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**"URBANIZATION AND ECONOMIC DEVELOPMENT  
IN SUB-SAHARAN AFRICA"**

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A handwritten signature in black ink, appearing to read 'A. M. M.', written in a cursive style.

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# **URBANIZATION AND ECONOMIC DEVELOPMENT IN SUB-SAHARAN AFRICA**

## **ABSTRACT**

In this paper, we try to understand the continuous urbanization in Africa. Urbanization is rapidly increasing in Africa at a time, it is also fleeing through an unlimited demographical change with growth in the young work force. Given that most African economies are labour intensive, coupled with the fact that they lag in exploiting their natural resources, rising urbanization will likely worsen unemployment concerns in urban centres. In the same vein, agriculture accounts for a substantial proportion of GDP in these countries (in The Gambia for instance, it accounts for roughly 63%). Continued movement of youth from the rural agricultural areas will have a direct effect on yield, translating into a fall in economic output. The political, social, and economic weakness in Africa makes it hard to deal with urbanization. Most countries in Africa are struggling for development and with the urban becoming crowded, the challenges are exacerbated. Urbanization in Africa is caused by poverty and the youths in the rural areas are attracted by the opportunities available in the urban areas. African urbanization has not been well functional, the reason being the fact that urban cities have not generated enough productive jobs. If policy makers have not change policies on urbanization in some African countries, future urbanization is likely to be the same as the current situations.

I thank Allaah the Almighty for the guidance, strength, and for giving me healthy life.

This study is wholeheartedly dedicated to my beloved parents FATOU B. SECKA and OUSMAN T. CHAM, who have been my source of inspiration and gave me strength, continually provide their moral, spiritual, emotional, and financial support, and the departed soul of my brother Sheikh Tijan Cham.

(We ask Allaah to grant him a lofty position in Jannah).

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## 1. INTRODUCTION

Urbanization is the process of people moving from rural areas to cities, and it is often accompanied by economic development. In Africa, urbanization has been increasing in recent decades, with the percentage of people living in cities rising from about 30% in 1990 to over 40% in 2020 (Figure 1).

