

Chapter 6

The implications of Africa's urbanisation for structural transformation

While there is growing awareness that urbanisation is profoundly transforming African societies, little attention has been paid so far to ways in which that process may be harnessed to accelerate the continent's structural transformation in a more effective and sustainable manner. In pursuit of that ambition, this chapter analyses the diversity and uniqueness of the continent's urbanisation experiences. Chapters 7 and 8 then focus on options for seizing the opportunities that urbanisation provides. An annex to Chapter 6 explains the methodology for the cluster analysis on urbanisation and structural transformation in diverse African countries.

In brief

Africa is urbanising at a historically rapid rate, bringing about considerable opportunities and challenges. Africa's urbanisation can allow for structural transformation, if accompanied by productive employment and sufficient public goods. Urbanisation patterns are diverse across Africa, but they generally confirm that unplanned urbanisation can challenge structural transformation.

Current urbanisation patterns should be more sustainable for economic, social and environmental development. In many African countries, a large portion of the urban labour force remains trapped in low-productivity informal services activities and access to public goods is unequal. Urban activities are increasingly connected with rural areas, which remain a pillar of African economies. Despite Africa's slow industrialisation, the costs of environmental degradation are large and increasing, adding to the economic and social challenges of urbanisation. Specifically, policies must ensure that infrastructure keeps up with rapid urban growth and connects urban centres and must actively promote urban planning and governance. Agenda 2063 and the Sustainable Development Goal 11 on cities provide new impetus for fulfilling Africa's urbanisation potential.

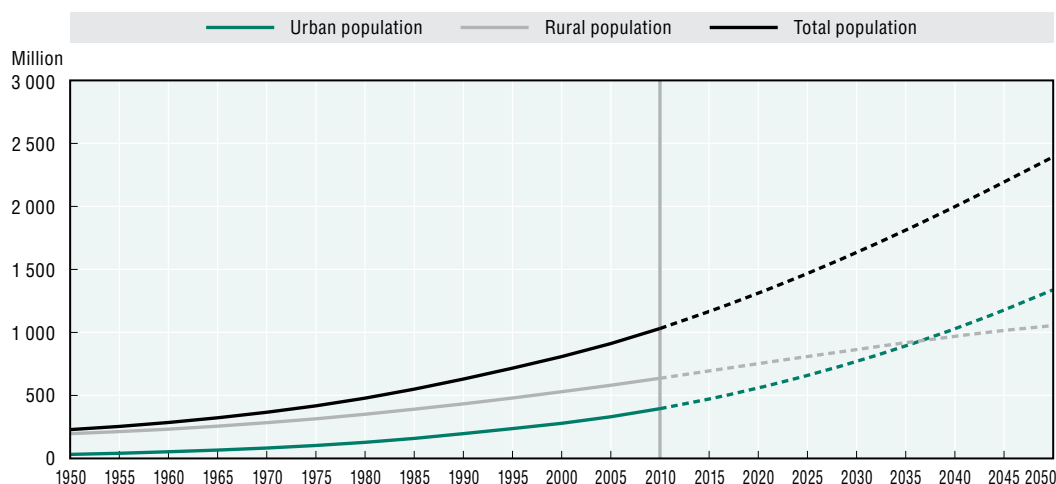
The links between urbanisation and structural transformation in Africa are complex and varied

The first section below informs the reader of the fast pace and magnitude of Africa's urbanisation in light of the most recent evidence. It frames Africa's urbanisation in the context of the "second wave" of the world's urbanisation process led by Asia. The following section analyses Africa's experience of rapid urbanisation with slow structural transformation. This contrasts with that of many world regions, most clearly OECD and East Asian countries. The third section looks at the variety of urbanisation patterns observed on the continent. The final section takes account of the staying power of Africa's rural economy.

Africa is urbanising at a historically rapid rate


The African continent is urbanising fast. The share of urban residents has increased from 14% in 1950 to 40% today. By the mid-2030s, 50% of Africans are expected to become urban dwellers (Figure 6.1).¹ Urbanisation is likely to continue and level off at about 56% around 2050.

Figure 6.1. Growth trends in Africa's urban, rural and total population, 1950-2050



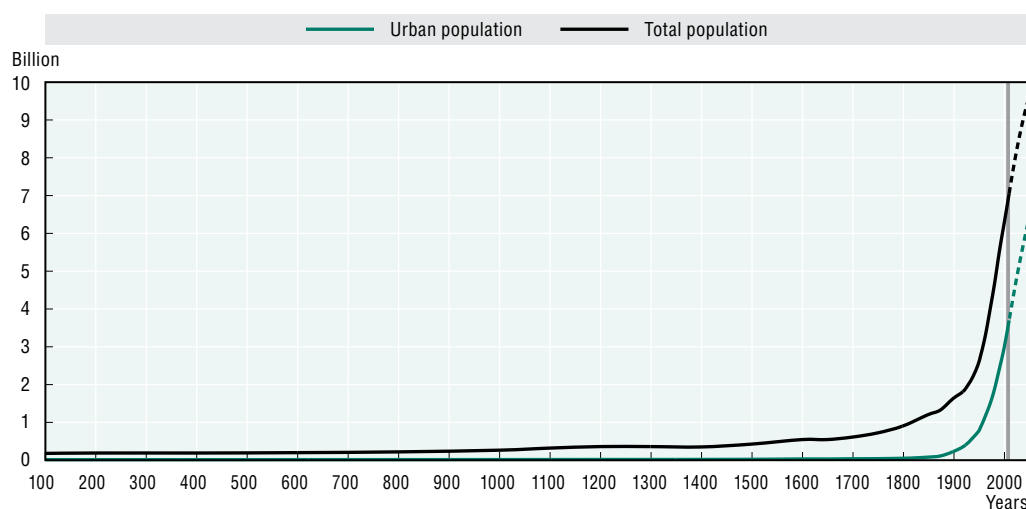
Note: Forecasts start from 2010 based on UN DESA's medium fertility scenario.

Source: UN DESA (2014).

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Considering their magnitude and speed, the urbanisation of Africa and Asia simultaneously correspond to the second major wave of urbanisation in the history of mankind. The first major urbanisation wave took place in Europe, Northern America, and to some extent Latin America and the Caribbean between 1750 and 1950 when the urban population increased from 15 million to almost 462 million. The current wave of urbanisation is bigger and faster. An additional 2.1 billion people are projected to be living in African and Asian cities between today and 2050 (Figure 6.2).

Figure 6.2. Global urban population growth, year 100 to 2050



Note: Vertical bar indicates projection after year 2010.

Source: Data on total population between year 100 and 1940 from Kremer (1993), data on urban population between year 100 and 1925 from Graumann (1977), and data from 1950 to 2050 from (UN DESA, 2014) using UN DESA's medium fertility scenario from 2010 onwards.

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The magnitude of the current wave of urbanisation calls for a more environment-friendly and less resource-consuming process than in the past. In China, as in several OECD countries, rapid urbanisation has come with environmental degradation proportional to development and poverty reduction: 12 of the 20 most polluted cities in the world are located in China, and about 90% of rivers around urban areas are seriously polluted (World Bank, 2007; Zheng and Khan, 2013). In addition, Africa's urbanisation is taking place in a resource and climate-constrained world unknown to earlier urbanisation (Swilling, 2015; Currie et al., 2015). Ensuring that the ongoing wave of urbanisation is more sustainable than in the past is of strategic importance to Africa and to the world at large.

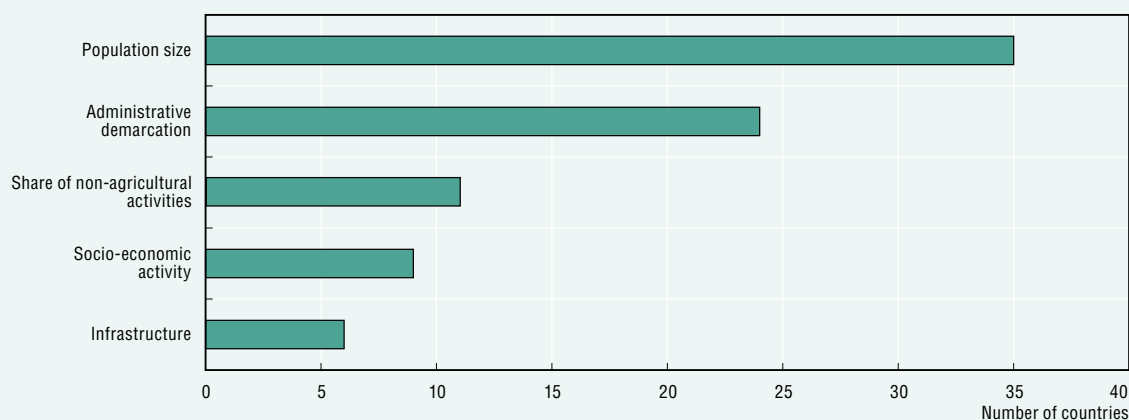
As Asia, Africa is urbanising twice as fast as did Europe. It took Europe 110 years to move from 15% urban in 1800, to 40% in 1910. Africa has achieved the same transformation in almost half the time: 60 years. Africa's urbanisation is estimated to have gained 5.9 percentage points between 2000 and 2015, second only to Asia, which gained 10.7 percentage points during the same period. In 2015, almost 472 million Africans lived in urban areas (authors' calculations based on UN DESA, 2014).

Even more striking is the rapid growth of Africa's urban population in absolute terms, or without relating urban growth to rural population growth (see Box 6.1). The size of Africa's urban population nearly doubled in 20 years from 237 million in 1995 to 472 million in 2015. Africa's urban population is expected to almost double again between 2015 and 2035. Not so long ago, in 1990, Africa was the world's region with the smallest number of urban dwellers: 197 million. Soon, in 2020, Africa is forecasted to have the second highest number of urban dwellers (560 million) after Asia (2 348 million).


Box 6.1. Definitions of urban areas, various agglomerations, urbanisation and urban population growth

The official definitions of **urban areas** vary across African countries (Figure 6.3). Thirty-five African countries define an urban area by population size, however the size varies. The threshold is between 1 500 to 3 000 inhabitants in 16 countries; 5 000 inhabitants in 11 countries; 10 000 inhabitants in 5 countries; 20 000 in Nigeria and 30 000 in Mali. Twenty-four countries define their urban areas according to administrative or political criteria, whereas for 11 countries the definition takes into account the presence of non-agricultural activities. Socio-economic activity defines urban areas for only 9 countries, while infrastructure is less commonly used in the national definitions. The lack of a single, accurate definition hinders collecting and tabulating urban statistics and prevents harmonised comparisons at regional and international levels (AfDB/OECD/UNDP, 2015). This report uses urbanisation data from UN DESA's *World Urbanization Prospects* (2014), which is based on official data produced by national statistical offices.

Figure 6.3. Definitions of urban across 54 African countries



Source: Authors' classification based on UN DESA (2014).

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Urban agglomerations carry various names, often depending on their size. **Cities** usually refer to large urban agglomerations; they can be big, intermediate or small. **Towns** refer to even smaller urban agglomerations and **villages** to the smallest. It is noteworthy, however, that no objective threshold exists and that the distinction between city and town is more common in the English language than in French and Portuguese, the other languages in which this report is published. A **megacity** is an urban agglomeration with a population of 10 million people or more, and a **megalopolis** a large agglomeration of adjacent urban centres. A **conurbation** is an urban agglomeration composed of several cities, initially separated by rural areas, whose growth has overlapped while remaining administratively independent. An **urban corridor** links cities of different sizes through transport and economic axes. **Urban settlement** is an all-encompassing category without reference to size.

Urbanisation differs from urban population growth. **Urbanisation** is the increase in the share of a country's total population living in urban areas. It is typically measured as the level showing the percentage of a country's total population that is urbanised. Deep changes accompany this increase, notably economic, social and environmental ones (see Box 6.2). **Urban population growth** is the absolute growth in a country's urban population. A country does not urbanise when urban population growth is lower than rural population growth.

Contrary to widely-held assumptions, Africa is urbanising fast mainly because towns and intermediate cities are growing. Between 2000 and 2010, urban agglomerations with fewer than 300 000 inhabitants accounted for 58% of Africa's urban growth; agglomerations with 300 000-1 million inhabitants only 13%; and those with over

1 million inhabitants 29%. Between 2010 and 2030, the small agglomerations are forecasted to make up 51% of the urban growth; the intermediate ones 16%; and the biggest 33%.

Africa's fast pace of urbanisation and urban growth contrasts with the slow pace of structural transformation, as the next sub-section shows. Urbanisation and structural transformation have not been mutually supportive in many African economies.

Urbanisation is part of structural transformation

Economic theory since Adam Smith and Alfred Marshall has long analysed the links between development and urbanisation. Early “dual economy” models viewed urbanisation as a process of rural-urban migration where surplus agricultural workers moved from rural areas into more productive jobs in modern urban industries and services (Haggblade, Hazell and Brown, 1989; Fei and Ranis, 1963; Johnston and Mellor, 1961; Lewis, 1954). Labour-saving technologies and rising agricultural productivity through a “green revolution” can push surplus agricultural workers away from traditional activities in rural areas (Gollin, Parente and Rogerson, 2002). Cities provide a large and diversified pool of labour, a more dynamic local market, more cost-effective access to suppliers and specialised services, lower transaction costs, more diversified contact networks and greater knowledge-sharing opportunities, and an environment that encourages innovation (Krugman, 1991; Spence, 2012; World Bank, 2009; AfDB, 2010).

Box 6.2. Definition of structural transformation

In its economic sense, structural transformation is the process of moving economic resources from low to higher productivity activities (AfDB/OECD/UNDP/UNECA, 2013). Its basic mechanics entail a push factor away from traditional agriculture best described as a “green revolution” and a pull factor into higher productivity manufacturing or services best known as an “industrial revolution”. Structural transformation involves moving away from low-productivity agriculture and re-allocating economic resources to higher productivity activities. The process may also happen within a single sector such as agriculture.

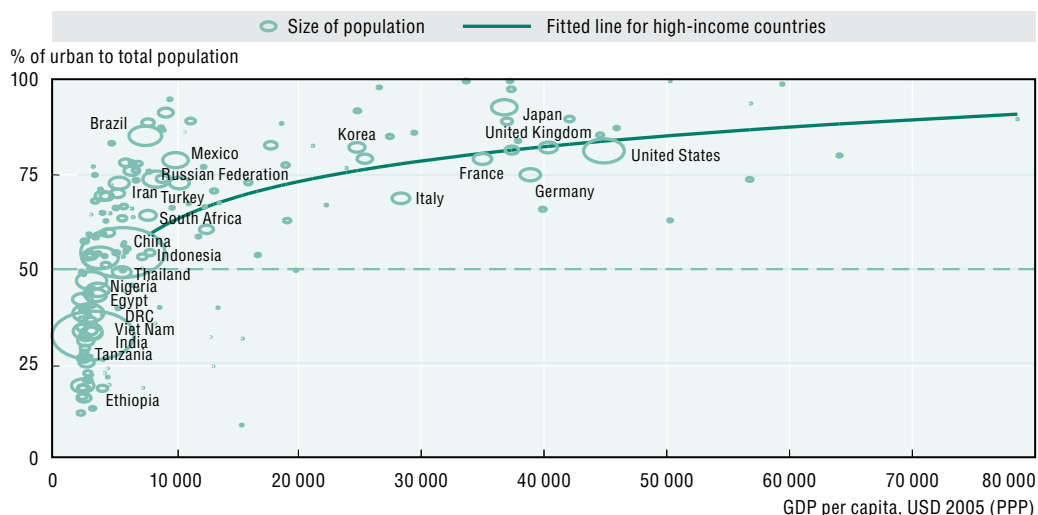
Structural transformation brings about deep changes to societies. In particular, it entails urbanisation and a reduction in total fertility ratios. Fertility ratios fall as people acquire more education, earn higher incomes and live in denser environments (Timmer and Akkus, 2008). Dysfunctions will inevitably be part of such radical transformations. In various regions of the world, these processes have not been linear.

