrates	South Africa, Madagascar, Sudan	0.3
8105	Cobalt	DR Congo, Zambia, Madagascar, Morocco, Congo Rep.	0.3

Source: ITC Trade Map

[20]ITC Trade Map

[21]South Africa's gold industry, like its economy, is crumbling, The Washington Post, March 2016

3. Potential Manufacturing Industries

Africa currently accounts for just 1.9 per cent of global manufacturing. At the same time, 80 per cent of its workforce is in low productivity sectors[22]. Africa can move up the value chain, and thus have a sustainable growth, by focusing on the manufacturing sector, particularly agro business, textile and garments, automobile assembling and pharmaceuticals. These sectors have a potential to cater to the growing African market as well as can serve as an export base, making it attractive to international investors.

Consumer goods like apparel and agribusiness (food processing) are classified under light manufacturing. Light manufacturing can be a suitable alternative to low productivity agricultural sector. Especially for an economy endowed with low-skilled labour, light manufacturing serves as a source for mass job creation and therefore boosts economic growth.

Labour intensive light manufacturing has led to growth of many developing countries including China and Viet Nam that started at almost the same level as Sub-Saharan Africa in the 1980s. Over time, Sub Saharan Africa has lost its market share to China which has emerged as a global manufacturing hub. Despite having preferential access to US and European Union markets, Sub-Saharan Africa's share has continually declined with less than one per cent market share in global light manufacturing. Even though Sub-Saharan Africa was liberalised, it could not compete with the better quality and cheaper imports from Asian countries like China, Viet Nam, Singapore, Korea, Thailand, and Malaysia[23].

The recent increase in cost of labour in China's manufacturing sector has now created an opportunity for Sub-Saharan Africa to develop its light manufacturing industry using its large supply of low-skilled workers and natural resources optimally.

(i) Agribusiness

Agribusiness implies commercialisation of agriculture at different levels ranging from supply of inputs, processing, marketing and retail sale thus adding further value to it and driving growth of both forward and backward linked activities.

According to the World Bank[24], the size of agriculture and agribusiness industry in Sub-Saharan Africa is projected to be at US$ 1 trillion by 2030. The growing middle class of Africa has led to further demand for urban food markets catering to diversified and improved quality diet. The potential sectors which are expected to grow in this process are rice and other food grains, poultry, dairy, vegetable oils, processed food along with the traditional agricultural commodities of Africa like cocoa, rubber, cashews and palm oil. Most of the African countries have comparative advantage in agriculture given the abundance of natural resources. However, foreign investors tend to opt for Asian and Latin American markets to get higher returns after risk adjustments. Accordingly, the main challenge to Africa's agribusiness sector is to maintain investor confidence, generate employment, provide opportunities to small landholders and respect the right of local communities. This section highlights select agribusiness industries wherein Africa has scope for diversification and in the process adds value to its commodities.

(a) Rice processing

The increase in population as well as household income will lead to an increased demand for rice, which is becoming the fastest growing the staple food in Africa. Rice, being relatively easier to store, is increasingly replacing traditional crops like cassava, sweet potatoes and yams. Per capita consumption of rice is said to have

[22]Hinh T. Dinh, Vincent Palmade, Vandana Chandra, and Frances Cossar, Light Manufacturing in Africa, World Bank, 2012
[23]Ibid.
[24]Growing Africa:Unlocking the Potential of Agribusiness, World Bank, 2013.

doubled since 1970s. High income consumers also have preference towards higher priced aromatic rice. Rice production in Africa has increased substantially from 12.7 million tonnes in 1990 to 30.7 million tonnes in 2014[25]. With demand outpacing the supply, Africa's imports have increased substantially in the last 50 years. Africa became the second largest importer of rice after Asia by importing 21.3 per cent of world rice in 2015[26].

The West African region produced the maximum rice in the continent with an estimated production of 14.9 million tonnes in 2016 according to the United Nations Food and Agricultural Organisation (FAO). Countries like Nigeria, Côte d'Ivoire, Senegal, Mali, Guinea, Sierra Leone took initiatives post the food crises of 2008 to become self-sufficient in terms of rice production. Côte d'Ivoire, in order to boost its rice processing and to attract foreign investors, has invested in the irrigation system, seeds and fertilisers. It has also built 100 rice processing plants. Côte d'Ivoire aims at becoming self-sufficient in terms of rice production by end of 2017. Similarly, the Nigerian Central Bank has allotted US$ 200 million for providing loans at subsidized interest rates to rice and wheat farmers.

A field study conducted by the World Bank compares the costs involved in the value chain for producing both plain and aromatic rice to understand the prospects of import substitution in Senegal. According to the findings of this study, rice in the Senegal River valley is produced under irrigation, and partial mechanization has been found to be competitive. The study also observed that yield could be further increased with increase in efficiency in milling and transportation. Senegal has a typical preference for aromatic rice which it imports in large volume, 6.8 per cent (450 million tonnes) of its total imports in 2015[27]. However, the government aims at becoming self-sufficient by 2017 with its production expected to reach 1.6 million tonnes in 2017[28]. In order to curb imports, it has imposed quota on imports and banned export of locally grown rice. The aromatic variety of rice produced is being tested whether it can be produced commercially. In order to move up the value chain, Senegal's rice industry needs to focus on cleanliness, quality and packaging of the grain. Apart from West Africa, consumption of rice has also increased in Tanzania, Egypt and Madagascar.

Challenges

Many small-scale processing units in Africa have emerged as a result of the privatization of the government-managed rice value chain in recent years. This has led to reduced processing costs thereby making locally produced rice competitive with the imported rice. Consumers' tendency to purchase imported rice is because of cleaner and homogeneous quality, which needs to be matched by the local rice processing industry. Production efficiency has improved in areas with proper irrigation systems. However, it is also held back in terms of competitiveness for the lack of private investment due to difficulty in getting secured tradable land rights. Producers also need to introduce requisite machineries and high yielding variety of seeds, among others, to enhance the scale and quality of production[29].

(b) Cocoa processing

Cocoa is the most important agricultural crop of Africa. Western Africa is the home to major cocoa producing nations in the world and supplies seventy per cent of the world supply of Cocoa[30]. Côte d'Ivoire is the leading producer followed by Ghana, Nigeria, Cameroon and Togo as shown in **Table 3.1**. These countries are also the major exporters of cocoa from Africa **(Table 3.2)**.

[25]FAO STAT
[26]Rice Import by Country, World Top Exports, January 2017
[27]ITC Trade Map
[28] "As Cities Swell, West Africa's Appetite for Rice is growing ", Bloomberg, June 2016
[29]Growing Africa: Unlocking the Potential of Agribusiness, World Bank, 2013.
[30]Marius Wessel Cocoa Production in West Africa, a review and analysis of recent developments, , NJAS- Wageningen Journal of Life Sciences, December 2015

Table 3.1: Major Producers of Cocoa in Africa

Country	Production in 2014 (in '000 tonnes)
Côte d'Ivoire	1,434.1
Ghana	858.7
Cameroon	269.9
Nigeria	248.0
Togo	30.5

Source: FAOSTAT

Table 3.2: Major Exporters of Cocoa in Africa

Country	Value in 2015 (US$ billion)
Côte d'Ivoire	5.1
Ghana	2.8
Cameroon	0.9
Nigeria	0.6
Togo	0.1

Source: ITC Trade Map

cocoa paste and cocoa butter had the share of 6.2 per cent and 3.6 per cent, respectively. The share of final products like chocolate and cocoa powder stood much lower at 0.9 per cent and 0.5 per cent, respectively **(Table 3.3)**.

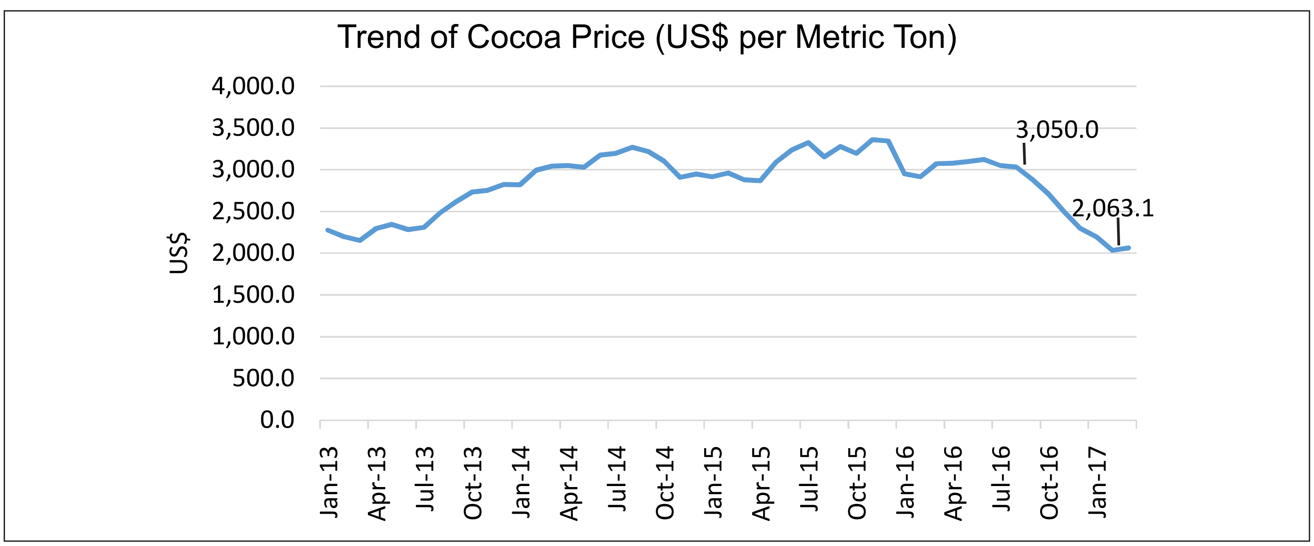
Table 3.3: Cocoa Product Exports by Côte d'Ivoire in 2015

HS Code	Item	Share in total exports of Côte d'Ivoire (%)
1801	Cocoa beans, whole/broken, raw/roasted	30
1803	Cocoa Paste	6.2
1804	Cocoa butter, fat and oil	3.6
1806	Chocolate and other food preparations containing cocoa	0.9
1805	Cocoa powder	0.5

Source: ITC Trade Map

Chart 3.1 demonstrates the trend in price of cocoa beans (International Cocoa Organisation Cash price, CIF US and European ports) since January 2013. Post the recovery from the worldwide commodity price slump in 2013, the price of cocoa beans has started falling again since July 2016 from US$ 3,050 per metric ton to US$ 2,063.1 in March 2017. This may be attributed to factors like heavy rainfall leading to good harvest and excessive supply of cocoa, fall in demand for chocolate and price fixing and the political instability in the African nations. Such kind of market uncertainty impacted farmers of key exporting nations like Côte d'Ivoire[31].

Chart 3.1: Trends in Cocoa Beans Price (US$ per Metric Ton)



Source: World Bank Database as accessed on May 1, 2017

[31]A Dip in Cocoa Prices Creates Cocoa Crisis For Ivory Coast's Farmers, NPR, March 2017

Cocoa accounts for a significant portion of Côte d'Ivoire's exports 41.2 per cent). A further fall in cocoa prices will affect the export revenue in the coming years and may affect the debt situation of the country. In 2015, the external debt stock as a percentage of exports of goods, services and primary income for Côte d'Ivoire stood at 93 per cent. Côte d'Ivoire mainly exports processed cocoa to global wholesalers and chocolate producers. Cocoa beans after harvesting and drying are taken to the plants of San Pedro (world's busiest cocoa exporting port). However, most of the processing plants in San Pedro have closed owing to the fall in international price. As a result, sacks of fermented cocoa beans have piled up outside the processing plants with the possibility of getting wasted because of rains[32].

Therefore shifting towards agro-processing is now very much required for African countries to insulate themselves from such commodity price fluctuations. The farmers currently employed in the plantations may be employed in the factories. Côte d'Ivoire is currently focusing on producing processed cocoa, with a target to process half of its cocoa produced by 2020. In May 2015, Côte d'Ivoire got its first chocolate factory which produces chocolate spreads and chocolate powder, opened by a French chocolate maker CEMOI. Several small entrepreneurs are now coming up trying to tap the emerging middle class market of Africa[33].

Ghana is the second-largest producer as well as exporter after Côte d'Ivoire with exports valued at US$ 2.8 billion (25.4 per cent share in total exports) in 2015[34]. It acts as a source of employment for over 800,000 farmers and contributes to 7 per cent of Ghana's GDP. Cocoa cultivation majorly happens in six out of ten regions in Ghana particularly the forest areas like Eastern Ghana, Ashanti, Brono Ahafo, Volta, Central and Western regions[35]. Cocoa beans are extracted from ripe cocoa pods, and then fermented for six or seven days followed by drying under the sun for another seven days. The beans are then packaged for export. The Ghana Cocoa Board (COCOBOD) established by the government of Ghana in 1947 is responsible for external marketing and development of the Cocoa industry through its wholly owned subsidy, the Cocoa Marketing Company (CMC). It provides agricultural inputs at a subsidized price and provides support to the farmers in the form of guaranteed price for their crops. The products made from Cocoa are mainly cocoa butter used in making chocolates and wide range of cosmetic products, and cocoa powder.

Table 3.4: Cocoa Product Exports by Ghana in 2015

HS Code	Item	Share in total exports of Ghana (%)
1801	Cocoa beans, whole/broken, raw/roasted	18.8
1803	Cocoa Paste	3.4
1804	Cocoa butter, fat and oil	2.2
1805	Cocoa powder	0.9

Source: ITC Trade Map

The break-up of cocoa exports in 2015 by Ghana is represented in **Table 3.4**. Cocoa beans form 18.8 per cent of the total exports in 2015 (US$ 2.1 billion) which is a raw material, whereas processed products like cocoa paste form only 3.4 per cent, followed by cocoa butter (2.2 per cent) and cocoa powder (0.9 per cent).

