

AFRICA'S CITIES:

# REALIZING THE NEW URBAN AGENDA



---

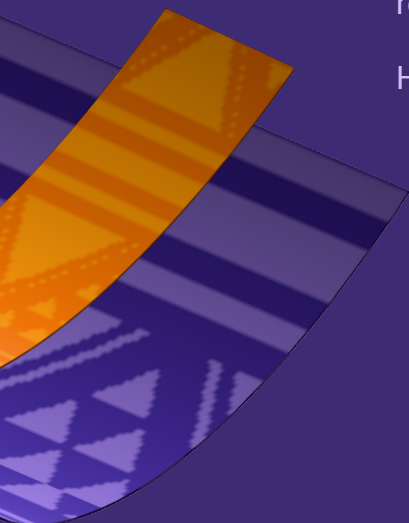
## ESSAY

Lagos: The challenges of managing a megacity	154
Kisumu: A secondary city with grand ambition	159

---

## VIEWPOINT

Urban economic development in Africa: A case study of Nairobi city	163
Cape Town: Lessons from managing water scarcity	165
Enhancing climate adaptation: The role of climate resilient housing in Africa's cities	167
How can cities create better jobs in sub-Saharan Africa	170



# Lagos: The challenges of managing a megacity

**BABAJIDE  
OLUSOLA  
SANWO-OLU**

Governor of Lagos  
State, Nigeria

@JideSanwoOlu

**All Africa's megacities are alike in many ways—the demographic pressures, the challenge of climate change, infrastructure renewal, fighting crime, and so on—but each one is also unique, in its own way, with a history, character, and journey that sets it apart from others.**

To achieve sustainable resilience and inclusiveness, Africa's cities need to develop the confidence to innovate with a home-grown approach. It is all too easy to attempt to copy and paste what appears to be working elsewhere in the world in terms of city management and problem-solving. Ultimately, the only approach that works in the long-term, is tailoring the thinking and problem-solving to the local context.

All Africa's megacities are alike in many ways—the demographic pressures, the challenge of climate change, infrastructure renewal, fighting crime, and so on—but each one is also unique, in its own way, with a history, character, and journey that sets it apart from others.

It is therefore necessary to ensure that these unique characteristics are kept in mind, in devising unique, home-grown solutions to the challenges being faced. So, that is the starting point.

Moving on to the specifics of policy areas that should be focused on in the coming year, I would say that at the top of the list would be all things related to the demographic pressure that today's African megacities face. Rapidly rising populations require jobs, schools, hospitals, energy, transport infrastructure, and so on. Let's start with **jobs and skills**. Africa is the fastest growing continent in the world, home to the largest population of people below 20.<sup>1</sup> And yet, unemployment is rising rapidly, not necessarily because African economies are not creating any jobs at all, but because the jobs are not being created at a pace that can keep up with population growth.

What is now clear to us is that we cannot depend on the traditional modes of thinking about jobs and skills—trying to educate everyone to tertiary level and focusing on academic certificates as proof of education. In many African countries a lot of people are still obsessed with going to university, even if they're studying courses that eventually turn out to be economically ineffectual.

This is not to say that tertiary education is not vital, or necessary—only this year, our administration in Lagos State established two new universities; the Lagos State University of Science and Technology, and the Lagos State University of Education, to expand access to tertiary education for our teeming youth population. However, the point I am making is that we must acknowledge and come to terms with the fact that we have to focus on multiple alternatives and avenues to get our young people educated and skilled.

This is where Technical and Vocational Education (TVET) comes in. As we have seen from experience, technology is a necessary ingredient for creating opportunities for leapfrogging old models of learning and for making a living. Today, a growing proportion

---

1 United Nations. 2022. World Population Prospects 2022. Department of Economic and Social Affairs Population Division.

**We cannot depend on the traditional modes of thinking about jobs and skills—trying to educate everyone to tertiary level and focusing on academic certificates as proof of education.**

of our young people earn a living from e-commerce, selling goods and services on the internet, to customers not only in Nigeria, but globally. Any government serious about creating such jobs, must therefore be serious about creating an enabling environment, by making the following happen: Bringing down the cost of internet access; providing and facilitating financing support for entrepreneurs and startups; and building school curriculums that introduce young people to innovative thinking and technology early.

I'm pleased to say that we are doing all of this in Lagos State. We are at the forefront of supporting the deployment of cutting-edge technology to give our young people an edge in the world of the 21st century. Our Eko Excel initiative is putting digital tablets in the hands of teachers and pupils. Our School Modernization Program is delivering schools with interactive learning facilities.

Lagos State Research and Innovation Council (LASRIC) is providing seed-funding to student innovators with startup ideas. The Lagos State Employment Trust Fund (LSETF) supports individuals and micro-, small and medium-sized enterprises (MSMEs), including technology-focused ones. We are rolling out a network of 6,000km of fibre-optic infrastructure that will increase access and reduce cost.

Second, after jobs and skills, is the issue of **climate change**. Lagos is especially vulnerable to climate change, as a city on the Atlantic Ocean, and barely two meters above sea level for the most part. Also, about 30 percent of our land mass is composed of water—lagoons, creeks, swamps, and marshes.

Rising sea levels are therefore a constant challenge, complicating the potentials of flash flooding. One ambitious solution we have embarked upon in Lagos State has been the **Great Sea Wall of Lagos**, designed as an engineering solution which seeks to protect Victoria Island and environs from the rising Atlantic, while at the same time also enabling us the opportunity to eke out a brand-new city called the Eko Atlantic City. This new city is setting new national standards in terms of clean energy deployment, energy efficiency, and environmentally friendly practices.

Let me now highlight some of the challenges that we face as administrators of cities and subnational governments, particularly in the context of Lagos. I would list the following: High rates of inbound immigration, data collection for planning, revenue generation, the tensions between sub-national and national governments, literacy levels, and the constraints of the political cycle.

Every day, Lagos receives an estimated 2,000 new migrants, from other parts of Nigeria, and possibly even West Africa. These people are coming in search of jobs and better economic conditions, understandably. However, this also constitutes increased pressure on available infrastructure, and on our planning capabilities, which we must continually respond to.

Which leads to my third issue: **Data collection**. To guide effective service delivery, we need to know: Who are the residents of Lagos? How many are they? What do they do for a living? And so on. No city can develop optimally without the presence of credible data and evidence to inform budgeting, planning, and the allocation of resources.

**We must acknowledge and come to terms with the fact that we have to focus on multiple alternatives and avenues to get our young people educated and skilled.**

One solution in Lagos has been to establish the Lagos State Residents Registration Agency (LASSRA), which proved useful when we were delivering relief materials to the indigent at the height of the COVID-19 lockdown. Our goal is to have a comprehensive and updated database of all our people.