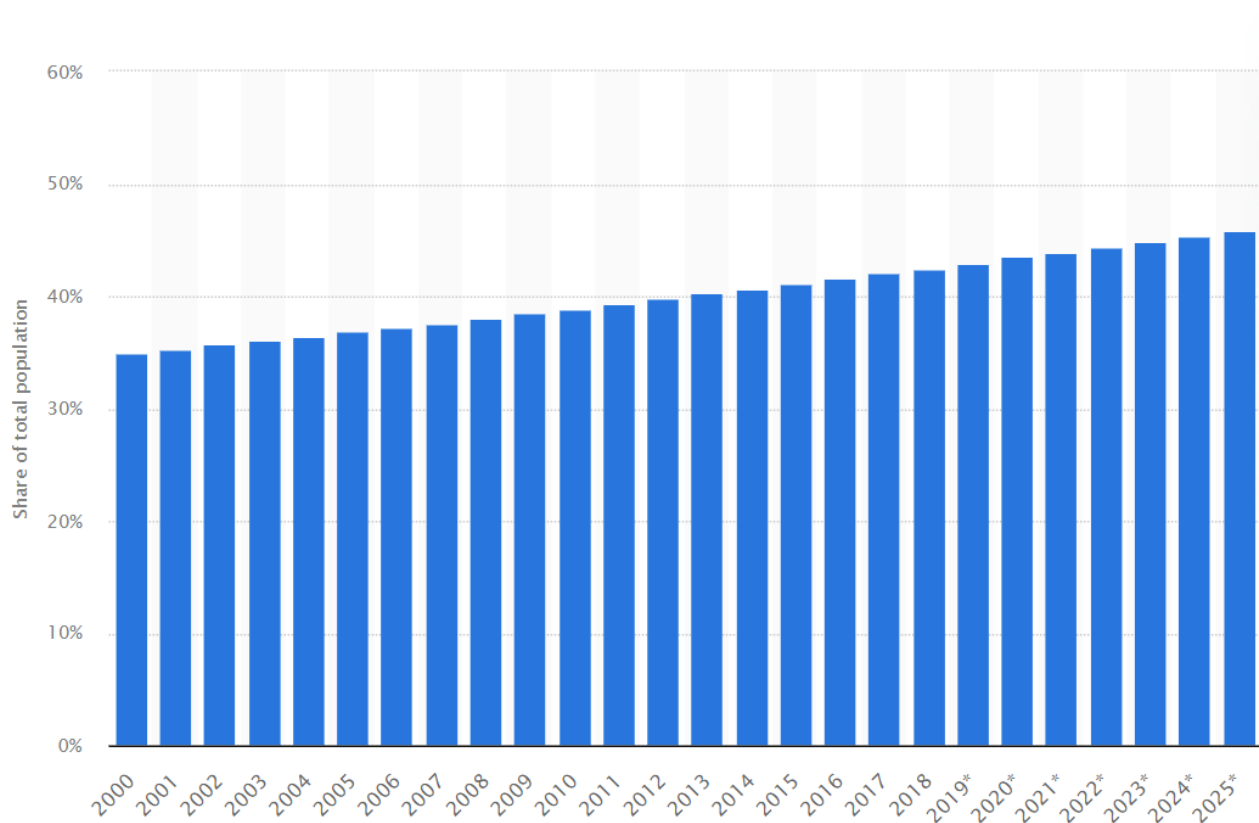


Figure 1: Urbanization rate in Africa from 2000 to 2025.

Source: statista.com.

The urbanization rate in Africa was projected at nearly 44% in 2021. Urbanization on the continent has increased steadily since 2000, when 35% of the total population lived in urban areas. This share is expected to increase further in the coming years. However, the proportion of the rural and urban population varies significantly on the continent. In 2019, Gabon and

Libya were the most urbanized countries in Africa, each exceeding 80%. In contrast, around the same share of the population was living in rural areas in Burundi and Niger, which recorded an urbanization rate of only 13% and 17%, respectively.

There are several factors that have contributed to this trend, including population growth, technological advances, and economic development. As countries in Africa industrialize and modernize, more people are moving to cities in search of greener pasture, education, and healthcare.

Urbanization can also lead to economic development by creating a larger market for goods and services, attracting foreign investment, and increasing productivity through the concentration of people and resources in a smaller area. However, it can also pose challenges, such as overcrowding, traffic congestion and environmental pollution.

To address these challenges and maximize the benefits of urbanization, it is important for governments and policy makers in Africa to implement policies that promote sustainable and inclusive urban development. This may include investing in infrastructure, improving access to education and healthcare, and promoting inclusive economic growth.

Burak Guneralp et al. (2017) discuss about the pitfalls and the opportunities granted by developed cities on the African continent to the conservation goals and practices. The rapid growth in urban population in Africa is causing high problems of insufficient infrastructure and bring new governance challenges. Africa's ecological community can serve as bedrock for green infrastructure to serve the needs of its urban populations while preserving fragile biodiversity. There are also encouraging drive to bring these concerns into the fold to address social, institutional, and ecological challenges that merged with the continued urbanization in Africa. It is predicted that Africa's urban population is expected to triple over 40 years from 395 million in 2010 to 1.339 billion in 2050, corresponding to 21% of the world projected urbanization. The nature of geographical expansion and growth of minor settlements will substantially influence Africa's urban landscape and the strength to achieve targets associated with the 2030 Agenda set out by the United Nations (UN) and the continent's own vision for Africa in 2063.

This thesis aims at analysing the most recent urbanization path in Sub-Saharan African countries, which are experiencing very high rates of urban growth. In the rest of the thesis, we will discuss urbanization path in Africa and its main causes and consequences, and provide an empirical analysis to understand whether and to what extent urban growth is associated with economic growth. The empirical results suggest an overall positive association between

increases in the percentage of urban population and Gross Domestic Product (GDP) per capita growth, even though this relationship depends on basic education, relative importance of the primary sector, and quality of the national institutional system.

## **2. CAUSES AND CHALLENGES OF URBANIZATION IN AFRICA**

### **2.1. CAUSES OF URBANIZATION IN AFRICA**

People move from rural areas to cities for a variety of reasons, including economic, social, and political factors. Migration to metropolitan regions can offer a way out of cultural and family restrictions such as limited access to property or low levels of female freedom. The expectation of a rise in social prestige and standing, or the belief that the "high life" can be found among the "bright lights" of the city, may also induce migration to an urban area.