Accordingly to a study conducted by Mulangu and Maiga (2013), Ghana's cocoa industry is mostly dominated by small stakeholders who use traditional methods for farming thus leading to productivity levels below its potential. Therefore, a bulk of exports is composed of unprocessed agricultural commodities, thereby increasing the country's vulnerability towards commodity price volatility. Cocoa beans account for even less than 10 per cent of the retail price charged for chocolate.

For an economic transformation to happen, Africa would need its traditional export items like Cocoa to move up the value chain through processing rather than

[32]Ivory Coast's cocoa farmers face financial crisis, BBC News, February 2017
[33]The chocolate shops championing Ivory Coast's cocoa, BBC News, June 2016
[34]ITC Trade Map
[35]Ghana Cocoa Board

exporting mere cocoa beans. As per 2013 data, Ghana processes less than one-fourth of the cocoa beans it produces, and just 5 per cent of the intermediate or processing market.[36]

Cameroon, the third largest producer and exporter of cocoa beans, is also hugely dependent on exporting raw cocoa beans. Cocoa paste forms 1.3 per cent, while cocoa butter, fat or oil forms just 0.9 per cent of the total exports **(Table 3.5)**.

Table 3.5: Cocoa Product Exports by Cameroon in 2015

HS Code	Item	Share in total exports of Cameroon (%)
1801	Cocoa beans, whole/ broken, raw/roasted	18.9
1803	Cocoa Paste	1.3
1804	Cocoa butter, fat and oil	0.8

Source: ITC Trade Map

Nigeria is presently the seventh-largest cocoa producer in the world and fourth largest in Africa. Nigeria's cocoa production has gone down in recent years due to lack of government support. The share of cocoa and cocoa preparations stood at 1.1 per cent of the total exports. Togo, the fifth-largest cocoa producer and exporter of Africa, has also been majorly dependent on exporting raw cocoa beans. ChocoTogo, started by a team of six Togolese entrepreneurs, is Togo's first cocoa processing company in 2013 producing 100 per cent organic chocolate without adding any chemicals[37].

Challenges

Challenges involved in the processing and final product manufacturing in cocoa industry would include the following:

- Freight costs are higher for processed commodities like cocoa powder or cocoa butter compared to unprocessed primary commodities like cocoa beans.
- High tariffs imposed on processed products by its main importers like the European Union – 7.7 per cent and 15 per cent ad valorem duty on cocoa powder and cocoa cake, respectively[38]
- Inadequate supply of quality cocoa beans for local processors at affordable prices.
- Scale of economies and energy costs may end up making the African nations less competitive compared to their global counterparts.

The cocoa industry being largely unorganised and majorly composed of small landholders requires a significant role of respective governments in terms of technological upgradation, ensuring better quality. With the help of better policy frameworks, African countries like Côte d'Ivoire and Ghana can leverage their international reputation of producing high quality cocoa beans, to move up the global value chains.

(c) Fruit Processing

Globally, demand for processed food has gone up drastically over the last few decades all over the world mainly due to changing food consumption patterns shifting from traditional food to easily storable ones. The demand for processed food, including packaged food items like tomato ketchups, juice, squash, jams and dried fruit has increased substantially. These are mainly made up from fruits or vegetables grown in tropical areas. If we look at Africa's top 10 exports, edible fruits and nuts have been among the major exporting items. A considerable portion of Africa lies in the tropic thus enjoying sunlight all year round serving as the ideal climate for growing "tropical" fruits like citrus, banana, pineapple etc. However, due to absence of proper infrastructure like transportation and storage facilities, most of the fruits are consumed locally or get wasted. **Table 3.6** shows the share of edible fruits and nuts in Africa's export in the last five years from 2011 to 2015.

[36]Optimal Agro-Industry Policy: A Case Study of Ghana Cocoa Processing, African Centre for Economic Transformation, November 2013
[37]Togo takes pride in its first locally produced fair-trade chocolate, Africanews, May 2016
[38]Optimal Agro-Industry Policy: A Case Study of Ghana Cocoa Processing, African Centre for Economic Transformation, November 2013

Table 3.6: Share of Edible Fruit and Nuts in Africa's Exports in Last Five Years

Year	Value (in US$ billion)	Share in total exports of Africa (%)
2011	6.6	1.1
2012	6.4	1.0
2013	6.9	1.2
2014	7.5	1.4
2015	7.7	2.0

Source: ITC Trade Map

Demand for tropical fruits from Western countries like USA and Europe are the major drivers of global exports of fruits. In the African region, Egypt, Tanzania, Burkina Faso, South Africa and Kenya are major exporters of fruits, and together accounted one-fifth of Africa's fruit exports **(Table 3.7)**.

Table 3.7: Major Fruit Exporters of Africa in 2015

Country	Value (US$ million)	Share in total exports of Africa (%)
Egypt	1123.1	5.1
Tanzania	279.3	4.8
Burkina Faso	97.1	4.4
South Africa	2828	4.1
Kenya	196.2	3.5
Morocco	710.5	3.2
Tunisia	285.4	2
Madagascar	17.9	0.8
Mali	13.8	0.4
Nigeria	156.8	0.3
Uganda	3.9	0.2
Algeria	34.8	0.1

Source: ITC Trade Map

Banana is the most important harvested fruit of Africa with Burundi, Rwanda and Uganda having the highest consumption. Although the banana export market is hugely dominated by Latin America and the Caribbean and the South-East Asian countries, Africa has a potential to become one of the leading exporters. Côte d'Ivoire and Cameroon are major banana producers and exporters. Pineapple is second most widely consumed and grown fruit in countries like Nigeria, Ghana etc. Many companies purchase harvested pineapples from local communities to make juice and concentrates. Mango is produced by Nigeria, Kenya, Egypt and Madagascar. Citrus fruits like oranges, limes, grape, and lemon are widely cultivated in the tropical and sub-tropical countries of Africa. South Africa is the leading producer of citrus fruits given its sub-tropical climate, followed by other countries such as Egypt, Tunisia and Morocco. South Africa earns almost US$ 600 million every year for exporting fresh citrus fruits to USA and Europe and is the second-largest citrus fruit exporter in the world[39].

Tanzania, for example, has the largest arable land of 44 million hectares in Eastern Africa, with an estimated 25.1 per cent share of agriculture in the economy in 2016[40] . Currently, the majority of Tanzania's agricultural produce is supplied as raw material. However, the Tanzanian government is trying to develop the agricultural sector in the form of commercial farm-based model. A wide variety of fruits and vegetables are grown in Tanzania (2.75 million tons annually) out of which only 4 per cent is processed in Tanzania[41]. Tanzania can move up the value chain in fruits and vegetables by focussing on processing, particularly, of avocado, bananas, guavas, grapes, jackfruits, mangoes, oranges, pineapples, papayas, peaches, tomatoes and chillies.

A study on "Industry in Tanzania" conducted by Page (2016) found that agro-processing is a dominant manufacturing sub-sector in Tanzania. The Annual Survey of Industrial Production of Tanzania revealed that the 287 agro-processing companies, of which more than 80 per cent are small scale, account for 55 per cent of the total manufacturing and 65 per cent of total employment[42].

[39]OECD-FAO Agricultural Outlook 2016-2025
[40]CIA-Factbook
[41]Tanzania Agro-Processing, export.gov, April 2016
[42]John Page, Industry in Tanzania, United Nations University, 2016

The Government of Tanzania has taken a new initiative to facilitate private sector investment worth of US$ 2.1 billion in the agribusiness sector along with a government backed investment of US$ 1.3 billion in infrastructure and public goods. This is known as the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) Programme[43], which aims at achieving sustainable growth for the small landholding agricultural units through inclusive commercialization. This is an international public-private partnership programme, which was included in GoT's 2009 resolution 'Kilimo Kwanza' which means 'Agriculture First'.

Challenges

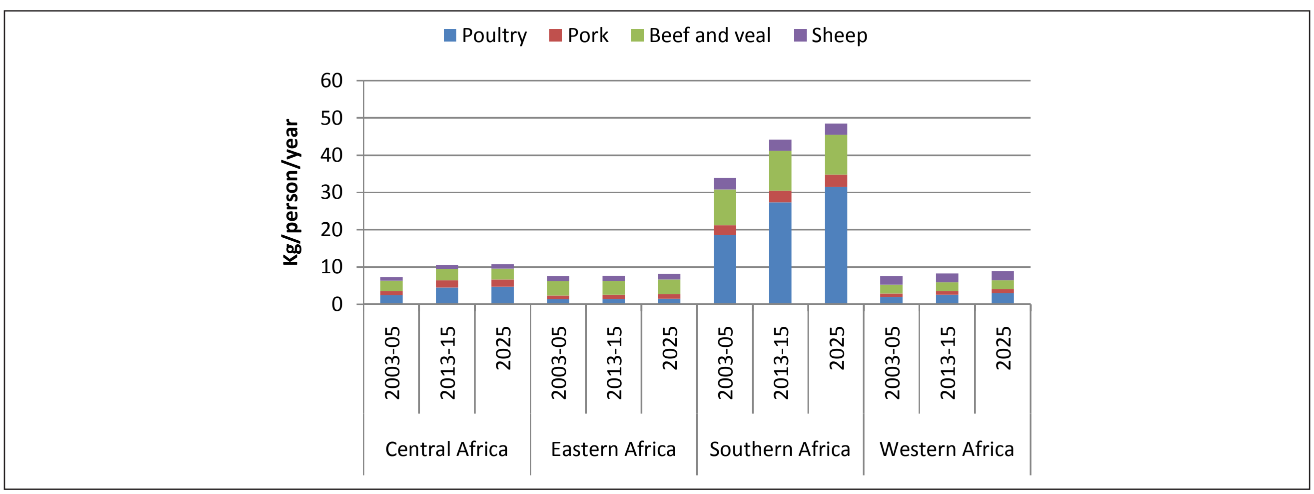
The challenges faced in this sector include underdeveloped irrigation scheme, limited access to capital, inadequate technological support, lack of cold storage facilities, and inadequate infrastructure to establish rural-urban linkages. Farmers have limited access to high quality seeds and fertiliser. Low level of technology leads to dependence on rains. Proper transportation and marketing services are also yet to develop to incentivize the fruit processing market. Further, many of the African nations continue to export fruits in raw form as part of intermediate inputs to fruit processing industries in other countries. There is a need to set up such processing industries, as well as to strengthen the existing ones, if any, to help the African countries move up the value chain which would require attracting foreign investments in the local fruit processing companies.

(d) Meat Processing

The per capita meat consumption by the Sub-Saharan African region is just 11 kg per annum, which is less than one-third the global average as per OECD-FAO Agricultural Outlook 2016-2025. However, there is significant difference across African regions due to difference in income levels, especially in the Southern Africa reflecting higher consumption by countries such as South Africa, Botswana and Namibia vis-a-vis the other countries of the region. However, if population is to be considered as a factor, the Eastern and Western African region together consume 54 per cent of the Sub-Saharan Africa's meat consumption. The total meat consumption is expected to increase by 35 per cent by 2025, surpassing all other regions across the world. This is mainly due to the increased income level, rapidly spreading urbanisation and population growth. Poultry accounted for 36 per cent of the total meat consumption from 2013 to 2015 followed by beef (33 per cent), sheep (19 per cent) and pork (12 per cent). **Chart 3.2** shows meat consumption across Africa with projected demand in 2025.

Poultry consumption has expanded faster compared

Chart 3.2: Meat Consumption across Sub-Saharan Africa



Source: OECD-FAO Agriculture Outlook 2016-2025

[43]Southern Agricultural Growth Corridor of Tanzania (SAGCOT): Fact Sheet, World Bank

to other meats in the past and has led to high imports, which caters to nearly 40 per cent of the domestic demand. South Africa has been the largest poultry producer and production is expected to increase further by 19 per cent by 2025. However according to the OECD-FAO projections, imports would still continue due to higher demand.

Beef production has been an attractive option in the Sub-Saharan African region due to its domestic demand. It's an important export product for Botswana and Namibia as they have preferential access to the European market. Sub-Saharan Africa accounts for 18 per cent of the global bovine herd and therefore large share of meat demand is met by domestic supply. Meat production still remains below global average leaving significant scope for further increase in productivity.

Sheep and Pork consumption are relatively less in Sub-Saharan Africa. Nearly 45 per cent of pork demand in Africa is met by imports. In contrast, demand for sheep meat is mostly met by domestic production and supplied by Eastern Africa because of its extensive pasture based system. The main centres in Eastern Africa are Sudan and Ethiopia, and Western Africa is predominantly Nigeria and Mali.

Ethiopia, for example, has adopted agricultural development led industrialisation, as a part of its Growth and Transformation Plan (GTP). Therefore, the Meat Processing Industry Value Chain is of strategic importance to Ethiopia, which is naturally endowed with livestock. While the main source of meat in Ethiopia is basically livestock. However, it is not handled on commercial basis, with just one slaughterhouse located in Addis Ababa[44] as prefix. Rest of the cattle are slaughtered in the backyard of houses as they are managed by mainly smallholders. Ethiopia also has brokers for channelizing exports thus escalating the prices by 25 to 50 per cent. Ethiopia was not able to meet the target amount of meat export in the year 2013 and 2014 as set by the GTP. Therefore, this sector needs interventions at multiple levels to develop it into a business model from its traditional practice. Improvement in the vertical relationship between the people engaged like cattle supplier, butcher, processor and horizontal factors like logistics, transportation, marketing to attract foreign investors and necessary certification for ensuring quality standards are required.

Challenges

The greatest challenge in the meat processing sector is investment, which limits production and therefore the Sub-Saharan region is a net importer of meat. In order to succeed in meat processing, there is a need for investments in infrastructure to encourage processing at least at rudimentary levels to begin with. Processing facilities like slaughterhouses, cold storage warehouses and transportation ensuring proper condition would also be required. Further, if the countries plan to tap export markets they would face competition from European Union especially for frozen products. Therefore, for meat processing, import substitution might be aimed for the domestic market in short term and once efficiency and scale of production is achieved export markets may be targeted.

