

Lessons Africa Can Learn From China's Experience in Urbanization

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The rapid urbanization of Africa is facing a multitude of challenges. This paper analyzes the seven major issues currently plaguing African urbanization: regional development imbalances, the disconnect between urbanization and economic growth, increasing complexities in the urbanization process, the constraining effect of lagging agriculture, low quality of urbanization, lack of coordination between urbanization and modernization, and excessive population concentration in urban areas. To address these issues, Africa can draw valuable lessons from other countries, particularly from China's experience in urban development. Since 1978, China has seen a rapid increase in its urbanization rate. The key to this success lies in policy orientation, labor force transition, prioritized regional development, and attracting foreign investment among other strategies. By learning from China's experience, African countries can optimize agricultural modernization, strengthen the manufacturing sector, increase investment in infrastructure, and accelerate the process of digitization, thereby creating new opportunities for their urbanization process. This paper explores the rapidly developing urbanization process in Africa and the accompanying challenges. It also analyzes China's experience in urbanization, offering insights and recommendations for Africa's urban development.

Keywords: African urbanization, Chinese urbanization, urbanization rate, population growth

Urbanization is not just the phenomenon of population concentration in cities; it is also a complex socio-economic transformation. This process is accompanied by profound changes in economic structure, social structure, and spatial configuration. It signifies a country's shift from an agriculture-dominated economy to a modern economy led by cities and the service sector.

This transition not only impacts economic development but also brings multiple social ramifications, including changes in social stratification, occupational structure, and lifestyle. Therefore, urbanization is not just an inevitable byproduct of economic development; it is also an important indicator of social progress and modernization.

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Successful implementation of urbanization requires multifaceted support and planning, including the improvement of infrastructure, industrial upgrading, environmental protection, and social welfare. Only then can we ensure that the process of urbanization not only drives economic growth but also enhances the quality of life and social welfare for the population (Zhao, Li, & Wang, 2023). In summary, urbanization is a complex but unavoidable process that has far-reaching implications for a country's economic growth and social development.

Africa's Urbanization Is Urgent and Rapidly Progressing

Currently, Africa has a population of about 1.3 billion people¹, with over 200 million aged between 15 and 24. It is projected that by 2025, one-fourth of the world's youth population will be in Africa.

According to Table 1, Africa has a large, rapidly growing, and highly potential population. From 2008 to 2018, Sub-Saharan Africa maintained a population growth rate of 2.68%. Although it has slightly declined since 2019, it is still much higher than that of China, the United States, or the global average. While global population growth has not accelerated, the total number has increased significantly, with Africa playing a crucial role.

Table 1

Population and Population Growth Rate of the World and Some Regions

Year	World	Sub-Saharan Africa	China	The United States
2021	7,888,408,686 0.86%	1,181,063,481 2.59%	1,412,360,000 0.09%	331,893,745 0.12%
2020	7,820,981,524 1.01%	1,151,203,345 2.56%	1,411,100,000 0.24%	331,501,080 0.96%
2019	7,742,681,934 1.06%	1,121,451,150 2.67%	1,407,745,000 0.35%	328,329,953 0.46%
2018	7,661,776,338 1.10%	1,092,306,937 2.68%	1,402,760,000 0.47%	326,838,199 0.53%

Source: World Bank database.

Due to its abundant labor resources and rising consumption levels, the process of urbanization in Africa is also accelerating (Collier, 2017). It is the fastest-growing urban region in the world today (UNCTAD, 2018, p. 10), gradually closing the gap with global urbanization levels. It is estimated that by 2040, over one billion people in Africa will live in cities², and by 2050, this number could rise to 1.33 billion.

Table 2

Urbanization Rate of the World and Some Regions

Year	World	Japan	Sub-Saharan Africa	China	The United States	France	England
2022	56.62%	91.95%	-	63.56%	83.08%	81.51%	84.40%
2021	56.48%	91.87%	41.83%	63.51%	82.87%	81.24%	84.15%
2020	56.2%	91.8%	41.29%	60.8%	82.8%	81.5%	83.2%
2019	55.7%	91.6%	40.76%	59.7%	82.5%	81.1%	82.9%
2018	55.3%	91.5%	40.22%	58.6%	82.2%	80.7%	82.7%

Source: World Bank database.

