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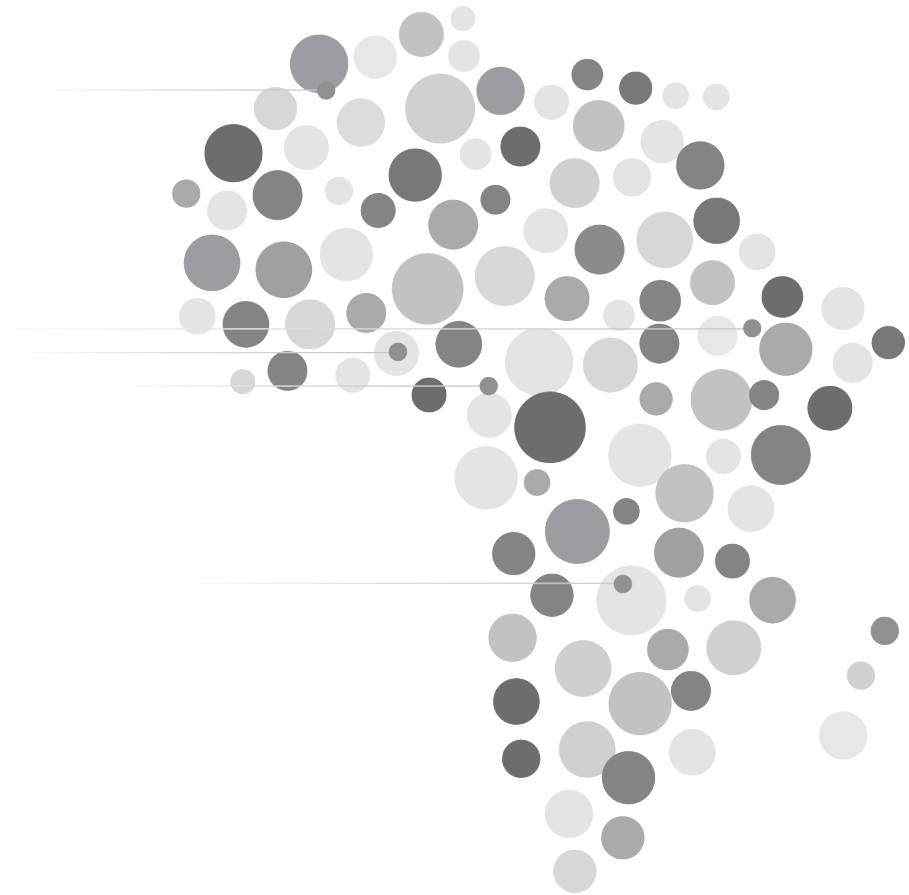

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Content

Definition of structural transformation

The Economic Commission for Africa defines structural transformation as the fundamental changes in economic and social structures that advance inclusive and sustainable development* This definition addresses three key questions:

a) What is structural transformation? It is a fundamental and multidimensional process observed in all countries reaching high levels of development;

b) How is it achieved? It requires profound economic and social transformation, such as economic diversification and technological upgrading, the creation of decent and productive employment and equitable social welfare;

c) Why does it matter? It is crucial for implementing the 2030 Agenda for Sustainable Development and Agenda 2063: The Africa We Want.

Within the core objective of accelerating structural transformation (ST), there are three inherent dimensions to be assessed: employment (E), production (P), and society (S). This speaks directly to the need to fundamentally change economic and social structures, with employment playing a key role in linking economic growth (production) and social development (society), in both directions. It is useful to keep in mind the ultimate objective of the analytical framework, namely, to achieve inclusive and sustainable development through accelerated structural transformation. Hence, structural transformation, employment, production and society for sustainable development (STEPS 4 SD) is the framework that shapes the design and implementation of the profiles (see figures I and II).

Figure I: Structural transformation, employment, production and society for sustainable development (STEPS 4 SD)

Employment	Production	Society
Labour productivity	Diversification	Demography
Decent work	Linkages	Health
Education and skills	Technology	Poverty and inequality

Within each of the three dimensions considered, there are three outcome areas that are crucial to accelerate structural transformation. With regard to production, the attention is on (supporting) diversification, (strengthening) linkages and (upgrading) technology. For employment, the focus is on (increasing) labour productivity, (promoting) decent work and (enhancing) education and skills. With respect to society, the emphasis is on (managing) demography, (improving) health and (reducing) poverty and inequality. For each outcome area, there is a set of core outcome indicators. They illustrate the results (outputs) that are expected

* The terms "structural transformation" and "structural change" are often used interchangeably. Narrow definitions are centred on the measurement of the economic gains accrued by shifting labour from lower-productivity to higher-productivity sectors, while broader definitions go beyond shifts in economic structures, such as production and employment, by also encompassing within-sector productivity improvements and changes in other aspects of society. For the purposes of the present document, the use of structural change is avoided and a broad perspective, as described by the STEPS framework, is adopted.

to be observed in order to accelerate structural transformation. These are complemented by other metrics pertaining to the relevant outcome area. Given that structural transformation is a gradual process, indicators are tracked over a long period of time: from 20 to 25 years, whenever possible. Below is a brief rationale for each outcome area.

Diversification

Economic diversification is a key feature of countries that have achieved high levels of development. Concentrated economic structures undermine structural transformation by promoting rent-seeking (in mining) and commodity traps (in agriculture). They are also typically associated with high vulnerability to price and demand shocks. Expanding the range of goods and services that are produced and exported, especially towards higher value addition, is therefore an important factor behind structural transformation.

Linkages

Deeper integration into the global economy can contribute to increased value addition and productivity growth, especially through participation in global value chains. A more interconnected economy, with strong backward and forward linkages throughout sectors and firms, can also help to overcome critical structural constraints, sustain economic gains and encourage innovation.

Technology

Technological progress is a catalyst for structural transformation. The creation, improvement, and adoption of technologies contributes to accelerating productivity growth and adding value to production processes. Technological change can be supported through the development of domestic technological capabilities and/or through the importation of foreign technologies, such as those embedded in foreign investment.

Labour productivity

Labour productivity is at the heart of structural transformation. In fact, the academic literature often measures structural transformation as the economic gains accrued by shifting labour from lower-productivity to higher-productivity sectors, also known as between-sector effects, as opposed to within-sector productivity improvements. Positive employment dynamics are therefore necessary to generate these benefits. Labour productivity not only depends on skills and health, from the worker's perspective, but also relies on existing technology and other firm-related characteristics. It is therefore central to this framework. Crucially, labour productivity improvements are necessary to enable economic (and household income) growth and thus help to raise living standards.

Decent work

Decent work entails employment opportunities that provide reasonable levels of remuneration, security and safety. Precarious work conditions, such as low pay and job insecurity, are a key obstacle to raising living standards and often undermine labour productivity. Creating

decent work opportunities is critical to engender positive structural transformation, given that economic and social structures may change in ways that do not always promote sustainable development.

Education and skills

An educated and skilled workforce is critical to accelerate structural transformation. Formal and informal education systems provide a range of skills for work and life. In particular, improved skill levels facilitate the reallocation of labour towards higher-productivity sectors. Enhancing demand-driven and work-relevant skills is key to reducing existing skill gaps and mismatches.

Demography

Demographic change can boost structural transformation through the considerable impact that it has on the economy and society. For example, changes in the age composition of the population can yield a significant demographic dividend by easing the economic burden on the working-age population. Urbanization and migration can also produce large economic benefits, although they may also entail significant costs if not adequately managed.

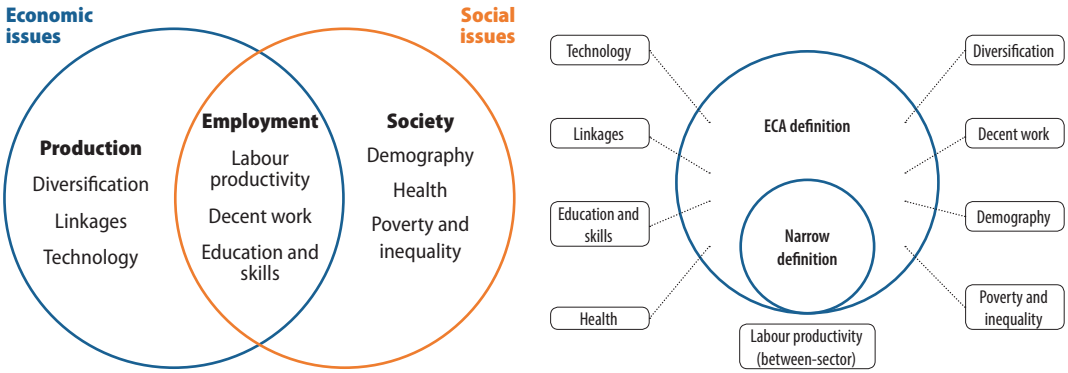
Health

A healthy workforce is central to expanding human capital and enhancing structural transformation. A high prevalence of diseases and other medical conditions undermines economic activity and labour productivity, especially through its impact on an individual's physical and emotional well-being.

Poverty and inequality

Poverty often undermines access to nutritious foods, health care, education and jobs, which, in turn, leads to malnutrition, a high disease burden, low skills and underemployment. Moreover, inequality contributes to economic, social and political instability, which curtails economic growth. Poverty and inequality can therefore prevent people from fully contributing to the transformation of economic and social structures.

Figure II: Economic and social issues relating to structural transformation



Data considerations/implications

When compiling data for the profiles, preference was given to official national sources, such as national statistics offices, central banks and government ministries. It should be noted, however, that data collected from national sources may not be comparable among countries owing to the use of different terminology, methods and classification systems. International sources were therefore used whenever national data either were not available or there was a need to contextualize the analysis with cross-country comparisons. The use of harmonized data from international sources, such as those produced by many United Nations agencies, is key to enabling consistent comparisons among countries. Whenever feasible and pertinent, data have been disaggregated by age, gender and location. Given that structural transformation is a gradual process, the analysis tracks changes over a relatively long period, usually by contrasting values or averages for the periods 1990-1999 and 2000-2009 with those for 2010 onwards.

Acknowledgements

The main objective of structural transformation, employment, production and society (STEPS) profiles is to produce country-specific data analysis and policy recommendations for structural transformation that will promote sustainable development. They are produced by the subregional offices of the Economic Commission for Africa (ECA), with input from the African Centre for Statistics, the Macroeconomic Policy Division, the Regional Integration and Trade Division, the Social Development and Policy Division, and the Special Initiatives Division.

The lead author of the Ethiopia profile was Pedro Martins of the Sub-Regional Office for Eastern Africa. The profile was prepared under the overall coordination and substantive guidance of the Deputy Executive Secretary for Knowledge Delivery of ECA, Giovanie Biha, and the direct leadership of the Officer-in-Charge of the Sub-Regional Office for Eastern Africa, Andrew Mold.

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1

Overview

Ethiopia has achieved significant economic and social progress in recent years, with improvements in average incomes, health and education. At the heart of this notable performance are a period of relative stability, macroeconomic and structural reforms, and ambitious development strategies. The Government's second Growth and Transformation Plan is predominantly focused on export-led industrial development – with agriculture playing a pivotal role – while also aiming to facilitate private sector investment in tradable modern service sectors.

Production. The economy has performed remarkably since 2004, with real gross domestic product (GDP) growing on average by 11 per cent per year. This strong economic record has been mainly driven by investment, much of which undertaken by the government and State-owned enterprises. Economic growth has been relatively broad-based (across sectors), although the economy remains dependent on agriculture. Merchandise exports rely predominantly on primary products, such as coffee, oilseeds, gold, chat, pulse and flowers, while air transport services provide vital foreign exchange. Trade in intermediate goods remains limited, as exports are mostly comprised of raw materials and imports favour capital and consumer goods. However, Ethiopia appears to be gradually integrating into global value chains. A growing focus on textile and garment and leather and leather products industries can potentially boost export earnings and generate knowledge spillovers. The country has recently received large amounts of foreign investment – averaging nearly $3 billion per year during the period 2014-2016 – which can help to increase the technological content of manufactured goods and exports. Affordable electricity may facilitate the expansion of energy-intensive manufacturing, but the country's energy-efficiency of production processes remains low.