(ii) Textile and Apparel

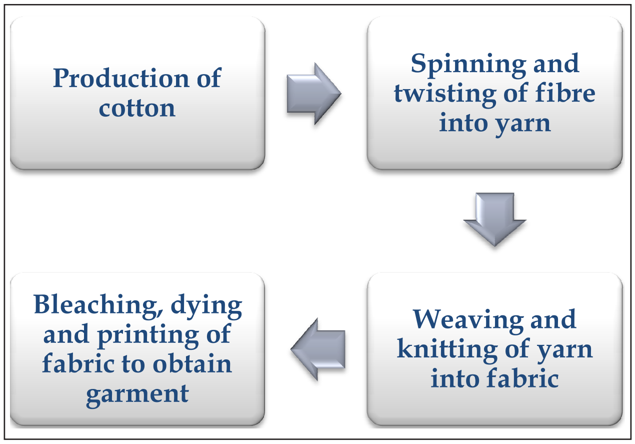
Africa's growing young population may seem like a boon apparently with 480 million youth in 2017 and 850 million projected by 2050[45]; however the underlying challenge is to utilise this demographic dividend or it will end up creating more unemployment. One of the most labour-intensive industry and crucial platform for employment creation is the textile industry. It is estimated that the combined apparel and footwear market of Sub-Saharan Africa is around US$ 30 billion.[46] In recent times, though the African textile industry has started to expand with African designs and fabrics showcased in international platforms like Paris, Milan, New York and London fashion shows. Domestic demand for African textile and garments has also increased with the growing African urban middle class population resulting in increase in the market size for African textiles and garments. **Exhibit 3.1** shows verticals of a textile value chain.

[44]Value Chain Study on Meat Processing Industry in Ethiopia, Addis Ababa Chamber of Commerce and Sectoral Associations (AACCSA), 2015

[45]Fashionomics Africa: Outlook for 2017, African Development Bank

[46]Ibid.

Exhibit 3.1: Textile Value Chain



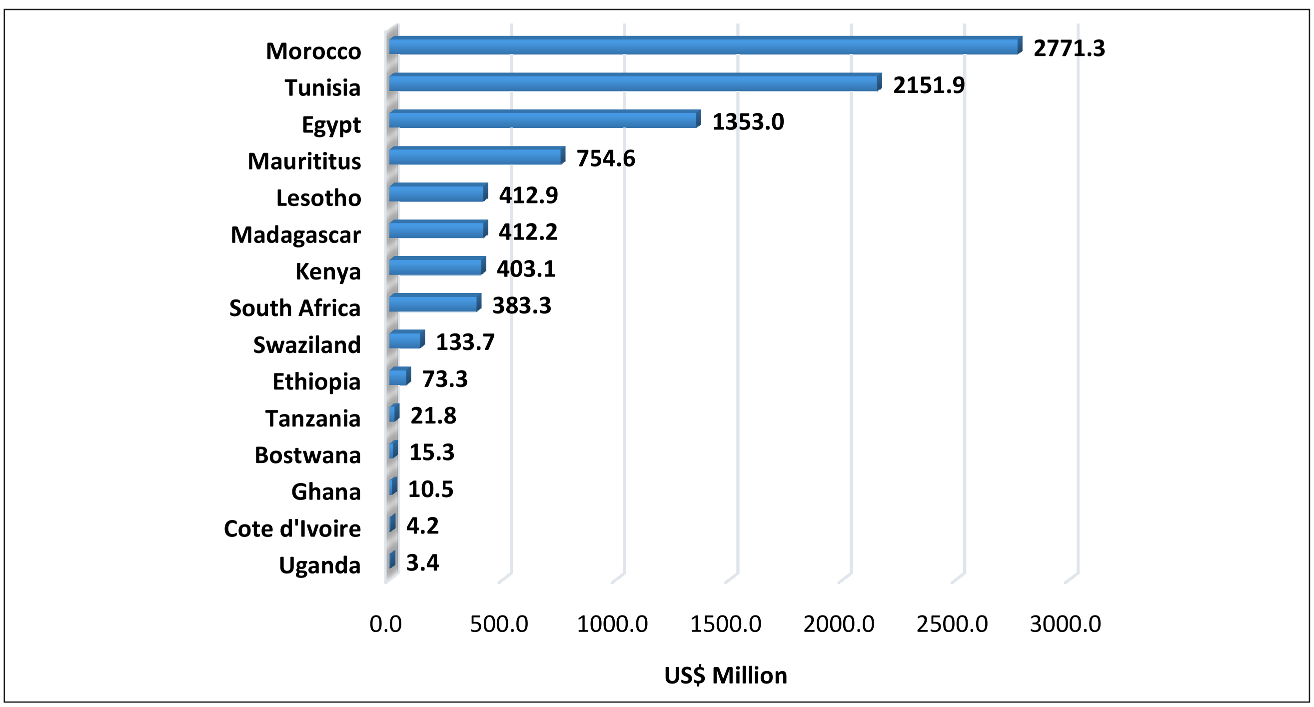
Source: African Development Bank

Africa has been the source of cotton production for international textile manufacturers with 10 per cent of global cotton being produced in Africa, which then goes to Asia for further manufacturing. According to AfDB, Africa accounts only for 16 per cent of global textile market (US$ 1.6 trillion) whereas the Asia-Pacific accounts for almost 60 per cent. There is thus a need for Africa to move up the textile value chain by producing garments instead of just exporting raw cotton. Out of the 54 African countries, 37 countries produce cotton and 30 countries export cotton. **Chart 3.3** shows the major apparel and clothing exporters of Africa in 2015.

McKinsey[47] has classified the major clusters of apparel sector of Africa according to their nature. West African countries like Ghana, Nigeria, and Cote d'Ivoire are not in an advantageous position to compete with global exports as they lack both dynamism and sophistication. The North African countries Morocco, Tunisia and Egypt, though are the largest exporters of apparel and clothing in 2015, lack the dynamism of their East African counterparts like Ethiopia, Kenya, Mauritius, Madagascar and to some extent Tanzania and Uganda.

Since 2013[48], the East African nations have come into focus as potential countries for becoming a textile manufacturing hub. Some European brands like H&M, Primark and Tesco have started sourcing their garments from Ethiopia. According to a survey

Chart 3.3: Major Clothing and Apparel Exporting Countries of Africa



Note: Clothing and Apparel (HS Codes 61 and 62)
Source: ITC Trade Map

[47]Sourcing in A Volatile World: The East African Opportunity, McKinsey & Company, April 2015
[48]East Africa: The next hub for apparel sourcing?, McKinsey & Company, April 2015

conducted by McKinsey[49] in January 2015 among the Chief Procurement Officers of different firms, Ethiopia has emerged as the seventh among the global top potential garment sourcing destinations in the next five years along with Bangladesh, Viet Nam and India as the top three destinations. Ethiopia, as a part of its second "Growth and Transformation Plan" (GTP-II), invested in construction of new industrial parks to increase its textile and apparel exports by US$ 1 billion by 2020. According to this Plan, 37 factories are supposed to be dedicated solely to textile and apparel sector in the Hawassa Industrial Park, out of which 6 are local and 15 are from USA, China, India and Sri Lanka. These factories are projected to generate 60,000 jobs by 2020. The US$ 250 million Hawassa Industrial Park has been built as a public-private partnership between the Ethiopian government and PVH Corp, as multi-brand owner of Calvin Klein and Tommy Hilfiger. The AfDB has invested in the construction of a section of the Modjo – Hawassa expressway[50] near the Hawassa Industrial Park, as Ethiopia aims to develop itself as a leader in light manufacturing. Availability of hydroelectricity, affordable inputs and institutional support has contributed to development of Ethiopia as an apparel exporter to United States and European Union, with more than 40,000 jobs.

Like Ethiopia, Kenya's apparel industry currently specializes in supplying high-volume bulk basics such as trousers, which accounts for 58 per cent of its exports to the United States. In 2015, Kenya exported US$ 403.1 million worth of apparel and clothing. Foreign direct investment received in recent years from Asia and Middle East, has boosted the capacity of the Kenyan garment factories as well as employment levels. However, unlike Ethiopia, Kenya faces number of problems like absence of local supplier of fabric which implies manufacturers have to depend on import thereby taking longer manufacturing time. Labour costs are also higher along with disrupted power supply.

In the Sub-Saharan African region, the largest exporter is Mauritius with US$ 754.6 million revenue generated in 2015. Mauritius is characterised by its high-end and high-technology used in textile manufacturing. It has more than 250 apparel companies catering to Europe, USA and South Africa. Setting up of export processing zones and favourable tax policy has led to increase in employment four folds to 80,000 in the last eight years[51]. AfDB is also supporting the textile industry of Madagascar in the form of Investment Promotion Support Project by an amount of US$ 10 million. This project aims at supporting capacity building of MSMEs in the textile sector especially women and youth supported by the Textile Sector Promotion Support Fund (FAPST).

However, considering the overall present scenario, export levels of clothing and apparel are still low with the share being just 0.5 per cent of world exports, and largely comprise basic clothing like t-shirts and trousers as per the AfDB.

Challenges

- More investment required to develop production facilities;
- Most of the producers and designers being small scale lack access to customized retail set up;
- Inadequate industry specific skill set among the workforce;
- Lack of access to credit for entrepreneurs and SMEs;
- Lack of adequate infrastructure – water, energy, ports, transport and customs;
- Limited access to information like market data and ongoing trends thus making the producers less competitive in terms of coping with the global market dynamics; and
- Lack of institutional and government support in many of Sub-Saharan countries.

These challenges can be overcome by utilising the fact that Africa provides cheaper labour compared to China or

[49]ibid
[50]Fashionomics Africa: Outlook for 2017, African Development Bank
[51]Investing in Creative Industries: FASHIONOMICS, African Development Bank, 2017

South-east Asia[52]. Local as well as international markets may be tapped by developing and promoting the brand Africa. Increased support and active participation by the governments of respective Sub-Saharan nations may help in improving the business environment and skill set of the workforce thus enhancing the competitiveness and integrating the industry with the global value chain. It will also benefit women as a substantial portion of the workforce in the textile industry comprises women. The Office of Special Envoy, African Development Bank has launched the “Fashionomics” initiative in Abidjan in 2015 with the objective of supporting micro, small and medium businesses engaged in the fashion and textile industry.

(iii) Automobile Assembling

The African automobile industry is mainly characterised by assembling of vehicles.[53] Africa’s automotive market is relatively small compared to its other counterparts like Latin America, Developing Asia, Oceania and Middle East. With a population of over 1 billion people, Africa had only 42.5 million registered vehicles in use in 2014. Africa has a motorisation rate of only 44 vehicles per 1000 people lower than the global average of 180 vehicles per vehicles per 1000 inhabitants, Latin America’s 176 vehicles per 1000 inhabitants and Developing Asia, Oceania and Middle East’s count of 79 vehicles per 1000 inhabitants.[54] Motorisation rate has increased by 31 per cent in 2014 in Africa as compared to 2005. As per the OICA 2016 sales statistics, 1.3 million new vehicles were registered or sold across Africa. Demand for new vehicles is mainly in countries like South Africa, Morocco, Egypt and Algeria and together they account for around 81 per cent of automobile sales in the continent. Egypt and Algeria are the largest automobile markets of Africa. Due to limited domestic auto manufacturing, domestic demand is met through importing. On the supply side, production of vehicles increased by 7.9 per cent to 0.9 million in 2016 as compared to 0.8 million vehicles produced in 2015 **(Table 3.8)**.

South Africa is the leading automobile manufacturer in Africa with the presence of more than 500 suppliers and original equipment manufacturers like BMW, Toyota, Volkswagen and Ford. It is also the largest exporter of automobiles worth US$ 8 billion in 2015. In August 2016, Beijing Automotive International Corp, China’s state-owned automobile manufacturer declared investments worth of US$ 759 million to build an auto factory in South Africa.

Morocco has overtaken Egypt in 2012 to become the leading automobile manufacturer in North Africa. Morocco enjoys its strategic geographical position with proximity to Europe, Middle East and rest of Africa, attracting substantial amount of foreign investment. Other than the locational advantage, Morocco’s politically stable environment attracts international investors. The Moroccan government has also introduced 5-year tax exemptions to automobile companies for setting up factories in the country and 25 years of tax exemption to companies whose majority of the production go for exports. It also offers to finance up to 10 per cent of the total investment required to set up a new automobile company and offer skill development training as well. Therefore, government support has largely contributed to the improvement of business environment in Morocco.[55]

Table 3.8: Production and Sales of Vehicles in Major Countries in Africa in 2016

Countries	Production *	Sale*
South Africa	5,99,004	5,47,406
Morocco	3,45,106	1,63,110
Egypt	36,230	2,64,100
Algeria	42,008	96,600
Nigeria	-	23,000
Kenya	-	10,600
Africa	9,01,628	1,314,463

*No. of new vehicles
Source: International Organisation of Motor Vehicle Manufacturers
‘-’ denotes not available

[52]Hinh T. Dinh, Vincent Palmade, Vandana Chandra, and Frances Cossar, Light Manufacturing in Africa, World Bank, 2012
[53]Africa’s Automotive Insight Report 2016
[54]International Organisation of Motor Vehicle Manufacturers 2016
[55]Why Morocco is Africa’s Automotive Industry Hub, Morocco World News, September 2015

The scenario in countries like Nigeria and Kenya are somewhat different. Automobile manufacturers, which have established their operations in these countries have been mainly incentivized by the policies promoting local content usage. Nigeria started assembling of passenger and commercial vehicles in 1970s with six international and commercial vehicle manufacturers – Peugot Automobile Nigeria Ltd, Volkswagen of Nigeria Ltd, Leyland Nigeria Ltd, Mercedes Benz-Anambra Motor Manufacturing Ltd, National Truck Manufacturing Ltd and Steyr Nigeria Ltd. However due to inadequate infrastructure, the output and capacity utilisilation of these plants continued to decline over time. Nigeria's largest automobile manufacturer, Peugot Automobile Nigeria Ltd stopped its production in 2010. By 2012, all the other plants were privatised. In 2014, the National Automotive Industry Development Plan (NAIPD) introduced the idea of resuming the small scale automotive sector of this country. It restricts the import of cars, which are more than 15 years old and encourages local assembly by imposing higher tariffs. The NAIPD focuses on the following elements –

- Development of industrial infrastructure through supplier parks;
- Development of skill;
- Certificates ensuring standards;
- Promoting investment through various fiscal measures; and
- Boosting domestic market.