¹ Source: Worldometer, <https://www.worldometers.info/world-population/>.

² Source: Worldometer, <https://www.worldometers.info/world-population/>.

Europe took 110 years to increase its rate of urbanization from 15% in 1800 to 40% in 1910. Africa, on the other hand, increased its rate from 14% in 1950 to 40% in 2014, taking only 64 years, highlighting the rapid pace of its urban development. According to Table 3, by 2020, Africa's rate of urbanization has surpassed three-quarters of the global level.

Table 3

Comparison of Urbanization Rates in Africa and the World (%)

Year	1950	1960	1970	1980	1990	2000	2010	2020
Africa	14.4	18.5	22.5	26.7	31.4	34.9	38.9	43.8
World	28.4	33.6	36.6	39.3	43.0	46.7	51.6	56.2

Source: World Bank database.

It is projected that by 2035, Africa's urbanization rate will reach 49%, and by 2050, it will reach 56%. At that time, 90% of the world's new urban population will emerge in Africa and Asia.

However, despite having the fastest urban growth rate globally, Africa's urbanization is accompanied by a series of problems:

- (1) A severe imbalance between the pace of urbanization and the level of economic development.
- (2) A lack of overall planning and infrastructure development in the process of urbanization.
- (3) The inability of urbanization without industrial support to absorb the large number of workers moving to cities.

Therefore, exploring effective strategies to address these issues is of paramount importance. This study aims to analyze these challenges from the perspective of improving the quality of African urbanization and avoiding the pitfalls that China and Western developed countries have previously encountered.

Challenges in Africa's Urbanization

Although Africa's rate of urbanization is rapidly rising, the process faces numerous challenges, leading to a conspicuous imbalance in its development. One of the primary issues is the lack of coordination between urbanization and socio-economic development. This misalignment manifests in several ways:

Significant Regional Development Disparities

African countries exhibit notable regional differences in their urbanization processes, influenced by factors such as geographical location, political conditions, economic development, and historical background.

Table 4

Urbanization Rate in Africa of the Highest Five Countries and the Lowest Five Countries

The highest five	Gabon 87%	Djibouti 79%	Libya 78%	Sao Tome and Principe 73.6%	Algeria 73.2%
The lowest five	Ethiopia 21%	Rwanda 18%	Malawi 18%	Niger 17%	Burundi 14%

According to Table 4, landlocked countries like Burundi, Niger, and Rwanda have relatively lagging urbanization rates, below 20%. In contrast, coastal countries like Gabon and Libya have urbanization rates exceeding 80%. Overall, about 22 African countries have an urbanization rate above 50%, and approximately 17 countries surpass the global average. From a regional standpoint, North Africa currently has the highest level of

urbanization in the continent, but its rate of development is relatively slow. Conversely, East Africa, although lower in urbanization levels, is the fastest-growing region in terms of urban development.

Such regional disparities not only reflect the imbalances in urban development across African countries but also highlight the need for customized strategies and policies to address the unique challenges faced by different regions. This may involve region-specific investments and planning in areas such as infrastructure, education, healthcare, and employment to promote a more balanced and sustainable urbanization process.

Disconnect Between Urbanization and Economic Growth

There is a glaring asymmetry between Africa's rapid urbanization and economic growth. Despite the fast pace of urbanization, it has not resulted in a corresponding economic uplift. The per capita GDP in most African countries remains low, far below the global average. Africa's rapid urbanization has occurred under conditions of low per capita GDP, a phenomenon that can be termed as "over-urbanization", where the urban population grows quickly, but corresponding productivity and economic development lag behind.