Big and small cities can benefit from agglomeration economies by using fewer resources to support a larger population. Increasing returns from agglomeration makes cities more attractive. Cities offer cultural vibrancy and diverse choices for services. This attractiveness further draws talents and investments, creating a virtuous circle of urbanisation and development. These advantages allow cities to increase productivity and hence economic gains through three broad functions: **matching**, **sharing** and **learning** (Kayizzi-Mugerwa, Shimeles and Yaméogo, 2014; Turok, 2014; Duranton and Puga, 2004):


- First, cities help firms **match** their unique requirements for labour, material inputs and premises better than towns. Larger markets bring more choices and opportunities.
- Second, cities afford firms access to a wider range of **shared** services and infrastructure because of the scale of activity.
- Third, firms gain from the superior flow of information in cities, which promotes more **learning** and innovation and results in higher value-added products and processes.

Hence, industrialised countries have gone through an urbanisation process. Globally, urbanisation closely relates to national income: all countries that pass the USD 10 000 per capita threshold are at least 50% urbanised (Figure 6.4).

Figure 6.4. Global urbanisation levels and GDP per capita in selected countries, 2014



Note: Exponential fit line for high income countries. Each bubble reflects the size of a country's total population.
Source: UN DESA (2014) and World Bank (2015).

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However, urbanisation is a necessary but insufficient condition for structural transformation. Many countries that are more than 50% urbanised still have low-income levels. Urbanisation per se does not bring economic growth, though concentrating economic resources in one place can bring benefits (Henderson, 2003). Further, rapid urbanisation does not necessarily correlate with fast economic growth: Gabon has a high annual urbanisation rate at 1 percentage point despite a negative annual economic growth rate of -0.6% between 1980 and 2011 (Chen M. et al., 2014).

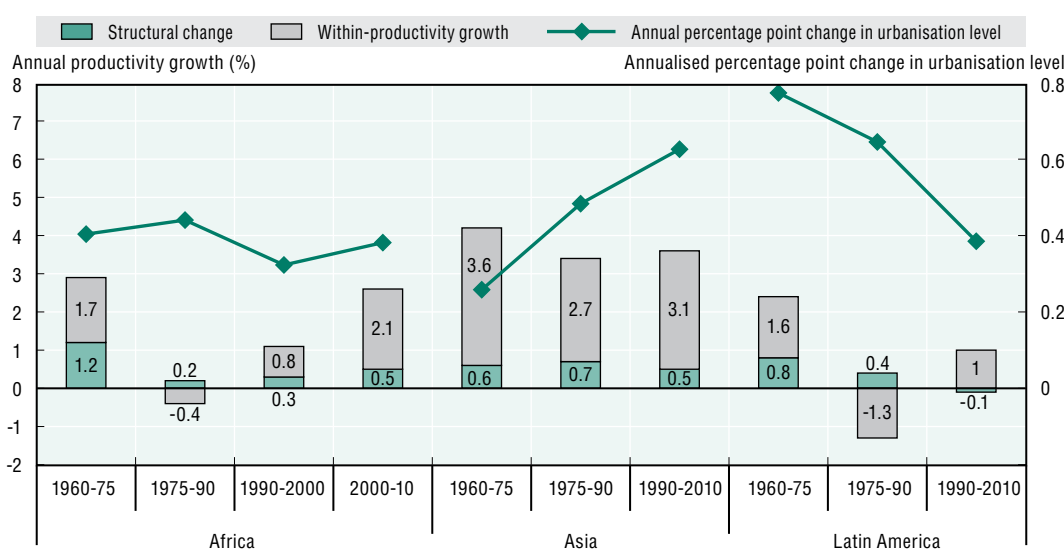
In addition, the benefits of agglomeration greatly depend on the local context, including the provision of public goods. Public goods possess non-rivalry and non-excludable benefits. Lack of sufficient public goods or their unsustainable provision can impose huge costs on third parties who are not necessarily involved in economic transactions. Congestion, overcrowding, overloaded infrastructure, pressure on ecosystems, higher costs of living, and higher labour and property costs can offset the benefits of concentrating economic resources in one place. These negative externalities tend to increase as cities grow. This is especially true if urban development is haphazard and public investment does not maintain and expand essential infrastructure. Dysfunctional systems, gridlocks, power cuts and insecure water supplies increase business costs, reduce productivity and deter private investment. In OECD countries, cities beyond an estimated 7 million inhabitants tend to generate such diseconomies of agglomeration (OECD, 2006). Hence, the balance between agglomeration economies and diseconomies may have an important influence on whether city economies continue to grow, stagnate or begin to decline.

OECD experiences demonstrate that many different patterns of urbanisation can lead to structural transformation, such as industrialisation. Urban structures have varied a great deal among OECD countries; there is no one-size-fits-all pattern. In several countries, primate cities like London and Paris dominate the urban networks. Other countries such as Germany or Italy have more balanced urban networks where intermediary cities, such as Stuttgart or Turin, have driven industrialisation. Moreover, rural regions can grow faster than urban ones. Between 1995 and 2007, OECD regions with lower levels of development tended to grow faster than richer regions, suggesting a catching-up growth process (OECD, 2012a). In Italy, clusters of small and medium enterprises in intermediary cities fostered industrialisation through specialising in closely related industries and forming interconnected production networks.

Structural transformation has been slow in a context of changing employment patterns


Weak linkages between urbanisation and structural transformation are observable in many regions of the world, though most recent examples are found in Africa and Latin America (UN-Habitat and UNECA, 2015). Previous editions of the *African Economic Outlook* have documented the slow pace of structural transformation in a majority of African economies, notably when compared with Asia's performance (AfDB/OECD/UNDP, 2013; AfDB/OECD/UNDP, 2015; see also McMillan and Harttgen, 2014). Figure 6.5 puts this comparison in perspective by showing the paces of urbanisation and structural transformation in 3 regional samples: although the 11 African countries are urbanising at a comparable speed to the 11 countries from Asia, labour productivity has been progressing more slowly; the 9 Latin American countries have experienced faster urbanisation but even slower structural change than the African ones.

Figure 6.5. Annualised labour productivity growth and urbanisation in Africa, Asia and Latin America, 1960-2010



Note: The following countries are included in Africa: Botswana, Ethiopia, Ghana, Kenya, Malawi, Mauritius, Nigeria, Senegal, South Africa, Tanzania and Zambia. Asia: China, Hong Kong (China), India, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru and Venezuela. "Within-productivity growth" refers to gains incurred within existing economic activities through capital accumulation or technological change. "Structural change" is incurred from reallocation of labour from low-productivity to high-productivity activities which increases aggregate labour productivity of the economy. Although this analysis uses a ten-sector categorisation with a longer time frame than AfDB/OECD/UNDP/UNECA (2013) albeit with less African countries (11 vs. 19), the final results of the two analyses are consistent.

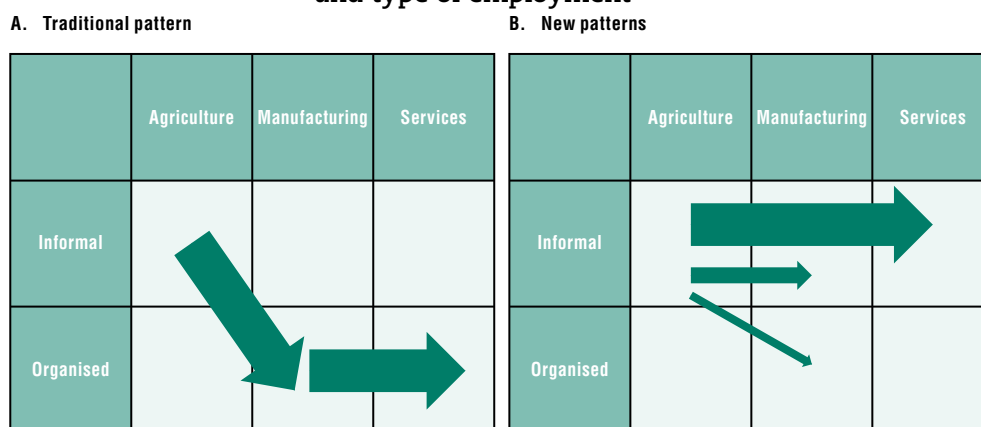
Source: Structural change figures adapted from Figure 1 and Figure 2 in De Vries et al. (2015) and urbanisation data computed from UN DESA (2014).

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The quasi halt of industrialisation in many African countries at the end of the 20th century seems to be a turning point. De Vries, Timmer and de Vries (2015) show that, following independence, manufacturing employment progressed quickly in Africa, from 4.7% in 1960 to 7.8% in 1975. During this period, urbanisation levels increased by 0.40 percentage points a year. The development trajectory thus seemed to follow the classic dual economic model explained above. Between 1975 and 1990, however, political and economic turmoil wiped out the nascent manufacturing sector while urbanisation continued. Structural change slowed down, as services kept absorbing workers released from agriculture, but with much lower returns than industry. With Africa's growth picking up considerably since the early 2000s, structural change has become positive again, albeit still at a slower pace than in Asia.

Many countries seem to be by-passing the manufacturing stage altogether in favour of services and risk the consequences of premature deindustrialisation. The sub-Saharan services sector grew from 47% of gross domestic product (GDP) in 1965 in aggregate to 58% in 2014, absorbing the bulk of growth in labour force in the process. Large-scale reallocation into services traditionally occurs in post-industrialised countries owing to the faster growth of labour-saving technologies in manufacturing and demand shifts away from manufactured products (Figure 6.6). There are thus concerns that African countries – and today’s developing countries at large – are moving into the service sector too early without having gone through a proper experience of industrialisation (Rodrik, 2015). “Premature deindustrialisation” may affect future growth prospects, because industrialisation is the most efficient path to sustained growth and economic convergence.

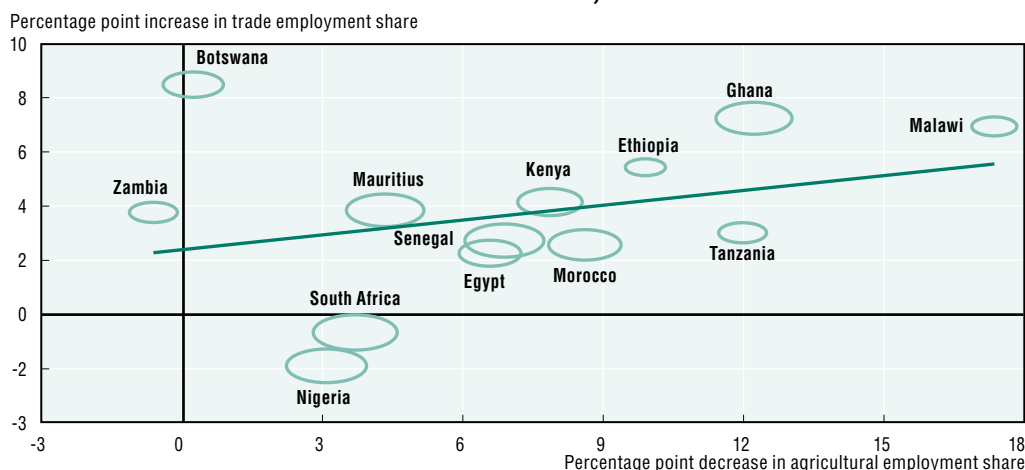
Figure 6.6. Traditional and new patterns of transformation between sectors and type of employment



Source: Adapted from Rodrik (2014).

Farmers may prefer to move into traditional or informal urban services because urban informal work is often more productive than agricultural work, even if considerably less productive than formal employment. In Ghana, the differential between urban informal work and rural farming work was estimated at 2:1 (Spence, Clarke Annez and Buckley, 2009: xiv). This productivity gap largely benefits the trade, hotel and restaurant service sector, which is the largest service sector and mostly consists of informal, micro and small enterprises such as hawkers and convenience shops. Hence, Figure 6.7 shows that, in 9 out of 13 African countries, a decrease in agricultural employment between 2000 and 2010 was related to the increase in employment in the trade, hotel and restaurant service sector (formal and informal services included).

Figure 6.7. Change in employment in trade services and agriculture in 13 African countries, 2000-10



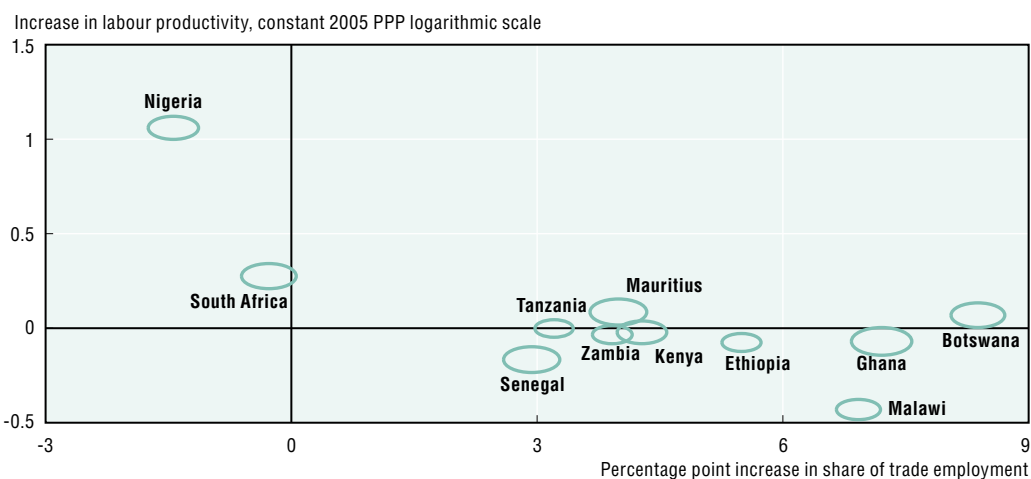
Note: The size of the bubble reflects the relative share of the country’s labour force in trade employment in 2000.

Source: Authors’ calculations based on the GGDC 10-sector database (Timmer, de Vries and de Vries, 2014).

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But the large exodus of low-skilled workers into trade, hotel and restaurant services reduces the productivity of this sector. In 7² out of the 11 African countries in Figure 6.8, the sector appears as the least productive activity in services while accounting for 10% to 25% of total employment. This sector has experienced productivity loss in real terms in the same 7 countries. Between 2000 and 2010, Ghana's wholesale and retail trade sector has increased its employment share from 17% to 25% without increasing its economic output.

Figure 6.8. Change in labour productivity and share of employment in trade services in 11 African countries, 2000-10



Note: Productivity is adjusted by sectoral price levels in real terms, which is available for 11 sub-Saharan African countries. The size of the bubble reflects the relative share of the country's labour force in trade employment in 2000.

Source: Authors' calculations based on the GGDC 10-sector database (Timmer et al., 2014).

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Low-productivity informal urban jobs prevail particularly in countries that urbanised while benefiting from rents stemming from natural resources extraction and agricultural exports. Focusing on Côte d'Ivoire and Ghana, Jedwab (2013) finds windfalls from cocoa exports have been disproportionately spent on non-tradable goods and services, giving rise to "consumption cities". In Ghana, census data shows that informal jobs grew with urbanisation from 74% to 82% of total employment between 2000 and 2010 (Table 6.1). Informal jobs remain more prevalent among female than male workers.

Table 6.1. Employment sectors of household heads by sex in Ghana, 2000-10

Employment sector	Total		Male		Female	
	2000	2010	2000	2010	2000	2010
Public	9.6%	8.7%	10.8%	9.7%	6.5%	6.5%
Private formal	14.6%	8.4%	15.4%	10.3%	12.7%	4.3%
Private informal	74.0%	82.0%	71.7%	79.0%	79.7%	88.6%
Semi-public or parastatal	1.0%	0.2%	1.2%	0.2%	0.5%	0.1%
Non-governmental or international organisations	0.2%	0.7%	0.3%	0.8%	0.1%	0.3%
Other	0.5%	0.1%	0.5%	0.1%	0.5%	0.0%
Total	100%	100%	100%	100%	100%	100%
Number of people	3 052 266	4 585 293	2 170 609	3 132 907	881 657	1 452 386

Source: Ghana Statistical Service, 2000 and 2010 Population and Housing Censuses, quoted in Potts (2013).