This has led to establishment of assembly plants by global manufacturers like Nissan, Ford and Volkswagen in collaboration with their local partners. Nigeria offers tax incentives in the form of allowing car companies to import two fully built units at a discount on duty by 35 per cent on passenger cars and 20 per cent on commercial vehicles for every locally built unit. It is also aiming to develop the local auto component industry so that it can supply the manufacturers at competitive rates. But at present, automotive companies like Nissan and Peugot only assemble bulk of their vehicles from imported parts due to absence of a local manufacturing industry. Nigeria's own company Innoson Vehicle Manufacturing Company assembles trucks and buses with the engine, gear box and electrical parts imported from outside.

In order to favour purchasing of new cars, Kenya has prohibited import of vehicles that are more than eight years old in order to promote local manufacturing of vehicles. At present Kenya's automotive market mostly focuses on assembly of imported vehicle parts, retail and distribution and after sales services of vehicles. There are three assembly plants – General Motors East Africa Plant (Nairobi), Associated Vehicle Assemblers Plant (Mombasa) and Kenya Vehicle Manufacturer (Thika). However, local manufacturing of auto components are yet to develop. With the increasing number of infrastructure projects (recently Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) Corridor Project), the demand for automobiles is expected to pick up thus driving the automobile sector. The auto sector has been identified as a key driver of Kenya's industrialisation. Therefore, the government has designed policies to encourage the local industry by building special economic zones, with tax holidays, lower tariff for water and power, and credit for export to the manufacturers. Local input requirement has been introduced through tariff imposed on imported auto components. The assembly of motor vehicles in Kenya grew by 31.4 per cent from 2013 to 2014, and the number of motor vehicles are expected to double by 2019 thus creating a foundation for Kenya to develop as a regional automotive hub among the East African Community (EAC) countries.

Ethiopia although one of the poorest nations in Africa aims to develop as a leader in light manufacturing in order to make itself less dependent on commodity market fluctuations. At present, Ethiopia produces just 8,000 vehicles per year, much much less compared to those of the established countries mentioned before. However, the country has capacity and potential to assemble more but lack foreign exchange required to buy imported parts of vehicles. Assemblers based in

Ethiopia are mostly Chinese firms like Geely, FAW, BYD and Lifan. Ethiopia appears to be promising because of its consistent GDP growth from 2007 to 2016 at the rate of 10.2 per cent on an average. It has also developed its infrastructure with respect to power supply and transport. An electrified railway line has been constructed to link Ethiopia to Djibouti port to facilitate faster import of raw materials and export of goods.

Challenges

- One of the biggest challenges of the automobile sector of Africa is the heavy import of second hand vehicles. According to Deloitte, at least 8 out of 10 vehicles imported are second hand in countries like Nigeria, Kenya and Ethiopia[56]. This is a common scenario across the continent. With African consumers having lower purchasing power compared to the other developing economies, high cost of new vehicles led to import of second hand vehicles from USA, Europe and Japan through the Middle East. **Table 3.9** shows the share of new vehicles and second hand vehicles in Ethiopia, Kenya and Nigeria in 2015 respectively. Second hand vehicles form the major share of total vehicle fleet in these countries because of their cheaper price.

Table 3.9: Production and Sales of Vehicles in Major Countries in Africa in 2016

Indicator (unit)	Ethiopia	Kenya	Nigeria
Fleet Size	587,400	1,300,000	3,590,000
New Vehicles (% of total fleet)	15	20	10
Second hand vehicles (% of total fleet)	85	80	90

Source: Africa Automotive Insights, Deloitte, 2016

- Access to credit for purchasing new cars is limited across the continent especially in the poorer economies. This can be attributed to limited information and purchasing power. This reduces the number of potential buyers of new vehicles because loans help consumers spread the cost of ownership over a period of time. According to Deloitte's report, as of 2015 only 7 per cent of the population in Kenya and 6 per cent in Nigeria have depth of credit information. The share becomes nil in the case of Ethiopia.
- Building a local manufacturer base in the form of uninterrupted and price competitive supply of auto components and other inputs is essential for developing vehicle assembly and production.
- Declining intra-continental exports as a result of regulatory tariffs or poor economic conditions. For example, Uganda and Tanzania impose tariffs on cars imported from Kenya because they do not meet local input criteria thus giving second hand cars an edge. South Africa, on the contrary, exports more vehicles to Asia, Europe and USA compared to other African countries.

Considering the overall present scenario, the automotive industry in Africa is still at a nascent stage. Although the rate of motorisation is low compared to its other emerging peer countries, this leaves a scope for further development and tapping the untapped potential.

(iv) Pharmaceutical Industry: Local Production of Medicines

Africa currently accounts for around 2 per cent of global pharmaceutical industry. However, it has the potential to become one of the major producers given its huge domestic market supporting the demand. According to the global consultancy firm McKinsey's report[57], the African pharmaceutical industry has grown from US$ 4.7 billion in 2003 to US$ 20.8 billion in 2013 and is projected to reach US$ 60 billion by 2020. Africa is yet to realise its potential compared to its growing consumer class and expanding medical facilities and healthcare systems. A growing pharmaceutical industry will have a dual benefit - not only it will help the continent diversify to a resource-independent sector but also help in developing the public health. Africa shares the burden of around 24 per cent of the global diseases. It suffers from three-fourth of global HIV/AIDS cases, 90 per cent

[56]Africa Automotive Insights, Deloitte, 2016
[57]Africa: A continent of opportunity for pharma and patients, Mc Kinsey & Company, June 2015

of malaria and tuberculosis infections. Over time, as a result of lifestyle changes, non-communicable diseases like cancer, diabetes, lung disorders, heart diseases are also increasing. These health challenges coupled with the growing demand from urban middle class has led to a need for a growing pharmaceutical industry. This sector is included among priority sectors in Africa's Accelerated Industrial Development Agenda (AIDA), which aims at uplifting Africans out of poverty.

Local pharmaceutical production has many benefits –

- It would help in producing quality assured, affordable medicines and ensure continuous supply of medicines.
- It would generate income and local employment, while also adding value in the way of developing a knowledge intensive economy, leading to technology spillovers.
- It would also help the African economies in becoming self-reliant and move local beyond the idea of receiving medicines in the form of aid.

Table 3.10 shows the potential of the African pharmaceutical industry to grow in the coming years. Multinational companies like GlaxoSmitheKline, Johnson & Johnson and Sanofi have already set up companies in Africa. Many Chinese and Indian companies have also set up operations in the continent. Chinese pharmaceutical products are sold mostly as a part of Chinese aid to Africa. The African pharmaceutical market is largely concentrated (around 85 per cent) to top 15 countries like Algeria, Egypt, Morocco, South Africa, Tunisia followed by emerging ones like Nigeria, Kenya, Uganda, Ethiopia and Ghana thus mainly dominated by the North and South African region.[58] Countries like Egypt and Tunisia have achieved self-sufficiency in terms of producing essential drugs. Morocco is the second largest manufacturer of medicines after South Africa accounting for 70 per cent of its domestic demand met by around 40 pharmaceutical companies and exporting 10 per cent of its total production to the adjoining African nations.

Table 3.10: Growth Forecast for Pharma Segments in Africa (2013-2020)

Pharma segments	Estimated CAGR* (2013-2020)
Prescription Drugs	6%
Generic Drugs	9%
Over-the-counter Drugs	6%

* CAGR - Compound Annual Growth Rate Africa includes top seven pharmaceutical markets Algeria, Egypt, Ghana, Kenya, Morocco, Nigeria and South Africa. Estimated figures have been used for 2020.
Source: McKinsey & Company, Insights into Pharmaceuticals and Medical Products Africa, April 2015

Manufacturing medicines in a country increases access to the same at a lower price. Starwin (Ghana), Saidal (Algeria), Universal (Kenya), Aspen (South Africa), or Cipla (Nigeria) are some of the leading global generic drug manufacturers present in Africa which produce medicine of international standard. With the setting up of hi-tech generic drug facility of Cinpharm in Cameroon, even a low wage earner would have access to antibiotics at a lower price compared to his/her Kenyan counterpart. Previously, local production of medicines in African countries was not considered an economically viable option as a result of high costs involved along with scarcity of skilled labour and bottlenecks in the supply chain. However, this image is gradually changing with such initiatives.

The Pharmaceutical Manufacturing Plan for Africa (AU PMPA) was set up in 2007, with the aim of guiding its member states towards establishing efficient pharmaceutical production for satisfying domestic as well as international demand. Ethiopia is the first African country to formally launch and take steps to implement this in the form of National Strategy and Plan of Action for Pharmaceutical Manufacturing Development in Ethiopia (2015-2025)[59]. It aims at enhancing local production of quality medicines through a set of objectives. Strengthening regulatory

[58]Making Medicine in Africa, Mail & Guardian Africa, February 2015
[59]Ethiopia Launches Landmark National Pharmaceutical Manufacturing Strategy, The Access and Delivery Partnership, August 2015

systems, implementing reforms to attract foreign direct investment, investing in human resource development for facilitating a platform for research and development and thus, leading to production of active pharmaceutical ingredients are some of the key objectives of the Plan.

The following factors will contribute to potential pharmaceutical manufacturing[60] –

- With the structural change in Africa's population, healthcare infrastructure is expected to develop significantly along with an increased demand for modern medicines.
- Healthcare capacity is also expected to increase in the coming years with increasing number of doctors, nurse and hospital beds.
- The business environment is also gradually becoming conducive with countries taking initiatives in the form of country specific labelling to reduce counterfeiting. With restriction on imports, international manufacturers are opening local subsidiaries in the form of mergers or joint ventures.

Challenges

The African pharmaceutical industry faces the challenge of inadequate capacity for research and design required for producing drugs locally as a result of absence of investment. Although almost 37 countries have presence of pharmaceutical industry, these are mostly dependent on imported active ingredients. Only South Africa produces some active pharmaceutical ingredients[61]

The African pharmaceutical industry also suffers from long delays in receiving international orders as preference is given more to developed countries by the exporters; poor logistics and storage facilities accompanied by high costs involved in transportation and distribution. In addition, with the absence of proper regulatory measures, people tend to settle for poor quality drugs thus adding little to curing the existing health issues. There is also a need for specialists to conduct clinical research and develop medicines, which would help in reducing the continent's health issues. It remains a major challenge in Africa develop a pharmaceutical industry that meet international regulatory standards, in order to increase access to essential medicines of standard quality and ensuring sustainable health systems, There is also a need for industry specific training and education to get a skilled workforce, which this would also help in generating more jobs and contribute towards the economic transformation of the continent[62].

[60]Africa: A continent of opportunity for pharma and patients, McKinsey & Company, June 2015
[61]Making Medicine in Africa, Mail & Guardian Africa, February 2015
[62] Nurturing an African pharma boom, Pharmaceutical-technology.com, July 2016

4. Potential for Enhancing India's Engagements in the Manufacturing Sector of Africa

The last two decades witnessed an increase in investments in the African region following improvements in ease of doing business, economic developments and political stability. During 2015, Africa has emerged as the second most attractive investment destination in the world after North America[63]. With rising production costs in Asia, Africa has a potential to emerge as the next investment destination, particularly for manufacturing. China, Turkey and India are the top three employment generators in the African manufacturing sector.

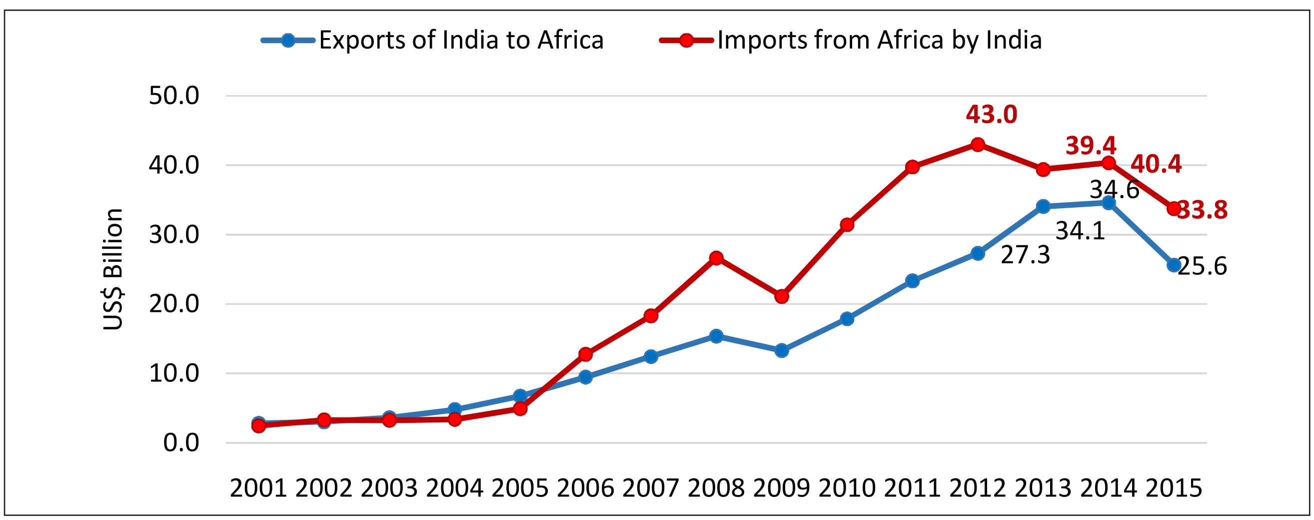
India's bilateral trade with Africa stood at US$ 59.4 billion in 2015. **(Chart 4.1)** with India's import surpassing its exports to Africa, mainly owing to import of mineral oils and fuels. India's imports from Africa are mainly dominated by primary commodities like mineral fuels, oils and products of their distillation (mostly crude), followed by pearls and precious stones, and ores slag and slash **(Table 4.1)**. Africa gets duty free access to 98 per cent of Indian tariff lines, excluding few items such as tea, coffee, vegetables and spices.