Finding the fiscal revenue to deliver on our electoral promises is another significant challenge. Nigeria's tax-to-GDP ratio is one of the lowest in the world, for various reasons.<sup>2</sup> This means that governments at all levels must keep finding creative ways to improve tax revenues, without necessarily raising taxes.

The only way to do this is by expanding the tax net, the number of people who are regularly paying their taxes. This will only happen if we simplify the tax filing system, given that many of our city residents are employed in the informal sector and may not be able to fill lengthy forms considering literacy levels.

Literacy also affects how well we as local leaders can communicate government policies and information and get the buy-in of critical stakeholders. It means that, in addition to adult literacy initiatives, efforts must also be focused on how to communicate in targeted ways that allow the population to better understand some of the complexities of policymaking.

Finally, in a federal system like ours in Nigeria, there exists long-standing tensions between the national government and the sub-nationals, or states, regarding areas of responsibility. Often, the only way to gain clarity is to seek judicial interpretation, which means long journeys through the court system. This certainly affects the abilities of municipal administrations to take certain decisions or craft certain policies. One of the lessons we have tried to apply in Lagos is to constantly push for increased cooperation and engagement with the federal government. We always strive to minimize the space for antagonism as much as possible.

None of these challenges I have outlined are insurmountable. We must continue to work hard at tackling them, while also carrying the people along through effective communication and stakeholder engagements. And we must always be realistic. Real and lasting change takes time; there are no shortcuts or silver bullets.

---

2 OECD. 2022. "Revenue Statistics in Africa 2022." Organization for Economic Cooperation and Development.

FIG.42

## URBANIZATION AND URBAN PRIMACY BY REGION, 1990-2019

Urban share and primacy are distinct concepts that describe different aspects of a country or region's urbanization. The urban share measures the share of the population that resides in urban areas. Africa, though one of the least urbanized regions of the world, has among the fastest growing urban populations. All regions in Africa are displaying rapid growth in the urban share of the population. Urban primacy, meanwhile, measures the share of the urban population that resides in the biggest city. Africa's urban primacy is high, even compared to other regions at similar levels of urban share. Urban primacy is especially high in Central Africa and East Africa, where more than a third of the urban population lives in the biggest city.



Source: World Bank. 2022. World Development Indicators. World Bank Group.



Source: World Bank. 2022. World Development Indicators. World Bank Group.

# Kisumu: A secondary city with grand ambition

**PETER ANYANG' NYONG'O**

Governor of Kisumu County, Kenya

**@AnyangNyongo**

**Building smart cities and urban areas for the future is compromised by the weak capacity of local governments to address financing of urban investments, as well as other infrastructural needs. This is due to inefficient own-source revenue collection and underfunding from the national treasuries.**

As an economic hub and transport intersection for the greater western region of Kenya, Kisumu was heavily exposed to the vulnerability occasioned by stress factors emanating from the COVID-19 pandemic. The high concentration of people from diverse backgrounds attracted to economic activities within the city was a recipe for high infection rates.

The county administration had to quickly innovate and find solutions to the challenges posed by the COVID-19 pandemic.

The biggest hurdle was how to balance supporting and safeguarding livelihoods, and implementing health measures to address the spread, including lockdowns and closures of business premises.

To mitigate the effects of the pandemic, the city was re-planned to improve infrastructure within the city; for example: We built new modern markets, rehabilitated the city's green spaces, and improved the green cover, while also ensuring better sanitation by expanding water networks.

Implementing these strategies had the net effect of saving lives and making the city attractive for investments and trade.

This is a clear manifestation that even in the face of adversities, we can still build resilient and inclusive cities, where the citizens enjoy quality livelihood.

This resilience is further exhibited as Kisumu hosted the 9th edition of Africities Summit in May 2022, the most successful summit in the history of Africities. Not to mention that this was the first time the event was held in an intermediary city. Records show that the Summit was attended by 11,000 delegates from 100 countries across the world.<sup>1</sup>

The theme of the Summit "*The Role of Intermediary Cities in Implementing the United Nations Agenda 2030 and the African Union Agenda 2063*," was very much in line with the quest for smart and resilient cities and towns in which over 50 percent of African population will live within the next 30 years.

Kisumu's success in hosting this event has opened the doors to other secondary cities to also venture out and seek opportunities to host similar events. It is also a message to national governments to support other emerging cities on the continent to host such seminal events, as they offer massive investment opportunities that may easily open doors for the growth and development of such cities.

The effects of hosting this summit will be felt long into the future just as the economic gains made in the short-term. Some of those short-term gains are already being seen

---

1 Odiwuor. 2022. "Africities Summit Kisumu Breaks Record with 11,000 Attendees & More." Kisumu Everyday.



It is against this backdrop, that in the framework for the United Cities and Local Governments of Africa (UCLG Africa), Africa's local governments have mandated the umbrella continental body to develop a special purpose vehicle for local governments to access funding from capital markets and international financial institutions.

in the county's infrastructure development such as the expansion of the airport, the construction of the Africities Convention Centre (the only convention center currently outside Nairobi), and the improvement of road networks within and around the city.

However, the demand for building smart cities and urban areas for the future is compromised by the weak capacity of local governments to address financing of urban investments, as well as other infrastructural needs. This is due to inefficient own-source revenue collection and underfunding from the national treasuries.

Local governments must therefore become innovative in finding avenues to raise resources for development, in order to supplement revenues from the central governments—which by and large only finance recurrent expenditures.

It is against this backdrop, that in the framework for the United Cities and Local Governments of Africa (UCLG Africa), Africa's local governments have mandated the umbrella continental body to develop a special purpose vehicle for local governments to access funding from capital markets and international financial institutions. This tripartite initiative by the UCLG Africa, the Africa Development Bank (AfDB), and Afreximbank is called ***"Africa Territorial Trade and Investment Agency (ATIA)."***

This financial vehicle, based on a pooling system, will enable local governments to provide much-needed service delivery.

This will be a game changer for local governments in the face of mounting economic difficulties, exacerbated by the serious impacts of climate change on every country in the world today.

The effects of climate change, ranging from prolonged droughts to extreme flooding, and rising water levels, are rendering families homeless, destroying crops, and killing livestock, as well as having devastating effects on the economies of local authorities.

As such, there is need to adopt interventions and responses based on implementable frameworks to urgently address impacts of climate change. Some of these, as in the case of Kisumu, include mainstreaming of climate change in local government policy and programs such as the "County Integrated Development Plans and Sector plans"; formation of County Climate Change Working Groups bringing together civil society, technical staff, the private sector, and research institutions; as well as building the capacity and awareness of citizens at the local level to prioritize actions that promote climate change resilience and adaptation.

Climate resilience working groups at the local level are also critical in identifying climate change related vulnerabilities and risks for the populations, livelihoods, investments, and the environment. These groups can also provide information on current and possible future climate scenarios, thereby helping to identify potential adaptation and coping responses for climate risks.