The fundamental reason for this imbalance is that Africa's urbanization has not effectively leveraged technological innovation and economic growth to drive quality increases in the urban population. The economic model still relies on the export of agricultural and mineral products and imports for consumption, and food production is not self-sufficient, resulting in a distorted economic development trajectory.

Therefore, solving this problem requires a multi-pronged approach that includes optimizing industrial structure, strengthening technological innovation and human capital investment, and adjusting economic policies to ensure that urbanization and economic development proceed in tandem, leading to a more sustainable and balanced model of development.

Increased Complexity of the Urbanization Process

Urbanization in developed countries usually occurs in three stages: The first is agricultural modernization; the second involves significant development in transportation infrastructure concurrent with industrialization; and the third is the information stage. However, in Africa, these stages are almost happening simultaneously. This leads to a convergence of issues arising at each stage, thereby increasing the complexity and challenges associated with urbanization.

Inadequate Agricultural Development Impeding Urbanization

The first step in the urbanization construction in Western developed countries often involves modernizing agriculture, which serves as the economic foundation while also freeing up the population. Unlike Western countries where agricultural modernization is the basis for urbanization, agriculture in most African countries remains underdeveloped, with yields less than half the world average. Agricultural modernization and mechanization are not given enough attention and investment, further restricting the healthy development of urbanization. Data indicate that the number of agricultural machinery tools available to African farmers is only one-tenth that of farmers in other developing countries and regions.

Low Quality of Urbanization

Examining from the four dimensions of economic development, social progress, quality of life, and infrastructure, the coupling and coordination between urbanization and industrialization in Africa are insufficient and mutually constraining (Abudu, Echima, & Andogah, 2018). The lack of a strong industrial base results in a predicament where economic growth cannot keep up with population growth.

Mismatch Between Urbanization and Level of Modernization

Africa's urbanization exceeds the level of its social productivity, leading to cities reaching their carrying capacity (Abudu et al., 2018; Wang, 2023). This phenomenon of over-urbanization, coupled with already lagging infrastructure, results in multiple problems including, but not limited to, increased unemployment, insufficient educational resources, poor sanitation, and housing shortages.

Over-Concentration of Urban Population

A massive influx of agricultural population into cities, particularly large ones, leads to explosive population growth. This rapid population increase is not supported by corresponding infrastructure and service systems. The layout of urban transport facilities, the coordination of the employment system, rational planning of residential areas, improvement of water, electricity, and fuel supply systems, and the planning of satellite cities around large urban areas have all failed to keep pace with development. As a result, cities exceed their own carrying capacities, leading to issues like "big city diseases", over-reliance on real estate for output value, disorganized urban planning, and environmental degradation.

In summary, Africa's urbanization process faces multiple challenges and problems. First, there is a clear mismatch between urbanization and socio-economic development, manifesting as regional development disparities and lack of corresponding economic growth. Second, the complexity of urbanization in African countries has increased because agricultural, transportation, industrial, and informational stages of development are almost occurring simultaneously. Third, the lagging agricultural development in most African countries limits the healthy progress of urbanization. Fourth, from a quality perspective, urbanization in Africa is generally low and lacks a strong industrial base. Fifth, there is a misalignment between urbanization and the level of social modernization, resulting in cities reaching their carrying capacities. Lastly, due to the excessive concentration of urban population, many infrastructure and service systems have been unable to keep up, leading to issues such as unemployment, inadequate education, housing shortages, and environmental degradation.

Africa Should Learn From China's Urbanization Experience

There is a special relationship between China and Africa:

1. Historical context: Forty years ago, China's global standing was somewhat similar to that of Africa today. For this reason, the challenges China faced in its economic development are also likely to confront Africa.
2. Complementary relationship: The Sino-African relationship presents beneficial complementarities. The most notable aspect is that China, as a major global manufacturing hub, has significant resource demands. While China obtains resources from Africa, Africa also benefits as a resource supplier, resulting in a win-win scenario.
3. Abundant resources and labor: Africa has rich labor and natural resources and is gradually transitioning to become a global manufacturing center. Consequently, Africa needs to learn from China's technologies and management expertise.