On the other hand, India mainly exports products relatively higher up the value chain like processed petroleum products, pharmaceutical products, automobile components, machinery and mechanical appliances **(Table 4.2)**.

Indian investments in Africa's manufacturing sector

African countries have been receiving Indian outward investments in areas such as agriculture, mining, electricity, gas, water, financial and business services, construction, transport and storage, communication, community and social services, among others. During the period 2010-11 to 2016-17, Africa has received investments worth of US$ 21.1 billion in the manufacturing sector, which accounted for 44.6 per cent of the total investment received by Africa (US$ 47.3 billion) from India **(Chart 4.2)**.

Chart 4.1: India-Africa Bilateral Trade



Source: ITC Trade Map

[63]Africa Still Poised to Become the Next Great Investment Destination, World Bank, June 2015

Table 4.1: Major Products Imported by India from Africa

HS Code	Commodities	Values in 2015 (US$ million)	Share in total imports of India from Africa (%)
	TOTAL	**33,780.2**	**100**
27	Mineral fuels, oils and their product of distillation	19,091.4	56.5
71	Pearls and precious stones	6,866.2	20.3
08	Edible Fruits and nuts	1,313.0	3.9
28	Inorganic chemicals	1,133.3	3.4
26	Ores, slag and ash	992.2	2.9
72	Iron and steel	619.1	1.8
74	Copper and its articles	582.9	1.7
25	Salt, sulphur and earths and stones	554.5	1.6
07	Edible Vegetables and roots	446.8	1.3
44	Wood and articles of wood	377.6	1.1
76	Aluminium and its articles	244.8	0.7
52	Cotton	186.5	0.6
47	Wood pulp and other fibrous cellulosic material	158.9	0.5
09	Coffee, tea and spices	175.8	0.5
12	Oil seeds and grains	126.8	0.4

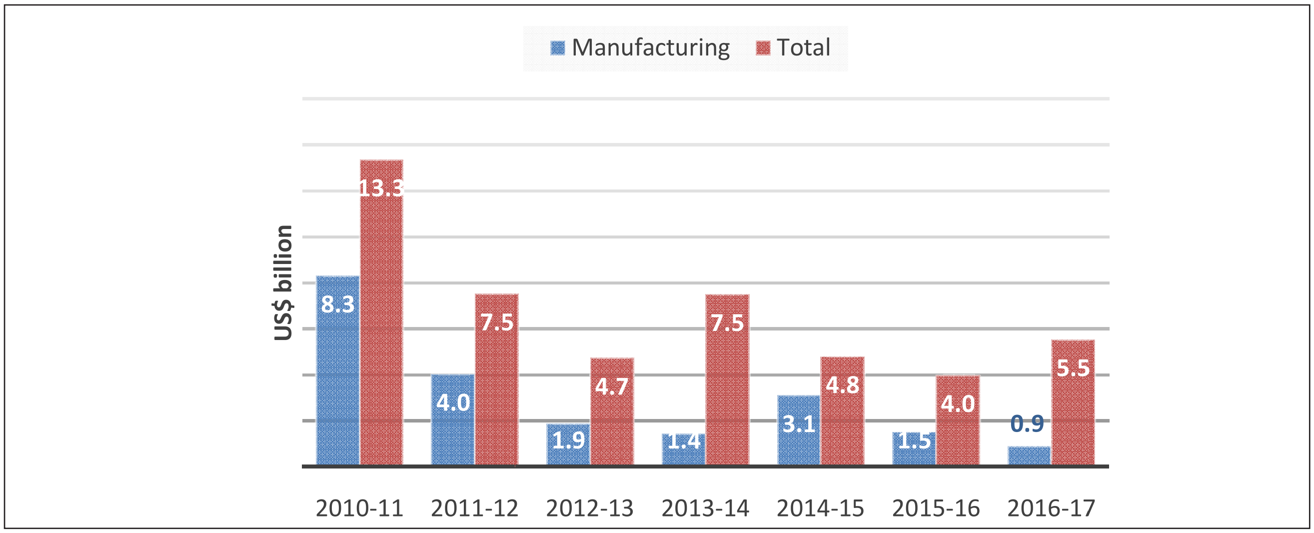
Source: ITC Trade Map

Table 4.2: Major Products Exported by India to Africa

HS Code	Commodities	Values in 2015 (US$ million)	Share in total exports of India to Africa (%)
	TOTAL	**25,640.3**	**100**
27	Mineral fuels, oils and their product of distillation	5,293.1	20.6
30	Pharmaceutical products	3,040.9	11.9
87	Vehicles other than railway and tramway	2,775.2	10.8
84	Machinery and mechanical appliances	1,607.6	6.3
10	Cereals	1,475.6	5.8
39	Plastic and its articles	810.2	3.2
85	Electrical machinery and equipment	900.5	3.5
17	Sugar and sugar confectionery	614.0	2.4
52	Cotton	770.1	3.0
29	Organic Chemicals	566.8	2.2
73	Articles of iron and steel	660.0	2.6
02	Meat and edible meat offal	590.3	2.3
72	Iron and steel	564.0	2.2
62	Articles of apparel and clothing accessories, not knitted and crocheted	447.7	1.7
61	Articles of apparel and clothing accessories, knitted or crocheted	305.7	1.2

Source: ITC Trade Map

Chart 4.2: India's investment in Africa



Approved Indian ODI
Source: Reserve Bank of India

Mauritius has been the largest recipient (95.7 per cent of Indian FDI investments in manufacturing sector of Africa) of Indian outward direct investment because of the Double Taxation Avoidance Agreement (DTAA) signed between India and Mauritius **(Table 4.3)**. Indian investments in other countries are often channelled through Mauritius because of tax incentives offered by the country, resulting in higher investments for the country. Other than Mauritius, countries receiving Indian investment include Tunisia, South Africa, Morocco, Libya and Ethiopia, Ghana, Zambia, Egypt and Nigeria.

Potential for Enhancing India's Engagements in the Manufacturing Sector of Africa

Majority of India's investment in Africa are in sectors such as gems and jewellery, oil and gas, chemicals, pharmaceuticals and metal processing. This section will explore the scope of the Indian investments in potential manufacturing sectors suggested in the previous section for Africa.

- **Agribusiness**

Agribusiness is one of the potential sectors where in India can look to invest in Africa. The agricultural sector of both India and Africa are largely characterised by labour intensive farming, small landholders and diverse nature of agricultural production. India's stance on the agricultural sector of Africa has been more towards

Table 4.3: Top 15 Recipient Countries of Indian Investment in Africa

Country	Investment (US$ million)	Share in India's investment in Africa (%)
Africa	21,100	100
Mauritius	20,163.9	95.7
Tunisia	190.3	0.9
South Africa	118.9	0.6
Morocco	95.9	0.5
Libya	91.7	0.4
Ethiopia	89.8	0.4
Ghana	46.6	0.2
Zambia	46.5	0.2
Egypt	43.5	0.2
Nigeria	37.4	0.2
Gabon	33.6	0.2
Tanzania	26.9	0.1
Kenya	19.7	0.1
Botswana	18.4	0.1
Algeria	14.1	0.1

Approved Indian ODI
Source: Reserve Bank of India

providing technology expertise. In order to collaborate with Africa in diversifying the African economy beyond natural resources sector, India has been supplying subsidized technology sharing through Indian private companies and their African partners[64]. The African agribusiness sector, though poised to become an US$ 1 trillion industry by 2030, lacks support in terms of availability of finance, market information, logistics etc. Investment in such areas will facilitate agricultural processing in potential countries by India and it could be a win-win situation for both India and African countries. For example, Indian companies can invest in cocoa processing units of Côte d'Ivoire or Ghana, or fruit processing units of Tanzania. Around 80 per cent of the cashew nuts produced by Côte d'Ivoire are imported by India which are processed and re-exported to developed markets. If the processing can be done in Cote d'Ivoire at a lower cost compared to India, this will help in generating employment in the country thus helping it moving up the cocoa value chain as well as benefiting India by exporting from an LDC country. Senegal has demand for aromatic rice, but currently has to import the same to meet its domestic demand. Indian aromatic rice companies could establish local subsidiaries or joint ventures with companies in Senegal thus tapping its market for aromatic rice. Mali[65] being one of the largest livestock producers of Africa, has 35 million cattle. It has the potential to develop as a meat processing industry but lacks necessary capital to set up modern abattoirs and other facilities like cold storage. Mali can be one of the investment destinations for Indian meat processors. An Indian company Allanasons Ltd has set up meat processing plant in Ethiopia located in Modjo, which employs more than 300 people. It is also in the process of setting up another plant in Adami Tulu of Ethiopia in 2017[66].

- **Automobile: Investing in auto component manufacturing**

There are several avenues for Indian automobile manufacturers to tap the African automobile markets. The continent has benefitted from overseas investments in the sector coupled with favourable environment created by host countries in the region. For example, Ethiopia has emerged as one of the fastest growing African economies and has taken several initiatives for economic developments, including improvements of necessary infrastructure. It is gradually emerging as an automobile manufacturer mainly driven by Chinese investments, while conventional markets like South Africa or Morocco are heavily dominated by American or European manufacturers.

African countries like Kenya and Nigeria lack local auto component industry and therefore mostly end up importing crucial inputs from outside[67]. Nigeria, being a highly populous economy, can achieve considerable economies of scale with time. Also Nigeria's strategic location with respect to its membership in Economic Community of West African States (ECOWAS) makes it a potential market and hub for automobile industry. However, it would require striking a balance of exporting and importing different stages of components like Fully Built Units (FBU), Semi-knocked Down (SKD) units or Completely Knocked Down Units (CKD)[68] depending on the needs since importing all transportation equipment would lead to a massive effect on its balance of payment. Indian automobile manufacturers like TATA Motors and TVS Motors are already set to establish their plants in Nigeria following its implementation of NAIDP. TATA Motors and Mahindra & Mahindra have also presence in Kenya. Other Indian auto component manufacturers can establish joint ventures with local companies in countries like Nigeria and Kenya, thus helping these countries establish themselves as manufacturing base of automobiles and not just assemblers. Manufacturing in Nigeria would provide market access to the ECOWAS region, and similarly Kenya would provide market access to the East African Community (EAC) nations.

- **Textile and Apparel**

According to WTO the first outward FDI from India to Africa was a textile mill set up by Birla Group in Ethiopia[69].

Kenya and Ethiopia are the two nations which have significant Indian investments in their respective textile

[64]India: The Development Partner Africa Needs, Berkeley Political Review, October 2016
[65]Mali seeks more Indian investment for gold mining, agriculture, Financial Express, April 2017
[66]Saudi, Indian investors eye power generation, livestock investments in Ethiopia, Ethiopia Investment Commission, December 2016
[67]Africa Automotive Insight, Deloitte, 2016
[68]Semi-knocked down (SKD) assembly is the initial stage of automobile assembly. With time, companies can gradually move towards completely -knocked down Kits assembling where components are usually sourced more from local suppliers.
[69]India-Africa: South South Trade and Investment for Development, WTO, 2013

industries. Many Indian companies like Arvind Limited a major Indian textile manufacturer have opened a six-million-piece garment plant in Ethiopia. An agreement worth US$ 100 million was signed between Raymond and the Ethiopian government during the Ethio-India Investment Forum held in Mumbai in October 2015.[70] A denim factory has been set up by Kanoria Africa Textile PLC in Bishoftu. Ethiopia has emerged as an investment destination for the Indian textile and garment industry investors followed by its Growth and Transformation Plan II. Kenya, being located at a strategic position with access to the Eastern and Central Africa, is looking forward to Indian investments.

As regards India's imports of cotton, the present volume of imports in 2015 stood at US$ 770.1 million. Africa is aiming to move up the textile value chain with not just producing or exporting cotton, but to get involved in garment manufacturing. Indian companies may invest in the sector as the local producers operating at a small scale level lack set up for retail manufacturing. Also, African fabrics and designs have received a lot of appreciation at the global platform in recent times. Joint ventures with African firms may give Indian garment manufacturers added advantage therefore in terms of product and market diversification.

- **Pharmaceutical industry**

The Indian pharmaceutical industry is known for being the largest worldwide provider of generic drugs, and accounts for roughly 20 per cent share of global exports. More than 80 per cent of antiretroviral (ARV) drugs are supplied by Indian pharmaceutical companies.[72] Indian pharmaceutical industry has been active in Africa and has been a success especially because of manufacturing the ARV drugs, which are mainly used for HIV treatment. As a result of the cost-effective production process adopted by the Indian pharmaceutical companies, the cost of ARV therapy has been brought down to less than US$ 400 per person from US$ 10,000 per person[73]. Pharmaceutical products formed almost 12 per cent of India's exports to Africa in 2015.

The strategy of Indian pharmaceutical firms has been ideally entering into joint ventures with their African counterparts, open subsidiaries or enter into agreement with local companies for producing drugs at low cost. Indian pharmaceutical company Cipla had entered into a joint venture with Quality Chemicals Industries Ltd. in 2008 in Uganda, to open a production unit for anti-malaria drugs.

Cipla has subsidiaries in South Africa in the name of Cipla Medpro whereas Lupin has by the name of Pharma Dynamics. Ranbaxy, another prominent Indian global pharmaceutical firm, does business in South Africa under the name of Sonke[74]. Cipla has local subsidiaries in Morocco and Algeria as well.

Africa lacks trained professionals due to absence of educational programmes covering topics like drug discovery to marketing of drugs. With increasing international drug manufacturing companies setting up local subsidiaries, the need for clinical research specialists would increase. In this connection, Indian companies may step in by investing in training relatively qualified local staffs for engaging them in clinical research in order to manufacture medicines locally at a lower cost, rather than importing active pharmaceutical ingredients. Secondly, African markets vary enormously in terms of size and economic conditions. Given such a condition, the Indian companies interested in doing business should first target established African cities in order to optimize the initial set up costs and gradually expand their operations mid-sized markets as well as rural markets. Developing local sales and marketing team helps in gaining market share. The Indian manufacturers setting up units in Africa should also focus on training to develop the technical and marketing skills of the workers.