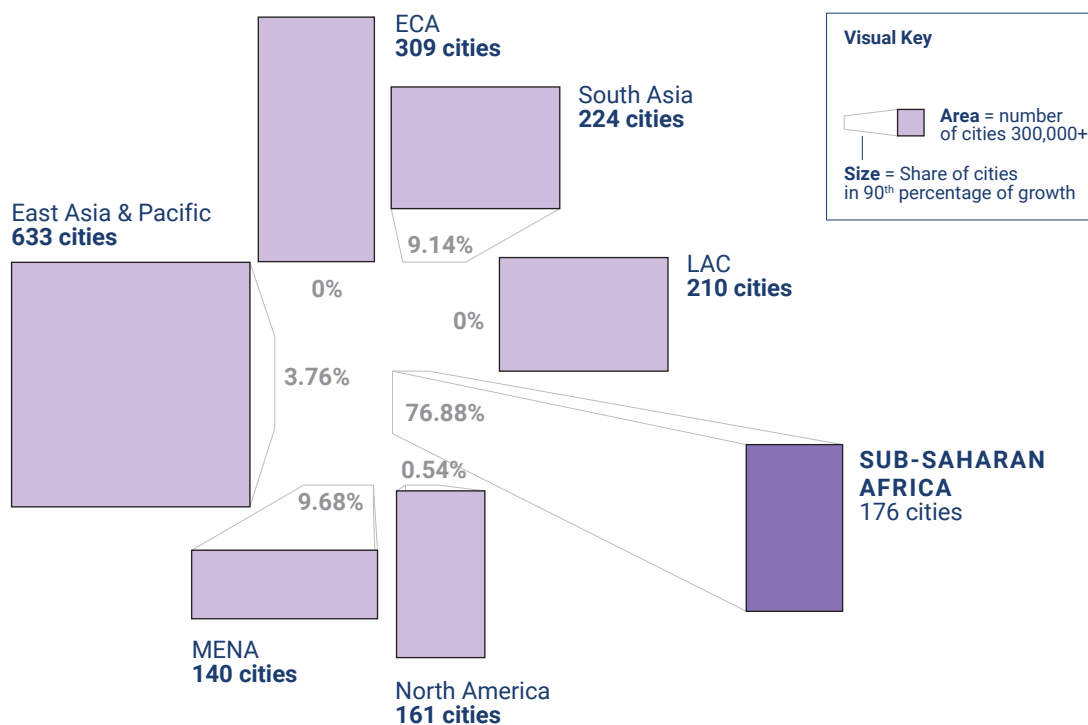
Fostering digital transformation for climate resilience is important in helping generate accurate and decision-relevant climate information or evidence and to plan for and minimize the negative impacts of climate change on livelihoods and the economy. For example, agronomic information for farmers to monitor and predict current environmental situations and get them ahead of the game.

In the final analysis, the biggest lessons from the pandemic were that there is urgent need for a “re-think” on Africa’s cities, especially with regards to planning for smart cities, environmental management, and improvement of air quality. As we look to 2023, several adversities remain, no doubt, but we must be prepared to seize opportunities that will help create livable, smart, and resilient cities for the future.

**FIG.43**

### A MAJORITY OF THE WORLD’S FASTEST GROWING CITIES ARE FOUND IN AFRICA

Africa has only 176 of the world’s 1,853 cities with populations of at least 300,000 people. Yet, it has more than two-thirds of the fastest growing cities in the world.



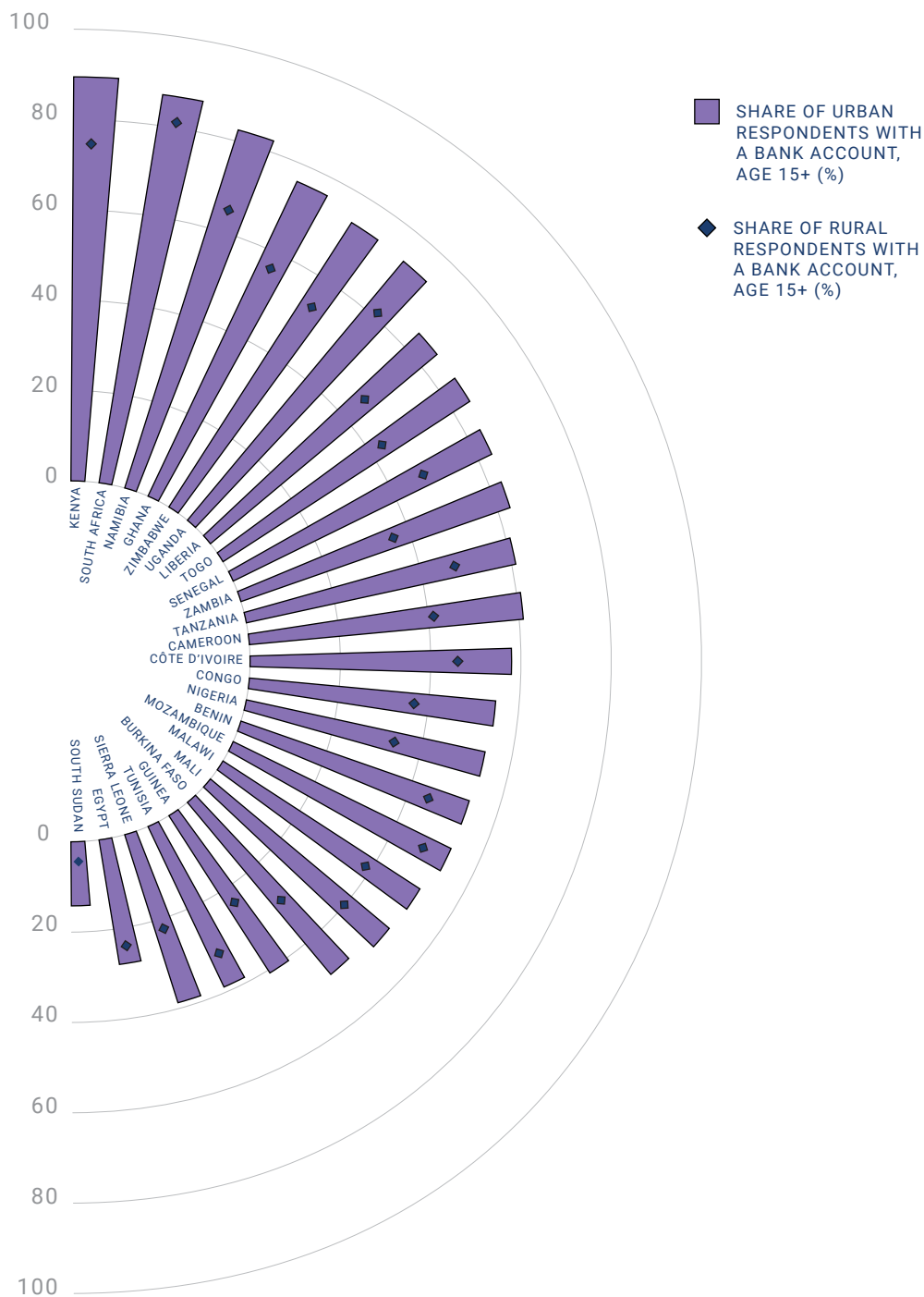
Note: Only cities with a population of at least 300,000 are included. Population growth projections are done by the United Nations and are for the year 2030.