Since China's reform and opening up in 1978, China has experienced nearly 40 years of rapid development. At that time, China's urbanization rate was just 17.92%, significantly lower than the global average of 38.48%. However, as of March 29, 2023, China's urbanization rate has risen to 65.2%. Particularly in the Beijing, Shanghai, Guangzhou, and Shenzhen, as well as in 15 other emerging first-tier cities³, the urbanization rate has

³ Tianjin, Chongqing, Chengdu, Nanjing, Wuhan, Hangzhou, Suzhou, Xi'an, Zhengzhou, Changsha, Dongguan, Shenyang, Qingdao, Ningbo, and Kunming, etc.

reached approximately 83%. It's noteworthy that these achievements were made against the backdrop of China's enormous population and vast territorial expanse, making the task more challenging and correspondingly increasing the costs.

China's Comprehensive Urbanization Development Experience That Africa Can Learn From

Currently, most African countries generally agree on the value of learning from China's experiences in urban development. Given that African nations vary in geography, resources, governance systems, and developmental characteristics, China can establish different platforms for sharing experiences and strategies in urbanization tailored to these distinct features.

1. Policy guidance: Government policies have shifted the primary drivers of China's urban development from geographical and historical factors to an economic spatial structure.

2. Mobilization of rural labor: The turning point came with China's 1978 reforms, which introduced a series of policies encouraging the flow of rural labor into cities.

3. Selective regional development: Priority was given to economically strong and geographically advantageous eastern and coastal areas, using regional economies to drive national economic and urban development.

4. Introduction of foreign capital: Starting with the 1978 reforms, China has extensively attracted foreign investments across various sectors⁴. Due to limited internal financing capabilities, Africa is also starting to prioritize foreign investments and has adjusted its laws and policies to incentivize and guide foreign investments into strategic sectors. Sino-African investment collaborations should focus on aligning with the host country's industrial policies.

5. Expanding openness: For over four decades, the Chinese government has steadfastly adhered to policies of reform and opening up, continuously enhancing the level of its open economy.

6. Education focus: Given that a higher quality of human resources benefits economic development, China not only places a heavy emphasis on basic education—implementing nine-year compulsory education from 1994—but also higher education, increasing enrollment and strengthening international academic exchanges.

7. Attach importance to medical treatment: Improved citizen health effectively stimulates economic and urban development. Before the founding of the People's Republic of China, the average lifespan was only 35 years; by 2018, it has risen to 76.54 years. Longer lifespans increase the drive for better quality of life, thus promoting urban development.

8. Environmental sustainability: African urbanization should strive to avoid or minimize the “pollute first, treat later” approach seen in China's urbanization. It should prioritize ecological protection, green development, and legally governed pollution control and environmental conservation.

9. Balanced regional development: Africa should aim for a balanced economic development between urban and rural areas as well as among different regions. This is to prevent the coexistence of situations where large cities expand excessively while rural areas stagnate (Wen & Shen, 2023; Luo & Zhu, 2023). Efforts should be made to avoid the increasing flow of people, goods, and capital converging towards mega-cities and provincial capitals, leading to problems associated with overly large cities, often referred to as “big city disease”.

10. Diverse development models: Due to the different development characteristics of African countries, there can be no one-size-fits-all approach to urbanization. Strategies should be tailored according to varying rates

⁴ Source: <http://finance.people.com.cn/n1/2020/0121/c1004-31558529.html>.

of urbanization and levels of economic development. For research on models of urbanization, it is suggested to categorize target countries into three types: those with an urbanization rate lower than 30%, those with an urbanization rate higher than 50% and a high level of economic development, and those with an urbanization rate at the African average.

By examining these multifaceted approaches, African nations can glean useful insights to address their unique challenges in urban development.