The role of local business partners is again very crucial when it comes to doing business. In order to expand their markets, local partnerships would serve to understand the local environment. For example, in order to reach geographically dispersed healthcare facilities and

[70]India – Ethiopia Commercial Relations, The Embassy of India
[72]Indian Pharmaceutical Industry, India Brand Equity Foundation, April 2017
[73]India's investment in Africa: Feeding up an ambitious elephant, International Centre for Trade and Sustainable Development, September 2016
[74]India's investment in Africa: Feeding up an ambitious elephant, International Centre for Trade and Sustainable Development, September 2016

pharmacies, Cipla has appointed local distributors. GSK works with drug packaging companies in Nigeria and Kenya in order to offer different ranges of products to tap multiple consumer segments. Companies like Merck import only the active pharmaceutical ingredient for its diabetic drug Glucophage. Rest of the tablet pressing and packing is done by its local partner in Nigeria.

Manufacturing active pharmaceutical ingredient in local subsidiaries in African countries by training local staffs would, therefore, save India's import costs and reduce production costs over a period of time, while having a knowledge spill-over effect. Secondly, since African markets vary in terms of size and economy, product differentiation in terms of packaging or according to the import restrictions imposed would help in further increasing the industry's competitiveness across the continent. Involving local staff in sales and marketing will also boost sales as they would understand the market nature.

India's Role in Facilitating Manufacturing in Africa

Bilateral trade between India and Africa has increased more than ten folds from US$ 5.2 billion in 2001 to US$ 59.4 billion in 2015 **(Chart 4.1)**. Although India was in trade surplus in the initial years, after 2006, India's imports from Africa witnessed significant jump as it started importing about one-fourth of its oil from the continent in order to reduce its dependency on the Gulf countries. Indian private investment in Africa has also increased in the last fifteen years mainly in areas like IT, energy, telecommunication, gems and jewellery, metal processing, chemicals and pharmaceuticals.

India's engagement with Africa has been mainly private sector driven resulting in greater integration with the domestic market. India has also focused on developing human resources and educational sector. In 2005, India became the first Asian full-member country of the African Union's Africa Capacity Building Foundation, and currently almost 50 per cent of Indian grants to Africa are now in the Information and Communication Technologies or education sectors[75].

Mutual development for India and Africa

Following are the areas where India can assume a development partnership role to facilitate growth in manufacturing sector of Africa

- **Skill Development:** India has always assumed a development partnership role when it comes to its engagement with Africa. With a significant increase in working population in the continent, one of the biggest opportunities for Africa would be development of skilled manpower to engage in manufacturing activities. India may engage with other African development institutes to enrich the human resource there through various skill development programmes in manufacturing. Technical expertise may be shared with them for different light manufacturing sectors.

- **Knowledge sharing:** Since India's manufacturing sector is essentially dominated by SMEs, similar to that of Africa; Indian companies could share their experience with their counterparts in Africa. Indian manufacturing associations could tie up with their African counterparts to develop respective sectors of their specialisation through collaboration. This could include building common resource centres for disseminating market and business related information, common quality testing labs for their products, among others.

- **Designing educational programmes:** One of the important initiatives essential for development of African pharmaceutical industry is building a pool of professionals for clinical research. Similarly, in the case of textile industry, educational programme relating to technical know-how, efficiency in production, designing, packaging and marketing, among others, would be essential to develop countries in the continent as a garment manufacturing hub. India may collaborate with relevant educational institutes in African countries

[75]In India, it's Time for Africa, Foreign Policy, October 2015

to deliver diploma programmes or vocational training for such sectors to train the workforce.

- **Credit Access:** As stated earlier, another major challenge for the African manufacturing sector to thrive is access to credit for investment, especially in case of textiles and agri-business as these are mainly characterise of small holders. They usually lack the financial capability to invest in setting up businesses. Indian financial institutions and banks could contribute to enhancement of credit access through knowledge sharing or through collaborating with financial institutions and banks in the African region.

- **Organising B2B Meets:** Enhancing of two-way trade and investment flows could not be sustained without vibrant people-to-people contacts. There could be various rounds of consultations among business fraternity, with special focus on dedicated sector/s in each round. This will help in exchange of ideas and business propositions among entrepreneurs and investors, thus boosting trade and investment activities between the two regions. Such B2B meets could be jointly facilitated by industrial bodies or investment and trade promotion agencies, with support from respective governments.

5. Export-Import Bank of India in Africa

Export-Import Bank of India (Exim India) commenced operations in 1982. The Bank was set up under an Act of Parliament (Export-Import Bank of India Act 1981), for providing financial assistance to exporters and importers, and for functioning as the principal financial institution for coordinating the working of institutions engaged in financing export and import of goods and services with a view to promoting the country's international trade. In its endeavour to promote India's international trade, Exim India's vision has evolved from financing, facilitating and promoting trade and investment, to a conscious and systematic effort at creating export capabilities. Exim India today seeks to develop commercially viable business relationships with externally oriented companies.

Africa has always been a focus region for Exim India, and thus a critical component of its strategy to promote and support two-way trade and investment. As a partner institution to promote economic development in Africa, the commitment towards building relationships with the in countries African Region is reflected in the various activities and programmes, which Exim India has set in place.

Exim India has representative offices in three countries in Africa viz., Abidjan in Cote d'Ivoire, Addis Ababa in Ethiopia, and Johannesburg in South Africa. These three offices play key roles in facilitating economic cooperation with the African Region, and are closely associated with several of the Bank's initiatives. The representative offices interface with multilateral institutions such as African Development Bank (AfDB), Afreximbank, regional financial institutions such as Eastern and Southern African Trade and Development Bank (PTA Bank), and West African Development Bank (BOAD), and developmental financial institutions such as Industrial Development Corporation of South Africa Ltd. (IDC), as well as Indian missions in the region with the aim of increasing bilateral commercial engagements between the two regions.

Lines of Credit

To enhance bilateral trade and investment relations, Exim India has in place several lines of credit (LOCs), which are extended to a number of institutions/ agencies in Africa. These LOCs supplement the 'Focus Africa' programme of the Government of India (GOI) and are extended especially to priority sectors, identified by GOI for mutual cooperation and benefit. These LOCs enable buyers in the overseas country to finance developmental projects equipment and other goods and services on deferred payment terms. Besides these operating LOC extended at the behest of GOI, Exim India extends its own commercial LOCs to various financial institutions and other entities in Africa, such as, PTA Bank (covering 17 countries in the eastern and southern African region), BOAD (covering 8 countries in the West African region), Indo-Zambia Bank, Nigerian Exim Bank and Afreximbank. Most of these LOCs have facilitated in strengthening the manufacturing sector of Africa either directly or indirectly. As on April 30, 2017, the total number of operative LOCs to Africa stood at 153 extended to 44 countries and amounting to US$ 7.6 billion. Of these, 148 LOCs aggregating to US$ 7.5 billion, to 41 countries are guaranteed by GOI. A list of LOCs extended to African countries is given at **Annexure**.

Project Exports

Exim India has been providing a steady stream of support to project activities in engineering, procurement, and construction (civil, mechanical, electrical or instrumental). This includes the provision of specific equipment related to supplies, construction and building materials, consultancy, technical know-how, technology transfer, design, and engineering (basic or detailed). Exim India also supports existing or new projects, plants or processes that require additional assistance in processes such as international competitive bidding, including multilaterally funded projects in India. During 2016-17, 26 projects amounting to US$ 915.6 million 17 countries in Africa were being executed by Indian exporters with the support of Exim Bank.

Buyer's Credit under National Export Insurance Account (NEIA)

In order to provide further impetus to project exports from India on medium- or long-term basis, especially in the infrastructure sector, in April 2011, a product called Buyer's Credit under National Export Insurance Account (BC-NEIA) was introduced. Under this programme, Exim India facilitates project exports from India by way of extending credit facility to overseas sovereign governments and government owned entities for import of goods and services from India on deferred credit terms. Indian exporters can obtain payment of eligible value from Exim India, without recourse to them, against negotiation of shipping documents. NEIA is a Trust, set up by Ministry of Commerce and administered by ECGC. As on March 31, 2017, Exim India sanctioned an aggregate amount of US$ 1.8 billion under BC-NEIA for 14 projects in Africa valued at US$ 1.9 billion.

Finance for Joint Ventures Overseas

Further, Exim India supports Indian companies in their endeavour to globalise their operations, through overseas joint ventures (JVs) and wholly owned subsidiaries (WOS). Such support includes loans and guarantees, equity finance and in select cases direct participation in equity along with Indian promoters to set up such ventures overseas. In the African Region, Exim India has supported several such ventures in countries such as South Africa, Kenya, Mauritius, Ghana, Nigeria, Sudan, Egypt, Zambia, Morocco, Uganda and Tanzania, across a range of sectors like agriculture and food processing, agro-based products, auto and auto components, chemicals, construction, electronics, engineering goods, EPC services, mining and minerals, plastics and rubber products, packaging, pharmaceuticals, software and IT enabled services, and textiles. These ventures serve to promote value addition, as also contribute to capacity building and capacity creation in host countries. As on March 31, 2017, Exim India through its overseas investment finance programme has supported 43 such ventures, set up by Indian companies in 15 countries in Africa with an aggregate sanction amount of ₹ 4.9 billion.

Association with African Development Bank (AfDB)

India is a member of the African Development Bank (AfDB) Group. Many Indian companies participate in projects funded by the AfDB Group. Exim India works very closely with AfDB and has an active programme which offers a range of information, advisory and support services to Indian companies to enable more effective participation in projects funded by multilateral funding agencies, including AfDB. Exim India assists Indian companies in projects supported by AfDB by not only fund and non-fund based assistance, but also by providing advance alerts on upcoming opportunities. With support from Exim India, Indian project exporters have secured a number of overseas contracts in Africa in sectors such as power, telecommunications, transport, water supply and sanitation. Exim India and AfDB have also signed an agreement for co-financing projects in Africa. The agreement envisages joint financing of projects (priority being given to support projects of small and medium enterprises) in regional member countries of AfDB. Exim India also organizes Business Opportunities seminars in Projects funded by AfDB across various centres in India.

Africa – India Partnership Day

Exim India together with FICCI (Federation of Indian Chambers of Commerce and Industry) organizes the Africa – India Partnership Day, on the sidelines of AfDB's Annual Meeting, with an objective of sharing India's developmental experiences with Africa, particularly in Public-Private Partnership model of financing infrastructure development. Exim India, along with FICCI, has so far hosted three such events; first being on May 30, 2013 in Morocco; followed by Rwanda on May 22, 2014; Côte d'Ivoire on May 27, 2015; and Zambia on May 24, 2016. The Africa-India Partnership Day has become a regular feature of the AfDB Annual Meeting, and showcases the immense scope for expanding the mutually enriching partnership between Africa-India.

Kukuza Project Development Company (KPDC) in Africa

Africa is a region of opportunities, as the continent is receiving plenty of investments in the infrastructure space. The PPP structure is slowly getting popularised by the national governments, increasing the interest of the private sector in infrastructure development. However, institutional capacity in several African nations is in a nascent stage.

Addressing the limited institutional capacity in Africa on conceptualisation, management, execution and imparting project development initiatives, Indian institutions such as Exim India, IL&FS, and State Bank of India have joined hands with the AfDB, and promoted a Project Development Company for infrastructure development in Africa.

The Company, named Kukuza Project Development Company (KPDC), has been incorporated in Mauritius in July 2015. 'Kukuza' in Swahili means 'a cause to growth'. Reflecting the name, the KPDC is expected to provide specialist project development expertise to take the infrastructure project from concept to commissioning in the African Continent. The KPDC will provide the entire gamut of project development expertise to various infrastructure projects, such as project identification, pre-feasibility/ feasibility studies, preparation of detailed project reports, environmental and social impact assessment, etc.

On the sidelines of the India-Africa Forum Summit (IAFS), which was held during October 26-29, 2015, in New Delhi, Exim India held the inaugural meeting of KPDC.

The KPDC shall utilise the domain expertise of each partner during the project development process to establish a bankable and sustainable implementation format based on an in-depth understanding of the concerns of all the stake holders - public authority, users community, developers/ investors and lenders.

Exim India's Country Mission

With a view to enhancing India's bilateral trade and investment relations and in order to support Indian entrepreneurs in their globalisation endeavours, Exim India has commissioned a country mission to select countries in Africa. The Mission endeavours to provide a framework for enhancing India's engagement in select countries in Africa by way of identifying key areas for commercial engagement while also assisting these countries in achieving their developmental objectives. This initiative is backed by Exim India's longstanding strategic and commercial relations with various institutions, bodies and organisations in Africa through its various capacity building programmes in various sectors in these countries.

Exim India's First Mission to Africa covered countries such as Mozambique, Rwanda and Tanzania in November 2014. The Mission team closely coordinated with Indian Missions, and held various rounds of interactions with Government officials of partner countries, multilateral institutions, business community, exporters, banks, Indian business diaspora, and other stakeholders, with a view to identifying business, trade and investment opportunities for Indian entrepreneurs.

Exim India's engagements in ITC's SITA

On March 9, 2014, Department for International Development (DFID) United Kingdom, mandated the International Trade Centre (ITC Geneva), to design and implement a project, called 'Supporting India's Trade Preferences for Africa' now called 'Supporting Indian Trade and Investment for Africa' (SITA). SITA is a six-year (2014-2020) project that aims at promoting exports from five East African countries – Ethiopia, Kenya, Rwanda, the United Republic of Tanzania and Uganda – to India through investment and skills transfer from the Indian side. Exim India had entered into an MOU with ITC in Geneva on March 26, 2014, under which it was associated with ITC's SITA initiative. The Project was in its inception Phase during March 2014 to March 2015, where a roadmap for SITA, including the focus sectors, was defined. The implementation phase of SITA (March 2015-March 2020) was officially launched in New Delhi, India, during March 19-20, 2015.