Rural-urban migration may also rise as a result of wars and ethnic conflicts. Together with the effects of transit and marketing on agricultural income, conflict may also drive residents of rural areas away for their own protection. Being in a region where a persecuted ethnic group predominates increases the risk of being a victim of ethnic cleansing, especially when there are ethnic tensions present. Metropolitan regions frequently have higher levels of ethnic diversity than rural areas, making them potential havens for marginalized communities. Moreover, there may be better police protection in cities, which promotes migration from lawless rural areas where it may be more difficult to maintain order.

From an economic perspective, migration from rural to urban areas—whether circular, seasonal, or permanent—is frequently a response to financial incentives. According to the traditional view of rural-urban migration, metropolitan areas' comparatively better economic conditions are the driving force behind migration. In accordance with this concept, migrants contrast potential rural income with predicted city salaries. People from rural areas will be drawn to the city if urban earnings are greater, perhaps as a result of government wage policy or labour unions. Even if there are poor employment prospects in the city, rural-urban migration may happen if predicted urban income is significantly higher than expected rural income. If predicted urban income is sufficiently high, migrants may be ready to undergo a period of unemployment.

Rural residents may be "pushed" out of rural areas by other factors in addition to the greater predicted urban income. Rural incomes can be quite susceptible to changes in global market pricing, therefore a general fall in agricultural commodity prices may have contributed to a

decline in those incomes. There may have been a shortage of land among rural residents as a result of increased population density and environmental damage, which encouraged out-migration.

A risk diversification approach may also lead to rural-urban migration. Because to variations in weather and rainfall, agricultural market prices, access to land, ailment, and war, agricultural revenue can be very unpredictable. If economic hardships in urban regions do not typically coincide with those in rural areas, some members of rural households may move to urban areas to lessen the danger to their families. Many households live in both urban and rural areas, and remittances between migrant workers and rural homes help to even out income.

Although there is evidence that greater rural education causes out-migration, there is no conclusive evidence that better urban services (infrastructure, hospitals, and schools) encourage movement. It is uncertain if improved transportation promotes migration or commutes and rural off-farm work.

Rural outmigration and the modernization of agriculture eventually cause productivity gaps between rural and urban areas to disappear. Yet, policy distortions could lead to wage differentials that are greater than what productivity would indicate. Alternately, they might skew investment allocations that unduly boost urban productivity or artificially lower rural production.

In Africa, higher urban incomes have mostly been linked to the continent's colonial past. Higher urban salaries during the colonial era reflected a division between a wealthy (European) ruling class and a poor (African) farming class. After colonialism ended and an "Africanization" of urban jobs began, this wage discrepancy was maintained. Strong labour unions, which had played a significant role in the victory of independence and were therefore well-organized and politically powerful, frequently defended this relatively higher pay. Favourable labour regulations that guaranteed minimum pay and working conditions for government employees, business workers, mineworkers, and other formal sector workers were frequently used to reward wage laborers.

Government spending in developing nations may have been biased toward urban-based sectors. Many emerging nations built roads and dams on a vast scale as part of their import-substitution strategy, which were frequently funded by agricultural taxes. The urban elite might improve its income at the expense of rural agriculture by influencing legislation to boost investment in urban infrastructure and industry. Yet, more recent data suggests that, at least in terms of public spending and tax revenues, cities—particularly major cities—subsidize the rest of the economy.

The existence of "financial urban bias" may also cause private investment to be biased in favour of urban areas. Research from emerging countries indicates that whereas rural areas tend to be net depositors of money, urban areas tend to be net users of credit because people in the former borrow money from the latter. Due to increased levels of credit rationing in rural locations where transaction costs are high, monitoring is challenging, and average balances are modest, this "financial urban bias" may arise. If money is saved in rural banks but borrowed through urban banks to be invested in urban enterprises for return rates that aren't any higher than those that could be acquired in rural areas, the consequence may be a skewing of investment towards cities.

Reducing these aspects of "urban bias" through the liberalization of agricultural commodity prices, the realignment of exchange rates, and the removal of import barriers to force industrial products to compete globally has been a key objective of structural adjustment policies implemented by developing countries over the past two decades. In Africa, "the income gap between urban wage earners and the rural population has reduced dramatically," whether due to structural adjustment lowering rents to an urban elite or general economic downturn causing reductions in formal employment. According to studies, rather than only between rural and urban areas, "the fundamental dynamic distributional relationship in Africa has been between rich and poor within both the urban and rural sectors.