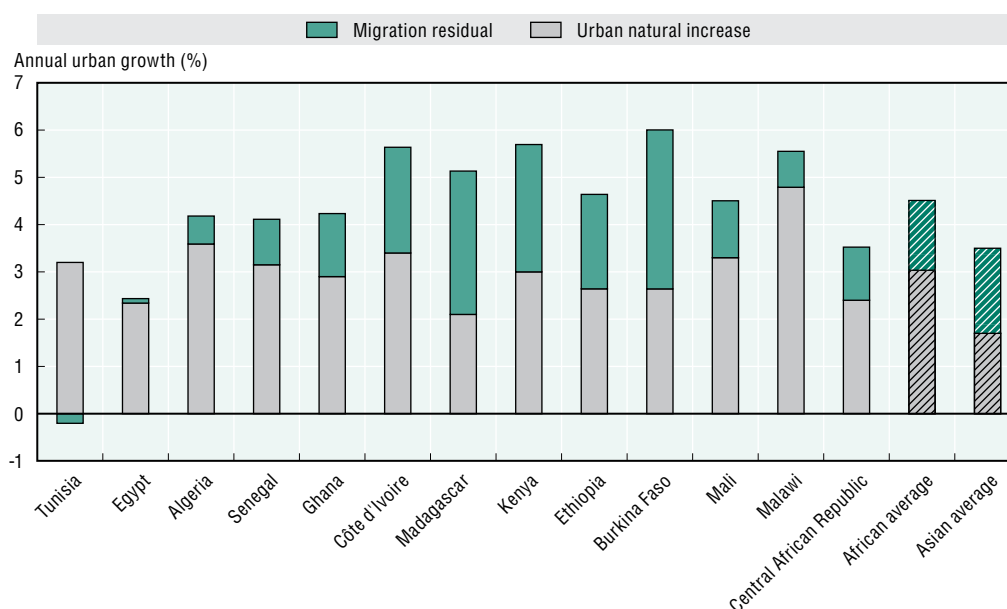
Rapid growth of African cities has compounded the consequences of slow structural transformation

The failed attempts in the decades following independence at accelerating industrialisation amid rapid growth of the urban population may explain in part why structural transformation has not accompanied urbanisation in the

case of most African countries, particularly in sub-Saharan countries. Natural demographic growth in urban areas has prevailed over economic migration of a working-age labour force from rural areas. This has outstripped the capacities of cities to provide productive economic opportunities and services.

Urban fertility remains much higher than in Asia and contributes to the majority of urban growth in Africa (Figure 6.9). While Africa's urbanisation rate has been second to Asia's, Africa's urban population growth rate was the world's fastest at 4% between 1960 and 2010. In 2010-14, the urban fertility rate remains at more than five children per woman in Burundi, the Democratic Republic of the Congo (DRC), Mali, Niger and Nigeria. To illustrate, a family of 4 rural migrants in 1960 would have become a family of 43 in 2010 at sub-Saharan Africa's annual increase of 2.9%, compared with 24 at Asia's increase of 1.7% (Jedwab, Christiaensen and Gindelsky, 2015).

Figure 6.9. Urban growth rates for selected African countries and Asia, 1960-2010



Note: The Asian average includes 12 countries: Bangladesh, China, India, Indonesia, Japan, Malaysia, Myanmar, Pakistan, Philippines, Korea, Sri Lanka and Thailand. The African average is a simple average of the 13 African countries in the sample.

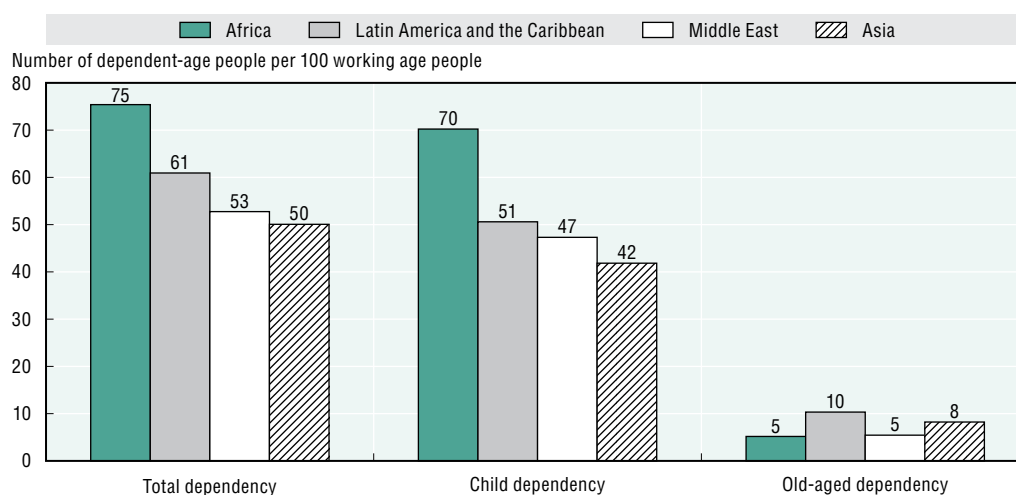
Source: Adapted from Web Appendix Table 3 in Jedwab, Christiaensen and Gindelsky (2015).

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The contribution of migration to Africa's urbanisation has decreased. Migration from rural areas accounted for at least half of all urban growth in sub-Saharan Africa during the 1960s and 1970s but about 25% of urban growth in the 1980s and 1990s (Brockhoff, 1995).³ Rural-urban migration accounts for less than a third of urban population growth in 22 African countries. It accounts for over 50% in only 7 African countries (Burkina Faso, Cabo Verde, Lesotho, Namibia, Rwanda, Seychelles and South Africa), whereas it contributed to half of Asia's urban population growth (Potts, 2009; Tacoli, McGranahan and Satterthwaite, 2015). Dissatisfaction with local public services has been one of the main reasons why Africans migrate to urban areas; this differs from Asia and Latin America where better employment opportunities attract people to cities (Dustmann and Okatenko, 2014; AfDB/OECD/UNDP, 2015). Changing weather patterns, land pressures, conflict and natural disasters also push African rural dwellers to urban areas (Box 6.5).

Africa's urban population in working age is now supporting more people in dependency-age than the urban population in any other world region. On average, 100 people of working age in urban Africa support 75 economically inactive people. This compares to 100 workers per 61 dependents in Latin America, 53 in the Middle East and 50 in Asia. The high rate of child dependency is the main cause of urban Africa's high dependency ratios. For every 100 urban workers, there are 70 children under 15 years old. In contrast, Africa has the lowest urban old-age dependency ratio, along with the Middle East. This results from low life expectancy. For every 100 people of working age, 5 are over 65 years old.

Figure 6.10. Urban dependency ratios in selected developing regions



Note: Averages are unweighted. Sample includes 43 African countries, 21 Asian countries, 23 Latin American countries and 9 Middle East countries based on data between 2000 and 2010.

Source: Authors' calculations based on data shared by Jedwab et al. (2015).

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Rapid urban growth does not in itself impede structural transformation if accompanied by sufficient productive employment and public goods. In fact, concentrating people in urban areas provides an opportunity to spread the costs of providing public goods over a larger number of users, thus reducing the marginal cost per user. However, despite their diverse forms, policies of productivity and public goods have failed in many African countries. This may help explain the lack of linkages between urbanisation and structural transformation in diverse groups of African countries.

African countries show diverse patterns of urbanisation, fertility transition and structural transformation

To further analyse Africa's urbanisation process requires understanding the wide diversity of situations found across its 54 countries. We can group African countries into five types according to their stages in three processes: urbanisation, fertility transition and structural transformation. The latter is expressed in the economy notably by the changing role of agriculture and by the importance of natural resource extraction. Figure 6.11 shows where countries stand visually in this typology by comparing their urbanisation levels and total fertility rates. Annex 6.A1 presents the methodology used for this analysis and lists the countries per group.

- The *diversifiers* are the five African countries at the most advanced stage of the three processes. Their urbanisation levels range between 40% and 67%. They are also close to completing their fertility transition with total fertility ratios of about

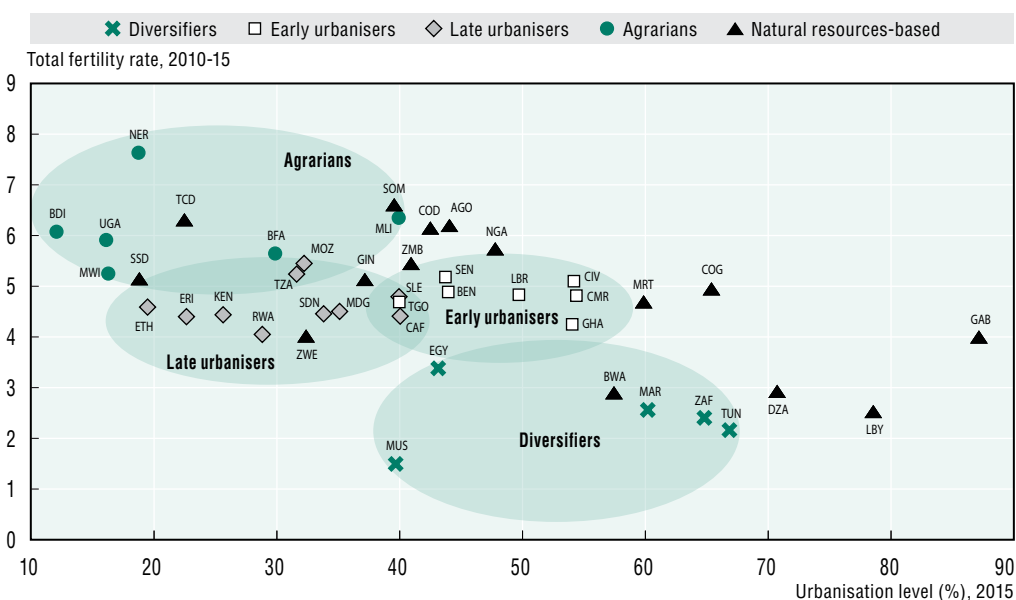
three or fewer children per woman. These countries are Egypt, Mauritius, Morocco, South Africa and Tunisia. This group has Africa's highest level of income (above USD 10 000 gross national income [GNI] per capita in 2013 with the exception of Morocco) and of human development (with a Human Development Index [HDI] value above 0.60).⁴ Between 1960 and 2010, a natural increase in the population drove urban growth in Egypt and Morocco. These two countries are more advanced in their structural transformation. Agriculture generates less than 16% of gross domestic product (GDP) and manufacturing 13-18% of GDP. The main challenge for these countries is to increase both productivity and economic complexity, as they have not yet been able to transition to sophisticated manufacturing. Indeed, the share of manufacturing in GDP peaked for all five countries in the *diversifiers'* group during the late 1980s and the 1990s and has since declined. Several countries have de-industrialised significantly. For example, South Africa's manufacturing workforce has shrunk from 16.8% of total employment in 1981 to 11.6% in 2011, shifting towards services; the size of its manufacturing sector decreased from 23.6% in 1990 to 13.3% of GDP in 2014.

- The *early urbanisers* are seven countries that have made progress in their urbanisation and fertility transition without having been able to diversify their economic base. Mostly found in West Africa, they include Côte d'Ivoire, Ghana and Senegal. These countries are about 35-50% urbanised and have total fertility ratios of about five children per woman. They are typically low- to lower-middle income countries (USD 1 000-4 000 GNI per capita in 2013), with low-to-medium levels of human development (HDI values between 0.40 and 0.57). Between 1960 and 2010, both migration and natural population increase have driven their urban growth. Migration out of agriculture has pushed the labour force to urban areas. Yet the manufacturing sector is small, 2%-14% of GDP, and can hardly absorb the high proportion of unskilled labour. The urban informal services sector has grown significantly. The common challenge for these *early urbanisers* is to break into higher value activities particularly in the urban formal sector. They should focus on manufacturing that can absorb a low-skilled labour force, pursue ambitious education policies, develop higher value-added urban services, further raise agricultural productivity and continue their demographic transition.
- The *late urbanisers* are eight countries that are predominantly rural yet have begun their urbanisation and fertility transition and structural transformation more recently. They are located in East Africa and include Ethiopia, Kenya and Tanzania. Less than a third of their population typically lives in urban areas. Their total fertility rates are four to six children per woman. Income levels are low (USD 1 000-3 500 GNI per capita in 2013), and levels of human development are low-to-medium (HDI values between 0.38 and 0.54). Manufacturing makes up less than 4-12% of GDP. While starting from a low base, several of these countries including Ethiopia and Rwanda have positively transformed their economic structures within the past ten years. These are the main challenges for the *late urbanisers*: continue to improve their infrastructures, particularly transportation linking different urban growth centres, break into manufacturing and higher value services as they continue to move out of agriculture, urbanise, and accelerate their demographic transition. Developing a network of intermediary cities can support the rapid urbanisation that is currently taking place.
- The *agrarians* are nine pre-dominantly rural countries that are still at a very early stage of their urbanisation and fertility transition. Many *agrarian* countries are landlocked, such as Niger, Chad and Malawi. Typically less than a third of

the population resides in urban areas, and women have on average at least six children. These countries' income levels did not exceed USD 1 900 GNI per capita in 2013, and they have low levels of human development (HDI values between 0.48 and 0.34). Their economies are predominantly agriculture-based: agriculture makes up 25-58% of their GDP and manufacturing 4-12%. For these countries, a natural population increase drove urban population growth between 2000 and 2010. Though rural-urban migration may increase as they are now starting their urban transition, their urban economies have not developed enough to attract much rural migration to urban areas. The *agrarian* countries are challenged to begin the structural transformation process more decisively by raising agricultural productivity and engaging in a well-planned urbanisation process. Once they have accelerated structural transformation, they will likely start the fertility transition.

- The *natural resources-based countries* have urbanised with windfalls from natural resources, which have attracted labour out of agriculture. Compared with other countries at similar income levels, these 13 countries show a higher degree of urbanisation (40-78%), generally higher fertility rates and a high degree of urban primacy with the capital usually disproportionately bigger than other cities. The share of GDP in agriculture is low at 3-21%. These countries exhibit huge variations in income levels (USD 500-20 000 per capita), in the types of natural resources they produce (e.g. hydrocarbons, minerals and metals) and in their geography (e.g. Libya is predominantly arid while Nigeria is mostly rain-fed). Their common challenges are to use their competitive advantage in international trade to diversify their economic base away from natural resources and to decrease fertility particularly in urban areas. However, they currently need specific policies to face the adverse global conditions of lower commodity prices.

Figure 6.11. Urbanisation levels and total fertility rate by typology of African countries



Note: Natural resources-based countries are not clustered in the figure because they are more scattered across the board. The history and ability of states to invest resource rents can have implications for their development.

Source: UN DESA (2015, 2014).

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Rural areas and towns remain pillars of Africa's urbanisation

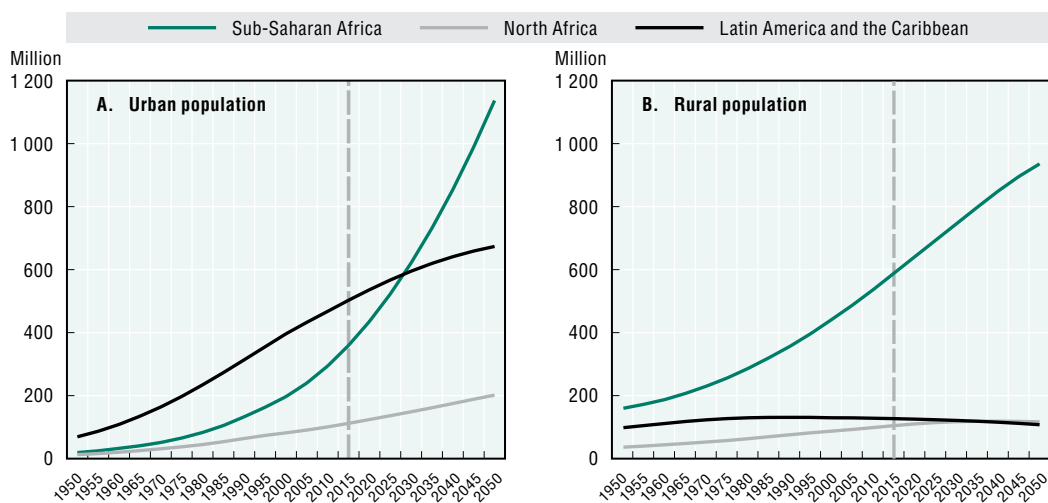
As seen above, urbanisation is not synonymous with the decline of agriculture, let alone of the broader rural economy. In most cases, agricultural output continues to grow – though at a slower pace – and accompanies the rise of industry and higher-value-added services as a share of GDP. Some rural regions may even develop faster than some urban ones.