Employment. Labour productivity has been increasing, but it is particularly low in agriculture and manufacturing. The large productivity gaps observed across sectors underscore the potential gains that can be accrued by reallocating productive resources. Despite limited changes in the composition of employment, labour shifts from agriculture to construction and services have provided a significant boost to the country's economic performance. However, most workers remain in either own-account or contributing-family

employment. Underemployment levels are high, with many workers willing to work additional hours. Low wages make Ethiopia a competitive location for labour-intensive manufacturing, but it also reduces the scope for labour income to improve living standards. Unemployment among young people in urban areas is high, at 27 per cent, especially among those with a secondary education. Creating decent productive jobs is key to tackling underemployment and unemployment. The basic skills of young people have improved markedly, with literacy rates rising sharply. Enrolments in secondary education and technical and vocational education and training programmes increased in the 2000s, but they have recently slowed. Although educational attainment and skill levels remain low, they have improved in recent years.

Society. Total fertility has declined steadily, which has contributed to slower population growth. As a result, the child dependency ratio is also falling. Those demographic trends can generate a sizeable demographic dividend provided that the economy is able to create good jobs for young people. Growing urbanization can catalyse structural transformation, although urban investment is required to manage population pressures. Stunting has declined significantly – from 67 per cent in 1992 to 38 per cent in 2016 – but it remains high. Life expectancy is rising, owing to improvements in health care and nutrition. However, the disease burden is increasing, with non-communicable diseases growing in importance. Income poverty has declined considerably, suggesting that economic growth has been inclusive. Nonetheless, non-income improvements have been modest. Income inequality remains low, although significant rural-urban disparities persist. Group-based inequalities are high, especially those pertaining to gender and location.

Overall, Ethiopia is making some progress in engendering structural transformation. Recent improvements in labour productivity, education, and health are promising. However, several challenges remain, such as the need to create decent employment opportunities, add value to production processes, build resilience to climate change and secure social and political stability.

2

Context

Ethiopia is a landlocked country in the Horn of Africa bordering Eritrea, Djibouti, Kenya, Somalia, South Sudan, and the Sudan. The country has a long and rich history, which has contributed to its ethnic, linguistic, and cultural diversity. It has the second largest population in the continent, of more than 100 million inhabitants, most of whom live in rural areas. Ethiopia is the eighth largest economy in Africa, behind oil-rich Angola and the Sudan, but ahead of Kenya. Although per capita incomes remain low, its population size and geographic location yield significant economic and geopolitical value.

Structural transformation is unlikely to take place in a climate of political and economic instability. Armed conflicts and severe droughts destabilized the country from the mid-1970s up to the early 2000s (figure 1).[1] Ethiopia has achieved substantial economic and social progress since then, with considerable improvements in average incomes, health and education. At the heart of this notable performance are a period of relative stability, macroeconomic and structural reforms, and ambitious development strategies. Nonetheless, it is important to manage existing risks, such as climate change and social instability, to sustain those hard-won gains.

The broad development vision of Ethiopia was set out in the mid-1990s through the Agricultural Development-Led Industrialisation strategy, which places agriculture at the centre of the industrialization process. The 2003 Industrial Development Strategy is based on this strategy, and can be defined as a State-driven industrialization policy focused on creating strong linkages between agriculture and industry, with a special emphasis on export-oriented and labour-intensive sectors (Oqubay, 2015). Those long-term strategies have been implemented through multi-year development plans. The Sustainable Development and Poverty Reduction Program 2002/03-2004/05 and the Plan for Accelerated and Sustained Development to End Poverty 2005/06-2009/10 were developed in the context of the Poverty Reduction Strategy process. The Sustainable Development and Poverty Reduction Program had placed a strong emphasis on

1 These included a protracted civil war (1974-1991), the Eritrean-Ethiopian war (1998-2000), and frequent droughts and famines, such as those that occurred during the period 1983-1985 and 2002-2003.

Figure 1: Economic growth and key events

Sources: National Bank of Ethiopia (2017a); (2018).

smallholder agriculture and rural development, while the Plan for Accelerated and Sustained Development to End Poverty had added the commercialization of agriculture as a new thrust and widened the scope to industry and urban areas. Building on the latter strategy, the first Growth and Transformation Plan 2010/11-2014/15 placed growth and economic transformation at the centre of development policy. One of its key objectives was to achieve an average annual growth rate of 11 per cent. While this target was mostly achieved, there was limited structural transformation over the period of the Plan. Cognisant of this, the second Growth and Transformation Plan 2015/16-2019/20 is aimed at achieving rapid, inclusive and sustainable economic growth, while developing productive capacities in agriculture and light manufacturing, with a view to accelerate structural transformation. Key sectors are textiles and garments, leather and leather products, and agro-processing. The overarching ambition is to reach middle-income status by 2025 and become the largest manufacturing hub in Africa.

A sound macroeconomic policy framework provides a solid foundation for accelerating structural transformation. The Government of Ethiopia has adopted prudent macroeconomic policies, with an emphasis on public investment, low inflation and a stable exchange rate. This policy strategy has supported economic growth and secured macroeconomic stability, notwithstanding the country's vulnerability to external shocks – both economic and environmental. The main priority of fiscal policy has been to scale up investment in economic and social infrastructure, such as transport, energy, health, and education.[2] The general government fiscal deficit has been kept low – usually around 2-3 per cent of GDP – partly by curbing recurrent expenditure and increasing government revenue.[3] Nonetheless, the tax-to-GDP ratio remains one of the lowest in Africa, at 13 per cent. While Ethiopia benefited

2 Public infrastructure investment has been financed by an unconventional policy mix comprising low nominal interest rates, rationed allocation of credit and foreign exchange, and an exchange rate that favours (capital) imports, in addition to restrained government consumption and reliable external financing (Moller and Wacker, 2017; World Bank, 2016a, pp 6-7).

3 The general government accounts do not include public enterprises.

from debt relief initiatives in the mid-2000s, total public and publicly guaranteed debt stock has been gradually rising since then – to date, it is above 50 per cent of GDP, half of which is external debt. A significant proportion of this debt stock is held by public enterprises, which make large investments to close the country's infrastructure gap. Given the need to mobilize additional resources to finance its investment-driven growth strategy, the Government is pursuing alternative sources of finance, including public-private partnerships (PPPs) and the issuance of international sovereign bonds, in addition to continued efforts to expand the tax base and improve tax administration.

The central bank has recently pursued a tight monetary policy – with reserve money acting as the nominal anchor for monetary policy – which has helped contain inflation. Consumer price inflation tends to be in single digits, although it has occasionally risen sharply, such as in 2008 and 2011, mainly driven by international food prices and droughts (Durevall and others, 2013; Geiger and Goh, 2012, p.7). Credit to the private sector remains relatively subdued, as credit allocation tends to favour public investment (World Bank 2015b, pp. 4-6). Domestic savings have increased to 22 per cent of GDP, on account of considerable bank branch expansion (World Bank, 2016b, p. 83). The central bank also strives to maintain the stability of the currency and stem macroeconomic volatility. The Ethiopian birr has been gradually depreciating against the United States dollar, although there have been sporadic sharper adjustments, such as in 2010 and 2017. The current account balance has deteriorated since the early 2000s, mostly because of growing merchandise trade imbalances, as imports far outpace exports. Import growth has been partly driven by public infrastructure projects, while relatively low international commodity prices have subdued export growth. Ethiopia has typically received significant inflows of foreign aid, workers' remittances, and (increasingly) foreign direct investment (FDI).[4] Those inflows have helped alleviate the balance of payments constraint. International reserves tend to be low – at approximately two months of import cover – given the willingness to use foreign exchange to support infrastructure projects.[5]

A favourable investment climate, rule of law, and good institutions also play an important role in facilitating structural transformation. There is significant scope to further improve the investment climate in Ethiopia. The country performs relatively well on enforcing contracts and resolving insolvency, but rather poorly on starting a business, getting credit, and protecting minority investors (World Bank, 2018). Firms report that the largest business environment obstacle they face is access to finance (40 per cent of respondents), while the second largest obstacle (electricity) lags significantly behind.[6] On governance issues, Ethiopia fares relatively well on rule of law, control of corruption, and government effectiveness when compared to its African peers, but compares less favourably on political stability, voice and accountability,

4 During the period 2014-2016, inflows of personal remittances averaged $1.2 billion per year, FDI $2.8 billion, and (net) official development assistance $3.5 billion (World Bank, 2017).

5 The allocation of foreign exchange is regulated by the central bank and prioritized for certain sectors and uses.

6 In fact, concerns about access to finance have been growing through time – from 19 per cent in 2006, to 33 per cent in 2011 and 40 per cent in 2015 (World Bank, 2016a).

and regulatory quality.[7] Civil unrest in the Oromia and Amhara regions in 2015–2016 led to a state of emergency and created some economic uncertainty. Securing social and political stability, while strengthening domestic institutions, is crucial to sustain economic growth and transformation.

Environmental sustainability is critical to guarantee that economic and social transformations can be sustained over a long period of time. The country's population and economy remain considerably dependent on rain-fed agriculture.[8] The country is prone to climatic shocks, such as droughts and floods, which directly affect the livelihoods of the population and contribute to food insecurity. Meanwhile, climate change is likely to produce more frequent and extreme climate events. The growing population also places pressures on resources, such as land and water, thus making natural resource management a key priority. The Government has established a large rural safety net programme based on cash and food transfers in return for engaging in public works, such as water management and landscape restoration, to improve resilience in rural areas. The Government has also made a strong commitment to renewable (and clean) energy, taking advantage of the country's significant hydropower and wind power potential. Among the most significant investments are the 6,450 MW Grand Ethiopian Renaissance Dam and the Adama and Ashegoda wind farms. Solar and geothermal energy is also being explored, albeit to a lesser extent. Those efforts are aimed at improving the provision of electricity, namely capacity and reliability, boosting energy exports and reducing production costs, with energy-intensive export industries in mind.

Even though Ethiopia is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Intergovernmental Authority on Development (IGAD), its economy is only weakly integrated into the regional economy. In fact, it ranks quite poorly with regard to free movement of people, financial integration, and trade integration.[9] However, recently efforts have been to integrate the country into regional infrastructure networks. Several dams and hydropower plants have been constructed since the early 2000s, which enable the country to export power to the region. The economy relies heavily on Djibouti, as most of its international trade is channelled through the Port of Djibouti. A 750-km railway linking Addis Ababa and Djibouti City was recently built – with plans to connect to Kenya, South Sudan, and the Sudan – as well as a water pipeline to provide safe drinking water to Djibouti. The strategic development of Ethiopian Airlines, one of the largest African airlines, has made the country a major player in regional air transport and provides considerable foreign exchange.[10] The expansion of Bole International Airport is intended to strengthen the position of Addis Ababa as a regional hub for meetings and transit to other destinations. Promoting regional security and stability is key for the country's development prospects, as many neighbouring

7 See Worldwide Governance Indicators for 2016 (available at http://info.worldbank.org/governance/wgi/index.aspx#home).
8 Less than 1 per cent of total agricultural land is irrigated.
9 See Africa regional integration index (available at https://www.integrate-africa.org/).
10 However, foreign exchange earnings are mitigated by operating costs, such as fuel imports and the servicing of foreign debt.

countries have been affected by conflict. Ethiopia is home to more than 840,000 refugees, mainly originating from Eritrea, Somalia and South Sudan, making it the second largest host of refugees in Africa and fifth largest in the world.

3

Production

3.1 Diversification

The sectoral composition of production is gradually changing. Agriculture remains a key economic sector – in terms of gross value added – while commerce and construction are growing in importance (figure 2).[11] Agricultural performance has improved since the mid-2000s, with crops, especially cereals, accounting for most of the growth. This was supported by the expansion of cultivated area and rising yields (Bachewe and others, 2017). However, agricultural growth has lagged far behind the overall average, owing to the predominance of traditional farming practices, such as rain-fed cultivation and limited use of fertilizer, and small fragmented landholdings. A reliable supply of good quality inputs, such as cotton, hides, and skins, is critical for the development of the textile and garment industry and leather and leather products. The mining sector is very small, but could be boosted by the exploration of potash, tantalum, and lithium in the near future. Construction has grown rapidly in recent years, owing to large public investment in infrastructure and residential and commercial construction activity (figure 3). The cement industry has benefited from the construction boom, with support from the government in the form of favourable electricity tariffs, affordable financing, and access to land and quarries. Growth in manufacturing has also been strong. Food and beverages still dominate the sector, although non-metallic mineral products (mainly cement), chemicals and chemical products, and leather and leather products have grown significantly in recent years. Nonetheless, it has been difficult to increase the weight of manufacturing in the economy, owing to its low starting point. The recent opening of large industrial parks and efforts to attract FDI for the sector are likely to support the expansion of the sector in the medium term (see the box on industrial parks). The role of medium and large firms has increased substantially, currently accounting for 80 per cent of manufacturing. Services account for a growing share in total output. Commerce has been a key driver of economic growth, especially because of the performance of wholesale and retail trade.[12] Transport

11 Commerce comprises wholesale and retail trade (section G in ISIC rev.3) and hotels and restaurants (section H). "Other services" includes real estate and business activities (section K), other service activities (section O), and activities of private households (section P).