If the urban poor have little access to these resources, the "urban bias" phenomena may be better understood as a bias in resource supply to the wealthy and elite. Assuming that everyone who lives in an urban region benefits from policies that favour urban groups and denying the range of socioeconomic groups seen in metropolitan areas. As a result, it could be fairer to talk about "elite prejudice" rather than "urban bias" to account for the economic differences between urban populations.

Even though fiscal and monetary policy, lending, and investment all predominantly benefit urban regions, this does not imply an "urban bias." It might represent variations in return rates. Furthermore, there can be a sweet spot for investment where some regions get substantially more money for infrastructure. Urbanization may boost productivity in each industry if agglomeration economies are present. In general, it is more efficient for credit to be concentrated in metropolitan regions where investment and lending yield higher rates of return. Disequilibrium between rural and urban sectors, regions, and populations is implied by the fundamental process of economic development.

In most developing nations, the absence of necessities, a lack of government presence, and little to no commercial activity serve as push factors that drive people away from rural settlements. In contrast, these nations' cities continue to be the focus of government development projects and the hub of numerous opportunities, forcing rural residents to migrate in large numbers to the cities because of these pull factors. Rural-urban migration is the main culprit, especially in emerging nations.

Because they pay different salary structures in metropolitan areas, the government has a bias in favour of rural settlements. The cities are thought to have an abundance of employment options and various sectors paying high wages. For the benefit of the population, there are more markets, medical facilities, magnificent housing amenities, and educational institutions. Most rural dwellers in some of the world's poorest nations lack access to electricity, thus they frequently yearn for the metropolitan lifestyle with lovely streetlights at night as opposed to living in the villages where they must rely on the moon's light. Natural growth is also more obvious in cities due to this cause. In Africa, people hold the belief that one's level of wealth accumulation is determined by the number of children they have. Families in rural areas tend to have more children than their counterparts in cities due to a lack of basic information about family planning methods; however, the urban population density makes the problem of natural increase more noticeable, in comparison to the rural settlement, primarily due to the multiplier effect. The prevalence of polygamy in rural communities also raises the average number of children per family. Environmental changes, droughts, floods, a lack of sufficiently productive land, and other pressures on rural lives might result in the need for migration to urban areas in addition to the before cited factors.

All sizes of communities are impacted by the urbanization process, which causes villages to progressively transform into small towns, medium towns into larger towns, and larger towns into cities. Megacities have expanded as a result of this trend. It is likely that in some areas, inhabitants will not need to move or emigrate to surrounding cities in search of greener pastures because they will already have access to the chances they want thanks to the transformation of some rural villages into urban settlements. A small rural community can progressively become a city over time by receiving constant infusions of scientific and technological information. Due to the discovery of minerals, resource extraction, and mechanized agricultural activities, incoming enterprises may start to develop commercial activities both within and outside of their immediate environment. Increased production and availability of commercial goods and services, along with the prosperity of the rural community, will all contribute to faster economic growth and more local jobs. In most circumstances, a rural settlement may lack the necessary

skills for some occupations in the sectors, which may necessitate the importation of specialized or skilled workers.

Construction of basic social amenities, health care facilities, and housing facilities is likely to be prioritized by policymakers as a way to maintain the pace of economic growth or to attract more businesses to the area as commercial and industrial activity increases and the potential for increased tax revenue for the government. People from nearby villages may move there to take advantage of the employment prospects, which will cause this rural town to eventually become urban.

The growth of contemporary industrial sectors is essential for economic development, which necessitated the exodus of an affordable and plentiful labour force from the agricultural sector. Successful agricultural output and foreign investment were promoted by the rural reform. Many rural laborers were able to join non-agricultural sectors and the emerging urbanization process after the pressure for food production was relieved. To find work, many peasants moved to towns, cities, industrial zones, and mining regions. Urban and rural development, industry and agriculture, urban growth, and economic growth all happened together.

Many African nations saw a fast urbanization following World War II. Nonetheless, this urbanization process is entirely distinct from that in wealthy nations. The things that flow into the area and improve living conditions operate as pulling forces, while the unfavourable living conditions in the outflow areas act as pushing forces. For rapidly expanding rural populations in emerging nations, emigration has offered one potential safety valve, but after World War II, the majority of the more industrialized nations have erected obstacles to immigration. As a result, the only option for the increasing number of poor rural residents has been to relocate to bigger towns and cities, where at least for them, there is a chance of employment, access to schools, clinics, and piped water, as well as a variety of public facilities and services that are frequently unavailable in rural areas. To satisfy the demands of urbanization, the vast majority of developing nations have aggressively pursued national modernization. Urbanization is symbolized by substantial population mobility in less developed nations, although industry is much behind.