Member of Association of African Development Finance Institutions (AADFI)

Exim India is a member of Association of African Development Finance Institutions (AADFI), a forum of institutions/ banks with the objective of creating co-ordination and economic solidarity among the development finance institutions in the African continent. The membership of AADFI helps to provide a platform for building linkages with other institutions in Africa, which are members of AADFI.

Further, Exim India's equity in Agricultural Finance Corporation, which offers consultancy support in development of agro-technology; promoter membership in 'Small Farmers' Agri-Business Consortium (SFAC)', an investment institution whose objectives include promoting small and medium agri-business ventures, places Exim India in a vantage position to share its expertise and support development related activities in Africa.

Global Network of Exim Banks and Development Finance Institutions (G-NEXID)

Exim India has entered into a Memorandum of Understanding (MOU) with four Exim Banks and Development Financial Institutions (DFIs) to form Global Network of Exim Banks and Development Financial Institutions (G-NEXID). The five signatories are Export-Import Bank of India, Export-Import Bank of Malaysia, African Export-Import Bank, Andean Development Corporation and Export-Import Bank of Slovakia. G-NEXID was formally launched at its inaugural meeting at UNCTAD, Geneva on March 13, 2006. Annual Meetings are held to deliberate upon measures to foster long-term relationship, share experience and strengthen financial cooperation to promote trade and investment relations between developing countries. G-NEXID has been granted 'observer' status by UNCTAD.

G-NEXID members in the African Region include: African Export-Import Bank, Cairo; Banque Nationale d' Investissement, Côte d'Ivoire; Banque Pour Le Financement De Petites Et Moyennes Entreprises, Tunis; Central African States Development Bank, Brazza Ville; Development Bank of Mali, Bamako; Development Bank of Namibia, Windhoek; Development Bank of Zambia, Lusaka; Development Bank of Southern Africa, Midrand; East African Development Bank, Kampala; Economic Community of Western African States, Lome; Industrial Development Bank of Kenya, Nairobi; Industrial Development Corporation South Africa, Sandton; Nigerian Export-Import Bank, Nigeria; and PTA Bank, Nairobi.

Inter-bank cooperation among BRICS members

BRICS, which comprise Brazil, Russia, India, China and South Africa, is an association of five major emerging national economies. In order to develop and strengthen economic ties and investment cooperation between BRICS countries, in 2010 state financial institutions for development and export support of the BRICS nations entered into a MOU, laying the foundation of BRICS Inter-Bank Cooperation Mechanism. Exim India is the nominated member development bank under the BRICS Interbank Cooperation Mechanism, along with other nominated member development banks from member nations of BRICS namely Banco Nacional de Desenvolvimento Economico e Social (BNDES), Brazil; State Corporation Bank for Development and Foreign Economic Affairs – Vnesheconombank, Russia; China Development Bank Corporation, and Development Bank of Southern Africa. The inter-bank cooperation among BRICS countries is expected to facilitate trade and help raise the economic profile of member countries at regional and global levels.

India assumed the Chairmanship of BRICS Forum for 2016, and Exim India, being the nominated member development bank from India, assumed the Presidency of the BRICS Interbank Co-operation Mechanism. The Bank organised a Technical Group meeting in Udaipur, during March 10-11, 2016, to discuss various areas for furthering co-operation among member development banks. During India's Chairmanship, the Bank organised a series of events and seminars, including the Annual Meeting and the Financial Forum of the BRICS Interbank Cooperation Mechanism. Exim India organized the BRICS Financial Forum on October 15, 2016, as part of the events associated with BRICS Summit held during October 15-16, 2016, in Goa. High-level delegations including Chairmen/ Managing Directors from the Development Finance institutions (DFIs) of BRICS and select BIMSTEC countries participated in the event and shared their insights and deliberated upon mechanisms to forge effective partnerships.

Partner in Institutional Building in Africa

As a partner institution in promoting economic development in Africa, Exim India shares its experience in the setting up of institutional infrastructure for enhancing international trade. In this regard, the Bank has taken active participation in the institutional building process in a number of countries in Africa. Besides being associated in the setting up of the Afreximbank, Exim India undertook an assignment to design, develop, and implement a programme on Film Financing for Nigerian Export-Import Bank (NEXIM Bank) for expanding its exposure in financing films (under Film Financing Programme). Exim India has also been involved in the design and implementation of Export Finance Programmes for Industrial Development Corporation, South Africa; Consultancy Assignment for the Government of Mauritius on 'Projecting Mauritius as an investment hub for Indian Firms'; establishment of Export Credit Guarantee Company in Zimbabwe; and preparing a blue print for setting up of Export-Import Bank of Zimbabwe.

In 2015, International Trade Centre (ITC), Geneva, under the SITA Project, awarded Exim India with Phase - 1 of an assignment for 'Institution Capacity Building for Export Credit and Insurance' to enhance trade competitiveness in Rwanda. The objective of the assignment is to establish a rationale and suggest a broad framework for establishing an Export Credit Insurance Corporation in Rwanda.

Institutional Linkages

Exim India has been consciously forging a network of alliances and institutional linkages to help further economic co-operation with the African Region. Towards this end, Exim India has taken up equity in Afreximbank, West African Development Bank (BOAD), and Development Bank of Zambia. These endeavours are supplemented by the various Memoranda of Cooperation (MOCs) / Memoranda of Understanding (MOUs), the Bank has in place, with key institutions in the African Region including: AfDB; Eastern and Southern African Trade and Development Bank (PTA Bank); Afreximbank; Banque De Financement Des Petites Et Moyennes Entreprises (BFPME), Tunisia; Banque Internationale Arabe de Tunisie, Tunisia; Board of Investment, Mauritius; ECO Bank (Pan African Bank); Foreign Investment Promotion Agency, Tunisia; Industrial Development Bank of Sudan; Industrial Development Corporation of South Africa Limited (IDC); Nigerian Export-Import Bank (NEXIM); National Bank of Egypt; and Societe Tunisienne de Banque, Tunisia.

Knowledge Building and Technology Transfer

In the area of knowledge building and technology transfer, Exim India's research studies have focused on potential areas for boosting India's trade and investment relations with Africa, the Economic Community of West African States (ECOWAS), Southern African Customs Union (SACU), Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA), Select West African and Southern African Countries, Select East African Countries, Least Developed Countries (LDCs), as also the member countries of Maghreb region.

In a Nutshell

In sum, Exim India, with its comprehensive range of financing, advisory and support services, seeks to create an enabling environment for enhancing two-way flow of trade, investment and technology between India and the African Region. While promoting infrastructure development and facilitating private sector development in host countries, the various efforts of Exim India, ensconced in its range of activities, also contribute towards institutional building in the African Region.

6. Summary and Conclusion

This paper mainly focuses on the much needed economic transformation which Africa is looking forward to. Africa has been primarily dependent on its natural resources like oil and gas, precious stones, and agricultural commodities for earning export revenues and, thereby meeting its import demand. As a result, the terms of trade have continued to fluctuate with the change in global commodity prices. Although the global commodity price boom led to double digit growth in Africa with increased price of agricultural as well as mining commodities, it also led to food crises. Similarly post 2012, with the slowing down of Chinese economy and other emerging markets, there was a fall in global demand for oil and other commodities like iron ore, which led to a fall in price of the same resulting in huge revenue losses for most African countries. Thus, Africa has been vulnerable throughout to global price fluctuations.

An economic transformation would also, among others, require an increase in labour efficiency; there is, therefore, a need to shift from lower productivity jobs to higher productive ones. Therefore, comes the need for manufacturing. Given that Africa is still at its nascent stage of economic development, light manufacturing could be the ideal way out in such a case as it requires low to semi-skilled labour and does not involve too much of capital investment. This study identifies sectors where Africa can move up the value chain by utilising the raw materials which it already has a comparative advantage in or through foreign direct investment and knowledge sharing by other countries.

The agribusiness sector is projected to be worth of US$ 1 trillion by 2030. Countries may engage in rice processing, thereby reducing the demand for imported rice. Further diversification may be achieved through aromatic rice production, and value to the product may be added in the way of packaging and branding. Africa is famous for cocoa production with the world's top two countries, Côte d'Ivoire and Ghana, located in the region. Although these countries produce raw cocoa beans, they account for less than 5 per cent of revenue earned from the intermediate or final products made from it. There is a need for further processing of these beans into intermediate products like cocoa paste or butter or final products like chocolates or cosmetics to add value to the cocoa beans and hence move up the value chain thereby generating employment and income. With proper investment, these countries can utilise their international reputation for producing quality cocoa and manufacture chocolates and other products which may be properly marketed through Fair Trade organisations[76]. Being one of the largest producers of tropical fruits globally, fruit processing is another sector in which Africa may diversify, and promote the Brand Africa image for such products. Meat processing is also another sector where in Africa has a scope of moving up the value chain.

Automobile industry is another sector in which Africa has potential to scale up its manufacturing output. Automobile assembling is present in Africa (in small scale) majorly in countries like Morocco, Egypt, Algeria and to the emerging ones like Nigeria, Kenya and Ethiopia. However, there is the absence of local component manufacturers, which eventually needs to be addressed by gradually developing themselves as a manufacturing hub by establishing joint ventures with foreign companies.

In textile and garment manufacturing, Africa is gradually moving up the global value chain, from just merely producing and exporting cotton to establishing itself as a garment manufacturer. With increased interest shown at global platforms for African fabric and design, many international manufacturers are looking at Ethiopia and Kenya for sourcing their garments.

Pharmaceutical industry being a non-resource based industry requires skilled work force. Many of the international pharmaceutical companies have opened their local subsidiaries in Africa. However, the active pharmaceutical ingredient is mainly imported from abroad as Africa lacks efficient professionals capable of clinical research. Further, due to lack of local production, there have been shortages of such medicine stocks, resulting in increased reliance on low quality medicines. As the demand for medicines increases, with increasing incomes and urbanization, Africa is being seen as a potential market for pharmaceutical industry.

India's engagements in Africa have always been symbiotic, and India could play a significant role in supporting Africa in developing as a manufacturing hub. Indian companies could enhance their investments in the identified focus sectors of the study, where at the same time serve as a development partner. This would help in creating a conducive investment environment through skill development and sharing of technical know-how through business-to-business and people-to-people contacts and collaborations.

[76]According to the World Fair Trade Organisation, Fair Trade is defined as "a trading partnership, based on dialogue, transparency and respect that seek greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South"

Annexure 1:
Exim India's LOCs in Africa (As on April 30, 2017)

- **GOI-supported LOCs**

Sr. No.	Country/ Region	Borrower	Amount of Credit (US$ mn)	Products/Projects covered
1	Angola	Government of Angola	40.0	Railway rehabilitation
2	Angola	Government of Angola	30.0	Industrial park
3	Angola	Government of Angola	15.0	Setting up a textile project (Cotton Ginning & Spinning)
4	Benin	Government of Benin	15.0	Railway equipment (US$ 10.25 mn) , agricultural equipment (US$ 4.25 mn) and cyber city (US$ 0.50 mn)
5	Benin	Government of Benin	15.0	Tractor assembly plant and farm equipment manufacturing unit
6	Benin	Government of Benin	42.6	Up-gradation of Water Supply Schemes in 69 villages in Benin
7	Burkina Faso	Government of Burkina Faso	30.0	Agricultural projects including acquisition of tractors, harvesters, agricultural processing equipment
8	Burkina Faso	Government of Burkina Faso	25.0	Rural electrification
9	Burkina Faso	Government of Burkina Faso	22.5	Low cost housing and economical buildings project in Burkina Faso
10	Burundi	Government of Burundi	80.0	Kabu Hydro Electric Project
11	Burundi	Government of Burundi	4.2	Farm Mechanization
12	Burundi	Government of Burundi	0.2	Preparation of Detailed Project report for an Integrated Food Processing Complex in Burundi
13	Cameroon	Government of Cameroon	37.7	(i) Maize Farm Plantation Projects (US$ 18.77 mn), (ii) Rice Farm Plantation Projects (US$ 18.88 mn)
14	Cameroon	Government of Cameroon	42.0	Cassava Plantation Project
15	Central African Republic	Government of Central African Republic	29.5	Setting up a modern dry process cement plant and procurement of buses for internal transport
16	Central African Republic	Government of Central African Republic	39.7	Two hydro-electric project
17	Central African Republic	Government of Central African Republic	20.0	Development of Mining Project
18	Chad	Government of Chad	50.0	Setting up of cotton yarn plant, Steel billet plant and rolling mill, plant for assembly of agricultural equipment and bicycle plant

19	Chad	Government of Chad	15.9	For financing Extension of spinning mill [addition of weaving and processing capacities
20	Comoros	Government of Comoros	41.6	For installation of an 18 MW power project in Moroni, the capital city of Comoros
21	Côte d'Ivoire	Government of Côte d'Ivoire	26.8	Project for renewal of urban transport system in Abidjan and for agricultural projects in the field of vegetable oil extraction, fruits and vegetable chips production, production of cocoa, coffee etc
22	Côte d'Ivoire	Government of Côte d'Ivoire	25.5	(i) Mahatma Gandhi IT and Biotechnology Park, (ii) Fisheries Processing Plant and (iii) Coconut fibre processing plant
23	Côte d'Ivoire	Government of Côte d'Ivoire	30.0	Electricity interconnection project between Côte d'Ivoire and Mali
24	Côte d'Ivoire	Government of Côte d'Ivoire	30.0	Rice Production Programme
25	Côte d'Ivoire	Government of Côte d'Ivoire	24.0	Electricity Interconnection Project between Côte d'Ivoire and Mali
26	Djibouti	Central Bank of Djibouti, Djibouti	10.0	General Purpose: Three contracts – one for supply of diesel generating sets and pumps, second for setting up a mini cement plant and a third contract for civil works - have been approved
27	Djibouti	Government of Djibouti	10.0	Cement Plant Project
28	Djibouti	Government of Djibouti	14.0	Completing Cement Plant Project in Djibouti
29	Djibouti	Government of Djibouti	15.1	Ali Sabieh Cement Project, Djibouti
30	DR Congo	Government of D. R. Congo	33.5	Setting up a cement factory in DR Congo, acquisition of 228 buses and acquisition of equipment for MIBA
31	DR Congo	Government of D. R. Congo	25.0	Installation of hand pumps and submersible pumps
32	DR Congo	Government of D. R. Congo	42.0	Execution of Kakobola Hydroelectric Power Project
33	DR Congo	Government of D. R. Congo	168.0	Ketende Hydro-electric Project
34	DR Congo	Government of D. R. Congo	82.0	Katende Hydro-electric Project
35	DR Congo	Government of D. R. Congo	34.5	Development of Power Distribution Project in Bandundu Province
36	DR Congo	Government of D. R. Congo	109.9	Transmission and distribution project in Kasai province
37	Eritrea	Government of Eritrea	20.0	Multipurpose agricultural projects and educational projects
38	West Africa	Ecowas Bank for Investment and Development	250.0	Public Sector Projects
39	West Africa	Ecowas Bank for Investment and Development	100.0	Public Sector Projects
40	West Africa	Ecowas Bank for Investment and Development	150.0	Public Sector Projects