12 Agriculture and commerce jointly accounted for about half of the economic expansion recorded between 2004 and 2016.

and communications and financial intermediation remain comparatively small. Real estate, part of "other services", was growing strongly until 2011. In summary, while the structure of production is becoming more diversified, to sustain rapid economic growth, deeper economic transformation, underpinned by the modernization of the agricultural sector and a sizeable expansion of manufacturing and modern services are needed (UNIDO, 2015).

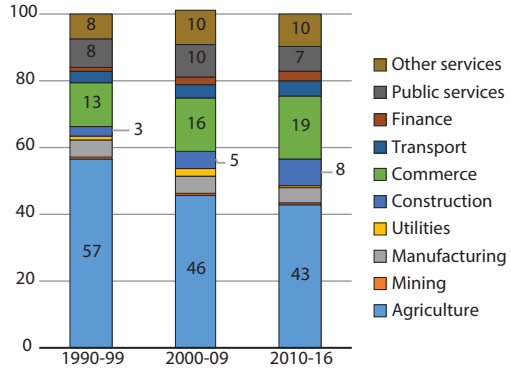
Economic growth has been mainly driven by investment, which has contributed to a large import bill. The share of total investment in GDP has increased remarkably (figure 4). This increase is comparable to the trends observed in China and the Republic of Korea between the early 1960s and the early 1990s, and in Viet Nam from about 1990 to 2007. Most of the new investment have been made by the public sector, including State-owned enterprises, and foreign investors (more recently). However, lack of access to credit and foreign exchange, and the enduring business constraints, have hindered the development of the domestic private sector.[13] This investment-push has contributed to a large import bill by boosting the imports of capital goods and services, especially those relating to the industrial and transport sectors. Imports of petroleum products have declined in recent years, owing to lower international oil prices, but the declines have been offset by higher food imports because of drought. Meanwhile, the country's export performance has been relatively weak because of low commodity prices and the slower economic growth of its main trading partners (figure 5).[14] Those trade trends have contributed to a large trade imbalance, which has put some pressure on the currency. Recent efforts to diversify the export base and promote higher-value-added exports may generate additional export earnings and reduce their volatility.

Merchandise exports continue to rely on primary (agricultural) products. Major exports are coffee, oilseeds, gold, chat (an herbal stimulant), pulses and flowers, which collectively account for 80 per cent of total merchandise exports (figure 6). In fact, Ethiopia ranks in the top 10 of world exporters of coffee, cut flowers, sesame seeds and chat. The share of leather and leather products declined considerably in the 2000s, but has been improving since 2010, while textiles and textile products are growing from a low base. Ethiopia has benefited only nominally from trade preferences schemes, such as the African Growth and Opportunity Act initiated by the United States of America and the Everything But Arms initiative of the European Union because of productive capacity constraints, such as lack of adequate inputs and non-tariff barriers, such as rules of origin. Overall, there have been limited changes in the composition of merchandise exports, especially towards high value-added exports. The weight of coffee, leather, and chat have declined considerably, which has been compensated by gold, flowers, live animals, and pulses. The country's export diversification index has remained broadly unchanged over the past two decades.[15] Regarding imports, petroleum products, machinery and aircraft, metal and metal products, road motor vehicles, and electrical

13 Lack of access to capital impacts negatively on firm-level investment – especially for small firms (Lashitew, 2017).
14 Exports of goods and services fell from 17 to 8 per cent of GDP between 2011 and 2016.
15 United Nations Conference on Trade and Development, UNCTADStat. Available at http://unctadstat.unctad.org/EN/ (accessed 16 March 2018).

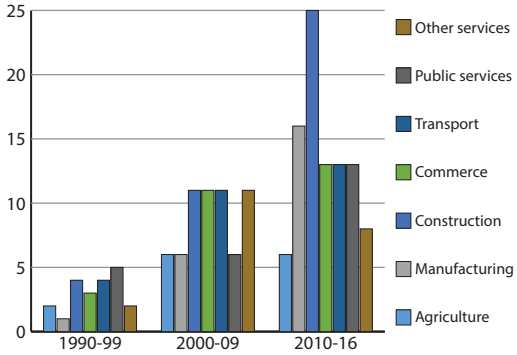
materials account for more than 50 per cent of total merchandise imports (figure 7). This trade structure, which is based on primary exports and capital imports, contributes to large merchandise trade imbalances, which are likely to persist in the medium term. Export market diversification is also key to reducing external vulnerability. China is the largest trading partner of Ethiopia, accounting for 12 per cent of exports and about one third of imports. Despite being a non-free trade agreement member of COMESA, trade flows with the block remain relatively small.[16] With regard to trade in services, exports are largely dominated by transport services, mostly because of the activities of Ethiopian Airlines (UNCTAD, 2017). Transport services are a major export earner, accounting for about 33 per cent of total export receipts. Nonetheless, service imports – mainly related to infrastructure projects and transport services – are also sizeable.

Figure 2: Composition of gross value added (%)



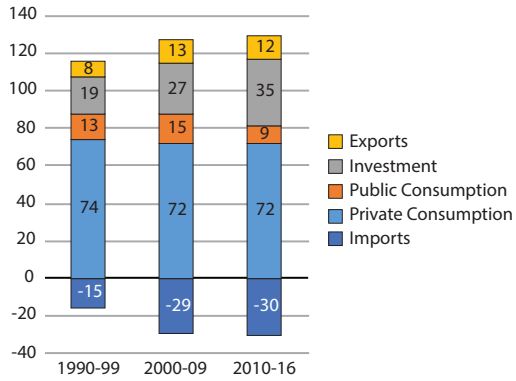
Source: National Bank of Ethiopia (2017a).

Figure 3: Sectoral growth, main sectors (%, average)



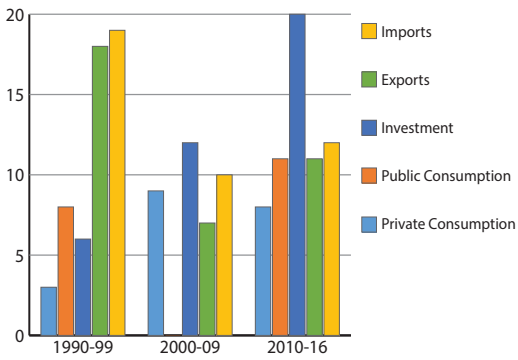
Source: National Bank of Ethiopia (2017a).

Figure 4: Composition of gross domestic product (%)



Source: National Bank of Ethiopia (2017a).

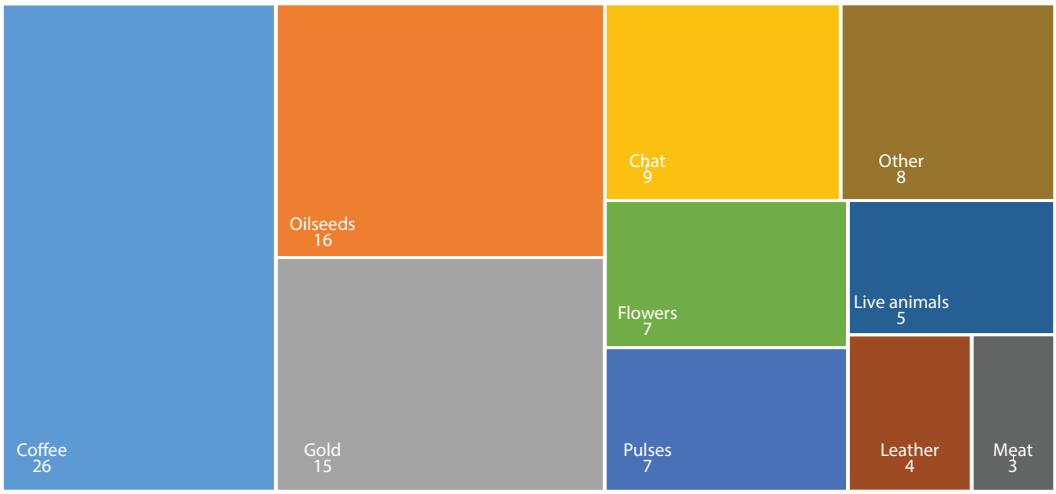
Figure 5: Expenditure growth (%, avg.)



Source: National Bank of Ethiopia (2017a).

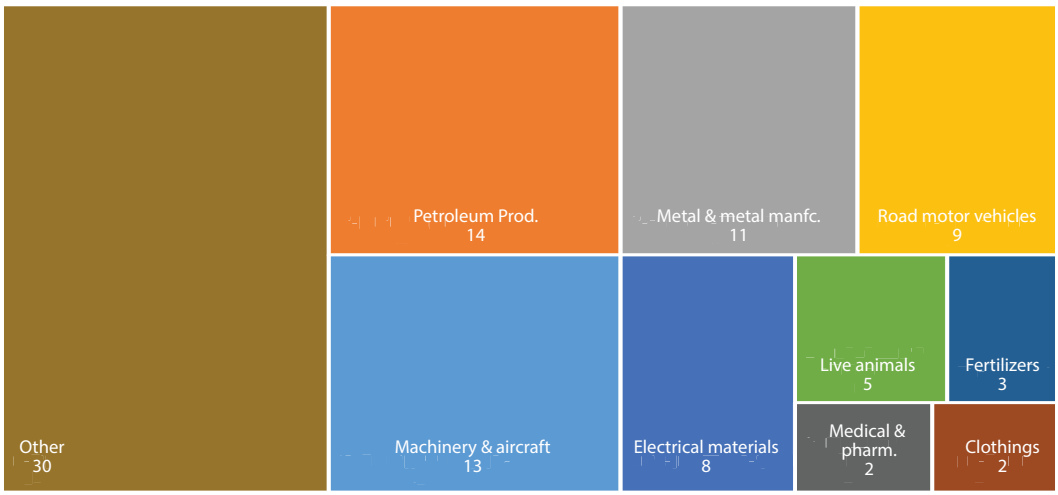
16 Between 2004 and 2016, only 8 per cent of the country's exports went to COMESA member States, while just 4 per cent of imports originated from the block. See http://unctadstat.unctad.org/EN/.

Figure 6: Merchandise exports (2010–2016, %)



Source: National Bank of Ethiopia (2017a).

Figure 7: Merchandise imports (2010–2016, %)



Source: National Bank of Ethiopia (2017a).

3.2 Linkages

Merchandise trade in intermediate goods remains comparatively low. The share of intermediate, semi-finished, goods in total exports is low – even by African standards – partly because raw materials still account for most merchandise exports (figure 8).[17] Hence, Ethiopia is predominantly a source of inputs for other countries' exports – a supplier of raw materials – rather than a production hub. Moreover, the import share of intermediate goods has been

17 The growth in consumer goods exports can mainly be attributed to cut flowers. Products can be grouped into four categories according to the stage of processing and end use: primary (raw materials); intermediate; consumer; and capital.