## **2.2. CHALLENGES OF URBANIZATION IN AFRICA**

Once upon a time, industrialisation and increased production were thought to be favourably correlated with urbanization. In order to take advantage of easy access to huge markets, capital, labour, legal services, social and economic infrastructure, and cross-border marketplaces,

industries frequently locate in metropolitan areas, particularly large cities. As a result, economic activity tends to be concentrated in urban regions, maintaining the urban bias in development policies. Nonetheless, it is now unmistakably evident that there are drawbacks to the concentration of people and economic activity in metropolitan regions. The resulting "overurbanization" causes traffic congestion, environmental pollution, inadequate housing, underemployment, and access to public services. Estimates of urban unemployment are the main indicator of how effectively metropolitan regions have absorbed the rapid population growth. The rising number of urban job seekers is one of the main effects of the rapid urbanization that African countries have undergone over the past two decades. Urban job seekers outnumber employers in every African nation. Urban unemployment in the area has doubled over the previous 20 years, going from 10% in the middle of the 1970s to roughly 20% in the 1990s (Vandemoortele, 1991). According to several research, the urban migrant population tends to have lower unemployment rates than the native population. This may be because they take jobs that the native population is not interested in. Low rates of unemployment among immigrants may or may not result in higher rates of unemployment among locals. The levels of unemployment among locals might not change if the occupations are actually ones in which they have no interest. It is also significant given the mounting evidence that a significant portion of migrants tend to find jobs outside of the regular labour market, in the underground economy. Although average household incomes in Africa tend to be systematically higher in urban than in rural areas and to be positively correlated with city size, underemployment and unemployment in the cities have a negative impact on the family's ability to make ends meet and frequently contribute to its instability. Children and young people lose some adult supervision when the mother and other family members leave the house to go to work. Children frequently have to find employment on their own, and if they do, they leave home at a young age, which contributes to the breakdown of the family as a whole. As traditional value systems deteriorate, urbanization has too frequently resulted in the abandoning of children. Nonetheless, there is scant proof that migrants' family values have broken down. Those who migrate frequently don't leave their rural hometowns, where they were raised. For many migrants, a rural area still serves as the definition of home because of the spouses and kids who had to be left behind, as well as other family members and local connections. For instance, urban dwellers in Nigeria frequently emphasized that they were outsiders in the metropolis. They tended to identify strongly with their native community and their deep family ties to it. They travelled there, helped with development, constructed homes there, and other things. Even among permanent migrants, these ties to the extended family and rural community are common.

Concerns about the costs of urbanization have also been raised due to Africa's rapid urbanization trend. Notwithstanding the existing urban bias in development expenditures and policies, unchecked urban growth makes it challenging for cities to offer citizens the services they want. The rate of urban growth has exceeded the ability of national and local governments to offer even the most basic levels of fundamental services. There is evidence that the growth of urban centres tends to increase air pollution, noise levels, congestion, health issues, and crime more than proportionately. The population's economic requirements and wants have grown in both number and quality as a result of urbanization. Such changes are crucial because they increase people's expectations and place further restrictions on government economic policies, which strengthens the urban bias in resource utilization. Africa is becoming more and more urbanized, and the majority of its cities are struggling to keep up with the rising demand for housing and urban services. It is anticipated that this urban growth will endure for the foreseeable future. As a result, how effectively African countries manage their resources will increasingly determine how well their economies operate.

Due to the urban bias in African development strategy, rural areas currently have less access to essential amenities than urban areas, which contributes to the concentration of poverty in such rural areas. For instance, the population in Sub-Saharan Africa had access to health services at a rate of 49% in rural areas compared to 78% in urban areas from 1985 to 1993; similarly, the population had access to safe water at a rate of 35% in rural areas and 73% in urban areas; and to sanitation at a rate of 29% in rural areas and 59% in urban areas during the same period (UNDP, 1995). Except for health care, where access was 1.5 times greater in urban areas, all of these services were more readily available there than in rural regions. Regarding child malnutrition, similar trends have been seen.