Africa's urbanisation is not a breakaway from its rural areas for many reasons. First, slow structural transformation, continued demographic growth in the countryside and declining migration flows to big cities mean that rural areas remain pillars of many African countries. Second, urbanisation holds new promise for rural areas by providing greater demand for rural products, upgrading the agricultural supply chain and enhancing the rural factor market (see Chapter 7 for a more detailed discussion). Third, the traditional divides between rural and urban areas have increasingly blurred: almost three-fourths of Africa's population lives within a rural-urban interface made up of rural areas and cities with fewer than 500 000 inhabitants. Fourth, those trends are not linear and demand careful analysis. Several countries for instance have experienced a deceleration of urbanisation or even de-urbanisation episodes.

Rural population growth will abate only slowly

A characteristic of African urbanisation is that rural population growth will abate only slowly. Except in the *diversifiers*' group, most of Africa's rural areas are not emptying fast (AfDB/OECD/UNDP, 2015; OECD 2016). Thus, while Africa urbanises, its rural population will continue to grow at a rate of more than 1% per annum beyond 2045. Sub-Saharan Africa is expected to grow by more than 353 million additional rural dwellers between 2015 and 2050. Continuing rural population growth in most of sub-Saharan Africa contrasts with other world regions. Globally, rural population is forecasted to start shrinking no later than by 2020. Figure 6.12 shows that sub-Saharan Africa is the region of the world where the rural population will continue to grow the most (in stark contrast to Latin America and the Caribbean).

Figure 6.12. Population increase in North and sub-Saharan Africa, and in Latin America and the Caribbean, 1950-2050

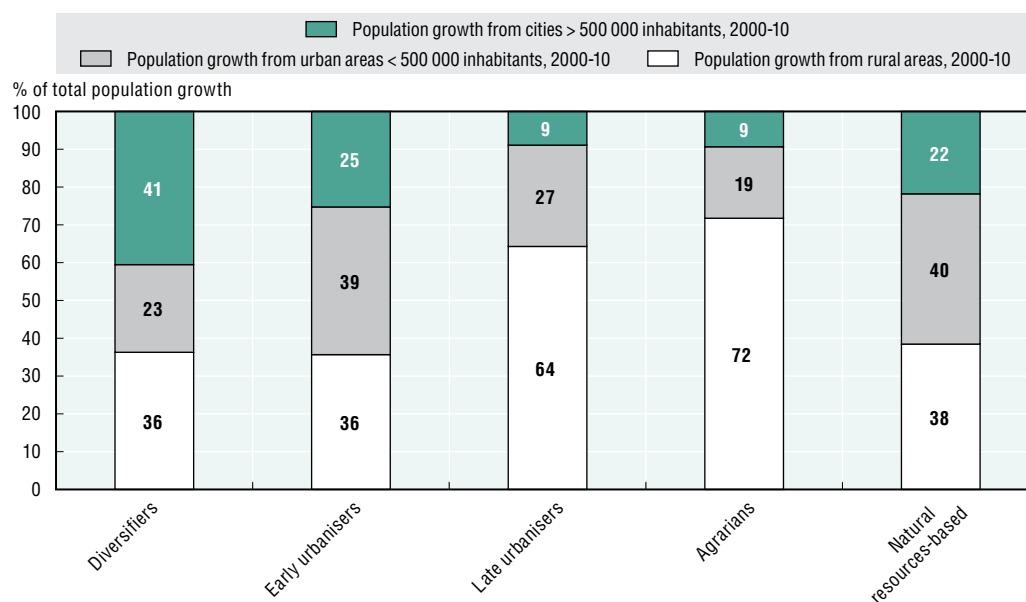


Source: Authors' calculations based on UN DESA (2014).
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The growth of towns and intermediary cities has strengthened the reciprocal linkages between rural and urban development


While the debate on urbanisation often focuses on big cities, urbanisation has actually been happening mostly in a rural-urban interface. A continuum of rural areas, villages, towns and cities of fewer than 500 000 inhabitants make up this interface.⁵ Figure 6.13 shows that the rural-urban interface remains important all over Africa, particularly for the *late urbanisers* and *agrarian* countries where it has absorbed over 90% of total population growth.

Figure 6.13. Contribution to population growth by city size and rural-urban interface by type of African country, 2000-10



Note: The countries in each group are listed in Annex 6.A1.

Source: Authors' calculations based UN DESA (2014).

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Over 952 million Africans, 82% of Africa's population, live at such a rural-urban interface. Across the different regions, the share of the population living in settlements smaller than 500 000 inhabitants is as follows: 91% in East Africa, 80% in West Africa, 77% in North Africa, 74% in Central Africa and 65% in Southern Africa. Looking at all of Africa's urban areas, 55% have a population of fewer than 500 000 people. Africa's urbanisation has thus to a large extent taken the form of "urban villages", diffusing urban growth in smaller towns. In 2010, the growth of cities of fewer than 500 000 inhabitants was second to that of the largest cities. The magnitude of this rural-urban interface shows that most Africans retain a close relationship with rural areas.

Box 6.3. Settlement dynamics in West Africa

Urbanisation is the most spectacular manifestation of West African settlement dynamics witnessed in past decades. Between 1950 and 2010, the region's total population increased by a factor of four (from 72 to 320 million), while its urban population increased by a factor of 22 (from 6 to 133 million). West Africa now counts 1 950 urban agglomerations with more than 10 000 inhabitants. The average distance between cities has been reduced from 111 kilometres to 28 (OECD, 2016). In 2000, 94% of high-density rural areas were located in the urban catchment area of towns with at least 50 000 inhabitants (OECD, 2013; see Map 6.1). Those rural areas, which averaged more than 51 inhabitants per km², accounted for 58% of the total rural population.

Box 6.3. Settlement dynamics in West Africa (cont.)

Settlement dynamics in West African towns and intermediary cities show that urban and rural populations are moving ever closer together, as documented in the Africapolis database updated by the Sahel and West Africa Club. Rural areas that are well connected to urban markets have more diversified local economies, with a higher share of off-farm employment and income from non-agricultural activities. One-fourth of West Africa's rural population is engaged in off-farm activities. At current urbanisation levels, the economy-wide share of agricultural employment is 50% at the regional level, down from 90% in 1950 (Moriconi-Ebrard, Harre and Heinrighs, 2016).

The traditional divides between rural and urban areas have increasingly blurred

Static categories of urban and rural no longer capture the hybrid nature of shifting relations between cities and countryside (Agergaard, Fold and Gough, 2010; Berdegué and Proctor, 2014). The phenomenon of “urbanisation of the countryside and ruralisation of the cities” observed in Tunisia by Miossec (1985) has become a general feature of the continent's urbanisation trends.

Migratory practices have diversified. A gradual improvement in infrastructure, including the adoption of mobile phones, has led to a growing tendency towards shorter and temporary migratory practices (Losch, Magrin and Imbernon, 2013). These new patterns may comprise weeks or days but also daily commuting, where transport conditions allow. The degree of change in migratory practices often reflects the regional density and quality of transportation, showing clear differences in networks. Circular migration has increased since the 1980s. This refers to migration into a town followed by a movement out of the town and back to a rural area, which could be a year or even decades later (Potts, 2012). In South Africa, population trends show increasing circular migration and the development of a rural-urban interface, leading to high formal housing prices and to many informal settlements that are only temporarily occupied (OECD, 2008).

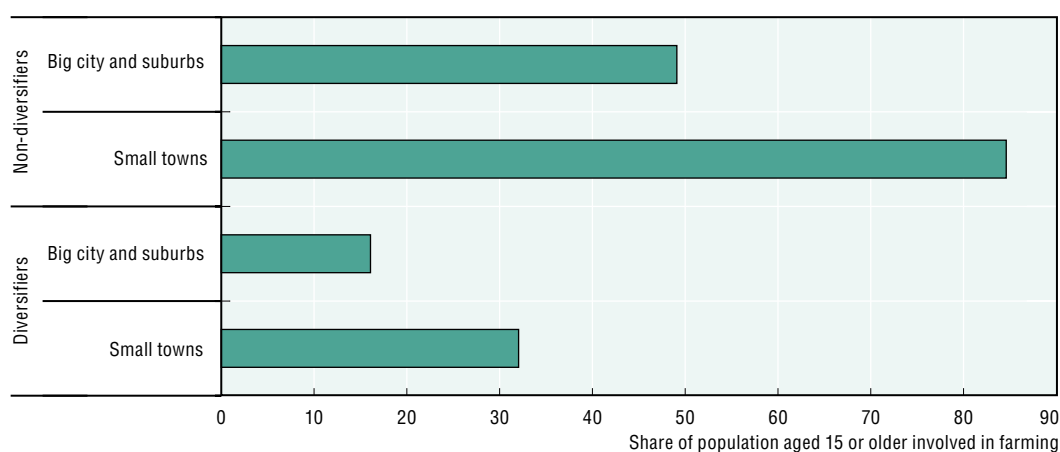
Increased mobility alters family structures and life styles. Different household members may exert activities in different places – the village, the neighbouring villages, the town, the capital or even abroad – thus diversifying their sources of income (Guétat-Bernard, 1998; Tacoli, 2003). Such practices generally do not disturb family cohesion. They sometimes even create a kind of archipelago family economy (Losch, Fréguin-Gresh and White, 2013). Living in multiple places produces functional spaces that often do not correspond to administrative boundaries (Cortes and Fayet, 2009; Ma Mung, 1999). This mobility gradually results in a rural economy that is more diversified and often related to some form of urban economy (Haggblade, Hazell and Reardon, 2007).

Many villagers become urbanised, while urban dwellers continue with some of their previous rural activities, notably urban farming. About 40% of African urban dwellers are “engaged in some sort of agricultural activity” (FAO, 2012). According to Gallup data for the period 2009-14, 85% of dwellers aged 15 or older in the towns of *non-diversifier* African countries are involved in agriculture, while the share is 49% in big cities and suburbs. In Africa's *diversifier* countries, the ratio stands at 32% in towns and 16% in big cities and suburbs (Figure 6.14).

These dynamics lead to new spaces appearing between rural and urban areas, sometimes far from government supervision (Diop, 2010). Urbanisation happens along a continuum of settlements without clear distinction between urban and rural. Next to


the appearance of megacities, urban population growth and urban sprawl have also led to urban corridors (see Chapter 7). Examples are Cairo-Alexandria, the 600-kilometre Ibadan-Lagos-Cotonou-Accra urban corridor and Kenitra-Casablanca-El Jadida. Such conurbations can also create urban regions or megalopolises, such as Greater Cairo, or Gauteng which includes Johannesburg, Midrand and Pretoria. Peripheral urban growth is often a challenge for local governments that are unable to conduct censuses and to provide services to those populations. For instance, the urban growth of Togo's capital, Lomé, happens mainly outside the city's administrative borders: the city has no reliable statistical data, recent urban planning document, or even a land-use inventory for those areas outside its remit. Thus, the municipality has virtually no latitude to increase its receipts (Paulais, 2012: 11; 76; 132).

Figure 6.14. Urban farming in big cities and small towns among African countries, 2009-14



Note: Gallup provides the two categories “small towns” and “big city and suburbs” through self-identified questions. *Non-diversifiers* include Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Gabon, Ghana, Guinea, Côte d’Ivoire, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Togo, Uganda, Zambia and Zimbabwe. *Diversifiers* are Mauritius (1 000 respondents) and South Africa (4 984 respondents).⁶

Source: Authors’ calculations based on Gallup World Poll (2015).

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Urbanisation has reversed or slowed down in some countries

Rural areas remain important also because Africa’s urbanisation has not been a linear process: over time, urbanisation trends have varied in direction and pace. Since the 1980s, the Central African Republic, Côte d’Ivoire, Mali and Zambia have experienced periods of de-urbanisation according to their censuses. In Benin, Burkina Faso, Mauritania, Mozambique, Niger, Senegal and Zimbabwe, the growth of large and medium sized-towns has stagnated or increased slowly (Potts, 2009: 253). These episodes of de-urbanisation or slow urbanisation were often related to economic crises caused by the shortfall of commodity exports and the ensuing structural adjustment that cut subsidies to urban populations (Potts, 2012). Although de-urbanisation occurred in other parts of the world (for instance in China during the Maoist era, in Cambodia during Polpot’s rule and in Thailand in the aftermath of the 1998 financial crisis), de-urbanisation episodes have been more frequent in sub-Saharan Africa over the past 30 years (Bairoch, 1988; Clark, 2009).

Table 6.2. Pace of urbanisation trends in selected African countries, 1980-2012

Counter-urbanisation (urban share falling)	Slow urbanisation (<2% between censuses)	Rapid urbanisation
Côte d'Ivoire 1988-98	Benin 1992-2002	Burkina Faso 1996-2006
Central African Republic 1988-2003	Ethiopia 1994-2007	Cameroon 1987-2005
Mali 1987-98	Malawi 1998-2008	Tanzania 1998-2002
Zambia 1980-90, 1990-2000	Mauritania 1988-2000	
Zimbabwe 2002-12	Niger 1988-2002	
	Sudan 1993-2008	
	Togo 1981-2010	

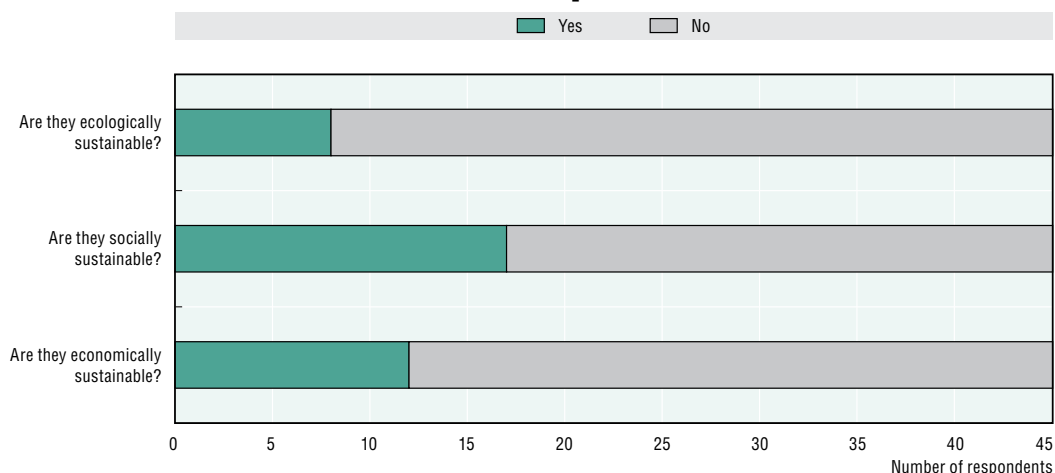
Source: National census data, quoted by Potts, 2013: 11.

According to United Nations estimates, the rural population grew faster than the urban population between 1990 and 2010 in five African countries: Egypt, Liberia, Mauritius, Swaziland and Zambia. In total, 11 African countries experienced negative or slow urbanisation, increasing less than 2.2 percentage points in urbanisation levels between 1990 and 2010: the Central African Republic, Chad, Comoros, Djibouti, Egypt, Liberia, Libya, Mauritius, Niger, Swaziland and Zambia. It is projected that four countries will experience slow urbanisation, increasing less than 2 percentage points in urbanisation levels between 2010 and 2030: Djibouti, Mauritius (which will continue to experience negative urbanisation), Swaziland and Zimbabwe.

Urbanisation represents challenges for development and the environment


Rapid urbanisation with slow structural transformation creates a significant obstacle to achieving the development objectives set by Agenda 2063 and the Sustainable Development Goals. While African urbanisation patterns are diverse, up to now few may be deemed sustainable economically, socially or environmentally, as confirmed by the AEO 2016 experts' survey (Figure 6.15). Without productive jobs in rural areas, most economies have seen labour move from agriculture into urban, low-skilled and informal service activities. Access to public goods remains highly unequal even within urban areas, often putting the social fabric at risk. African cities are facing an unprecedented combination of developmental challenges together with rising environmental risks such as unsafe sanitation, climate change and air pollution.

Figure 6.15. Are urbanisation trends sustainable in your country?
Africans' responses



Note: Survey responses by country economists of the AfDB and UNDP in 45 country offices in Africa about trends in the country they monitor. Responses are weighted by one per country.