41	Ethiopia	Government of Ethiopia	65.0	Energy transmission and distribution project
42	Ethiopia	Government of Ethiopia	122.0	Sugar Industry
43	Ethiopia	Government of Ethiopia	166.2	Development of sugar industry
44	Ethiopia	Government of Ethiopia	213.3	Development of sugar industry
45	Ethiopia	Government of Ethiopia	91.0	Development of sugar industry
46	Ethiopia	Government of Ethiopia	47.0	Development of sugar industry
47	Ethiopia	Government of Ethiopia	300.0	Ethio-Djibouti Rail Line Project
48	Gabon	Government of Gabon	14.5	Housing industry
49	Gabon	Government of Gabon	67.2	Rehabilitation and upgradation of the broad-casting facilities
50	The Gambia	Government of Gambia	6.7	Tractor assembly plant project
51	The Gambia	Government of Gambia	10.0	Construction of National Assembly Building Complex
52	The Gambia	Government of Gambia	16.9	Completion of National Building Assembly Complex
53	The Gambia	Government of Gambia	22.5	Electrification expansion project
54	The Gambia	Government of Gambia	22.5	Replacement of Asbestos water pipes with UPVC pipes project
55	Ghana	Government of Ghana	27.0	Rural electrification, agriculture, communication and transportation projects.
56	Ghana	Government of Ghana	60.0	Rural electrification project, construction of Office and Seat of President
57	Ghana	Government of Ghana	25.0	Track materials, tools and equipment , Procurement of 60 high capacity mineral wagons and spares, Procurement of 30 nos covered wagons, Spares of low capacity mineral wagons, Tata flat trucks/ buses and Foundry materials, Information and Communication and Technology (ICT) and Good Governance project, and Agro Processing Plant
58	Ghana	Government of Ghana	21.7	(i) Improved fish harvesting and fish processing project and (ii) waste management equipment and management support project
59	Ghana	Government of Ghana	35.0	Sugar Plant
60	Ghana	Government of Ghana	24.5	Sugarcane development and irrigation project
61	Guinea	Government of the Republic of Guinea	35.0	Strengthening of Health System
62	Guinea Bissau	Government of Guinea Bissau	25.0	Electricity project mango juice and tomato paste processing unit and purchase of tractors and water pumps for development of the agricultural sector
63	Kenya	Government of Kenya	61.6	Development of various small and medium enterprises
64	Kenya	IDB Capital Limited, Kenya	15.0	Upgrade of Rift Valley Textiles Factory (RIVATEX East Africa Ltd)

65	Kenya	Government of Kenya	30.0	
66	Lesotho	Government of Lesotho	5.0	General purpose: Contracts approved include export of pump sets, consultancy services and irrigation equipment
67	Lesotho	Government of Lesotho	4.7	Vocational training centre for empowerment of youth and women
68	Liberia	Government of Liberia	144.0	Power Transmission and Distribution Project
69	Madagascar	Government of Madagascar	25.0	Project for rice productivity (US$ 10 mn) and project for fertilizer production (US$ 15 mn)
70	Malawi	Government of Malawi	30.0	Supply of irrigation, storage, tobacco threshing plant and one village- one project in Malawi
71	Malawi	Government of Malawi	50.0	Cotton processing facilities (US$ 20 mn), Green Belt Initiative (US$ 15 mn) One Village One Product (OVOP) (US$ 15 mn)
72	Malawi	Government of Malawi	76.5	Procurement of design, supply, installation and commissioning of fuel storage facilities ,irrigation network, commissioning of sugar processing facility in Salima district
73	Malawi	Government of Malawi	23.5	Construction of a new water supply system from Likhubula river in Mulanje to Blantyre
74	Mali	Government of Mali	27.0	Rural electrification and setting up of agro machinery and tractor assembly plant in Mali.
75	Mali	Government of Mali	30.0	Electricity transmission and distribution project from Côte d'Ivoire to Mali
76	Mali	Government of Mali	45.0	Electricity transmission and distribution project from Côte d'Ivoire to Mali
77	Mali	Government of Mali	36.0	Completion of Mali-Côte d'Ivoire Interconnection Link for integrating the national power grids of the two countries
78	Mali	Government of Mali	15.0	Agriculture and food processing projects
79	Mali	Government of Mali	100.0	Power Transmission Project Connecting Bamako and Sikasso via Bougouni
80	Mauritania	Government of Mauritania	21.8	Potable water project (US$ 6.8 mn) and agricultural development project (US$ 15 mn)
81	Mauritius	Government of Mauritius	48.5	Offshore Patrol Vessel from M/s Garden Reach Shipbuilders & Engineers Ltd.
82	Mauritius	Government of Mauritius	46.0	Purchase of specialised equipment and vehicles
83	Mauritius	Government of Mauritius	18.0	To finance the acquisition of Waterjet Fast Attack Craft
84	Mauritius	Government of Mauritius	52.3	Project Trident

85	Mozambique	Government of Mozambique	20.0	General purpose : Contracts approved include supply of water drilling machinery, equipment, accessories, components and spares, support vehicles, water and fuel tankers and electrical equipment
86	Mozambique	Government of Mozambique	20.0	Gaza Electrification Project
87	Mozambique	Government of Mozambique	20.0	Transfer of water drilling technology and equipment
88	Mozambique	Government of Mozambique	25.0	To finance IT Park Project which will comprise construction of building and (a) incubator facility, (b) research and learning center and (c) technology park and administrative facility.
89	Mozambique	Government of Mozambique	30.0	Rural Electrification Projects in the provinces of Gaza, Zambezia and Nampula in Mozambique
90	Mozambique	Government of Mozambique	25.0	Rural Electrification of Cabo Delgado, Manica and Niassa Provinces
91	Mozambique	Government of Mozambique	20.0	Enhancing productivity of rice, wheat, maize cultivation
92	Mozambique	Government of Mozambique	13.0	Solar Photo Voltaic Module Manufacturing Plant
93	Mozambique	Government of Mozambique	250.0	Improving the quality of power supply in Mozambique
94	Mozambique	Government of Mozambique	19.7	Rural drinking water project extension
95	Mozambique	Government of Mozambique	149.7	Rehabilitation of Road between Tica, Buzi and Nova Sofala in Mozambique
96	Mozambique	Government of Mozambique	47.0	Construction of 1200 houses in Mozambique
97	Niger	Government of Niger	17.0	Acquisition of buses, trucks, tractors, motor pumps and flourmills
98	Niger	Government of Niger	20.0	(a) Rehabilitation of six-power stations (b) Purchase of three power transformers (c) Rehabilitation as well as erection of power lines between various places in Niger
99	Niger	Government of Niger	34.5	Electrification of 30 villages using solar photovoltaic system and Setting up of Solar Photovoltaic System
100	Niger	Government of Niger	25.0	Potable Water for Semi-Urban and Rural Communities
101	Niger	Government of Niger	30.0	Solid Waste Treatment cum Landfill Project
102	Nigeria	Government of Nigeria	100.0	Various projects in Nigeria
103	R. Congo	Government of the Republic of Congo	70.0	Rural Electrification
104	R. Congo	Government of the Republic of Congo	89.9	Development of Transport System
105	R. Congo	Government of the Republic of Congo	55.0	Setting up a Greenfield 600 tpd rotary kiln Cement Plant Project
106	Rwanda	Government of Rwanda	20.0	Power projects

107	Rwanda	Government of Rwanda	60.0	Power projects
108	Rwanda	Government of Rwanda	120.1	[i] Export Targeted Modern Irrigated Agricultural Project (USD 60.22 million); and [ii] Extension of Export Targeted Modern Irrigated Agricultural Project (USD 59.83 million)
109	Senegal	Government of Senegal	17.9	Supply of buses and spares by Tata International (Tata Motors) from India to Senegal
110	Senegal	Government of Senegal	27.0	Irrigation project
111	Senegal	Government of Senegal	11.0	Women poverty alleviation programme and acquisition of vehicles from India
112	Senegal	Government of Senegal	10.0	IT Training projects
113	Senegal	Government of Senegal	25.0	Rural electrification project and Fishing Industry Development Project
114	Senegal	Government of Senegal	5.0	Supply of Medical equipment, furniture and other accessories to 4 hospitals
115	Senegal	Government of Senegal	27.5	Rural electrification
116	Senegal	Government of Senegal	19.0	Fisheries Development Project
117	Senegal	Government of Senegal	42.0	Setting up a Modern Abattoir, Meat Processing, Cold Storage, Rendering and Tannery Plant and Market Place in Senegal
118	Senegal	Government of Senegal	26.0	Acquisition of buses
119	Senegal	Government of Senegal	63.0	Rice Self Sufficiency programme in Senegal
120	Senegal & Mali	Government of Senegal & Mali (combined)	27.7	Acquisition of railway coaches and locomotives from India. Mali (US$ 20.62 mn) and Senegal (US$ 7.08 mn)
121	Seychelles	Government of Seychelles	8.0	General Purpose - Contracts covered include export of rice, potatoes and buses
122	Seychelles	Government of Seychelles	10.0	Import of goods and services from India for specific projects funded by Development Bank of Seychelles (DBS)
123	Sierra Leone	Government of Sierra Leone	15.0	Procurement of tractors and connected implements, harvesters, rice threshers, rice mills, maize shellers and pesticide soarat equipment
124	Sierra Leone	Government of Sierra Leone	30.0	Rehabilitation of existing facilities and addition of new infrastructure to supply potable water
125	Sierra Leone	Government of Sierra Leone	78.0	Transmission Line and Substation in Sierra Leone
126	Sudan	Government of Sudan	50.0	General purpose: Contracts approved include export of electrification equipment, photovoltaic cells, diesel coaches, rehabilitation of locomotives, textile machinery, copper rods etc.
127	Sudan	Government of Sudan	350.0	Project for setting up 4 x 125 MW Kosti Combined Cycle Power Plant in Sudan to be executed by Bharat Heavy Electricals Ltd. (BHEL)
128	Sudan	Government of Sudan	41.9	SINGA-GEDARIF transmission and Sub-Station Project

129	Sudan	Government of Sudan	48.0	(i) supply of agricultural inputs for the Sudanese Agricultural Bank, (ii) technical and laboratory equipment to Higher Educational Institutions, (iii) scientific equipment for Ministry of Science and Technology, (iv) solar electrification and (v) meeting requirement of Sudan Railways
130	Sudan	Government of Sudan	52.0	Singa-Gadarif Transmission line extension to Galabat, micro-industrial projects and development of livestock production and services
131	Sudan	Government of Sudan	25.0	Eldeum Sugar Project at White Nile state
132	Sudan	Government of Sudan	125.0	Mashkour Sugar Project (second tranche of US$ 150 mn)
133	Sudan	Government of Sudan	45.2	Capitalization of Interest under operative LOCs for change in terms of the existing LOCs
134	Swaziland	Government of Swaziland	20.0	IT Park
135	Swaziland	Government of Swaziland	37.9	Agricultural Development and Mechanization of Agriculture in Swaziland
136	Tanzania	Government of Tanzania	40.0	Export of tractors, pumps and equipment from India to Tanzania.
137	Tanzania	Government of Tanzania	36.6	Financing the purchase of 723 vehicles
138	Tanzania	Government of Tanzania	178.1	Water supply schemes to Dar-es-Salaam
139	Tanzania	Government of Tanzania	268.4	Extension of Lake Victoria Pipeline to Tabora, Igunga and Nzega
140	Tanzania	Government of Tanzania	92.2	Rehabilitation and improvement of water supply system in Zanzibar
141	Togo	Government of Togo	15.0	Rural Electrification Project in Togo
142	Togo	Government of Togo	13.1	Farming and cultivation of Rice, Maize and Sorghum in Togo
143	Togo	Government of Togo	30.0	Rural Electrification Project to cover 150 localities
144	Togo	Government of Togo	52.0	Setting up of 161 KV Power Transmission Line
145	Zambia	Government of Zambia	50.0	Pre-fabricated Health Posts in Zambia
146	Zambia	Government of Zambia	29.0	Itezhi-Tezhi Hydro power project
147	Zimbabwe	Government of Zimbabwe	28.6	Up-gradation of Deka Pumping Station and River Water Intake System in Zimbabwe
148	Zimbabwe	Government of Zimbabwe	87.0	Renovation/Up- gradation of Bulawayo Thermal Power Plant
149	**Africa Total**		**7502.6**	

- **Institutional LOCs**

Sr. No.	Borrower	Region	Amount of Credit (US$ mn)	Products/ Projects covered
1	AfreximBank	Pan-African Institution	30.0	General Purpose
2	Banque Ouest Africaine De Developpement (West African Development Bank)	West	10.0	General Purpose
3	Eastern and Southern African Trade and Development Bank (PTA Bank) (covering 17 countries in the eastern and southern African region)	Pan-African Institution	25.0	General purpose
4	Nigerian Exim Bank	-	20.0	General purpose
5	Indo-Zambia Bank	Southern Africa	5.0	General purpose
	Sub-Total		**90.0**	

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