Industrial parks

The recent development of industrial parks is intended to transform Ethiopia into a major manufacturing hub in Africa. The industrial parks are focused on export-oriented labour-intensive sectors, such as textiles and garments, leather and leather products, agro-processing, and pharmaceuticals, and have the following objectives: foreign exchange generation; technology and knowledge transfer; and employment creation. Domestic and foreign firms share those parks with a view to maximizing linkages and creating synergies. To attract large foreign investors, the industrial parks are strategically located near good transport infrastructure and universities and provide easy access to utilities, such as electricity, water, telecommunications, and waste treatment, and other services, such as security and customs facilitation. In addition, investors benefit from generous fiscal incentives, such as exemptions from income tax and import duties, and favourable land leases. Several industrial parks have been opened in the past few years, and have already attracted well-known companies, such as H&M and PVH – owner of the Calvin Klein and Tommy Hilfiger brands. The flagship Hawassa Industrial Park is a 300-hectare industrial park, which is focused on textile and garment production and is expected to create about 60,000 jobs when fully operational. The park has state-of-the-art infrastructure and facilities, which will be mostly powered by renewable energy, making it the first sustainable textile and apparel industrial park in Africa. The industrial park will closely collaborate with the Hawassa University and benefit from the extension of the Addis-Adama expressway, the Addis-Modjo-Djibouti railway, and a new domestic airport in Hawassa. The Government is aiming to open a dozen industrial parks spread across the country, including in Adama, Dire Dawa, Mekelle and Kombolcha. It is hoped that the industrial parks will support the achievement of the Growth and Transformation Plan II targets on manufacturing production (8 per cent of GDP) and exports (26 per cent of total merchandise exports) by 2020.

stable (figure 9). The limited contribution to intermediate production processes undermines the country's ability to capture significant value added and foreign exchange earnings. The development and strengthening of regional value chains, which remain poorly exploited, could boost the country's trade in intermediate goods (ECA, 2015).[18]

Ethiopia has gradually deepened its integration into global value chains. The estimated share of foreign value added embedded in exports has been increasing (figure 10).[19] This growing import content of exports implies stronger backward integration in global value chains, even if it remains comparatively lower than its main regional peers. The increasing presence of foreign firms may explain this trend, as they are more likely than domestic firms to purchase foreign inputs for exports. Forward integration into global value chains is much higher than backward integration, given the considerable weight of raw materials in total exports. While deeper integration in global value chains is usually a good development, it is also important to enhance domestic value addition. The proportion of locally-purchased inputs by foreign firms is relatively low, at 17 per cent of total purchased inputs, about half the level prevalent in Kenya. While there are no significant local content requirements, such as the use of local labour or raw materials, the Government has introduced high export taxes on selected raw and semi-processed products to incentivize local processing, such as a 150 per cent tax on hides and skins, created industrial zones to facilitate linkages between foreign firms and local manufacturers, such as those that manufacture leather tanning and footwear, and established

18 This can be achieved through deeper regional integration, such as by developing regional clusters.
19 This is the value of imported goods and services that are used to produce goods for export.

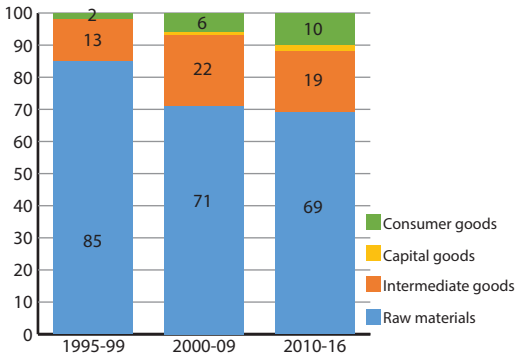
institutions to support domestic processing through training, research and standard-setting, such as the leather and the textile industry development institutes (Amendolagine and others, 2013). Moreover, Ethiopia has mitigated the disadvantages of being landlocked through investment in transport infrastructure and logistical services, such as air transport, which has facilitated exports of cut flowers.

Emerging products can generate significant spillovers and accelerate structural transformation. The main products exported are outside the denser parts of the "product space" (figure 11).[20] Coffee, oilseeds, and cut flowers have few connections with other products, and are thus unlikely to generate productive synergies, such as knowledge spillovers. Nonetheless, there have been some improvements, with a growing number of products with "revealed" comparative advantage and from sectors that are considered sophisticated.[21] Some emerging products are located near the denser network clusters, which facilitates the production of several other products that require capabilities similar to those already acquired. In particular, there is an increasing presence in light (labour-intensive) manufacturing, such as apparel and leather products. Ethiopia should take advantage of the close linkages in those clusters to generate positive spillovers. For instance, modernization of the agricultural sector can support industrialization through the reliable provision of good quality inputs to manufacturing processes and by generating greater demand for manufactured goods. Diversifying into more complex products and enhancing the sophistication of productive capabilities is key to substantially accelerate structural transformation. While there has been some progress, several challenges remain. For instance, exports of textiles and garments ($98 million) and leather and leather products ($132 million) fell considerably short of the ambitious Growth and Transformation Plan I targets – $1 billion and $500 million, respectively. This can mainly be attributed to investment delays, difficulties in procuring inputs (quantity and quality of cotton and hides), low productive capacities (including skills shortages), and power supply problems (outages and fluctuation). The Growth and Transformation Plan II is intended to tackle those issues.

20 "Product space" is a network representation displaying the levels of relatedness between products traded – in terms of the capabilities (productive knowledge) required to produce them. It is often used to inform or predict the evolution of a country's export structure by identifying promising products already produced and exported competitively in world markets.

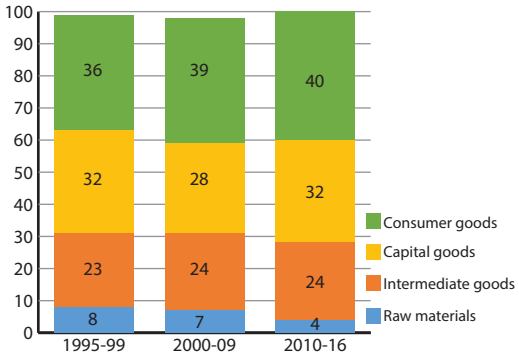
21 "Revealed" comparative advantage indicates that a country is exporting a product above its "fair" (expected) world export share. Only products with "revealed" comparative advantage (RCA > 1) are shown in the figures.

Figure 8: Merchandise exports by end use (%)



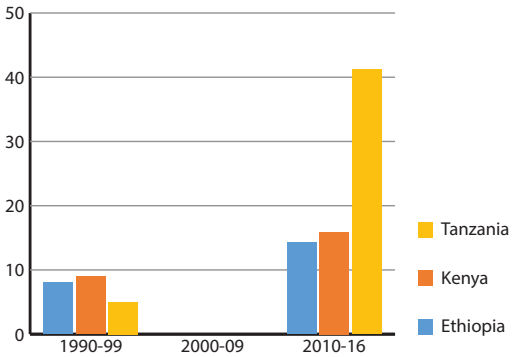
Source: United Nations Statistics Division, United Nations Comtrade Database. Accessed via World Integrated Trade Solution (WITS). Available at https://wits.worldbank.org (accessed 16 April 2018). UNSD (2017a).

Figure 9: Merchandise imports by end use (%)



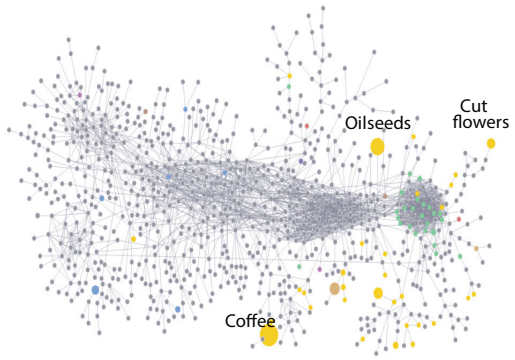
Source: United Nations Statistics Division, United Nations Comtrade Database. Accessed via World Integrated Trade Solution (WITS). Available at https://wits.worldbank.org (accessed 16 April 2018).

Figure 10: Foreign value added (% exports)



Sources: ECA (2015); AfDB and others (2014).

Figure 11: Product space (exports, 2016)



Note: Node size represent export values.
Source: Hausmann and others (2017).

3.3 Technology

Ethiopia has attracted significant foreign investment in recent years, which can lead to technology spillovers. FDI inflows averaged approximately $3 billion per year in the period 2014–2016, and are trending higher.[22] This makes Ethiopia one of the top FDI destinations in Africa. The majority of FDI inflows have been earmarked to manufacturing, with China, India, and Turkey growing in importance as the source countries (figure 12).[23] In fact, Ethiopia has become a key recipient of FDI in textiles and garments. This is a result of the Government's

22 Foreign direct investment inflows surpassed $4 billion in 2016/17 (National Bank of Ethiopia, 2018).
23 Official sources do not provide a sectoral breakdown for FDI. While data from the Financial Times (fDiMarkets) only captures investments that are publicly reported, such as in newspapers, it still provides valuable insights on the structure of FDI.

focus on export-oriented FDI in the manufacturing sector with a view to overcoming low domestic productive capacities through technology assimilation, improved managerial capacities and job creation. Improvements in the legal framework, institutional capacities, such as through the Ethiopian Investment Commission, and infrastructure, including industrial parks, have played a key role. To attract foreign firms, governments usually offer generous concessions, such as tax holidays and import duty exemptions, in addition to undertaking associated infrastructural costs, such as the recent construction of industrial parks. Hence, it is crucial to ensure that those investments bring significant benefits in terms of technology and knowledge transfer, job creation and demand for domestic inputs.[24] The main objectives of the Science, Technology and Innovation (STI) Policy of 2012 were to promote research geared towards technology learning and adaptation, and to develop, promote and commercialize useful indigenous knowledge and technologies.[25] Research and development expenditure has increased in recent years, although it remains very low in per capita terms. The proportion of manufacturing firms that are engaged in innovation activities, such as in-house research and development or training, is considerably lower than in Kenya and the United Republic of Tanzania.[26]

The technological content of manufactures is growing, even though it remains low. The share of medium- and high-technology manufacturing value added in total manufacturing value added has steadily increased in Ethiopia, while it has declined in Kenya and the United Republic of Tanzania (figure 13).[27] Nonetheless, the country's manufacturing sector is still considerably smaller than that of those two countries – in absolute value and per capita terms. More than 80 per cent of manufactures are either natural resource-based, such as prepared foods and beverages, or low-technology, such as textiles, clothing, footwear, and leather manufactures. While the overall technological level of production remains low by international standards, the recent trend is promising. The technological sophistication of manufactured exports has not increased since 2011, partly because of the strong performance of resource-based manufactures since 2011 (figure 14).[28] The increasing presence of foreign firms in the manufacturing sector may contribute to greater incorporation of technology in manufactured exports – on account of imported technology.

24 There is some evidence of technology transfer. In Ethiopia, the entry of a large greenfield FDI plant in a district is estimated to increase the total factor productivity of domestic plants by 8 per cent (Abebe and others, 2018).

25 ECA (2016) advocates tapping into the African diaspora for skills and resources to stimulate science, technology and innovation.

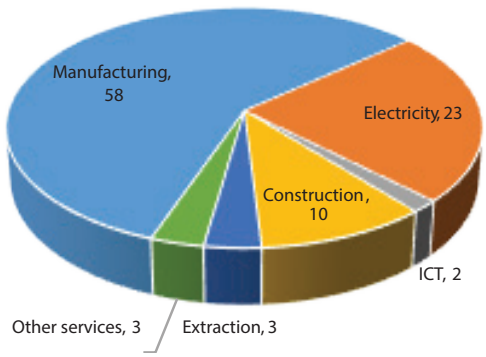
26 United Nations Educational, Scientific and Cultural Organization, UIS.Stat. Available at http://data.uis.unesco.org (access 16 April 2018).

27 The United Nations Industrial Development Organization classifies manufacturing industries into three technology groups, based on the International Standard Industrial Classification (UNIDO, 2015, p.216): low technology (food and beverages, tobacco, textiles, wearing apparel, wood products, paper, printing and publishing, and furniture); medium technology (coke and refined petroleum, rubber and plastic, non-metallic minerals, basic metals, and fabricated metals); high technology (chemicals, machinery and equipment, electrical machinery and apparatus, precision instruments, and motor vehicles).

28 The United Nations Conference on Trade and Development classifies manufactured goods by degree of manufacturing (factor intensity), based on the Standard International Trade Classification: labour and resource intensive, low-skill and low-technology intensive; medium-skill and medium-technology intensive, and high-skill and high-technology intensive.