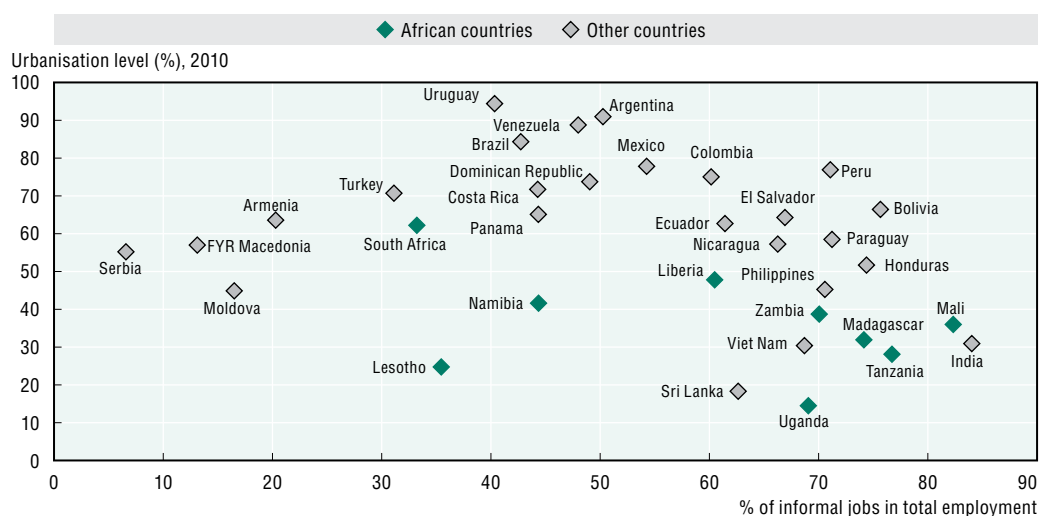
Source: AEO experts' survey, 2016.

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Urban settlements hold informal workers in low value-added service sectors

The steady economic growth and rapid urbanisation of the last decade and a half have not been matched by proportional formal employment creation. The proportion of the labour force in vulnerable employment dropped by only 2% between 2000 and 2015, despite exceptionally robust GDP growth rates of over 5% a year fuelled by a long commodity boom (Parnell, Pieterse and Haysom, 2016). Most male and female workers thus stayed in the informal services sector, for instance as street vendors, with no perspective of moving to more productive activities and durably improving their livelihoods. The informal economy is estimated at 61% of urban employment and 93% of all new jobs created (Kessides, 2005). For African women, the informal economy is estimated to represent 92% of all job opportunities outside of agriculture, overwhelmingly as self-employment or own-account work, though up-to-date statistics are lacking (ILO, 2002, quoted by Kessides, 2005). Informality remains a hallmark of many African countries, though it remains widespread in many other developing countries at different urbanisation levels (Figure 6.16).

Figure 6.16. Urbanisation levels and share of informal work in total employment in six African countries and 26 non-African countries, 2010



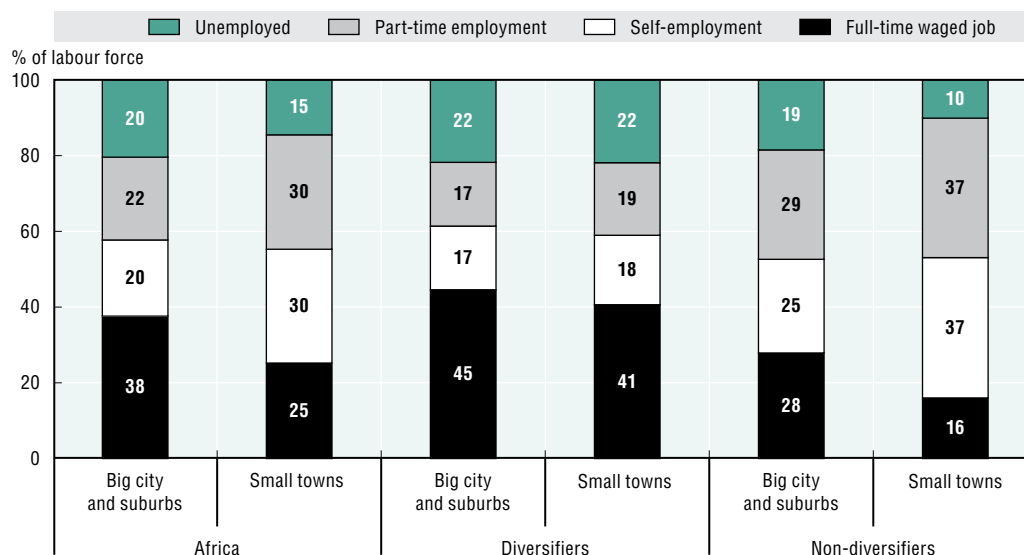
Source: ILO (2012) and UN DESA (2014).

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The drivers of informality are many. This informality is often an outcome of accommodating rapid population and economic growth in cities. It is also due to a lack of institutional capacity to protect property rights, enforce regulations and manage planned urban expansion (Spence, Clark Annez and Buckley, 2009: 26-27).

The weak performances of the modern manufacturing and service sectors mean that wage-paying jobs are rare, and most people are trapped in vulnerable employment or are forced out of the labour force altogether. Based on an analysis of Gallup data, Africa's working-age population is more likely to have a wage-paying job in big cities than in towns at 38% and 25% respectively (Figure 6.17). This gap in wage-paying full-time jobs between cities and towns is wider in *non-diversifier* countries than in *diversifier* countries, reflecting the deeper extent of structural transformation in smaller cities and towns in the *diversifier* countries. In contrast, towns have a higher share of populations in vulnerable employment and that are unemployed than big cities, and this share is much higher in towns among *non-diversifiers*. Thus, 84% of respondents are in vulnerable employment and unemployed, in contrast with a combined 55% in big cities in *diversifier* countries.

Figure 6.17. Type of work by size of African city and country typology (%), 2009-14



Note: Gallup provides the two categories “small towns” and “big city and suburbs” through self-identified questions. The employment categories are also provided by Gallup. *Diversifiers* include Egypt, Morocco, South Africa and Tunisia. *Non-diversifiers* include Algeria, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Ghana, Côte d’Ivoire, Kenya, Liberia, Libya, Malawi, Mali, Mauritania, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Uganda, Zambia and Zimbabwe (see Annex 6.A.1).

Source: Authors’ calculation based on Gallup World Poll (2015).

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Access to public goods remains unequal in most urban areas

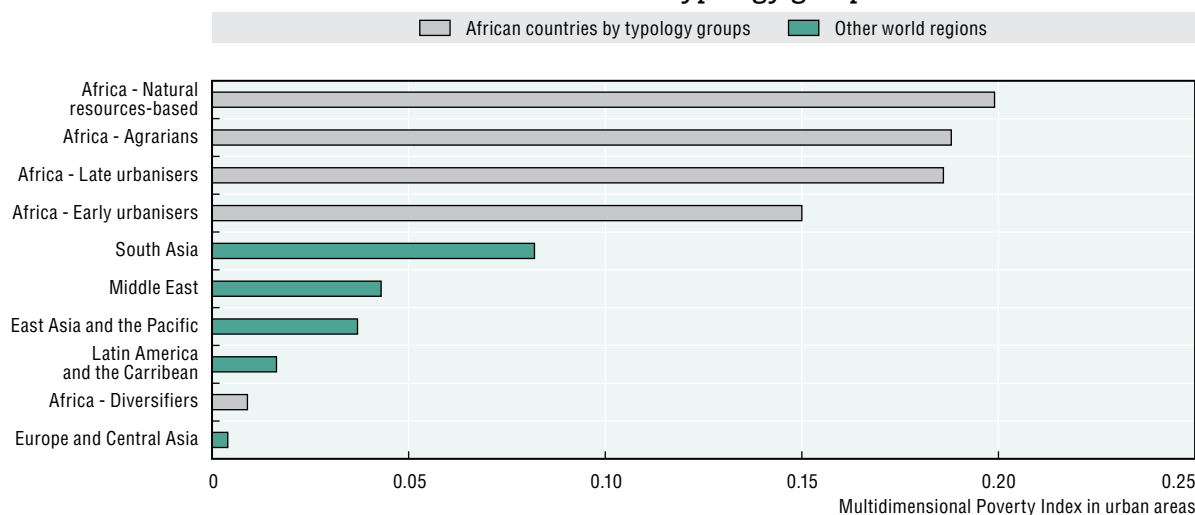
Diversifiers have reduced urban poverty more rapidly than other countries

The incidence of urban poverty is much higher in Africa than on other continents: 62% of sub-Saharan Africa’s urban population live in slums (UN-Habitat, 2008).⁷ A slum household is defined as deprived in at least one of the five following amenities: durable housing, sufficient living area, access to improved water, improved sanitation or secure tenure (UN-Habitat, 2006). Many African countries face a real risk of tripling their slum population by 2050 (UN-Habitat, 2014).

The Multidimensional Poverty Index (MPI) shows that urban poverty is high in Africa. The MPI is a composite measure of poverty headcount and deprivation intensity faced by households. Africa’s urban MPI is 0.151, much higher than the average for the sample of 54 non-African developing countries at 0.026 and twice the level of South Asia, the next poorest region (Figure 6.18):


- Within Africa, the group of *diversifier* countries has an urban MPI level of 0.009. This is considerably lower than the rest of the continent and even lower than all other developing regions except developing Europe and Central Asia.
- The *natural resources-based* countries face the highest level of multidimensional poverty, followed by the *agrarian* countries, the *late urbanisers* and the *early urbanisers*.

Figure 6.18. Urban Multidimensional Poverty Index by world region and AEO 2016 typology group



Note: The countries included in each group are **Africa - natural-resources based**: Chad, Congo, Democratic Republic of the Congo, Guinea, Mauritania, Nigeria, Somalia, South Sudan, Zambia, Zimbabwe; **agrarians**: Burkina Faso, Burundi, Malawi, Mali, Niger, Uganda; **late urbanisers**: Central African Republic, Ethiopia, Kenya, Madagascar, Mozambique, Rwanda, Sierra Leone, Sudan, Tanzania; **early urbanisers**: Benin, Cameroon, Côte d'Ivoire, Ghana, Liberia, Senegal, Togo; **South Asia**: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan; **Middle East**: Iraq, Jordan, Palestine, Syrian Arab Republic, Yemen; **East Asia and the Pacific**: Cambodia, China, Indonesia, Lao, Mongolia, Philippines, Thailand, Timor-Leste, Vanuatu, Viet Nam; **Latin America and Caribbean**: Barbados, Belize, Bolivia, Brazil, Colombia, Dominican Republic, Ecuador, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Peru, Saint Lucia, Suriname, Trinidad and Tobago; **Africa diversifiers**: Egypt, Morocco, South Africa, Tunisia; **Europe and Central Asia**: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Serbia, Tajikistan, Ukraine, Uzbekistan.

Source: Authors' calculations based on data from Alkire and Robles (2015).

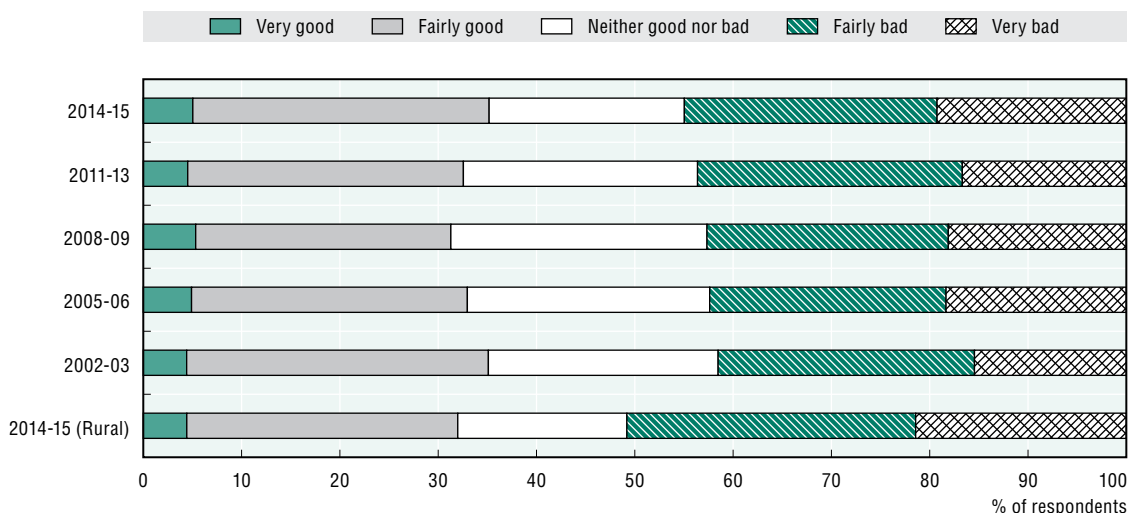
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The urban poor in Africa face four main risks: i) health risks resulting from poor living conditions, overcrowding and lack of basic services; ii) livelihood risks from vulnerable employment, hazardous occupation and discrimination in labour markets; iii) external shocks from natural disasters that disproportionately affect informal settlements; and iv) governance risks of not receiving adequate policy attention (Tacoli, McGranahan and Satterthwaite, 2015). Other than the *diversifiers'* group, African urban areas are characterised by higher poverty headcounts as well as more intense deprivations than urban areas in other regions. Thirty-four per cent of Africa's urban inhabitants living outside the *diversifier countries* are deprived in at least three of the ten MPI dimensions, in contrast to 3% in the *diversifier countries* and 9% in other non-African developing countries. Africa's urban poor are most deprived in their living standards, followed by health care. Almost a third of Africa's urban poor do not use clean cooking fuel. A quarter of the urban poor lack access to electricity and sanitation.

Poor living conditions affect well-being in urban areas

The past decade of robust economic growth has not improved subjective well-being of Africa's urban inhabitants. Thirty per cent of urban respondents find their living standard good and 5% very good, but the share of positive responses has remained constant at only about 35% since 2002/03 (Figure 6.19). In contrast, the share of urban respondents finding their economic conditions bad or very bad has always been higher and increased from 41% to 45%. Nonetheless, urban residents generally think they are better off than their rural counterparts, 50% of whom consider their living conditions unfavourable.

Figure 6.19. Self-evaluation of current personal economic conditions by African urban respondents



Note: The country coverage gradually increases from 16 countries in 2002/03 to 34 countries in the latest wave (2014/15).

Source: Extracted from Afrobarometer (2015).

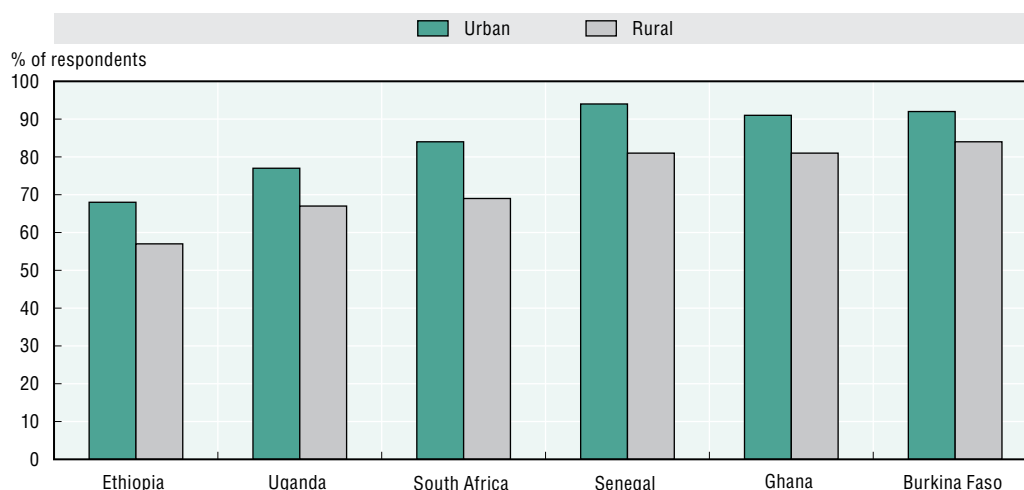
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With high urban inequality, segregation is becoming an increasing risk for social cohesion


Africa has some of the world's most unequal cities. The distribution of income among urban households as measured by the Gini coefficient⁸ stands at 0.539 for the urban areas in a sample of 12 countries (UN-Habitat, 2010a). Johannesburg has one of the world's highest Gini coefficients at 0.75 (UN-Habitat, 2010b). The social consequences of urban inequality affect human development outcomes, limit access to opportunities and perpetuate inequity (UN-Habitat, 2008). Crime rates and insecurity are high and tend to grow with city size, such as in Johannesburg and Lagos. A survey of 9 sub-Saharan African countries shows that urban residents are much more concerned on average about the problem of crime than rural residents, with differences ranging between 8 to 15 percentage points (Figure 6.20).