Source: United Nations. 2022. United Nations’ World Population Prospects.

FIG.44

## AFRICA'S RURAL POPULATIONS' ACCESS TO FINANCIAL SERVICES LAGS FAR BEHIND URBAN RESPONDENTS

In a given African country, chances are a majority of urban residents age 15+ have a bank account. In many cases, this figure is significantly higher than in rural areas. It is not uncommon for rural residents to face account ownership rates of 10 or even 20 percentage points less than their urban counterparts.



Note: Data are for 2021. Dataset includes data from 153 countries, including 41 from sub-Saharan Africa. The countries included in sub-Saharan Africa include Angola; Benin; Botswana; Burkina Faso; Burundi; Cameroon; Central African Republic; Chad; Comoros; Democratic Republic of Congo; Republic of Congo; Côte d'Ivoire; Eswatini; Ethiopia; Gabon; The Gambia; Ghana; Guinea; Kenya; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Mauritius; Mozambique; Namibia; Niger; Nigeria; Rwanda; Senegal; Sierra Leone; Somalia; South Africa; South Sudan; Sudan; Tanzania; Togo; Uganda; Zambia; Zimbabwe. Source: World Bank. (2021). Global Findex Dataset. World Bank Group.

# Urban economic development in Africa: A case study of Nairobi city

---

## JACOB NATO

Policy Analyst, Kenya Institute for Public Policy Research and Analysis

[@JacobNato1984](#)

---

## HUMPHREY NJOGU

Senior Analyst, Kenya Institute for Public Policy Research and Analysis

[@HumNjogu](#)

---

## ROSE NGUGI

Executive Director, Kenya Institute for Public Policy Research and Analysis

[@KIPPRAKENYA](#)

---

## ALOYSIUS UCHE ORDU

Director and Senior Fellow, Africa Growth Initiative, Global Economy and Development, Brookings Institution

[@Aloysiusordu](#)

---

## EDE IJJASZ-VASQUEZ

Nonresident Senior Fellow, Africa Growth Initiative, Global Economy and Development, Brookings Institution

[@Ede\\_WBG](#)

---

At about 4.4 percent, Africa has the fastest urbanization rate globally.<sup>1</sup> Already, the region has reached 40 percent urbanization and by 2050, the number of urban residents will have doubled. Moreover, about 60 percent of Africa's urban population today lives in informal low-income neighborhoods.<sup>2</sup>

In most countries, urbanization leads to substantial productivity gains supported by scale, density, and agglomeration. Better connected people and firms lead to savings in transport and logistics, technological and information spillovers, and more efficient labor markets. However, Africa's urbanization has not realized the full potential and benefits of such agglomeration. The economic transformation and benefits of urbanization, observed in other regions, are yet to be achieved in sub-Saharan Africa.

To understand the barriers, and unlock the economic opportunities of urbanization, the Africa Growth Initiative (AGI) at the Brookings Institution developed an "Urban Economic Growth Framework for African cities." The framework focuses on the three primary constraints limiting a city's ability to benefit from agglomeration and generate productive jobs: **Accessibility, the business environment, and public sector governance.** The framework provides specific indicators and ways to identify these three critical constraints, with a view to inform and guide policymakers on specific actions and appropriate policies.

As a start, the AGI framework was applied to the city of Nairobi (Kenya's capital), to analyze Nairobi's key challenges and possible solutions for growth and employment.

Unemployment and underemployment in Nairobi are a top concern, especially as youth makeup 48 percent of the total unemployed workforce (15 to 64 years).<sup>3</sup> While the labor force in Kenya has been growing at an average annual rate of about 3 percent, Nairobi needs to generate many more (and better) jobs to offer improved livelihood opportunities to its large youth demographic. At the national level, Kenya has registered good progress in creating jobs, especially in the digital and gig economy. The report recommends two areas of focus. First, in coordination with the national government, Nairobi City County needs to support the gradual formalization of the large number of informal jobs and enterprises by easing business registration and motivating registration through targeted support programs. Second, better education and skills in targeted economic sectors are required to enhance productivity and earnings. Nairobi city should ensure that tertiary institutions provide training and skills consistent with emerging technologies.

- 
- 1 United Nations. World Population Prospects. 2022. United Nations Department of Economic and Social Affairs: Population Division.
  - 2 World Bank. 2015. "Growing African Cities Face Housing Challenge and Opportunity." Press Release. World Bank Group.
  - 3 KNBS. 2020. Labor Force Survey 2020. Kenya National Bureau of Statistics.

Furthermore, enterprise data in Nairobi shows that businesses are likely to transition from micro- to medium-, and to large enterprises as the owners' levels of education attainment rises.

**Accessibility within the city:** Accessibility is vital for connecting workers to firms and firms to markets. Despite the excellent progress made on infrastructure development, there is a high concentration of unpaved roads in Nairobi's high-density informal settlements.

Consequently, as shown in the report, most jobs are not accessible within one hour of public transport commute i.e., commuting time by bus, *matatu* (shared taxi), or foot. The city also has a mismatch in zoning and land use. Nairobi therefore needs a new approach to urban planning that considers population growth, infrastructure, housing, and land use. Equally important is updating the land appraisal system and creating more public spaces.

**Business environment:** Many businesses in the city face several challenges, including complex processes to access licenses and permits, insufficient finance, expensive land, rigid labor regulations, inefficiency in tax administration, and crime risk. For example, a business takes about 92 days to secure an electricity connection.<sup>4</sup> A firm loses about KSh 2.3 million per year due to power outages on average. These are critical areas for Nairobi to enhance its business environment. Furthermore, it is essential to coordinate the implementation of business policy reforms between the national and county governments.

**Public sector governance and finances:** The devolution process in Kenya has given Nairobi City County a total of 14 constitutional functions. The city faces important challenges in terms of financing, despite the commendable increase in revenues and fiscal transfers from KSh 9.51 billion in FY 2013/14 to KSh 19.42 billion in FY 2020/21. Still, the city faces several financing shortfalls, from high levels of pending bills and fiscal deficits, to delays in receipt of equitable fiscal transfers. These challenges call for proper budget planning, improved budget execution, and higher levels of the city's source revenue.

The application of the AGI Urban Economic Growth Framework to Nairobi City County shows that the city has enormous potential to achieve the benefits of urban agglomeration and create productive jobs by paying particular attention to its challenges in accessibility and infrastructure, business environment, as well as public sector governance and finance.