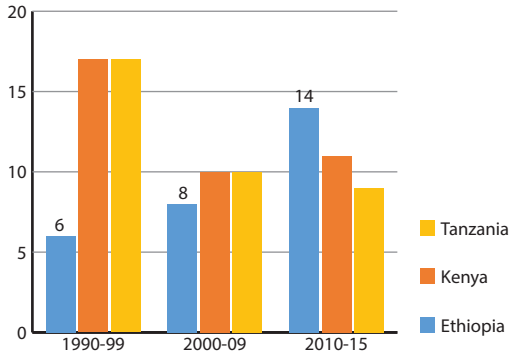
The energy intensity of production is very high, but has been declining rapidly. High levels of energy intensity often indicate low energy efficiency of production processes.[29] Overall energy intensity of Ethiopia is one of the highest in the world: the amount of energy used per unit of GDP is about 15 megajoules, compared with the average for African countries of 6 megajoules (IEA and World Bank 2017, pp. 118-120). The rate has declined sharply since 2003, coinciding with accelerated growth of the economy, but in that regard, industry has been on a slower downward trajectory (Figure 15). The provision of affordable and reliable energy can support energy-intensive manufacturing, but increasing energy efficiency is also crucial. Energy use per capita has increased steadily, with most of the demand coming from the residential sector (more than 80 per cent) and transport (about 10 per cent). Industrialization and urbanization are likely to increase pressure on the environment and natural resource sustainability. In fact, carbon dioxide (CO2) emissions have increased at a more rapid rate in recent years, owing to cement manufacturing, which is both energy- and emission-intensive. Recent investment in renewable energy sources, such as to feed the electrified rail network, and a focus on domestic biofuels may help curtail CO2 emissions. Overall, enhancing energy efficiency would improve energy security and reduce CO2 emissions, while adopting green technologies could also increase natural resource productivity and thus ensure the sustainability of production processes.

Figure 12: Foreign direct investment by sector (2010-2016, %)



Source: Financial Times, fDi Markets project database. Available at www.fdimarkets.com (accessed 16 March 2018).
(2017).

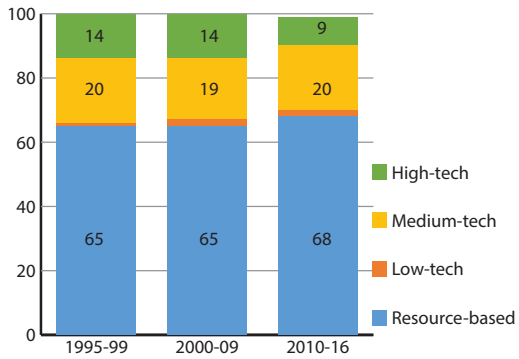
Figure 13: Medium- and high-tech in manufacturing value added (%)



Source: United Nations Industrial Development Organization Industrial Statistics Database: INDSTAT2. United Nations Industrial Development Organization. Available at http://stat.unido.org (accessed 18 March 2018).

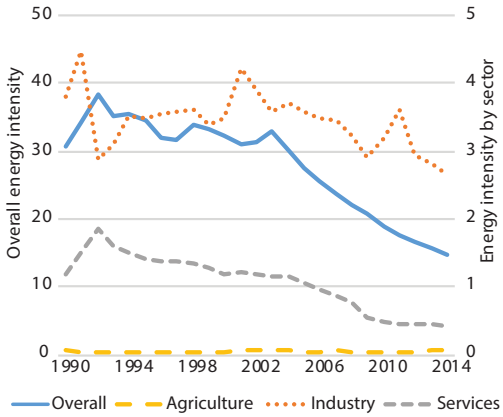
29 Energy intensity is only a proxy for energy efficiency, as it can be affected by factors not directly linked to efficiency, such as climate and economic structure. In fact, the cost of energy in Ethiopia is one of the lowest in Africa, which stimulates consumption and thus affects energy intensity.

Figure 14: Manufactured exports by technology (%)



Source: United Nations Conference on Trade and Development, UNCTADStat. Available at http://unctadstat.unctad.org/EN/ (accessed 16 March 2018).

Figure 15: Energy intensity (MJ/Unit of GDP)



Note: MJ megajoules and GDP in constant 2011 US$ purchasing power parity.
Source: IEA and World Bank (2017).

3.4 Summary

The structure of production is changing gradually, with commerce and construction growing in importance. Economic growth has been mainly driven by investment, much of which is made by the Government and State-owned enterprises. Merchandise exports continue to rely on primary products, such as coffee, oilseeds, gold, chat, pulses and flowers, while air transport services provide vital foreign exchange. Trade in intermediate goods remains limited, as imports favour capital and consumer goods, while exports are mostly composed of raw materials. However, Ethiopia appears to be gradually integrating into global value chains. A growing focus on textile and garment and leather and leather products industries has the potential to boost export earnings and generate knowledge spillovers that accelerate structural transformation. The technological content of manufactured goods is increasing, but for manufactured exports, it is not. In addition to investment in research and development, improving education and skill levels is essential to promote technological upgrading. The energy intensity of production processes remains high, suggesting that energy efficiency is low.

4

Employment

4.1 Labour productivity

There have been limited changes in the structure of employment in Ethiopia. Most of the workforce is concentrated in the agricultural sector, with limited job opportunities available outside the sector. The share of employment in agriculture has declined recently, albeit not considerably (figure 16).[30] Construction and "other services" absorbed most of this change, although agriculture, commerce, and manufacturing remain the largest employers in the country. Women are more likely to be employed in commerce and manufacturing than men.[31] The pace of structural transformation is intrinsically related to the speed at which production resources (especially labour) are reallocated towards more productive uses.[32] Accordingly, it is crucial to stimulate employment generation in the most dynamic sectors of the economy. Between 2005 and 2013, total employment increased by approximately 8 million, with agriculture alone accounting for two-thirds of that increase.[33]

Agriculture and manufacturing are characterized by low productivity levels, despite recent improvements. Labour productivity in agriculture and manufacturing is considerably lower than in other sectors – as measured by gross value added per worker (figure 17). While agriculture is typically the least productive sector, the manufacturing sector of Ethiopia is very heterogeneous.[34] It comprises many low-productivity micro-small enterprises and a few high-productivity medium-large firms.[35] Extensive improvements in labour productivity were recorded in commerce, construction, and manufacturing during

30 The figure for 2013 differs from official statistics (73 per cent) because of adjustments pertaining to the definition of work – see Martins (2018). Nonetheless, the conclusions of this section do not change in a significant way.

31 The proportion of women working in commerce (10 per cent) and manufacturing (7 per cent) is significantly higher than for men (5 and 3 per cent, respectively). A higher share of men work in agriculture (81 per cent), compared to women (73 per cent).

32 This is the narrow definition of structural transformation.

33 Employment growth tends to track population growth quite closely because of the nature of the labour market. Hence, large rises in the rural labour supply may partly account for low labour productivity in agriculture.

34 See Gollin and others (2014) on agricultural productivity.

35 Net job creation by small firms and large firms is similar in the medium term – with small firms associated with higher turnover, low productivity, and lower wages (Page and Söderbom, 2015).

the period 2005-2013 – above 7 per cent per year – because output growth far outpaced employment growth. Labour productivity gaps across sectors remain very large. For instance, finance, transport, and utilities are between 9 to 13 times more productive than agriculture. Those large gaps illustrate the potential gains and scope for the reallocation of labour, especially for boosting aggregate productivity and sustaining economic growth. Nonetheless, sectors that are highly productive may not be able to absorb large numbers of workers if they are capital intensive, such as mining and utilities. In fact, a key challenge is to absorb new workers while sustaining productivity growth at the sector level.[36] In principle, labour shares are expected to decline in sectors with below-average labour productivity, such as agriculture, and increase in more dynamic above-average productivity sectors. While this seems to be broadly the case for Ethiopia, the labour share of commerce has declined considerably, while labour productivity in manufacturing has remained lower than the aggregate average (figure 18).[37] This suggests that, unlike many Asian countries, the manufacturing sector is not driving economic transformation.

The reallocation of labour from agriculture to higher-productivity sectors has boosted the economic performance. Average gross value added per worker growth has accelerated by four percentage points since the mid-2000s. This strong performance was mainly on the back of improvements in sector productivity, especially in agriculture and commerce. However, between-sector productivity effects were also important (figure 19). The former is usually accounted for by enhanced skills, better management practices or adoption of new technologies, while the latter relates to gains accrued by reallocating labour from lower-productivity to higher-productive sectors – usually from agriculture to manufacturing and modern services. Had workers not moved (in relative terms) between 2005 and 2013, annual labour productivity growth would have been 25 per cent (or 1.6 percentage points) lower. Hence, even relatively small changes in the structure of employment can yield considerable economic gains, owing to large productivity gaps across sectors.

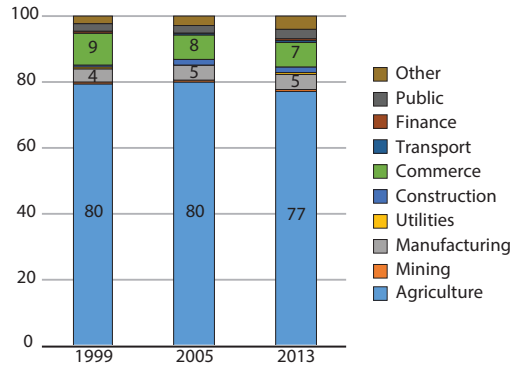
Manufacturing has traditionally been a key sector for engendering structural transformation, partly because of the increasing returns to scale, high tradability, and strong backward and forward linkages to agriculture and services. However, growing automation may erode the potential for job creation and labour cost competitiveness, even in Ethiopia.[38] Modern services, especially those associated with knowledge and innovation, may also contribute to more rapid structural transformation and thus sustain economic growth. In fact, a thriving manufacturing

36 Construction, other services, and public services registered increases in both employment shares and labour productivity levels during the 2005-2013 period. However, labour productivity growth decelerated in most service sectors – except for commerce – potentially suggesting that traditional and informal activities are absorbing most of the workers, rather than modern and formal activities.

37 Traditional sectors, such as agriculture, are expected to be in the bottom-left quadrant of the figure, with the remaining sectors in the top-right quadrant. The size of the circles represents the labour shares.

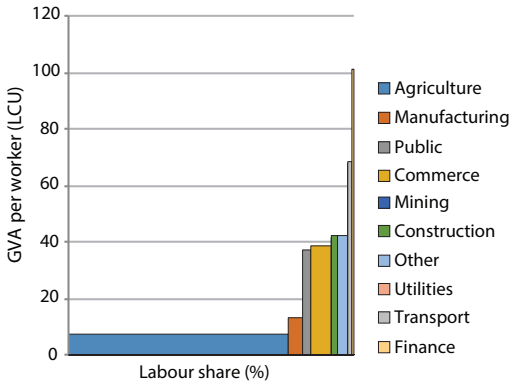
38 Approximately 85 per cent of employment in Ethiopia is believed to be susceptible to automation – the highest of all developing countries in the World Development Report 2016 – although slow technology adoption and low wages moderate this scenario to 44 per cent (World Bank, 2016e, p. 23).

Figure 16: Sector of employment (%)



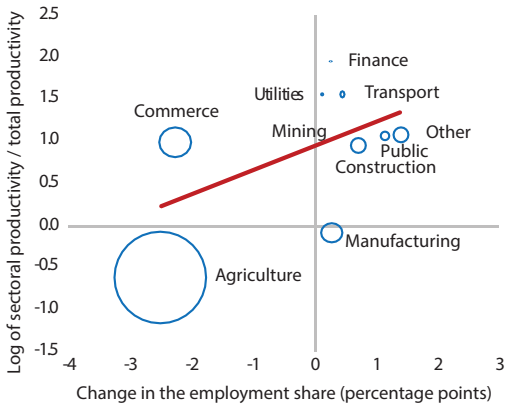
Source: Martins (2018).

Figure 17: Labour share and productivity (2013)



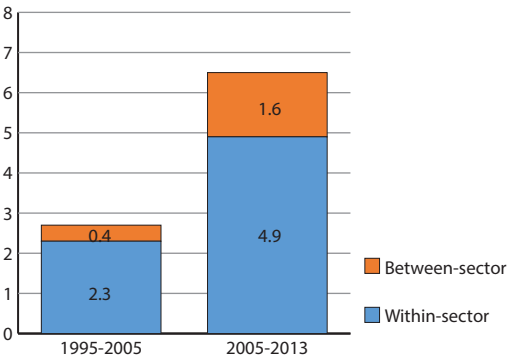
Source: Martins (2018).

Figure 18: Employment shifts (1999-2013)



Source: Martins (2018).

Figure 19: Gross value added per worker growth (annual %)



Source: Martins (2018).

sector requires competitive services, such as information technology, finance, insurance, and travel, which are increasingly embedded in merchandise trade. While the Growth and Transformation Plan II is focused on enhancing productivity in agriculture and manufacturing, it is also intended to facilitate private sector investment in tradable modern service sectors.