Pre-schoolers who are malnourished are more prevalent in rural areas of practically all African nations than they are in metropolitan settings. Reduced cellular immunity and an increase in the frequency and/or severity of sickness are both linked to malnutrition. Infant and young child death rates are typically inversely connected with malnutrition rates. The rise in street children is one facet of urbanization that is tied to urban poverty in Africa (UNDP, 1993).

Not all street kids are orphaned or homeless. The fact that street children choose not to attend school and instead choose to form groups and congregate in the streets in an effort to survive is one of their core characteristics. While the majority of male street children in Africa pursue irregular jobs like car washing or shoe shining, the majority of female street children frequently turn to prostitution. Some street kids steal and beg as well. African nations have much higher urbanization rates than is likely justified by their level of economic development. However,

many of those nations' economies are deteriorating as a result of this urbanization. Urban unemployment and urban poverty are growing as a result of the fact that the rate at which the urban population is growing outpaces the rate at which work opportunities in the formal sector are growing. The economic crisis that is currently affecting the majority of the region's countries is exacerbated by this condition of things.

Poor institutions for protecting property rights and ineffective land management make access to land expensive and uncertain, which leads to incorrect land use allocation and discourages profitable investment. Urban land markets in West Africa typically function under these circumstances, failing to create the favourable conditions necessary to sustain productive urbanization without having a large negative impact on the economy. In order to gain access to land for housing, urban services, and infrastructure, West African cities have relied heavily on informal processes. The data on urban extensions and leapfrog development presented above demonstrate how this informal spatial expansion presents problems for infrastructure development and urban planning. Few people have legal land titles, which discourages investment and makes the real estate market ineffective. These difficulties are primarily caused by a lack of coordination in the pattern of land use and land tenure transformation that has accompanied urban population increase and spatial urban expansion, as well as the coexistence of several land tenure regimes (referred to as "legal pluralism"). Because there is a limited quantity of land available through official private or governmental land delivery channels, the severe strain on land in urban and peri-urban areas in West African cities is made worse. Land demand rises as a result of urbanization, and a problem occurs when there is not enough land available where it is most required.

Francophone Similar civil rules were passed down from the colonial era to the countries of West Africa. Land-related issues are controlled by the presumption of state ownership concept in the absence of a title of ownership. Land is still mostly distributed by the government, and as a result of decentralization policies in an increasing number of nations, by local authorities. Land markets function inside and across various land delivery routes, which frequently include allocations involving a wide range of stakeholders and that may or may not be legal. The current legal system in place in many West African nations is the consequence of a long history of land reforms, which frequently brought about complication in land tenure. These difficulties limit the ability to raise money for investment and development as well as the ability of local governments to generate income because they prohibit urban land markets from operating successfully.

Due to the coexistence of many land tenure regimes, the processes for making land available for housing are convoluted, expensive, and opaque. Residents of Bamako have different levels of access to land depending on their employment and income. The majority of households must use alternative, more informal routes, while a tiny percentage—usually those with significant incomes or jobs in the public or private sectors—can get land through various formal channels. Political and social networks are equally important. In actuality, informality is the rule rather than the exception and is in some ways predetermined by the system's numerous beneficiaries, including the public authorities. The majority of households lack the social contacts necessary to manage the land administration, making access to land under official tenure either pricey or unachievable, or it may not even be envisioned at all due to ignorance of property rights. Social unrest and instability were considerably exacerbated by such unequal access. In these cities' urban and peri-urban districts, where poverty rates and population growth are high, access to land is a contentious topic. Inadequate policy goals and an absence of control over land distribution pose serious dangers to governments. These nations' land markets function in an environment of poor institutional capability, insufficient human and financial resources, and poor governance in the land sector. Designing any sustainable land and housing policy requires a better understanding of present urban land and housing practices, the operation of land markets, and the creation of land pricing.

Members of the African Policy Circle concentrated on four main issues over the entire year of 2019 as a result of the continent's rapid urbanization. First and foremost, increased insecurity and violence are two of the most significant risks of urbanization as the number of urban poor people rises. According to the findings of the Afrobarometer surveys conducted in 2016 and 2018, urban areas are more likely than rural ones to experience insecurity and violence. The relative high prevalence of insecurity and violence in Africa's urban centres further shows that urbanization may be a source of such inequality and inadequate state capacity, which are often regarded to be manifestations of economic inequality, weak state capacity, and limited possibilities. Urban insecurity is escalating both in frequency and intensity in several of Africa's fastest-growing cities. Many people in these cultures are being forced to seek out alternate methods of supporting their livelihoods through organized crime and violence due to the pervasive poverty and inequality in these societies in the lack of competent governance. Urban centres with such gaps are more likely to have high crime rates, according to studies on the relationship between urbanization and urban inequalities, such as those relating to wealth and education. From simple theft to armed and organized crime, there are many different types of crime. Criminals in metropolitan areas can eventually "upgrade" to other, riskier behaviours like drug trafficking. Self-inflicted violence, interpersonal violence within the family or