The spatial divide heightens social disparities across neighbouring urban areas. Large gated communities heighten spatial segregation and hampers social cohesion. One example is Eko Atlantic City on an artificial island five kilometres away from Lagos that offers exclusive amenities for upper class and expatriate elites (Kester, 2014). In particular for women, perceived or actual threats of violence have direct impacts on their ability to freely move in public spaces. In Nairobi, over 700 gender-based physical violence in public spaces including bus stops and parks were reported in 2010-11 (McEvoy, 2012). Results from a study in Kigali found that 42% of women were concerned about sexual harassment when traveling to educational institutions during the day and 55% after dark (UN Women, 2013).

Figure 6.20. Africans saying “Crime is a very big problem in our country”, 2015



Source: Pew Research Centre (2015).

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Box 6.4. The flux of urban refugees to African cities

The flux of refugees to cities, or urban refugees, poses specific challenges for social cohesion, urban economic productivity and the integration of refugees into society for a decent life. International migration within Africa has been linked to political crises, wars and their economic fallout, increasing the number of refugees in urban areas (Naudé, 2008).

Nairobi, Kenya, has 46 000-100 000 refugees from 8 neighbouring countries. Refugee camps such as Dadaab have become as large as towns, sheltering hundreds of thousands of refugees from Somalia since the early 1990s. The influx of refugees to Nairobi's district of Eastlands in the early 1990s led to an increase of over five-fold in rent prices for single rooms pushing many Kenyan tenants out, while refugees often lived in squalid conditions of over-crowding (Campbell, 2006; Lindley, 2007). But the consequences can also be positive: the arrival of refugees created bustling business activity. The Eastleigh Business Community registered a total of 2 800 mainly Somali business people between its founding, in 1999, and 2005 (RCK, 2006).

Other countries have also been affected:

- Sudan's capital, Khartoum, accommodates 1.5 million displaced persons (Paulais, 2012).
- In Egypt, Cairo hosts a million refugees from Sudan, in addition to those from other countries. The situation is similar in Alexandria, Egypt's second largest city. Policies generally ignore urban refugees, though many face abuse (Paulais, 2012: 139).
- In South Africa, local governments have created helpdesks for migrants in the cities of Johannesburg, Matatiele, Musina and Tshwane. They attempted to respond to violent riots against foreigners in 2008 and 2015 (AfDB/OECD/UNDP, 2009).

High environmental risks compound the developmental challenges of Africa's urbanisation

As it urbanises, the African continent faces a conjunction of important environmental and developmental challenges, which other regions have not faced simultaneously with such magnitude. Those include the fast rising impact of air pollution on the health and economy of African people as well as the multiple consequences of global climate change affecting urban areas.

The costs of air pollution are abnormally high

Urbanising Africa faces multiple environmental and developmental issues. Unlike regions that urbanised earlier, Africa must deal with them simultaneously.

Environmental risks – air pollution, unsafe water and unsafe sanitation – require attention. In 2013, ambient particulate matter pollution (APMP) caused at least 246 000 premature deaths. Deaths from household air pollution (HAP) have risen, with indoor air pollution being the number one cause of respiratory illness among women and children in African informal settlements (UN-Habitat, 2008). By contrast, deaths from other long-standing environmental risk factors such as unsafe water and unsafe sanitation have fallen steadily (Table 6.3).

Table 6.3. Premature deaths from selected major risk factors in Africa, 1990-2010 (five-year intervals) and 2013

	1990	1995	2000	2005	2010	2013
Unsafe water	837 702	780 095	751 892	644 136	561 342	542 855
Unsafe sanitation	615 540	573 084	551 948	468 815	407 092	391 656
Childhood underweight	474 819	467 921	420 606	309 945	273 294	275 813
Household air pollution	396 094	422 895	436 463	429 199	450 969	466 079
Ambient PM pollution	181 291	190 933	200 854	213 429	227 428	246 403

Source: Roy (forthcoming).

As they face those new challenges, African cities cannot borrow from others' experience. Other world regions have never exhibited such convergence of important environmental and developmental challenges. By 1990, China's childhood underweight death toll was low enough for APMP deaths to dominate it at a ratio of 11:1. By 2013, China's childhood underweight death toll had been more or less eliminated, and APMP deaths dominated it at a ratio of 671:1. Africa can hardly tackle the new risk factor of APMP, with its approximately 250 000 deaths in 2013, together with the old problem of childhood underweight, with its 275 000 deaths. Environmental challenges such as APMP are to a great extent caused by urbanisation and, more specifically, by motorisation. While it can be viewed as a post-industrial risk, APMP is already relatively high in Africa although the continent has reached only the early stages of industrialisation. Developmental challenges like under nourishment also need attention. "Childhood undernutrition" remains the leading risk factor for premature deaths in sub-Saharan Africa.⁹ Being underweight is the third cause of premature deaths in Africa (Table 6.3).

Roy (forthcoming) translates premature deaths into economic costs. Using the value of statistical life (VSL) method, measuring the cost of mortalities at the level of society as a whole, he estimates that air pollution cost Africa USD 447 billion in 2013, a third of its GDP (Table 6.4). For Africa, the estimated economic cost of premature deaths from all four selected environmental risk factors, APMP, HAP, unsafe water and unsafe sanitation, exceeds USD 850 billion or almost two-thirds of GDP.

Table 6.4. Economic costs of premature deaths from selected major risk factors in Africa (USD million), 2013

	Ambient particulate matter pollution	Household air pollution	Unsafe water	Unsafe sanitation	Childhood underweight
Total (of countries with available data)	215 212	231 798	248 191	160 670	134 468

Note: All computations use the OECD base value of USD 3 million in 2005, which reflects an aggregation of individual values for small changes in risk of death, as found in the OECD countries (OECD, 2012b). This base value is adjusted for differences in per capita GDP and adjusted for post-2005 income growth and inflation. Available data are insufficient to complete calculations for the following countries: Eritrea, Sierra Leone, Somalia and Zimbabwe.

Source: Roy (forthcoming).

Climate change and urban growth will heighten environmental pressures on urban areas

Although African countries contribute less than 4% to global gas emissions, climate change imposes increasingly high costs on the continent (FAO, 2008). Average temperatures in Africa are predicted to increase 1.5-3°C by 2050, magnifying the impacts of climate change that can already be witnessed (UNEP, 2007). Should climate change continue unmitigated, the sole effect of rising temperatures could lead most African countries to be poorer in 2100 than today (Burke, Hsiang and Miguel, 2015). Strong urban demographic growth inevitably magnifies environmental pressures on urban ecosystems. The poorest households, which are highly dependent on natural resources, are the most affected by environmental degradation.

Climate change and environmental degradation caused by urban growth have different impacts on various African cities and regions:

- **Flooding risks in low elevation coastal zones:** 50% of African settlements with 1-5 million inhabitants lie at low elevation coastal zones (Kamal-Chaoui and Robert, 2009). Flooding increases in cities because they have more impervious surfaces (Paulais, 2012). The populations and assets of port cities like Abidjan, Douala or Tunis are vulnerable to sea level rise. Agricultural land may be lost as well (Map 6.2). Egypt's coastal zone contains 40% of the country's total population and is expected to experience a 6.4% decrease in GDP per meter of sea level rise (Brown, Kebede and Nicholls, 2011). For Nigeria, estimates lay at a 0.3% GDP loss, and for Senegal at 12-17%.
- **Abrupt weather changes:** Several countries face changes in weather patterns, varying in duration and intensity. East African countries tend to have heavier rainfall. Southern Africa experiences dryness, drought and wildfires. In parts of the Sahel, lower than average rainfall could lower corn production and endanger access to food, for example in Nairobi as shown by the Agricultural Stress Index (FAO, 2014).
- **Changing rain patterns:** An acceleration of the hydrologic cycle will increase patterns of extreme rainfall (IPCC, 2007). Annual average adaptation costs in Africa could amount to USD 18 billion between 2010 and 2050, mainly costs in the water sector and coastal protection. While the mean flow of water would increase, water availability would drop in Ethiopia's capital Addis Ababa by 73%, in Botswana and South Africa by 20%, and in Somalia by 42% (AfDB, 2011).
- **Heat extremes:** Heat extremes and urban heat islands have impacts on health and vegetation and create further climate warming (Huang and Lu, 2015). Urban heat islands are higher temperatures in the cities resulting from human activity such as pollution, the modification of the physical and chemical properties of

the atmosphere, and the covering of the soil surface. In North Africa, heat stress currently causes 2 000 fatalities per year but they are predicted to rise to 47 000 in 2080 (OECD, 2015). Regions close to the Sahel cities such as Ouagadougou will also be affected. African countries could experience 907 000 deaths in 2080. In a city like Johannesburg, the hottest vulnerable areas identified are suburbs where density is high and vegetation low (Hardy and Nel, 2015).

- **Deforestation:** Fuelwood supplies more than 80% of household fuel in Africa and accounts for 90% of harvested wood. Map 6.3 shows that recent deforestation in Central Africa clusters especially around major transport links and urban centres such as Kinshasa.
- **Desertification:** Land degradation and conflicting land-use patterns are consequences of continuous land desertification, high population growth and exhaustive exploitation of resources. Desertification already affects two-thirds of Africa's land and 65% of its population. It is responsible for large parts of rural-urban migration, for example to Ouagadougou, Burkina Faso (Pauleit, 2015). In the Sahel and in the Horn of Africa, 60 million people are likely to migrate between 2016 and 2020 because of degraded areas.

Box 6.5. Climate change and rural-urban migration in sub-Saharan Africa

Climate change has led to rural-urban migration in sub-Saharan Africa. This is largely because the area's agriculture depends heavily on rainfall, more so than other world regions (Barrios, Bertinelli and Strobl, 2006: 4).

- Declining rainfall has increased urbanisation rates in sub-Saharan Africa (ibid.: 18).
- The decline in moisture (measured by an index combining precipitation and potential evapotranspiration) has affected agricultural productivity, pushing rural dwellers to urban areas (Henderson, Storeygard and Deichmann, 2014: 2).
- While rainfall trends have fallen steadily since the 1970s, a 1% fall in precipitation is estimated to have increased sub-Saharan Africa's urbanisation rate by 0.45% (Barrios, Bertinelli and Strobl, 2006: 18).
- Inefficient management of rural water and land resources has also contributed to rural-urban migration by lowering agricultural productivity. Likewise, inappropriate land tenure systems have deterred sustainable investment (Global Centre for Food Systems Innovation 2014: 59).

It is unlikely that urbanisation driven by decreases in rainfall promotes Africa's structural transformation. By pushing the labour force out of rural areas, drier conditions can increase urban productivity in cities endowed with an industrial base, particularly those with an export sector not wholly dependent on local agriculture (Henderson, Storeygard and Deichmann, 2014: 1; 22). However, few African cities have a sufficiently industrialised export base to make productive use of additional rural migration (ibid.: 25).

Policies should focus on productive jobs and public goods for the growing urban population

The history of Africa's urbanisation is certainly singular but not fundamentally different from urbanisation experiences in other world regions. This singularity owes mainly to the continent urbanising at lower levels of income than others but also to a number of policy dysfunctions over the past decades (UN-Habitat, 2014). While

dysfunctions are a part of any urbanisation process, rapid urban growth has compounded their consequences, particularly in terms of urban overcrowding, lack of connectivity and inefficiencies impeding the provision of public goods.

Investment in urban infrastructure must keep up with rapid urban growth

Among the policy-induced factors explaining why urban infrastructure has not kept up with strong urban growth, three areas stand out: public and private actors have not sufficiently upgraded the urban infrastructure; steadily high fertility rates in urban areas have contributed to overcrowding through fast urban growth; and dysfunctional real estate markets have led to the explosion of informal housing.

Governments must upgrade the urban infrastructure

Urban planning and urban finance have greatly lagged all over Africa (UN-Habitat, 2014; 2008). Most African countries have urbanised later than other world regions. Many big cities are colonial legacies that were not planned to host large populations. As such, several African capitals stemmed from a rent-based or extractive vision of the economy that is not conducive to structural transformation (AfDB/OECD/UNDP, 2015).

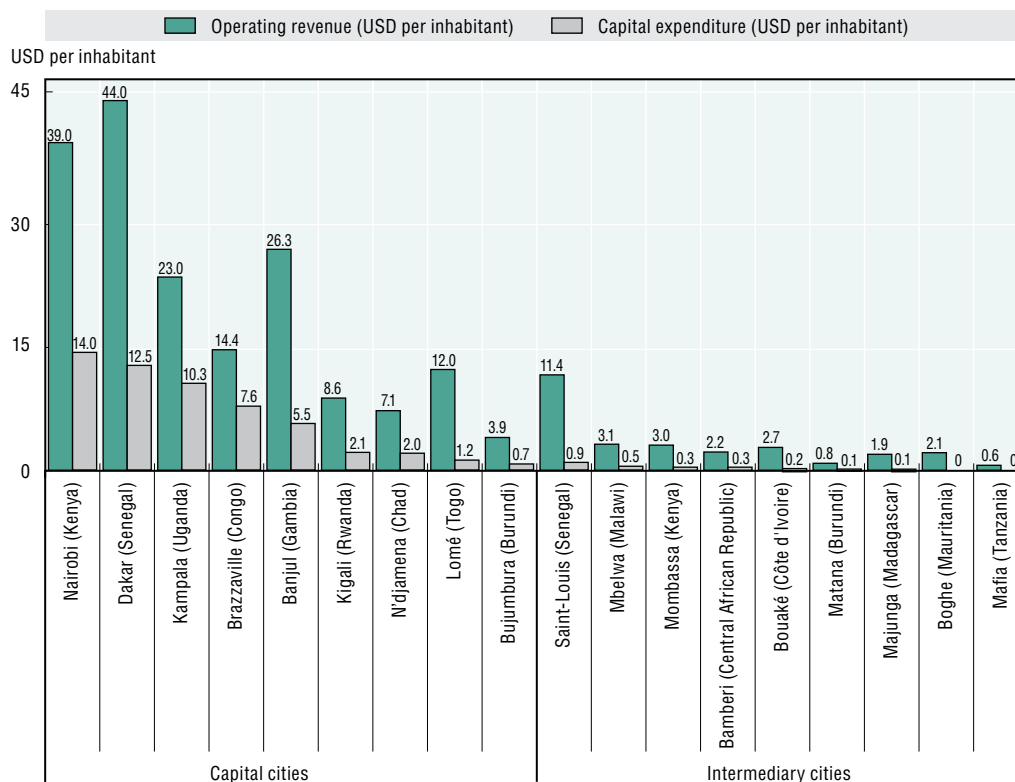
Some planned cities built soon after independence have faced unexpectedly high population density leading to severe congestion. Mauritania's capital, Nouakchott, was built in 1958 as an administrative capital for an expected capacity of fewer than 15 000 inhabitants, but it has grown by more than 9% annually since 1950 to reach almost 1 million inhabitants in 2015 (AfDB/OECD/UNDP, 2015: 182). Similarly, booming urban growth at 5.3% a year in Angola has overwhelmed the existing capacity of provincial capitals where existing systems were originally designed for smaller populations. Two-thirds of the population live in urban slums and peri-urban areas with limited access to basic services. Outside Luanda, only four cities have sewerage collection systems, and these serve only central urban areas covering 17% of the population (USAID, 2010).

Investment in urban infrastructure has not kept pace with rapid urban population growth, decreasing the marginal utility that comes from economies of scale when providing services to a larger urban consumer base. On average in sub-Saharan African countries, gross domestic investment has remained constant at less than 22% of GDP since 1960, whereas it has increased to 42% in the East Asian developing countries (World Bank, 2015). Large pockets of poverty and vulnerable employment have often prevented public and private investment in urban infrastructures, magnifying urban congestion effects.