4.2 Decent work

There have been limited improvements in the quality of jobs. The vast majority of workers remain in either own-account or contributing family employment (figure 20). Those two groups – jointly known as "vulnerable employment" – are often associated with lower and less secure incomes. Only 10 per cent of workers are paid employees, compared to an estimated 42 per cent in Kenya, while paid employment only accounts for 37 per cent of non-agricultural employment. In urban areas, paid employees represent about 50 per cent of

total employment, although most of those employed are engaged in precarious types of work, such as temporary and seasonal or casual work (ILO, 2013, pp. 15, 32). Women are more likely to be employed in precarious forms of employment than men.[39] Without significant job creation, underemployment and unemployment will rise sharply, especially given the country's demographic trends.

Time- and income-related underemployment remain pervasive. Despite recent improvements, time-related underemployment remains high in rural and urban areas, suggesting that many workers are willing to work additional hours (World Bank, 2016c, p.49). This in part can be attributed to the lack of full-time well-paid jobs. In 2012, average monthly wages were estimated at about $70 in Ethiopia, which is extremely low when compared with the monthly wages of Kenya ($440) and the United Republic of Tanzania ($230) (ILO, 2016). Real wages had been declining until recently, in part because of public-sector wage containment and downward pressures on private-sector wages, which can be attributed to high urban unemployment. While low wages make Ethiopia a competitive location for labour-intensive manufacturing, they also reduce the scope for labour income to improve living standards. However, the expansion of wage and salaried employment may have a positive impact on household incomes if it provides higher labour earnings than the current forms of vulnerable employment. Moreover, earnings vary considerably according to gender, location, and sector; they are higher for men, urban areas and service sectors. The low pay rate (proportion of workers with monthly earnings below two thirds of monthly earnings, excluding agriculture) was estimated at 38 per cent in 2005 for all working and 55 per cent for women (ILO, 2013, p.20).

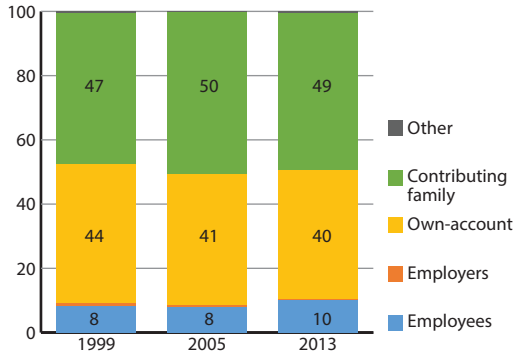
Youth unemployment in urban areas is a great concern. The nationwide youth unemployment rate has been approximately 7-8 per cent since 2005, significantly lower than in Kenya but above that of the United Republic of Tanzania (figure 21).[40] However, youth unemployment varies substantially by gender and location. Young women are much more likely to be unemployed (10 percent) than young men (5 percent). Urban unemployment rates for the youth are estimated at 27 percent – compared to 14 percent for those with ages above 25 – and are particularly high for those with secondary education. In fact, evidence suggests that urban areas are not creating sufficient employment for those with secondary (and primary) education (World Bank, 2016b, p.49). Unemployment among the educated urban youth is therefore a key concern, especially since this group is likely to grow in the near future.

The main sources of labour law include the Labour Proclamation of 2003 (on labour relations) and international labour conventions ratified by Ethiopia. However, national institutions and

39 In 2013, women were less likely to be paid employees (8 per cent) than men (12 per cent), while nearly two thirds were (unpaid) contributing family workers, compared to about one third for men, who were mostly own-account workers.

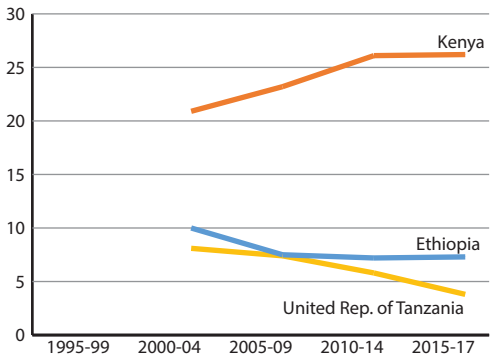
40 Low unemployment rates may primarily reflect the absence of income support. Poor people cannot afford to be unemployed, so they often take the first job opportunity available, even if it entails unpaid family work or informal own-account work, such as home-based work and street trading.

Figure 20: Status in employment (%)



Source: International Labour Organization, ILOSTAT. Available at www.ilo.org/ilostat (accessed 18 March 2018).

Figure 21: Youth unemployment rate (%)



Source: International Labour Organization, ILOSTAT. Available at www.ilo.org/ilostat(accessed 18 March 2018).

laws have predominantly focused on (formal) wage employment, seldom covering (informal) self-employment. Overall, the country's policy framework favours employment transitions – through active labour market policies, such as skills training and public works programmes – rather than employment or income security. The latter usually entails strong employment protection legislation and passive labour market policies. In a recent survey, only 1 per cent of firms in Ethiopia identified labour regulations as a major constraint (World Bank, 2016a). However, it is vital to tackle labour underutilization – underemployment and unemployment – by stimulating job creation in the private sector.

4.3 Education and skills

Basic skills have improved markedly for the young people. Literacy rates for the 15-24 age group have increased sharply, enabling a convergence to the levels observed in Kenya and the United Republic of Tanzania (figure 22). The introduction of free primary education in 1994 and increased public spending are key factors supporting this improvement. However, there are significant geographical and gender disparities – rural areas and women are particularly disadvantaged – and there is ample scope to enhance access to and the quality of education. For instance, safety nets could ensure that children stay longer in school, while lower pupil-teacher ratios, smaller class sizes and improved teachers training could significantly improve quality standards. Efforts to support adult literacy have been notable, mainly through the integrated functional adult literacy programme. Enhancing foundational skills, such as literacy and numeracy, provides the basis for acquiring higher levels of education and work-related skills.

Enrolments in secondary education and technical and vocational educational training programmes increased considerably in the 2000s, although they have recently slowed. Enrolment in secondary education, a measure of more advanced skills, has improved

considerably, although progress has decelerated in recent years (figure 23).[41] General secondary education is free (grades 9-10), but access has been hampered by costs other than tuition fees, such as teaching materials, and low primary completion rates. In addition, promoting science, technology, engineering, and mathematics (STEM) education is of vital importance in a modern economy – the ratio of those studying science and technology to social and humanities sciences in higher education is 3-to-1. The Government has promoted technical and vocational education and training (TVET) to bridge the skills deficit in key economic sectors, including manufacturing. Enrolment in TVET programmes increased from about 9,000 students in 2001 to more than 370,000 in 2011 (Ethiopia, Ministry of Education, 2005, p. 24; 2016, p.133). This rapid growth has led to concerns about quality standards and skills mismatch, which originated from its supply-driven nature (Seid and others, 2017). TVET enrolment has been subdued since 2011, missing the enrolment target for 2015 (1.1 million) by a large margin (Ethiopia, Ministry of Education, 2015). This can be partly explained by public perceptions influencing student preferences for white-collar occupations, thus leading to a mismatch between student interests and labour market needs (World Bank, 2015b, p. 31). Public communication campaigns and closer engagement between the private sector and TVET institutions, such as through apprenticeships, could improve enrolment and quality levels.

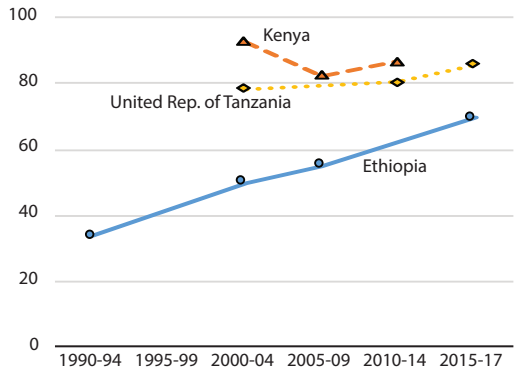
Educational attainment and skill levels have improved, but remain low by regional standards. Mean years of schooling have increased over time, although it remains extremely low and far behind the levels observed in Kenya and the United Republic of Tanzania (figure 24).[42] This suggests that recent efforts and achievements must be sustained over a long period to substantially change the education profile of the workforce.[43] Consequently, skill levels are also comparatively low in Ethiopia, with one third of total employment corresponding to elementary occupations (figure 25).[44] Most of the medium-skill level is attributed to skilled agricultural workers. There are significant gender disparities, as women have considerably less years of schooling and lower skill levels. The proportion of firms identifying an inadequately educated workforce as a major constraint declined from 23 per cent in 2006 to 3 per cent in 2015. Nonetheless, skill concerns vary across sectors and firm sizes, with the levels being much higher than average in the manufacturing sector and in large firms. For instance, 21 per cent of firms in the textile and garments sector have recently cited skills as a major business constraint (World Bank, 2015b).

Public spending on education is increasing, even as a share of the total fiscal budget, which is, to date, at 25 per cent. However, spending favours tertiary education, which accounts

41 Ethiopia's definition of secondary education differs from the International Standard Classification of Education.
42 A one-year increase in education of a manufacturing worker is associated with a labour productivity increase of between 33 and 41 per cent (World Bank, 2015b, p. 29).
43 The expected years of schooling – for children of school entrance age – is estimated at more than eight years (UNDP, 2017).
44 This classification follows the International Standard Classification of Occupations. High-skill level includes managers, professionals, and technicians; while low-skill level relates to elementary occupations.

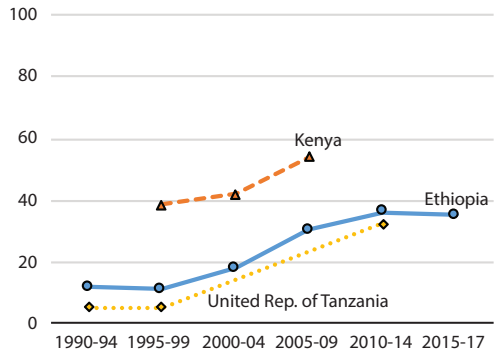
for nearly 50 per cent of the total education budget.[45] Efforts to improve the skill level of the workforce need to cascade from continued investments in primary education – with an increasing focus on quality – through to higher levels of general education. In particular, increased access to quality TVET programmes and greater private sector involvement in training will be crucial.

Figure 22: Youth literacy rate (%)



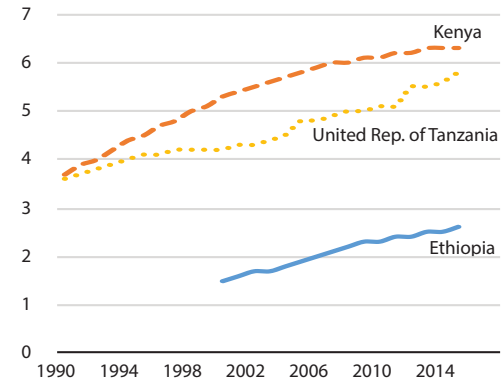
Source: United Nations Educational, Scientific and Cultural Organization, UIS.Stat. Available at http://data.uis.unesco.org (accessed 16 April 2018).

Figure 23: Gross enrolment ratio, secondary (%)



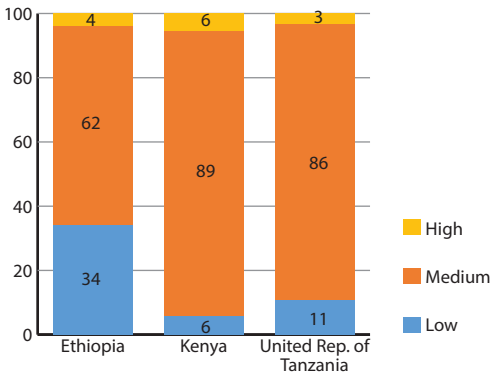
Source: United Nations Educational, Scientific and Cultural Organization, UIS.Stat. Available at http://data.uis.unesco.org (accessed 16 April 2018).

Figure 24: Mean years of schooling (25+)



Source: United Nations Development Programme, Human Development Data (1990–2015). Available at http://hdr.undp.org/en/data (accessed 16 March 2018).

Figure 25: Skill levels (2015, %)



Source: International Labour Organization, ILOSTAT. Available at www.ilo.org/ilostat (accessed 18 March 2018).

45 In fact, the share of TVET in the total education budget declined between 2010 and 2014 (Ethiopia, Ministry of Education, 2016, p. 9).