---

4 World Bank. 2022. World Development Indicators. World Bank Group.

# Cape Town: Lessons from managing water scarcity

**GEORDIN  
HILL-LEWIS**

Mayor of Cape Town,  
South Africa

@GeordinHL

Between 2015 and 2018, Cape Town endured a one-in-400 year drought which took the city of around 4.6 million residents to the brink of “day zero,” a point when Cape Town would run out of water.

What ultimately saved the day, was a combination of sustained public communications and innovative engineering solutions.

Cape Town’s communications of the drought were successful due to the city administration’s ability to accurately measure its daily drinking water production, as well as its dam levels. This enabled the city to set a target water usage for each resident per day, so that the reservoirs in the dams could last until the winter rainfall season.

Daily public communication stressed the need for residents to, inter alia, take short showers, flush only when necessary, and refrain from using drinking water for gardening. Campaigns also targeted visitors to the city, under the slogan “save (water) like a local.” The city communicated a moving forecast of whether “day zero” was being pushed out as a result of successful water saving measures.

In addition to raising awareness, the city also looked to increase distribution efficiency and curb water losses. Recent studies have shown that pressure management in urban water distribution networks is one of the cost-effective ways to extend asset-life and reduce water leakages, which can sometimes account for up to 70 percent of total water losses.<sup>1</sup> Cape Town is fortunate to be a leading metro for pressure management technology, establishing 170 pressure management zones covering 68 percent of the water network as of June 2021. This upped the city’s ability to reduce leaks, bursts, and especially consumption, with savings of 70 million liters per day (ML/d) at the peak of the 2018 drought.

As an incoming mayor post the drought crisis, my priority is to ensure that Cape Town’s New Water Programme (NWP) delivers around 300 million liters (ML) per day by 2030 from new alternative water sources.

To achieve this, one of my first actions was to quadruple the city’s annual rate for water and sewer pipe replacement so that our supply network remains in good order, and water losses remain low.

Over the next three years, around R10 billion of the city’s R30 billion capital expenditure plan will also be invested in water and sanitation infrastructure to ensure sustainable development.

---

1 Samir, Nourhan, Rawya Kansoh, Walid Elbarki, and Amr Fleifle. 2017. “Pressure control for minimizing leakage in water distribution systems.” Alexandria Engineering Journal Volume 56, Issue 4, December 2017, Pages 601-612.

**As an incoming mayor post the drought crisis, my priority is to ensure that Cape Town's New Water Programme (NWP) delivers around 300 million liters (ML) per day by 2030 from new alternative water sources.**

The city has further raised R1 billion through a Green Bond listed on the Johannesburg Stock Exchange (JSE), helping to fund key sustainability infrastructure projects, including upgrades to reservoirs, water pressure management, water re-use, and upgrades to sewer and water supply networks.

We are planning to invest about R4.7 billion to bring about 105 million liters of groundwater a day into our drinking supply by 2036. The Table Mountain Group Aquifer has already delivered its first water in 2020, and the first groundwater to be injected into the supply network from the Cape Flats Aquifer is expected towards the middle of 2023.

Water efficiency will be further enhanced through state-of-the-art, automated domestic water metering installations rolled out progressively over the next decade, as well as a robust alien vegetation<sup>2</sup> clearing program along waterways.

Regarding water reuse and desalination projects, the city has set up an Independent Advisory Panel and partnered with the South African Water Research Commission (WRC) to coordinate and provide research, development, transparency, and accountability.

Cape Town is proving that we have learned the right lessons from the drought crisis by converting water savings into a culture, with a proactive bid to use less than 950 million liters daily this summer. This will enable us to avoid low-level water restrictions next summer if we experience another below average winter rainfall.

---

2 Exotic, non-indigenous vegetation which tends to guzzle water supply from rivers and dams, crowding out indigenous vegetation.

# Enhancing climate adaptation: The role of climate resilient housing in Africa's cities

**MUHAMMAD  
MUSTAPHA  
GAMBO**

Manager of Policy,  
Research and  
Partnerships at Shelter  
Afrique, Nairobi, Kenya

@mmgambo

**Climate change  
cannot be solved  
without delivering  
climate resilient  
housing and  
tackling building  
emissions, as  
buildings account  
for 19 percent of  
the world's Green  
House Gas (GHG)  
emissions.**

Housing is a key component for achieving social and economic development. As such, adequate, safe, and affordable housing is at the core of Goal 11 of the 2030 Agenda for Sustainable Development (i.e., attaining Sustainable Cities and Communities). Moreover, housing related activities and investment are major economic drivers, serving as an important contributor to economic activity and job creation.

## **The role of the housing and built environment in attending to the challenges of climate change**

At the same time, it is widely acknowledged that climate change will affect the socio-economic development trajectory of Africa, threatening the region's attainment of the 2030 Sustainable Development Goals and the objectives of the Africa Union's Agenda 2063.

However, a less acknowledged fact is that climate change cannot be solved without delivering climate resilient housing and tackling building emissions, as buildings account for 19 percent of the world's Green House Gas (GHG) emissions. According to the Intergovernmental Panel on Climate Change (IPCC) special report, by 2030, all new buildings must be zero net carbon, and existing buildings must be zero net carbon by 2050.<sup>1</sup>

## **What is climate-resilient housing?**

Resilient housing can be described as housing that can resist, recover, and adapt to adverse effects of climate change or natural disasters. It is the capacity of human settlements to cope with shocks (environmental, economic, and social) and respond to these shocks over time. Thereby, resilient houses are required to be planned, designed, built, operated, and maintained to reduce vulnerability to these indicated threats.<sup>2</sup>

- 
- 1 Rogelj, J., D. Shindell, K. Jiang, S. Fifita, P. Forster, V. Ginzburg, C. Handa, H. Kheshgi, S. Kobayashi, E. Kriegler, L. Mundaca, R. Séférián, and M.V. Vilariño. 2018. "Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development." In: "Global Warming of 1.5°C." Cambridge University Press, pp. 93-174, doi:10.1017/9781009157940.004.
  - 2 Castillo, Sofia; Coachman, Natalia; Silva, Paloma. 2022. "Why is it necessary to finance climate-resilient housing?". August 2022. Inter-American Development Bank.



## Recent developments in climate change initiatives in the construction industry in select African countries

Fortunately, progress is being made by city managers and other related stakeholders to tackle the challenge of climate change in the housing industry in Africa.

Kenya considers climate change a cross-cutting theme that is being mainstreamed in the medium-term plans of the County Integrated Development Plans (CIDPs), which in turn inform the country's development blueprint—Vision 2030. Under these plans, the Government has mandated that all affordable housing projects be aligned with Global Green Certification requirements. Elsewhere, Nigeria recently promulgated the 2021 Climate Change Act, which is the first standalone climate change legislation in West Africa. The act encapsulates critical components of the country's climate change policies, most of which were adopted in 2021. These include the revised National Climate Change Policy; National Climate Change Programmes; the 2050 Long-Term Low Emission Vision; and the first Nationally Determined Contribution (NDC).