China's Law of Urbanization Process That Africa Can Learn From

Developed countries' urbanization development follows three stages: first, the modernization of agriculture; second, the simultaneous progress of industrialization and major development of transportation infrastructure; and third, the information age. Here, we'll delve into these three stages and analyze the lessons Africa can take from China.

Enhancing the level of agricultural development in Africa. The development of agriculture is fundamental to urbanization. For countries with an urbanization rate below 30% (such as Burkina Faso, Comoros, Lesotho, Kenya, Uganda, Eswatini, Chad, Ethiopia, South Sudan, Rwanda, Malawi, Niger, Burundi, etc.), it is crucial to bolster African agriculture through means such as strengthening agricultural trade, elevating the level of agricultural mechanization, establishing agricultural industrial parks, promoting agricultural technologies, and nurturing skilled agricultural personnel.

Modernizing agriculture is not only the foundation of urbanization but also a pivotal stage in the evolution of socio-economic structures and productivity development. Specifically, modern agriculture incorporates the application of scientific technologies in farming aimed at enhancing agricultural productivity and managerial efficiency. Yet, there's a conspicuous lag in this area in Africa. For instance, Africa's farmland irrigation facilities are scarce, covering less than 5% of cultivated land, and farmers' market comprehension is inadequate, with a low degree of mechanization. However, the robust import trend in Africa's agricultural machinery trade in recent years indicates that the modernization of agriculture is gaining attention.

China's protected agriculture model should be studied. This approach optimizes natural light and temperature conditions through technological means, allowing crops to grow unrestricted by external environmental factors. Simply put, it offers crops an isolated space conducive to growth throughout the year. These technologies can range from large, fully automated, and intelligent greenhouses to more economical and practical polytunnel greenhouses. In rural China, the more cost-effective polytunnel greenhouses are widespread, allowing farmers to cultivate off-season vegetables and fruits.

In essence, through agricultural modernization, especially with the use of protected agriculture, not only can agricultural productivity be enhanced, but a robust foundation for urbanization is also laid. This holds significant referential value for African countries where agriculture remains relatively underdeveloped.

Learning from the construction of China's industrial system. Africa is at a pivotal stage of structural transformation and industrial upgrading, necessitating the gradual refinement of its industrial system (Xu, 2023). Throughout this process, Africa can draw inspiration from China's successful experiences in constructing its industrial framework. Specifically, African countries should, based on their unique characteristics and needs, establish and perfect their industrial systems at an appropriate scale to bolster manufacturing capabilities and drive rapid economic growth. For African nations with urbanization rates surpassing the global average (such as Gabon, Libya, Djibouti, São Tomé and Príncipe, Algeria, Equatorial Guinea, Botswana, Tunisia, Republic of

Congo, South Africa, Cape Verde, Angola, Morocco, Gambia, Seychelles, Cameroon, Ghana, etc.), they can glean more specific insights from the various regional industrial development models and experiences of China to carve their optimal development trajectory. Through this approach, Africa can not only elevate the level of its manufacturing industry but also foster comprehensive and swift economic progress, thereby establishing a mutually beneficial mechanism between industrialization and urbanization.

Promote the rapid development of manufacturing. China's economic growth is heavily reliant on manufacturing and fundamental industries. In the initial 30 years following its reform and opening up, sectors like steel, textiles, petrochemicals, and electronics effectively bolstered China's urbanization. As the continent with the highest concentration of developing nations and an emerging manufacturing industry, Africa's vast population serves as a stable force for its consumer market, which should prioritize the development in these manufacturing domains.

Establish a distinctive industrial system. Multiple factors, such as low labor costs, a large population, and continuously improving transportation conditions, have contributed to China becoming the "world's factory". These elements also hold relevance for Africa. With a large and youthful demographic, Africa has the advantage of fostering specialized industries. For instance, rapidly growing nations with significant populations, like Nigeria, can focus on investing in labor-intensive industries like textiles, home appliances, and automobiles to absorb more workforce and progressively emerge as distinct global manufacturing hubs.