One-third of developing countries' total infrastructure needs concern urban areas (UCGL, 2007). African cities' investment needs have been estimated at around USD 30 billion per year, of which USD 20 billion for sub-Saharan Africa (Paulais, 2012: 100). Depending on development levels, African countries would need to spend 5-7% of their GDP on public infrastructure, i.e. a minimum of USD 100 billion per year (World Bank, 2005). Determining the local finance gap for specific cities depend on specific needs, urban density and various methods of calculation.

Municipal governments of African cities do not have the resources to tackle these challenges by themselves. Cities' expenses and receipts per inhabitant are very low (Figure 6.21). At around USD 40 per capita per year, the revenues of capital cities such as Dakar and Nairobi fall very short of the financial needs induced by urban growth, and infrastructure expenses cannot match demand (Figure 6.21). The financial situation of intermediary cities is even weaker with less than USD 1 spent per capita per year on average.

Figure 6.21. Operating revenue and capital expenditure per capita in selected African capitals and intermediary cities



Source: Yatta (2016) based on CGLUA (2014).
 StatLink <http://dx.doi.org/10.1787/888933350725>

Gender blind infrastructure also contributes to urban dysfunctions by exacerbating inequalities existing between women and men. Women are affected by urban infrastructures unsuitable to their needs. Longer distances from the closest water source contribute to women's time poverty: on average, women in sub-Saharan Africa travel over six kilometres every day for clean water, and women and girls are responsible for 71% of water collection in the region (UN et al, 2010). In Addis Ababa, exposure to violence and sexual harassment in public places influences women's employment choices (ActionAid, 2011). Gender blind infrastructure also affects girls' education opportunities and the unequal time women spend on unpaid care activities.

Policies should provide more affordable formal housing

Weak land rights can constrain urban economies, particularly formal housing markets. Formal housing markets do not respond efficiently to the growing demand of urban housing. Important housing demand outstrips the formal market, causing a housing shortage and contributing to high prices. As a result, formal housing is often unaffordable for middle- or lower-income households, pushing them into the informal housing market. In the East African Community, less than 10% of the population can afford a house on the formal market (CAHF, 2015: 220). Over 62% of sub-Saharan Africa's urban dwellers live in informal settlements.

By and large, Africa's housing markets suffer from inadequate and unco-ordinated housing policies. Land rights and legal ownership are generally weak, except in the *diversifier* countries, which boast some successful examples of containing the expansion

of informal urban housing (see Chapter 7). Land tenure systems in most sub-Saharan African countries are inherited from customary law where land titles do not exist. Land ownership is often unclear, and legalisations of settlement are disputed (Collier, 2013: 8). Land grabbing – the misallocation of public land to private actors with political connections – occurs commonly at the expense of affordable housing. At the same time, informal housing can be extremely expensive relative to residents' income. In Kibera and Mathare, Kenya's largest slums, landlords investing in rental housing are able to reap return rates on their investments as high as 100% and 70%, respectively (Paulais, 2012).

By contrast, *diversifier* countries show examples of improving the housing market in urban areas. Slums in North Africa have diminished substantially, particularly in Morocco and Tunisia (CAHF, 2015: 223). Rate of homeownership is high, for instance at 89% in Mauritius. Comprehensive management of housing and land has contributed significantly to turning Mauritius' real estate sector into a driver of economic growth. South Africa has a well-established property market and a world class cadastral system (ibid.: 136-181). Allocating clearly defined land rights is fundamental for investment in land or infrastructure development (King and Napier, 2015: 7).

More broadly, lack of financial support and inadequate structure of banks affect the construction industry and households. The few formal construction firms in sub-Saharan Africa cater to high-end housing and housing for civil servants (Collier, 2013: 10). Lack of mortgage institutions and inadequate administrative structures of commercial banks prevent firms from financing mass housing. Due to the lack of collateral and restrictive lending policies, 85% of Africa's urban population cannot secure formal housing loans (Mo Ibrahim Foundation, 2015: 22). In the Economic and Monetary Community of Central Africa, only 5% of private-sector employees have access to mortgage finance from commercial banks (CAHF, 2015: 215).

Atypically high construction costs increase the price of formal housing. Materials such as cement are around three times higher than world prices, which also accounts for the low competitiveness of savings and loan agencies (Collier, 2013: 6).¹⁰ Government initiatives to build residential districts have sometimes ended up erecting "ghost cities" due to the high costs of apartments, such as the district of Nova Cidade de Kilamba, built 30 kilometres outside Luanda and hosting only 10% of its capacity (Mo Ibrahim Foundation, 2015: 22).

Lack of urban connectivity has offset economies of agglomeration

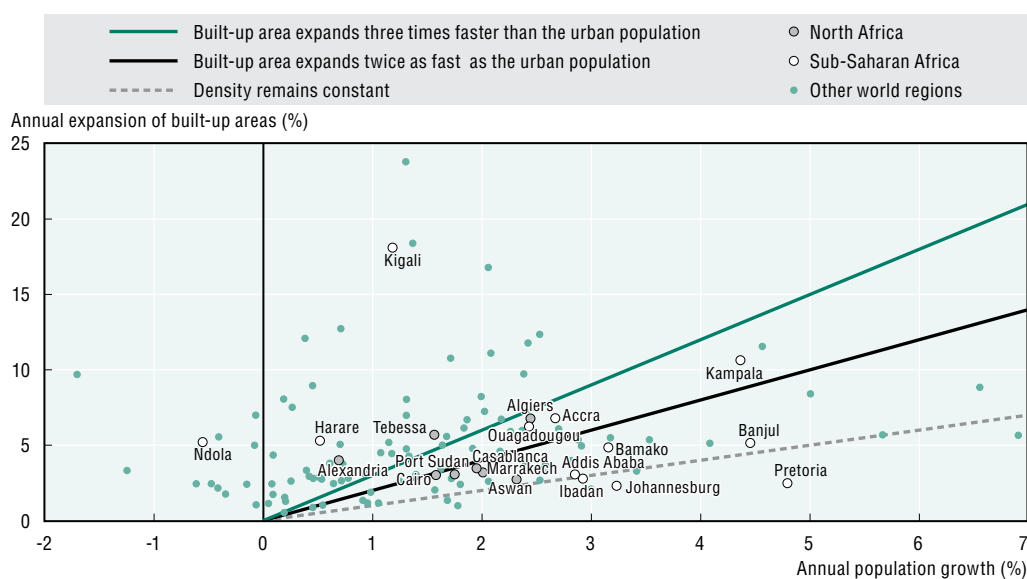
Urban connectivity helps to support economies of agglomeration, or use less material infrastructure to support a larger population. Urban policies must better promote the connectivity among workers and firms (labour markets), among firms themselves (input markets), and among producers and consumers (local and international consumer markets) (Collier, 2016). Urban sprawl spreads people further away from each other, while weak transportation infrastructure increases the cost of connecting them together.

Most cities have expanded through urban sprawl


In many sub-Saharan African cities, urban expansion has been fragmented and sparse, with new development leapfrogging from the central cores (Angel et al, 2010a). African cities thus suffer from the challenges of urban sprawl, decreasing the benefits of connectivity within urban areas.

African cities are expanding into rural areas, similar to the global trend (Angel et al., 2010a). The *Atlas of Urban Expansion* shows that 12 sub-Saharan African cities have a low density at 81 inhabitants/km², while 6 North African cities have densities similar to Southeast Asian cities at 155 inhabitants/km². The African cities studied have built up rapidly; the lowest rate is 2.3% a year (Johannesburg). The rates have often surpassed and even more than doubled that of population growth. Kigali has expanded by 18% a year, tripling the size of its population in only 15 years. Several cities, such as Kampala, have achieved rapid population growth at 4.3% with even faster physical expansion at 10.6% a year, reducing their density level (Figure 6.22).

Figure 6.22. African cities' expansion of built-up areas and population growth, 1990-2000



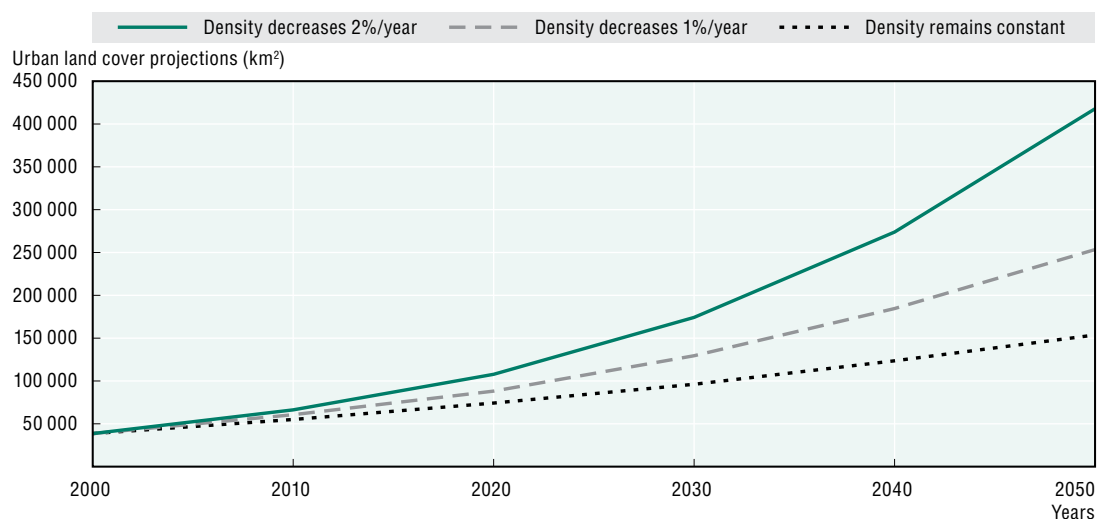
Source: Authors' calculations based on Angel et al. (2010a).

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Sub-Saharan Africa's ratio of urban to arable land has changed quickly, though it remains currently low at 1.5%. In Lagos, frontier residential development, replacing forests and farmlands, already affects rural livelihoods at the urban fringe. This problem is compounded by institutional factors such as the skewed distribution of private land, the high costs of undeveloped land, and weak land-use planning regulations. Pro-poor land tenure and housing policy reforms can address such issues (Brimoh and Onishi, 2007).


At current rates of population growth and decreasing density, African urban areas will continue to expand quickly. Sub-Saharan Africa's urban areas will likely grow at least four-fold between 2010 and 2050, even if the rate of land expansion remains constant, since the urban population is expected to quadruple from 295 million to 1.15 billion. However, if the consumption of land per capita increases at 1% or 2% per annum, the land area of cities is likely to increase six- or eight-fold, respectively (Figure 6.23). By comparison, the density of urban areas in developing countries decreased at nearly 2.5% per annum between 1990 and 2000. Between 2000 and 2010, Accra's density decreased at an average annual rate of nearly 2.5%, while Algiers' density has decreased by 4.3% per year (Angel et al., 2015). Such high rates of urban expansion seem environmentally unsustainable as they reduce the supply of ecosystem services such as arable land, freshwater and waste absorption. They may also affect hydrologic cycles and vegetation cover (Grant, 2015).

Figure 6.23. Projections of urban land cover for Africa, 2000-50



Note: This figure is based on projections of urban population and average density level. The three scenarios depend on the average urban density level decreasing by 1% or 2% per annum or not changing at all.

Source: Adapted from Angel et al. (2010b).

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Public mass transportation systems need improving

Policies should make formal and informal transportation safer and more comprehensive, regular and accessible. Since mass transportation is a public good, states are normally involved in providing it. Today many of Africa's transport systems continue to rely on private solutions. Public transport has been recently developed and is inaccessible for a large part of the population. It takes an average of 25 minutes to commute to work in Accra, compared with 45 minutes in Abuja and up to 60 minutes in Monrovia (UN-Habitat, 2010b: 107-109). Developing mass transportation systems is essential to cost-effectively connect people to jobs and thus increase a city's productivity. The minimum density for a viable public transport system is considered to be 150 inhabitants per hectare.

Policies that favour investment in cost- and energy-efficient public transport networks are needed to improve sustainability and mobility strategies (UN-Habitat, 2008). Mass transportation systems are necessary for environmental sustainability and to avoid car dependency (Glaeser, 2012). They reduce dependence on oil and petroleum; lower air pollution; encourage access and mobility; and increase social interactivity in cities.

Income levels determine transport usage. In South Africa, workers in the lowest-income quintile rely foremost on walking, followed by taxis (25%) and buses (7%) (Statistics South Africa, 2013). The lowest-income households spend at least 20% of their disposable income on transport (South African Country Note). In other countries, over 50% of trips are made on foot (Foster and Briceno-Garmendia, 2010).

Higher income leads to higher access to private car ownership. In many African cities, the use of private motorised transport is low: it varies from 1% of total transportation means used in Dakar and 7% in Dar es Salaam, to 10-20% in Harare and Kinshasa and up to 45% in Ouagadougou where motorcycles are commonly used (Mo Ibrahim Foundation, 2015). Countries with the highest car ownership per 1 000 people are Libya (297), the Seychelles (182), Mauritius (174), Botswana (168), and South Africa (165).

Countries with the lowest are Ethiopia (3.1), Togo (2.3), Sao Tome and Principe (2.2) and the Central African Republic (0.31) (World Bank, 2015).

As fares for urban public transport are too high for poorer populations, informal means of transport prevail. The average family can afford no more than one daily round trip on a public bus, while the poorest households are excluded. Minibuses are more frequently used than large, official buses (Accra 52% vs. 10%, Bamako 10% vs. 1% and Nairobi 29% vs. 7%) (Kumar and Barrett, 2008). Fares for minibuses vary and are often lower than those for large buses (the cost of a trip with minibus compared to a large bus is on average USD 0.25/0.31 per trip (World Bank, 2011). On average, lowest-income quintile households spend 30-50% of their disposable income on daily commutes a month, though commutes cost as much as 105% of their income in Lagos.

Structures of public transport systems have a disproportionate influence on women's time use and well-being. Women are less likely to drive and more likely to make multiple trips and use multiple forms of transport. In Bamako, for example, 87% of women walk for almost all trips compared to 57% of men. Thus, bus timetables, costs of transport and travel routes that do not take women's specific travel needs into account can increase the time and costs of travel and consequently women's time poverty.

The availability of transport and services cause large differences of accessibility between income groups. In low-income countries, one in five respondents to the Afrobarometer survey has no access to transport services. In upper-middle-income countries, over 80% of respondents live in areas with at least three infrastructure services at their disposal (Leo, Morello and Ramachandran, 2015).

Urban planning and governance should focus on informal settlements

Human settlements in Africa have largely grown unplanned (UN-Habitat, 2014; 2008; Grant, 2015). Master plans for African cities were conceived during the colonial period, based on European experience of cities. Few of these plans were implemented as they did not fit with Africa's social, political or economic specificities. The rural bias in the 1970s also contributed to the policy makers' difficulty in coherently planning cities. The shortages of qualified and (active) planners and other built-environment professionals have compounded inadequate planning systems, legal frameworks, and obsolete building standards (Silva, 2015). Moreover, most countries suffer from insufficient funds to carry out urban planning. Some must face challenges of poor governance, corruption and wasted resources.

Urban planning should take account of informal settlements. Some governments have viewed cities' informal settlements, where most urban inhabitants work and live, as leading to a waste of resources. Legislation has sometimes ensnared urban planning, like in the eviction case of 700 000 informal settlers during operation Murambatsvina in Zimbabwe in 2005 (Watson and Agbola, 2013). Urban planning has recently focused on retrofitting central business districts or planning new satellite towns altogether. Certain large-scale luxury projects and gated communities have created spatial segregation and bypassed the development of slums.

The share of public space for parks and roads in Africa's urban land is about 15-20%. This is half of the world's average of 30-40%. According to UN-Habitat (2013), the generally accepted minimum standard for public space in urban areas is 45%, broken down into 30% for streets and sidewalks and 15% for green spaces. This standard aims to achieve a minimum density of 150 inhabitants per hectare.

Box 6.6. Cities for the next two billion urban dwellers

The current United Nations population projections suggest that the world will add over 2.3 billion new urban dwellers between 2015 and 2050. The total urban population at mid-century will exceed the entire global population in 2000. Urban form tends to last, and the lock-in effects from urbanisation decisions endure, so the urbanisation decisions of the next 30-60 years are likely to shape living conditions on earth for centuries to come.

Massive urban growth is both a challenge and an opportunity. It is a challenge because mistakes will be costly to reverse. It is an opportunity for reforms of all types. Thus urbanisation and structural transformation need to reinforce one another, especially through the use of urbanisation policies. Urbanisation policies must address issues such as human capital, entrepreneurship and industrialisation, as well as the core urban concerns of infrastructure and urban form.