Additionally, it is worth noting that over the past few years, there have been notable cases of resilient housing initiatives in Africa. An example of these is the climate resilient housing initiative at Mozambique, which was delivered through the Coastal City Adaption Project (CCAP).

Mozambique has been severely impacted by the effects of climate change, where an estimated 60 percent of the country's 28 million people live in low-lying coastal areas, where sea-level rise and frequent intense storms cause flooding, erosion, and landslides, threatening communities, homes, and economic activities.

The CCAP programme was aimed at supporting local governments and communities in the cities of Pemba and Quelimane to develop affordable and resilient solutions and techniques for building.

The key design, construction elements, and techniques adopted in this initiative include low vulnerability site selection, which reduces potential impact of hazards (i.e., avoiding areas with high exposure to flooding and strong winds); raised foundation (i.e., elevated platform above the maximum level of flooding); reinforced wall (i.e., construction done with durable materials, such as coconut or bamboo wood) and secure roof with rainwater harvesting capacity (i.e., roofing design with an adequate slope to withstand strong winds and also facilitate rain harvesting system).<sup>3</sup>

Another example of resilient housing technology is in Malawi, where Durabric is increasingly being used as a more sustainable alternative to traditional burnt clay bricks for housing construction. The compressed earth stabilised block is made using a combination of locally sourced materials, comprising of earth, sand, cement, and water. Durabric has proved to be an affordable alternative for resilient housing delivery, with resultant impacts in terms of curbing deforestation and carbon emissions, in addition to building local capacity in the industry.<sup>4</sup>

---

3 Nkhonjera, Maria; Mathibela, Nonhlanhla. 2019. "Climate Change and Resilient Housing: Lessons for Mozambique." Centre for Affordable Housing Finance in Africa.

4 Ibid.

**Another example of resilient housing technology is in Malawi, where Durabric is increasingly being used as a more sustainable alternative to traditional burnt clay bricks for housing construction. The compressed earth stabilised block is made using a combination of locally sourced materials, comprising of earth, sand, cement, and water.**

## Way forward and conclusion

While there have been moderate achievements in developing legislation, tools, and policies to enhance climate-resilient housing and urban development in select African countries, these initiatives have relied on global templates and standards, which may be difficult and expensive to replicate at scale in the African context.

Moreover, advocacy and awareness among stakeholders on climate change acts and standards are required. Public and private entities need to be proactively engaged, to understand the implication of these standards and laws on their activities, as well as their respective obligations.

Most importantly, housing delivery and built environment stakeholders should take advantage of the recently introduced climate-change policies and their incentives, to introduce technological innovations that can mitigate the impact of climate change in the industry.

In conclusion, as Africa continues to experience unprecedented rates of urbanization coupled with increasing climate related incidences, it is pertinent for stakeholders to put in more effort in making housing safe and resilient to climate change related impacts. This in turn can help protect lives and livelihoods from disasters and build sustainable communities.

# How can cities create better jobs in sub-Saharan Africa?

---

## MICHAEL DANQUAH

Research Fellow, United Nations University World Institute for Development Economics Research (UNU-WIDER)

@mnkdanquah

---

## KUNAL SEN

Director, United Nations University World Institute for Development Economics Research (UNU-WIDER)

@kunalsen5

**Urbanization has taken place without structural transformation with the share of employment in manufacturing in sub-Saharan Africa far below South Asia, even though South Asia has a lower urbanization rate.**

Structural transformation involves the movement of workers from low-productivity sectors to high-productivity sectors. It has historically been associated with a shift from agrarian economies to more industrial economies based around urban areas, as seen in many Western nations as well as the Southeast Asian giants. For these economies, it is thought to have been crucial to economic growth and poverty reduction, by creating jobs and improving labor productivity.

In many African countries, however, the prospect of a thriving manufacturing industry seems difficult to realize. Urbanization has taken place without structural transformation with the share of employment in manufacturing in sub-Saharan Africa far below South Asia, even though South Asia has a lower urbanization rate than sub-Saharan Africa (Figure 45). Further, African cities' economic sectors are dominated by low-productivity, informal enterprises,<sup>1</sup> most of which are found in the services sector—specifically wholesale and retail trade, while a few enterprises are engaged in informal manufacturing. Large segments of Africa's urban population work in the low-paid, informal wage economy, often self-employed.<sup>2</sup>

Disentangling the connections between Africa's cities and the slow pace of structural change will be essential for creating growth and reducing poverty, as structural transformation has the potential to foster economic diversification and inclusive growth. For effective policymaking, it is important to understand the drivers of structural transformation at the city level. It is also crucial to understand what alternative patterns of structural transformation—that is, leapfrog development (economic transition from agriculture to services, jumping the manufacturing stage)—might mean for the sustainable growth of African cities.

For example, the economic landscape in Greater Accra, the capital of Ghana, provides a picture of this experience. At the sub-city level in Accra city region, economic activities are dominated by the services sector largely made up of informal enterprises. The share of manufacturing establishments and employment are very low compared to services (Figure 46). Productivity at the city region is generally low, but it is not homogenous across the different areas of the city. This leapfrog development (from agriculture to services) has not resulted in the creation of productive jobs in the city.

Moreover, the organizational type (private limited) and formality and institutional performance of city governments seem to correlate with low productivity of enterprises.<sup>3</sup> Some of the major constraints to enhancing productivity and economic

---

1 OECD, Africa's Urbanisation Dynamics .2022. The Economic Power of Africa's Cities.

2 Danquah, M., S. Schotte and K. Sen. 2021. "Informal Work in Sub-Saharan Africa: Dead End or Stepping Stone?", IZA Journal of Migration and Development, Vol. 12(1), forthcoming.