Develop the service sector and tertiary industry. Once the urbanization rate surpasses a certain threshold, particularly beyond 45%, the service sector and tertiary industries begin to play an increasingly vital role. African countries should consider starting with productive services and modern lifestyle services to pinpoint new economic growth avenues.

Enhancing Infrastructure Development in African Countries

With the rapid progression of urbanization in Africa, the demand for infrastructure development, especially transportation infrastructure, is ever-increasing. Optimizing such infrastructures not only propels economic growth but also accelerates urbanization. China holds significant advantages in infrastructure development, and African countries should place great importance on collaboration opportunities with Chinese enterprises. In recent years, China has not only shown profound interest in investing in African infrastructure but has also continuously improved the quality of collaborations, expanded the areas of cooperation, and optimized investment structures. In this regard, numerous opportunities await African nations to collaborate with Chinese businesses.

To achieve more efficient infrastructure construction, African countries need to avoid operating in silos. Strategic long-term planning is essential, particularly in areas such as energy supply, communication, and other supportive infrastructures. It's vital to form a development mode that is organically interconnected.

Beyond roads, railways, and airports, Africa should also emphasize the construction of ports and the economic potential they offer. Such initiatives not only bolster international trade but also enhance the urbanization of port cities and the general urbanization process. Given that ports are widely regarded as strategic resources in the 21st century, coastal African nations (approximately 38 in number) possess a distinct advantage. It's noteworthy that China boasts remarkable strengths in port and maritime economy, consistently occupying seven out of the top 10 global container ports (ranked by throughput) for a decade. Thus, African countries have ample room to further collaborate with China in this domain, promoting comprehensive economic and societal advancement.

Africa's Digital Development and Urbanization Progress Hand in Hand

Thanks to the rapid advancements in global information and communication technologies, Africa demonstrates significant growth potential in emerging sectors such as internet applications, smart cities, and e-commerce. These domains not only drive considerable economic growth but also foster an increase in societal productivity (Tao, 2023).

Currently, Africa boasts over 200 million internet users. This staggering figure reflects its robust consumer demand and varied consumer demographics. E-commerce has become a pivotal driver for economic growth, successfully integrating Africa into the global trade and value chains through cross-border transactions.

In recent years, e-commerce in Africa has shown a pronounced upward trajectory. The rapid proliferation of mobile phones even outpaces broadband connectivity. This trend further propels the penetration and application of information technology across Africa, also facilitating the urbanization process. Consequently, digitalization and urbanization in Africa are mutually reinforcing, laying a sturdy foundation for the continent's holistic development.

Conclusion

The rapid progression of urbanization in Africa is undeniably one of the highlights of the 21st century, marking the new vitality and hope that this abundant continent presents on the global stage. This irreversible historical trend not only reveals the unwavering determination of African countries in pursuing economic growth and social progress but also reflects their efforts to find their place amidst the waves of globalization. However, the urbanization process in Africa has not been smooth sailing. Challenges like regional developmental imbalances, significant disparities between urban and rural areas, and the lack of synchronization between economic growth and the pace of urbanization present significant challenges to Africa's sustainable development. In this context, China, having achieved remarkable successes in its urbanization journey, undoubtedly offers a valuable reservoir of experiences for African nations.

However, the path to urbanization in Africa is not a mere replication of China's model. When assimilating and drawing inspiration from China's experiences, African countries must thoroughly consider their geographical, cultural, political, and economic backgrounds. Mere imitation can often lead to strategy failures; hence, specificity, adaptability, and innovation are crucial in formulating effective urbanization strategies. It's noteworthy that as China-Africa relations continue to deepen, their economic, technological, and cultural exchanges are also intensifying. This provides African nations with more collaborative resources and opportunities, not only propelling the speed of urbanization but also enhancing its quality and benefits.

In conclusion, African nations face a complex and unique urbanization challenge. However, by judiciously assimilating external experiences, bolstering international collaborations, and aligning with their actual circumstances, they can potentially pave the way for a more prosperous, harmonious, and sustainable future.

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