4.4 Summary

Labour productivity has increased across most sectors, but it remains comparatively low in agriculture and manufacturing. The large productivity gaps observed across sectors underscore the potential gains that can be accrued by reallocating productive resources. Despite limited changes in the composition of employment, especially when compared to the structure of output, labour shifts from agriculture to construction and services have provided a significant boost to the country's economic performance. Nonetheless, vulnerable forms of employment remain the norm. Underemployment levels are high, with many workers willing to work additional hours. Low wages make Ethiopia a competitive location for labour-intensive manufacturing, but it also reduces the scope for labour income to improve living standards. Youth unemployment in urban areas is high, at 27 per cent, especially among those with a secondary education. Creating decent productive jobs is key to tackling underemployment and unemployment, especially in a context of a rapid demographic change. The basic skills of the young people have improved markedly, with literacy rates rising sharply. Enrolments in secondary education and TVET programmes increased in the 2000s, but have recently slowed. Although educational attainment and skill levels remain low, they have improved in recent years, which play a key role in accelerating labour productivity growth.

5

Society

5.1 Demography

The fertility rate has declined steadily, suggesting that a demographic transition is taking place. The decline in the total fertility rate in Ethiopia has been remarkable, even though it continues to be relatively high (figure 26). The notable progress can be explained by improved family planning, rising living standards, and women staying longer in education. For instance, the proportion of women with an unmet need for family planning fell by more than 33 per cent between 2000 and 2016, while the proportion of demand for family planning satisfied by modern methods increased from 14 to 61 per cent. However, there are significant spatial disparities in fertility rates, ranging from 1.8 children per woman in Addis Ababa to 7.2 in the Somali region. Further reductions are required, especially in rural areas, to create the preconditions for a sizeable demographic dividend. Moreover, lower fertility rates reduce population growth and are typically associated with higher household investment in education and in health care, and higher levels of female education and labour force participation (IMF, 2015).

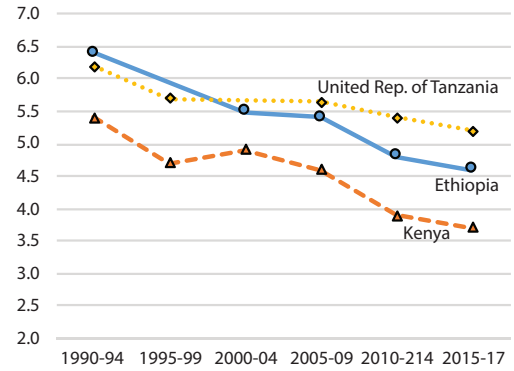
Demographic trends create considerable opportunities and challenges. The child dependency ratio has declined sharply since 2005, partly because of lower total fertility (figure 27). Lower dependency ratios ease the economic burden placed on workers, as the economically inactive population is often financially dependent on the economically active. Compared with 1990, the population share of the 0-9 age group declined markedly, while that of the 10-34 age group increased (figure 28).[46] Those demographic trends can potentially generate a significant demographic dividend. As the relative size of the working-age population expands, output and income per capita/household are likely to increase, provided that there are sufficient productive employment opportunities, as well as domestic savings. Estimates indicate that lower dependency ratios have recently boosted output per capita growth by nearly 1 percentage point per year (Martins, 2008). In fact, projections suggest that demographic trends alone could increase real GDP per

46 Ethiopia is in the early stages of a demographic transition, as the share of working-age population (in total population) only started to increase in the 2000s. However, it seems to be undergoing a faster transition than other African countries because of a more rapid decline in fertility and mortality (World Bank, 2016a, p. vii; IMF, 2015, pp. 41-42).

capita by more than 40 per cent between 2010 and 2056 – when the share of the working-age population is expected to peak (Drummond and others, 2014, p. 20). Nonetheless, it is crucial to sustain investment in human development, namely education and health, and create decent jobs for new entrants in the labour market. Otherwise, those powerful demographic trends may lead to high unemployment and underemployment, and ultimately fuel social instability.

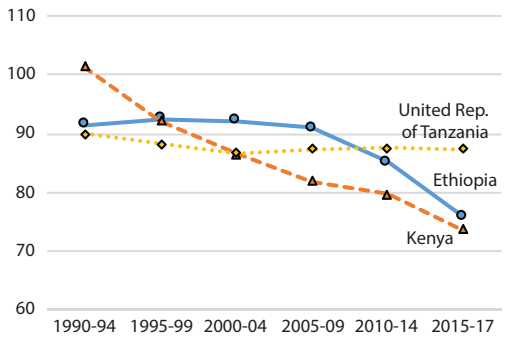
Urbanization facilitates structural transformation, but associated pressures need to be managed. Ethiopia has one of the lowest levels of urbanization in the world, with only 20 per cent of the population living in urban areas. Urban agglomerations enable economies of scale, encourage innovation and facilitate service delivery, in addition to creating a larger and more diverse pool of workers to meet labour demand. Rural-urban migration plays a key role in transforming economic and social structures, especially regarding the composition of employment. However, rapid urbanization may intensify pressures on the labour market, public services, housing, transport and the environment. Although the pace of urbanization has recently increased, the share of the urban population living in slums has been gradually declining (figure 29). This is partly the result of an ambitious public housing scheme for low-income dwellers, namely the Integrated Housing Development Program, which was launched in the mid-2000s. Nonetheless, most of the urban population still lacks decent housing. As the population increasingly moves from rural areas to urban centres in search of jobs in industry and services, it is crucial to ensure that workers have decent living conditions. Growing investment in urban infrastructure and services, such as adequate low-cost dwellings, transport, and municipal services, are essential to ease growing population pressures on cities.

Figure 26: Total fertility (children per woman)



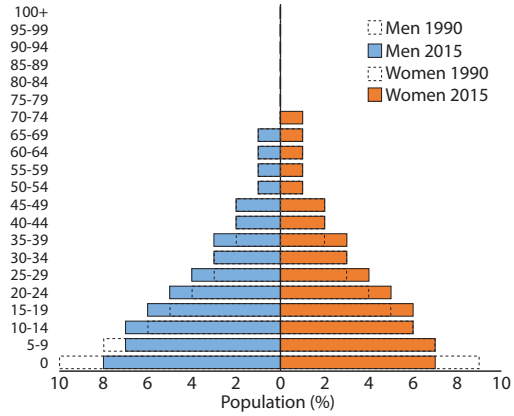
Sources: ICF International (2017); Central Statistical Agency (1993).

Figure 27: Child dependency ratio



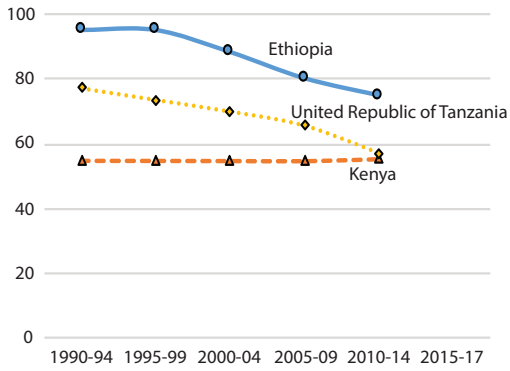
Source: United Nations Department of Economic and Social Affairs (2017).

Figure 28: Population pyramid (1990 and 2015)



Source: United Nations Department of Economic and Social Affairs (2017).

Figure 29: Urban population living in slums (%)



Source: UN-Habitat, Urban data. Available at http://urbandata.unhabitat.org/explore-data/ (accessed 17 April 2018).

The urbanization strategy of Ethiopia entails the development of geographically dispersed secondary cities as future growth centres for balanced spatial growth (ECA, 2017).

5.2 Health

Stunting levels have declined considerably, but they remain very high. The prevalence of stunting in children under 5 years has declined consistently since the early 1990s (figure 30), in part on the back of improvements in child health, mothers' nutrition status and mothers' education levels (Woodruff and others, 2017). Nevertheless, stunting levels are still very high and a major concern. Stunting can have long-term consequences on physical health and cognitive functions, such as delayed motor development and cognitive impairment. In fact, 67 per cent of the adult population suffered from stunting as children; productivity losses associated with stunting is estimated at 4 per cent of GDP (ECA and WFP, 2013). Adult undernourishment is also a major concern, especially for women. The proportion of women aged 15-49 years who are underweight has declined, but it still is one of the highest in the world. Chronic energy deficiency in pregnant women may lead to low birth weight, short stature and a higher risk of infections, leading to a vicious cycle of stunting. Enhancing food security and increasing awareness, through community-based nutrition programmes, are key to promoting dietary diversity and quality (based on nutrient-dense foods), and improving infant feeding practices.

Life expectancy is increasing, and so is the disease burden. Life expectancy and healthy life expectancy at birth have increased significantly in a short period (figure 31).[47] The construction

47 Healthy life expectancy is an estimate of the average number of years a person is expected to live in full health, thus excluding years living with diseases, or injury or disability.

of new health facilities and a growing number of health extension workers, with approximately 40,000 deployed across the country, have enhanced the provision of basic health services. However, the implied loss in health because of disease, injury or disability, has also increased, which has widened the gap between life expectancy and healthy life expectancy. Despite recent improvements, the numbers of physicians and nurses and midwifes per 1,000 people are very low compared to Kenya and the United Republic of Tanzania (World Bank, 2017). As a result, there is significant scope to improve the health system. Ensuring that the working-age population is in full health is required to enhance labour productivity and facilitate job transitions.

The disease burden attributed to non-communicable diseases is increasing in importance. The proportion of disability-adjusted life years caused by communicable, maternal, neonatal, and nutritional diseases has been declining, partly on the back of strong improvements relating to HIV/AIDS and tuberculosis (figure 32).[48] Meanwhile, the share of non-communicable diseases has increased correspondingly. In 2015, non-communicable diseases accounted for 75 per cent of total years lived with a disability, mainly mental disorders (depression), musculoskeletal disorders (lower back and neck pain), neurological disorders (migraines), and other non-communicable diseases (skin and sense organ diseases). While there has been some progress in tackling infectious diseases, non-communicable diseases constitute a growing disease burden for the country's workforce. Reducing non-communicable disease prevalence requires the prevention of behavioural, environmental (including occupational), and metabolic risk factors.

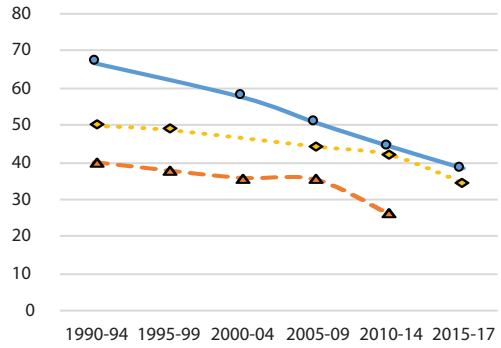
Public spending on health accounts for about 8 per cent of the total fiscal budget, compared to about 25 per cent for education (National Bank of Ethiopia, 2017b).[49] Total health expenditure per capita has increased significantly since 2000, albeit mainly funded by external assistance. Spending on HIV/AIDS, reproductive health, malaria and tuberculosis has accounted for nearly 50 per cent of total public health spending.[50] The key challenge is to secure domestic financing for health expenditures – to reduce dependency on external donors and ensure that out-of-pocket costs do not undermine access to poor people – and to boost efforts to prevent and treat non-communicable diseases.

48 Disability-adjusted life years measures the overall burden of disease, accounting for both years lost due to disability or disease and premature death. Years lost due to disability can significantly affect the productivity of workers.

49 In the 2016/17 budget, a large share of expenditure was allocated to road construction (18 per cent) and agriculture and natural resources (14 per cent), although 50 per cent of the latter was directed for water. Allocations to other economic sectors included urban development and housing (3 per cent) and trade, industry and tourism (2 per cent), while other social sectors included culture and sports (2 per cent) and labour and social welfare (1 per cent).

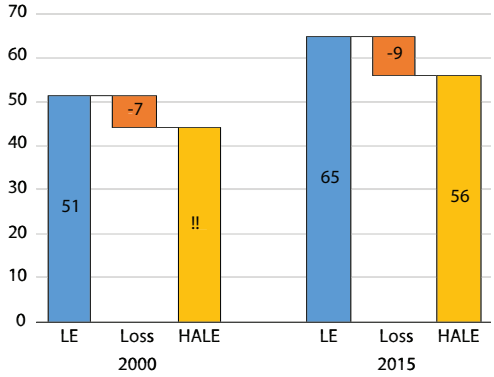
50 World Bank (2016d, pp.23,29).