community, and collective violence (such as riots or terrorism) brought on by political, social, and economic issues are additional forms of urban crime. Although there is widespread concern about the link between urbanization and rising insecurity in African cities, the levels and forms of violence and insecurity range between various African countries and are driven by a variety of factors. For instance, South Africa has a higher rate of violent crime than other nations in the region, which is a result of the nation's widening economic disparity, weak social cohesiveness, and high rate of illicit gun ownership. Sudan, another rapidly urbanizing nation in Africa, offers a totally different setting. Political unrest is roiling the nation as protesters call for civilian government. Many people have died because of the protests since they started. Violence against women has been particularly common. Young people are frequently motivated to join gangs, engage in drug trafficking, or commit violent crimes by the increased demand for work and the limited absorption of youngsters into the urban labour market as more people, especially teenagers, move from rural to urban surroundings. On an individual, communal, and societal level as well as nationally, insecurity and violence are known to cause a wide range of social, economic, and psychological issues. Children and teens, the elderly, and women are the groups most at risk for and impacted by violence and insecurity. UN-Habitat draws attention to the fact that unrest and violence have helped urban residents develop a pervasive fear. Also, because of the higher delivery costs, they have resulted in a decline in foreign direct investment, a decline in productivity, an increase in the number of private security firms, and an uneven distribution of public services.

Due to a number of circumstances, including the weak state capacity and inadequate police systems in many African countries, responding to these challenges has proven to be extremely challenging. Because of this, many African elites have turned to private security companies, while many urban residents with ordinary or low incomes are uniting to form local neighbourhood vigilante groups. Both of these factors are changing urban security in Africa as a result of the continent's urban residents' growing victimization anxiety. These many security organizations could occasionally replace or supplement the conventional security apparatus. Moreover, escalating violence and insecurity impede economic growth. According to studies, productivity variations are highly correlated with insecurity, decreasing the rate of development.

Rapid urbanization affects infrastructure and stresses already ineffective urban planning efforts in addition to creating the various security problems mentioned above. It puts cities' current transportation and road systems to the test, and in some cases, can cause them to fail since they were not built to handle the new mix and higher volume of traffic. As a result, there is famously

heavy traffic and a high accident rate. In many African towns, walking and cycling are quite widespread, yet walkers and cyclists are also regularly hurt or killed in accidents. Yet, the majority of infrastructure projects in African cities are focused on building roads, which frequently encourages further motorization and, as a result, increases in traffic, noise, stress, air pollution, and accidents. However, many African cities' practice of separating residential neighbourhoods from places of employment, marketplaces, educational institutions, and healthcare facilities may cause inhabitants to spend more time and money on transportation. In addition, many African cities are dealing with a persistent water and sanitation crises that disproportionately impacts the urban poor, despite the fact that these issues are crucial for development in many respects. For a person's personal and socioeconomic growth, access to clean water, affordable toilets, and appropriate hygiene practices is crucial. They are especially important for the development and wellness of children. In general, poor country-level planning, poor ownership, poor governance, a lack of political will for action, a lack of knowledge, poor maintenance, and inefficient use of existing systems, an unclear division of roles and responsibilities between the public and private sectors, and a lack of capacity to address these issues are the main causes of the water, sanitation, and hygiene crisis in urban Africa. Moreover, efforts related to water, sanitation, and hygiene are typically not given priority in national budgets or donor monies. Weak institutional capacities, corruption, sluggish economic development, and a lack of urban planning all contribute to these issue clusters, which include increased insecurity and violence as well as overcrowded or non-existent basic infrastructures in Africa's metropolitan centres. Weak institutional capacity has frequently resulted in the failure to address urgent infrastructure needs or in worsening access to essential services like health care, education, and water and sanitation. This confluence of circumstances has frequently produced enclaves within cities that divide the "haves" from the "have-nots," aggravating social and economic inequality and leading to knock-on effects like rising crime rates in metropolitan regions.