Environmentally, the stakes are high. The emergence of sprawling, car-dependent cities for the next two or three billion urbanites would be a huge environmental setback. At the same time, policies favouring transit-oriented development, green building design and sustainable land use could help make the current wave of urbanisation part of the solution to the world's environmental challenges, rather than part of the problem (OECD, 2012c). However, time is running out: cities are growing fast and in much of the world they are growing in ways that augur ill for the future when it comes to issues like climate change and air quality.

The experiences of OECD countries, where urbanisation is largely complete, point to some important lessons for today's fast-urbanising countries:

- **Governance matters.** Successful cities require co-ordination across policy sectors and jurisdictions. This is especially true of dynamic issues like resilience and sustainability. Governments must build them into institutions and policy processes, rather than considering them as isolated objectives to be attained by this or that policy intervention.
- **Some mistakes are harder to rectify than others.** For example, the failure to set aside land for public infrastructure and amenities or to provide for an arterial grid of roads can be incredibly costly, or even impossible, to correct once development has taken place and land prices have risen.

National urban policies are critical to all of this. Even where powers are devolved, senior governments largely determine both what cities can do and what they have incentives to do. National policy makers need to be attentive to the way sectoral policies may create unexpected or unwelcome incentives and constraints for cities – as, for example, when regulatory and property tax regimes favour extensive development, in contradiction to policies aimed at curbing sprawl.

Source: OECD (2014; 2015).

Now is the time to prepare for Africa's urban transition

Africa has the opportunity to promote sustainable urbanisation and accelerate structural transformation

Africa's fast pace of urbanisation requires massive investment in infrastructure. In order to accommodate African urbanites, governments and the private sector will have to invest twice as much by 2050 as they have since the years of independence. Investments in urban infrastructure have strong lock-in effects and can determine city

growth half a century after they have been made. Experience from OECD countries shows that retrofitting infrastructure can prove much more costly than carrying out early “no regret” policies (Brahmbhatt et al., forthcoming).

Policy makers are increasingly aware of urbanisation's central place in the process of structural transformation (UN-Habitat and UNECA, 2015). Four-fifths of survey respondents consider urbanisation as an opportunity for sustainable development (Figure 6.24). This departs from the post-independence approach which tended to dismiss Africa's urbanisation as too fast, unmanageable and needing to be constrained (Box 6.7 on urban bias). However, policies attempting to restrain urbanisation instead of tapping its potential for structural transformation remain commonplace. According to a United Nations survey, 80% of African countries continue to desire a “major change in the spatial distribution of their population”, and a similar proportion (85%) have implemented policies to limit rural-urban migration (UN, 2013: 109; 114).

Box 6.7. Economists' “urban bias” in a rural Africa

The concept of the urban bias largely emerged after African countries' independence. This academic debate contending that cities are harmful to rural development has pitted the rural against the urban and negatively influenced the perception of the role cities can play in Africa's development (Yatta, 2016). Development economists have developed three main notions of the “urban bias”:

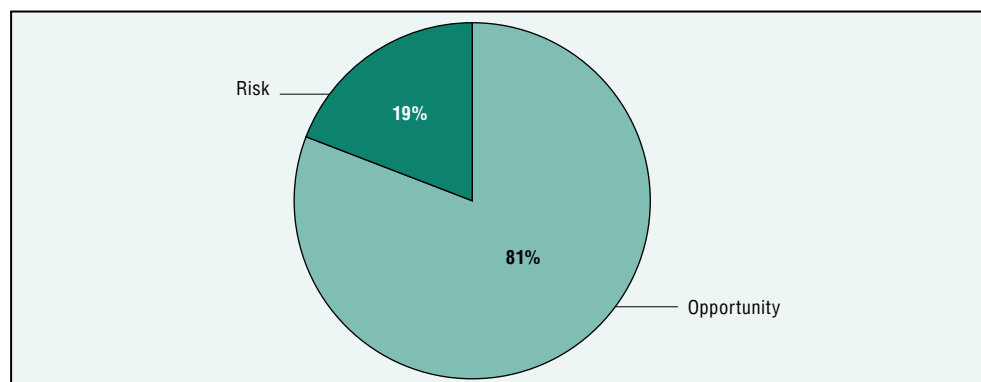
- As a “price twist” leading to rural exploitation by the urban. Developed in the late 1960 and 1970s, this model of price twists describes how prices of goods produced in cities are significantly higher than rural products, whereas agricultural products are sold under value (Corbridge and Jones, 2005).
- As an investment monopoly parasitic to the national economy. Cities absorb a large proportion of the national budget and become net consumers of credits while rural areas provide supply (Schikele, 1968; Chandavarkar, 1985).
- As a waste of human resources by attracting the rural labour force into the unproductive urban informal sector and creating food scarcity (Dumont, 1966; Balogh, 1966). The seminal Todaro Paradox showed that increasing urban working opportunities would increase urban unemployment by attracting more rural-urban migration (Todaro, 1969).

International organisations have echoed this academic debate. The World Bank's “Berg-Report” suggested that ruling regimes in sub-Saharan Africa imposed urban-biased policies to muffle unrest in towns and cities and support their interest group (Berg, 1981).

By the 1990s, the stance of international organisations started changing. In 1991, the World Bank highlighted how urban economic activities could positively influence economic growth (World Bank, 1991). Founded in 1999 at the Summit of Mayors, the joint World Bank-UNDP initiative City Alliances' “Cities Without Slums” started to address urban poverty in developing countries. This more positive perspective was echoed in the *World Development Report 2009: Reshaping Economic Geography* (World Bank, 2009).


The ongoing international debates on the roles of cities and human settlements in advancing regional and global development agendas are therefore an important opportunity to rethink policies. Those that have shaped current, unsatisfactory outcomes can be made more conducive in the future to sustainable development and effective sustainable transformation.

Figure 6.24. Is urbanisation perceived as a risk or an opportunity in your country?



Note: Survey responses by country economists of the AfDB and UNDP in 48 country offices in Africa. Response is weighted by one per country.

Source: AEO experts' survey, 2016.

StatLink  <http://dx.doi.org/10.1787/888933350754>

International events highlight Africa's urbanisation and structural transformation

Today, the political momentum is focusing on urbanisation and structural transformation at both pan-African and global levels (Table 6.5). The African Union is developing its urbanisation agenda to support Africa Agenda 2063 in co-ordination with global partners. UN-Habitat's African Urban Agenda (AUA) is supported by Ghana and Nigeria and strives for the buy-in of other African governments. This momentum inspired the drafting of the Abuja Declaration in February 2016, with a view to feeding a Common African Position for the Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III) as "a people-centred and leadership-driven process". The continent aspires to speak with one voice in order for the New Urban Agenda to reflect the pan-African vision of Agenda 2063.

Table 6.5. Pan-African and international events on sustainable urbanisation¹¹ and structural transformation, 2014-18

2014	The African Union establishes a Specialized Technical Committee on Public Service, Local Government, Urban Development and Decentralization, gathering African Ministers of Housing and Urban Development.
January 2014	The African Union's African Common Position on the Post-2015 Agenda prioritises "Structural economic transformation and inclusive growth".
March 2015	UN-Habitat and the Economic Commission for Africa hold a side event on the Role of Urbanisation in the Structural Transformation of Africa at the Eighth Joint Annual Meeting of the African Union's Specialized Technical Committee on Finance, Monetary Affairs, Economic Planning and Integration/UNECA Conference of African Ministers of Finance, Planning and Economic Development in Addis Ababa, Ethiopia.
April 2015	African Ministers of Housing and Urban Development initiate a process of drafting an Africa Common Position on the Third UN Conference on Housing and Sustainable Urban Development (Habitat III).
June 2015	The First Ten Years Implementation Plan (2014-23) of the African Union's Agenda 2063, which lays out the objective of increasing urban investment, is adopted at the 25th Summit of the African Union.
September 2015	The African Union announces it will develop an African Charter on Urban Development and Human Settlements.
December 2015	The 7th Africities Summit is held in Johannesburg, South Africa, co-organised by United Cities and Local Governments of Africa.
March 2016	During the Africa Regional Conference on Habitat III in Abuja, Nigeria, African ministers and civil society organisations adopt the Abuja Declaration opening the way to a Common African Position to Habitat III.
July 2016	African heads of states are scheduled to adopt a Common African Position to Habitat III.
October 2016	Habitat III will be held in Quito, Ecuador.
November 2016	The 22nd session of the Conference of the Parties (COP 22) to the UN Framework Convention on Climate Change will take place in Marrakech, Morocco.
January 2018	UN-Habitat will host the 9th World Urban Forum in Kuala Lumpur, Malaysia.

The Sustainable Development Goal on cities gathers momentum

At the international level, sustainable cities and human settlements are at the heart of the Sustainable Development Goals (SDGs) adopted during the UN General Assembly in September 2015, with SDG 11 aiming to “Make cities and human settlements inclusive, safe, resilient and sustainable”. This new, stand-alone urban goal is path breaking because it acknowledges that cities can be pathways to sustainable development (Parnell, 2015). The Draft Africa Common Position on Habitat III undertakes “to ensure that goal 11, as it stands now, needs to be considered together with goals 8, 9 and 10 on matters relating to promoting economic growth as well as full and productive employment; building infrastructure, industrialization and innovation, as well as reducing inequality within and between countries” (AUHF, 2015).

The Third UN Conference on Housing and Sustainable Urban Development is an opportunity to promote Africa’s position on the New Urban Agenda. The conference aims to secure renewed political commitment for sustainable urban development, assess accomplishments to date, address poverty, and identify new and emerging challenges. Habitat III and the New Urban Agenda will propose a global strategy for urbanisation for the 20 years until the next Habitat conference.

Annex 6.A1. Methodology for the cluster analysis on urbanisation and structural transformation in African countries

This chapter clusters the 54 African countries into five groups to highlight the diversity of their structural transformation processes. The groups are *diversifiers*, *early urbanisers*, *late urbanisers*, *agrarians* and *natural resources-based countries*. This cluster analysis identifies common characteristics of countries.

This methodology focuses on country characteristics at the national level. We have clustered the African countries following the four processes of structural transformation described by Timmer and Akkus (2008): i) a declining share of agriculture in GDP and employment, ii) urbanisation, iii) a demographic transition from high rates of births and deaths and iv) the rise of a modern industrial and service economy.

First, we filtered the 54 countries by dropping 12 that had a population of fewer than 2.5 million inhabitants in 2013. Such small countries tend to have a much higher share of urban population than larger countries, and their urbanisation processes differ as well. The primary city of larger countries often has more than 2.5 million inhabitants. Despite their small size, we kept Botswana and Mauritius in the sample because both are widely recognised as typical case studies of structural transformation in Africa.

Second, we identified the *natural resources-based countries* within the remaining 42. The literature points out the structural differences of resource-based countries compared to non-resource-based countries. Building on previous editions of the *African Economic Outlook*, we defined *natural resources-based countries* as those where the production of minerals, metals and hydrocarbons accounts for more than 30% of GDP in 2010 (AfDB/OECD/UNDP/UNECA, 2013: Table 6.3).

Third, we classified countries by their urbanisation levels as of 2015, using UN DESA (2014). We defined countries as:

- urbanised when at least 60% of the population resides in urban areas
- having started the urbanisation process when they have an urbanisation level of at least 40% and less than about 50%
- predominantly rural countries when they have an urbanisation level of less than 20%. We kept Burkina Faso and Mali in this category because their agriculture produces more than 35% of their GDP.

Fourth, we distinguished countries by their total fertility rate (TFR) where most data was available – between 2010 and 2015 – using UN DESA (2014). We based the demographic typology on previous editions of the *African Economic Outlook* which grouped African countries by their TFR (AfDB/OECD/UNDP, 2015; see also Guengant and May, 2013). We opted to use national TFRs, instead of urban TFRs (Jedwab, Christiaensen and Gindelsky, 2015b), so as to reflect employment challenges at the national level and integrate rural dynamics into the analysis of structural transformation. Using urban TFR would not produce significant differences in the country clustering. This demographic clustering produced the following categories:

- Countries are classified as more advanced in their demographic transition when the TFR falls below 3.5 children per woman, which corresponds approximately to Egypt's TFR.
- Countries having started the process of fertility transition are those with TFRs between 3.5 and 5.5 children per woman.
- Countries with TFRs of 5.5 children or more are classified as not having started the fertility transition.

The economic dimensions used in the cluster analysis are discussed in greater detail throughout Part II of this report.

Using this process, we have classified African countries as shown in Table 6.A1.1.

Table 6.A1.1. African countries clustered into groups according to their levels of structural transformation

Non-resource-based countries				Resource-based countries
Diversifiers	Early urbanisers	Late urbanisers	Agrarians	Natural resources-based countries
Advanced in fertility transition, urbanised	Started fertility transition and urbanising	Started fertility transition but not yet urbanising	Have not started fertility transition nor urban transition	
Egypt	Benin	Eritrea	Burkina Faso	Algeria
Mauritius*	Cameroon	Ethiopia	Burundi	Angola
Morocco	Côte d'Ivoire	Kenya	Chad	Botswana*
South Africa	Ghana	Madagascar	Central African Republic**	Republic of the Congo
Tunisia	Liberia	Mozambique	Malawi	Democratic Republic of the Congo
	Senegal	Rwanda	Mali	Guinea
	Togo	Sudan	Niger	Libya
		Tanzania	Sierra Leone**	Mauritania
			Uganda	Nigeria
				Somalia
				South Sudan
				Zambia
				Zimbabwe

Note: * Countries kept in the sample despite having less than 2.5 million inhabitants. ** Central African Republic and Sierra Leone have a total fertility rate of about 4.5 children per woman and an urbanisation level of approximately 40%. Yet their economies are overwhelmingly agrarian (58% of GDP and 56% of GDP respectively).

Notes

1. United Nations estimates project that Africa will be 50% urbanised in 2037.
2. These countries are Botswana, Ethiopia, Ghana, Kenya, Mauritius, Malawi and Senegal.
3. Weeks (1994) argues that “special factors account in part for Africa’s rapid rates of urbanisation in the immediate postcolonial period. Colonial prohibitions on migration to cities in East Africa – and control of population movements more broadly – were deeply resented. A one-time stock adjustment that may have had little to do with economic factors took place in the early years to compensate”.
4. The UNDP Human Development Index measures countries’ achievements in key dimensions of human development: health, education and standard of living (see Chapter 4). The health dimension includes life expectancy at birth, the education dimension years of schooling for adults aged 25 years and over and expected years of schooling for children of school-entering age. The standard of living is measured by gross national income (GNI) per capita.
5. Many varying definitions of intermediary cities exist. For a working definition, see Annex 6.A3 of the *African Economic Outlook 2015* (AfDB/OECD/UNDP, 2015: 170).
6. Only two countries are in the *diversifiers* group because Gallup asked the question solely to sub-Saharan African countries.
7. UN-Habitat’s “State of World Cities 2008/2009” refers to data from 2005. This comprehensive estimate has not yet been updated.
8. The Gini index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies total inequality.
9. “Childhood undernutrition” encompasses “childhood underweight”, “childhood wasting” and “childhood stunting”.
10. A saving and loan agency is a financial institution that offers banking and related financial services, especially savings and mortgage lending. It is equivalent to the term “building society” in the United Kingdom.
11. Sustainable urbanisation is the transition of societies from majority rural to majority urban in a sustainable way. Although it has many dimensions (Allen, 2009), this report focuses on its economic, social and environmental ones.

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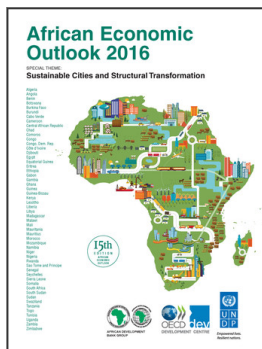
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From:
African Economic Outlook 2016
Sustainable Cities and Structural Transformation

Access the complete publication at:
<https://doi.org/10.1787/aeo-2016-en>

Please cite this chapter as:

African Development Bank/OECD/United Nations Development Programme (2016), "The implications of Africa's urbanisation for structural transformation", in *African Economic Outlook 2016: Sustainable Cities and Structural Transformation*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/aeo-2016-10-en>

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