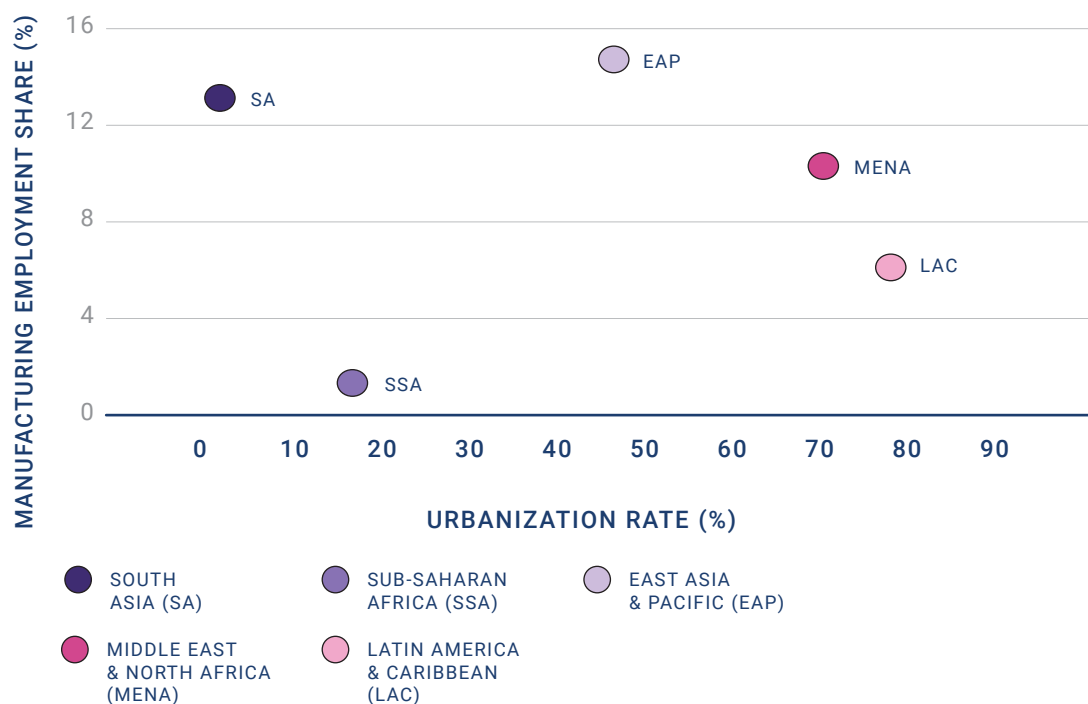
3 Iddrisu, M., W. Ohemeng and M. Danquah. 2022. "Structural transformation in Accra" ACRC Quantitative Report on Accra, mimeo.

transformation in the city include access to long-term finance, high cost of production especially for energy, land, transportation, and space for business operations, higher costs for public services due to bureaucratic tendencies by city officials, and excessive influence of political leadership and interference at the sub-city level.<sup>4</sup> City governments would need greater capacities, resources, and support to improve the performance and productivity of enterprises—particularly the establishment of new manufacturing enterprises in the city. Further, there is room to transfer some of their services to the private sector, work together with relevant institutions to carry out appropriate land reforms, and seek investments in critical infrastructure that would help the growth of high-productivity enterprises. Given the rapid increase in the size of African cities, as more workers move to urban areas from rural areas in search for jobs, urbanization must be accompanied by structural transformation in Africa. Consequently, policies that foster productivity growth among formal and informal enterprises, as well as deliver productive jobs for Africa’s urban workforce will be critical to the success of the continent in economic development in the years ahead.

**FIG.45**

**SHARE OF EMPLOYMENT IN MANUFACTURING VS URBANIZATION RATE (2015), BY REGION**

Sub-Saharan Africa’s urbanization rate, or the share of the population that lives in urban areas, is low but growing rapidly. What is unique about sub-Saharan Africa’s urbanization rate (compared to other regions), is that the region’s urban population is expanding despite a notably smaller share of workers employed in manufacturing.