Figure 30: Prevalence of stunting (%)



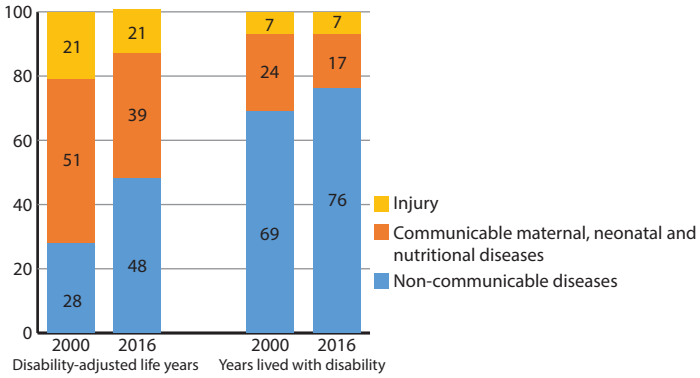
Source: ICF International (201

Figure 31: Life expectancy and healthy life expectancy (years)



Source: World Health Organization, Global Health Observatory data repository. Available at http://apps.who.int/gho/data/ (accessed 17 April 2018).

Figure 32: Disease burden by cause (15-49 years, %)



Source: Institute for Health Metrics and Evaluation, Global Health Data Exchange. Available at http://ghdx.healthdata.org/gbd-results-tool (accessed 17 April 2018).IHME (2017).

5.3 Poverty and inequality

Income poverty has declined considerably, but non-income improvements have been modest. The proportion of the population living under the national poverty line has declined since 2000 (figure 33).[51] Poverty reduction has been mainly supported by the performance of the agriculture sector and public spending on basic services and rural safety nets (see the box on the Productive Safety Nets Programme) (World Bank, 2015b). However, urban safety nets are required to reduce vulnerability, especially for those unable to work, such as persons with disabilities and the elderly. Beyond income, the Multidimensional Poverty Index (MPI) suggests that 87 per cent of the population was "MPI poor" in 2011 (Oxford Poverty and Human Development Initiative, 2017). MPI poverty is mainly attributed to the low living

51 Although the poverty level has declined more rapidly under the purchasing power parity in United States dollars poverty lines, the national threshold provides a better measure of a country's specific economic and social conditions.

standards in rural areas, mostly pertaining to the lack of electricity, sanitation, cooking fuel and assets.[52] The differential in poverty headcounts (income versus MPI) is one of the highest in the world, which highlights the challenge of translating income improvements into better non-monetary outcomes in Ethiopia.

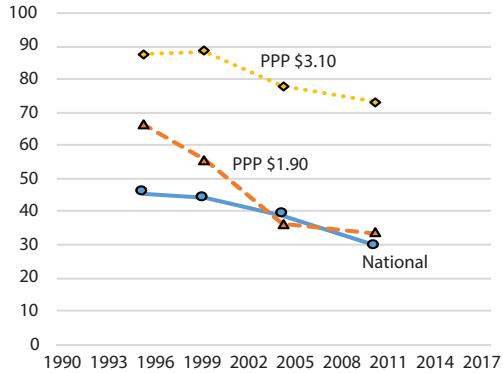
Income inequality remains low, but has recently increased. Although Ethiopia has one of the lowest levels of income inequality in Africa, it appears to be rising (figure 34). The average income of the poor has increased at a slower pace than the overall average, but fiscal redistribution has ensured that economic gains are equitably distributed. In fact, the Gini Index in 2010 declines from 33 to 30 when taxes and direct transfers – such as the Productive Safety Net Programme and food aid – are taken into account (World Bank, 2015b, p. 14). The national income distribution is moderately skewed towards the wealthiest, with over 40 per cent of income accruing to the richest 20 per cent of the population (figure 35). More rapid income growth at the top of the distribution has recently contributed to a rising income share for the top quintile. In fact, the poorest 10 per cent of the population recently has experienced negative consumption growth, partly because of the effects of high food inflation on net buyers of food (including marginal farmers) and urban unskilled workers (World Bank, 2016b, p. viii). Achieving more inclusive growth by accelerating income generation opportunities for the poor is important to support reductions in poverty and inequality.

Group-based inequalities are high, and an impediment to full participation in the economy. Significant gender inequalities are apparent in the labour market and in the education and health sectors (figure 36). Although the labour force participation rate for women is approaching that for men, it is still 10 percentage points lower. The lack of gender parity is particularly striking for skill levels, as women are severely underrepresented in high-skilled occupational categories, such as managers, professionals, and technicians.[53] Women are also considerably less likely to be paid employees than men, and the trend points to a worsening situation. Regarding education, gender disparities worsened until the early 2000s. However, they have improved considerably since then. Gender parity has almost been achieved in youth literacy and gross enrolment in secondary education, while the healthy life expectancy at birth for women is three years higher than for men. Spatial inequalities are also large, especially those related to health outcomes. They can undermine inclusive growth and fuel social and political instability. However, there is some evidence of regional convergence in poverty rates, mainly owing to agricultural growth, improvements in basic services and safety nets (World Bank, 2016b, pp.19-21). Further narrowing gender and spatial inequalities would enable people to fully participate in the transformation process.

52 For instance, MPI poverty in Addis Ababa was estimated at 20 per cent, compared to figures above 80 per cent for the remaining regions, with the exceptions of Harari and Dire Dawa.

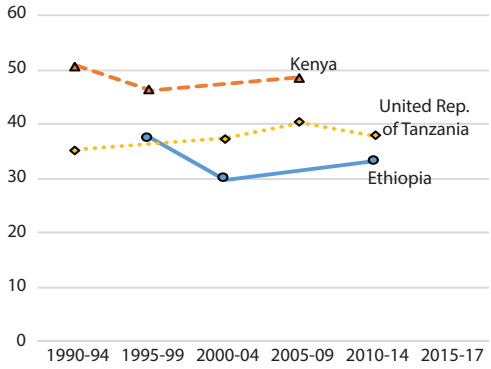
53 In addition, the proportion of women employed in senior and middle management roles was estimated at 21 per cent in 2013. (International Labour Organization, ILOSTAT. Available at www.ilo.org/ilostat (accessed 18 March 2018).

Figure 33: Poverty headcount ratio (%)



Source: World Bank (2017).

Figure 34: Gini Index

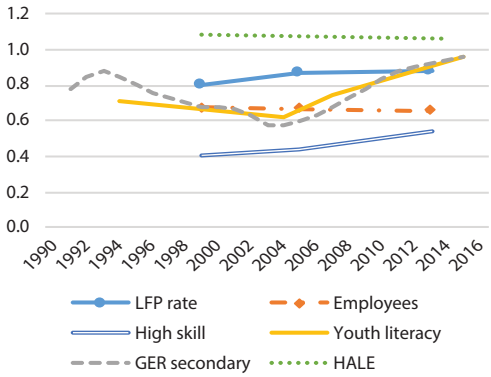


Source: World Bank (2017).

Figure 35: Income shares (%)

Source: World Bank (2017).

Figure 36: Gender parity indices



Sources: International Labour Organization, ILOSTAT. Available at www.ilo.org/ilostat (accessed 18 March 2018); United Nations Educational, Scientific and Cultural Organization, UIS.Stat. Available at http://data.uis.unesco.org (accessed 16 April 2018); World Health Organization, Global Health Observatory data repository. Available at http://apps.who.int/gho/data/ (accessed 17 April 2018).

5.4 Summary

Total fertility has declined steadily, which has contributed to slower population growth. As a result, the child dependency ratio has also been decreasing. Those demographic trends ease the economic burden placed on workers and can generate a sizeable demographic dividend. Average income may increase, but only if the economy is able to create productive employment opportunities for this emerging youth bulge and if new entrants in the labour market have the suitable skill sets. Growing urbanization can facilitate structural transformation, but urban investments are required to manage population pressures. Stunting levels have declined significantly, but remain high. Life expectancy is rising, owing to improvements in health care and nutrition. However, the disease burden is also increasing, with non-communicable

diseases growing in importance. Improving health levels is vital to support increases in labour productivity and ensure that people can contribute to (and benefit from) the transformation process. Income poverty has declined considerably, suggesting that economic growth has been inclusive. Nonetheless, non-income improvements have been more modest. Income inequality remains low, although there are significant rural-urban disparities. Group-based inequalities are high, especially those pertaining to gender and location. Tackling inequalities is critical to promote economic and social inclusiveness, especially through equitable access to employment opportunities and a fair distribution of economic gains.

Productive Safety Nets Programme

The Productive Safety Nets Programme was established in 2005, with considerable financial support from international donors, as an alternative to repeated emergency food aid programmes. The Programme is targeted at 319 chronically food-insecure woredas or districts with a view to improving resilience to shocks, creating assets and enabling food self-sufficiency. The Programme provides predictable food and cash transfers, based on season and need, to ensure that households meet their basic food requirements in difficult times without depleting productive assets. The Programme reaches more than eight million people and the current phase (2015-2020) has an annual budget of about $300 million, which makes it the largest cash transfer programme in sub-Saharan Africa after a programme in South Africa. One component of the Programme is a public works programme, which provides up to five days of work per month at a pre-specified wage rate. The activities are chosen by community members and are usually related to soil conservation, water management, and agroforestry. The other component is direct support, which provides a cash transfer to households without non-disabled adult members. The Programme has helped reduce rural poverty and vulnerability and boost agricultural yields.

Key messages

- **Deeper regional integration should be a policy priority**. Ethiopia is becoming more integrated into regional infrastructure networks, with Ethiopian Airlines playing a major role in air travel, a new railway linking Addis Ababa to Djibouti City, and the construction of a power transmission line to Kenya. However, deeper integration pertaining to trade, finance, and labour with neighbouring countries, especially through the country's membership of COMESA and IGAD, has significant potential to instil greater dynamism in the economy. In particular, the development and strengthening of regional value chains should be further explored.

- **There is scope to create a more conducive business environment.** While public investment has been the key driver of economic growth, sustaining this positive momentum requires the emergence of a dynamic domestic private sector. The investment climate can be improved through the gradual implementation of financial reforms (to expand credit creation), continued infrastructure development, such as through PPPs, and greater competitiveness, by, for example, facilitating market entry in key sectors. Moreover, securing social and political stability – through enhanced civic engagement – is indispensable to create the enabling conditions for sustained economic growth and transformation.

- **A thriving agricultural sector is essential to promote industrialization, reduce poverty and enhance food security.** The Government of Ethiopia has long recognized the central role of agriculture in facilitating industrialization – mainly regarding crops, but also livestock. Despite some notable achievements, there is an urgent need to modernize the sector with a view to improving yields and resilience, especially in the light of climate change and threats to food security. This can be partly achieved by accelerating investments in irrigation, fertilizers, improved seeds and mechanization.

- **More rapid job creation in manufacturing and modern services is fundamental to accelerate structural transformation.** Notwithstanding the previous message, there are limits to how much the agricultural sector can sustain economic growth and support structural transformation. Moreover, demographic change is intensifying pressures on the labour market. It is, therefore, crucial to generate sufficient decent employment opportunities for new entrants in the labour market, especially for the urban youth, with a focus on sectors experiencing growing demand and rapid increases in labour productivity.

- **Despite some economic diversification, technological upgrading and stronger production linkages are key to capture more value-added.** There has been some diversification of production and exports, but this has not taken place in higher-value-added sectors and products. The current focus on textiles and garments, leather and

leather products, and agro-industry is appropriate, but key challenges still need to be dealt with, such as the procurement of quality inputs, such as cotton and hides, workers' skills, access to finance and land, and trade logistics. Developing domestic productive capabilities at a faster rate is essential to enable a move to higher-value-added products and better integrate into global value chains.

- **Targeted investments in education and health care are needed to boost labour productivity and facilitate job transitions.** Inadequate skills and poor health undermine the ability of workers to fully participate and benefit from economic transformation. Jobs associated with higher productivity levels require specific technical skills, highlighting the need to expand science, technology, engineering and mathematics (STEM) education and technical and vocational education and training programmes. Public communication campaigns and greater public-private coordination could play an important role in reducing skill gaps and mismatches. Improving the health status of the workforce, especially by reducing stunting levels and tackling non-communicable diseases, can also generate significant productivity gains, as disease and disability entail large costs for households and the broader economy.

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