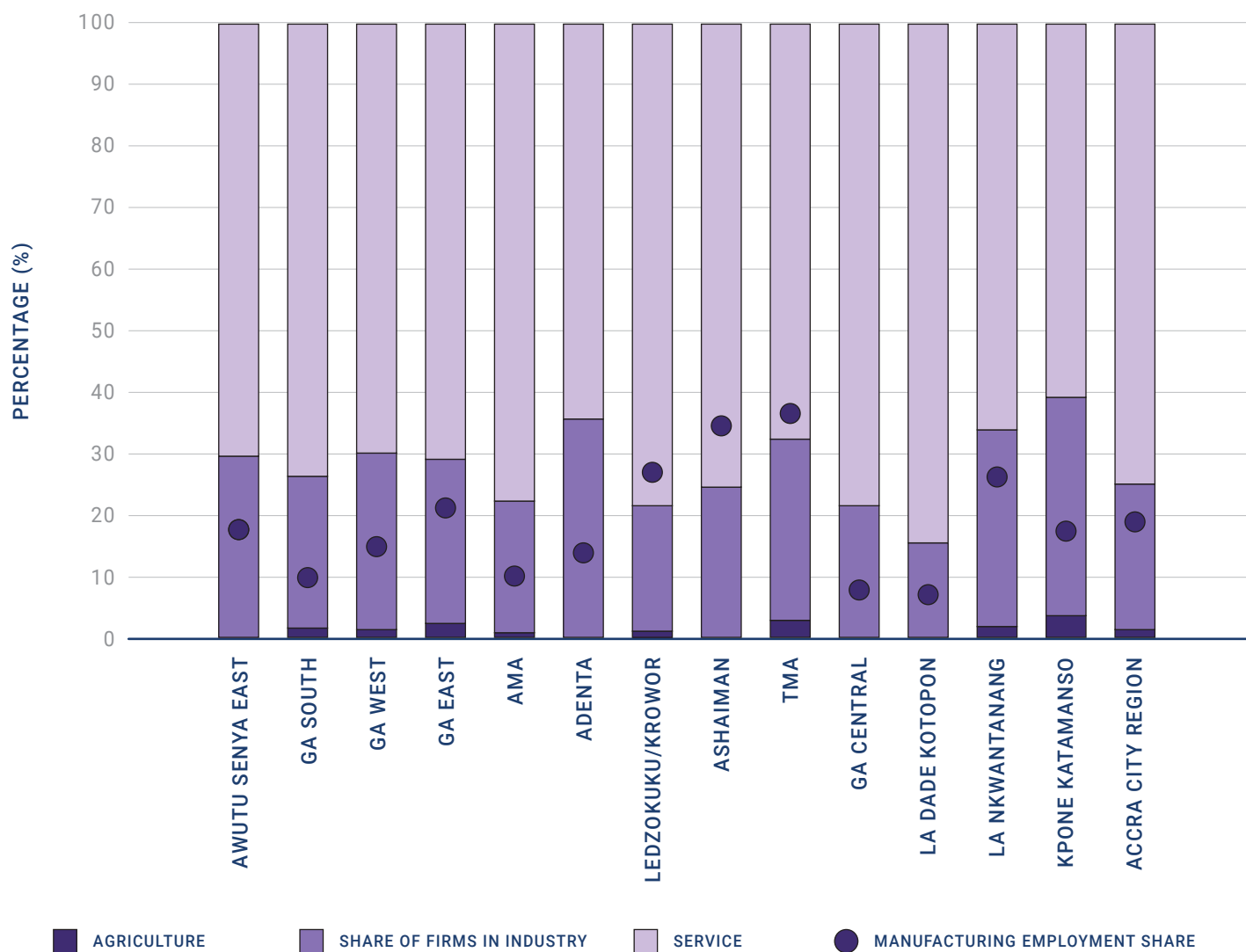


4 Domfeh, G. (2022) "Structural transformation in Accra" ACRC Qualitative Report on Accra, mimeo.

FIG.46

## SHARES OF ESTABLISHMENTS IN EACH SECTOR AND SHARES OF MANUFACTURING EMPLOYMENT ACROSS DISTRICTS IN ACCRA CITY REGION

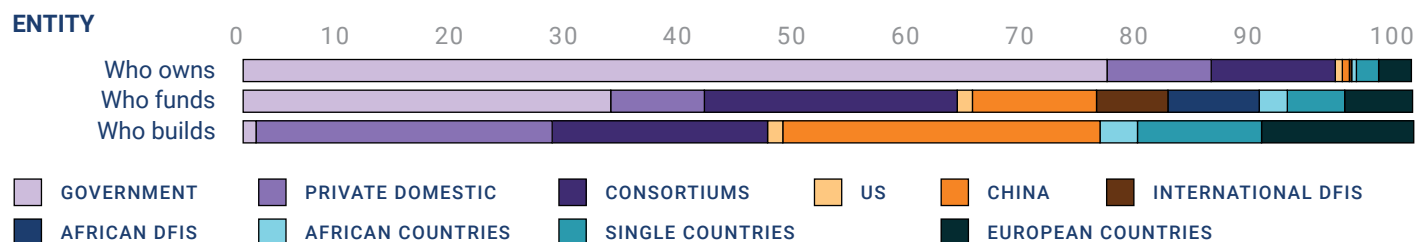
Most Ghanaian firms are engaged in the services sector, while only very few are involved in agriculture. The share of firms in industry varies from 15 percent to 36 percent, depending on the district. In Accra Metropolitan Assembly (AMA), only about one in ten workers is employed in manufacturing.



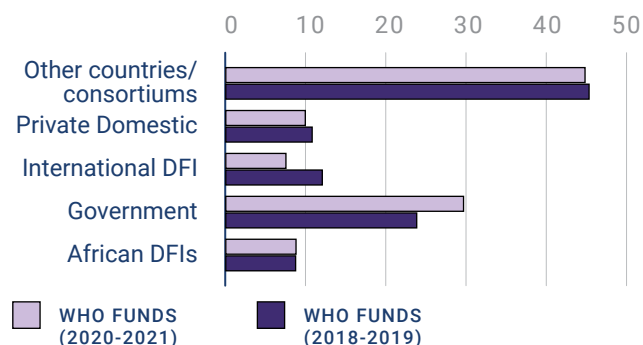
Source: Ghana Integrated Business and Establishment Survey (IBES), 2014/2015.

FIG.47

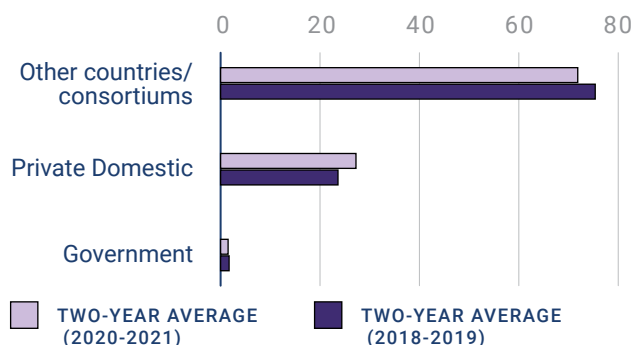
## AFRICA'S INFRASTRUCTURE STORY



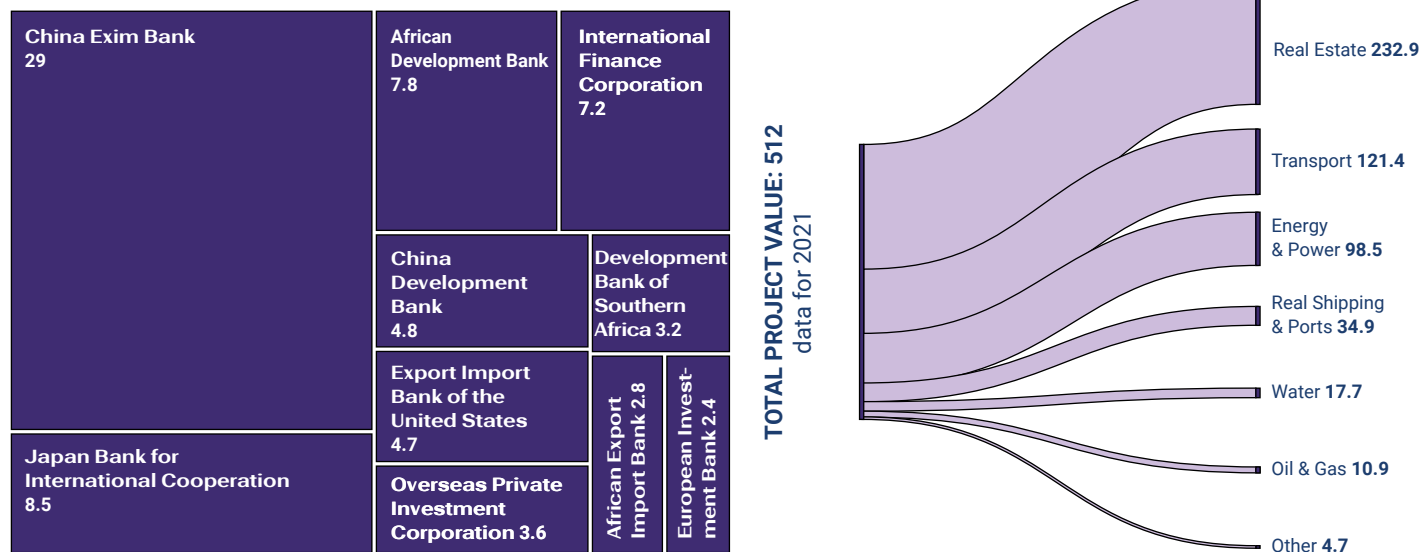
### THE BURDEN OF INFRASTRUCTURE FINANCING HAS SHIFTED FROM INTERNATIONAL DFIS TO AFRICAN GOVERNMENTS



### AFRICAN FIRMS ARE BUILDING MORE OF AFRICA'S INFRASTRUCTURE



### TOP INFRASTRUCTURE LENDERS IN AFRICA (2018 TO 2020) (USD BILLION)



Note: **African DFIs** are Development Finance Institutions headquartered in Africa (e.g. the African Development Bank). **Consortiums** are two or more construction companies or governments holding an equal split of a project's ownership, building activities, or funding activities. **Governments** include governments or government departments within the African continent. **International DFIs** are those headquartered outside Africa (e.g. the World Bank). **Private Domestic firms** are African construction firms/financial institutions headquartered in the same African country where it is constructing or funding a project. **Single Countries** are those that could not be grouped together according to shared geography.

Source: Deloitte. 2021. Africa Construction Trends Report. IJ Global.