Citing inadequate political leadership, a lack of finance, and the isolation of various stakeholders from the planning procedures as the primary causes of these failures, implementation. Members also emphasized the problematic lack of coordinated initiatives, as well as the inadequate communication and feedback channels between urban councils and their residents, pointing out that only a small number of civil society organizations in Africa have a clear focus on urban governance activities.

### **2.3 IMPACT ON RURAL COMMUNITIES**

By more regular transportation connections to a greater number of locations, especially those processing exports, urban regions provide stronger external connectivity for consumers and retailers. Urban areas are therefore important marketplaces for agricultural goods, supplies, and distribution. By enhancing the infrastructure that connects them, urbanization can also shorten the distance between producers in rural areas and their markets. As a result, urbanization boosts rural incomes and economies by increasing the demand for natural resources and agricultural goods. Yet, socioeconomic conditions, institutions, and the infrastructure they invest in determine how urbanization affects the demand for agricultural products and, consequently, rural productivity and earnings. Many urban residents in Sub-Saharan Africa are poor and live in slums. Because of this, expanding urbanization has not led to the projected increases in demand, agricultural output, and general wellbeing in these areas.

According to the assessment, the quick growth of major supermarkets has frequently coincided with the expansion of cities. This transformation of the agri-food industry has occasionally resulted in the elimination of small farms, as well as small processing and distribution companies. However, urbanization, which has been accompanied by the growth of supermarkets, has increased the demand for quality and convenience foods to meet urban food needs. As a result, the flow of agricultural goods and services has increased, leading to agricultural growth in regions or nations where there are emerging middle-class consumers who are demanding more diversified, higher quality, and safe products. For instance, it improves specialization, quality standards, or purchase consolidation or involvement in value chains. This might limit access, which would have an impact on the agri-food system's conditions and organizational structure (Weatherspoon & Reardon, 2003). Given the financial benefit of agglomeration, closeness, and economies of scale, this is the case. A nation's economy can change because of urbanization in this fashion. However, supermarkets only purchase a small number of fresh goods directly from farmers, such as fruit, vegetables, eggs, and dairy products (Nair et al., 2018). Public interventions could help in the field of directly connecting supermarkets and farmers to lower marketing costs and convey incentives to producers.

Urbanization continues to play a crucial role in connecting producers and global markets because most African exports are still based on agriculture and natural resources. The research also contends that the impact of urbanization on agricultural product consumption is not uniform and can differ depending on a region's infrastructure and proximity. The existence of infrastructure or the distance from urban centres, which determines their involvement in "modern" value chains and their access to commercial centres that buy their products for processing or retailing, determines the positive impact of urbanization through consumer

linkages. Hence, considering the ongoing fast urbanization, policies that make it possible for remote farmers to take part in value chains would have a significant positive impact on the development of the agricultural industry and rural life as a whole.

Urbanization's impact on commercialization and rental services, which primarily affect the delivery of goods and services to rural areas, can also be observed because of consumer links. Rural income improves because of more agricultural commercialization, which in turn boosts the quantity of surpluses that can be sold and the demand for agricultural supplies and services. Small businesses like merchants, processors, and logistical service providers then start to emerge because of this, which can function as a catalyst for the expansion of off-farm incomes as well as the overall change of the rural economy. In rural areas, the renting of agricultural services like planting, sowing, fertilizing, and harvesting has increased because of urbanization. Most of the infrastructure and technologies used to deliver these services are produced in urban areas. Such prospects would result in better farming practices and higher labour productivity because of the mechanization and modernization of agriculture. Farmers' and other value chain participants' earnings would increase as a result in the end.

The rising urbanization trend is allowing rural livelihoods to diversify by opening new economic options. As they provide larger and more effective labour markets, urban areas, especially minor and secondary town growth, are increasingly emerging as a significant source of employment. Little towns, as opposed to bigger cities, experience a stronger impact on poverty reduction as a result. However, in some cases, because urbanization excludes individuals without access to resources, such women and young people, it has worsened economic disparity due to its influence on non-farm work. In this regard, policies that are appropriate and targeted at protecting smallholder farmers should be in place.

Increased remittances and migration as a result of increased off-farm income would boost agricultural output. With a major contribution from urban migration, the share of rural household income from non-farm sources is increasing, primarily due to labour flows, and was occasionally as high as 40% to 50% of the average rural household income in Sub-Saharan Africa in the 2000s (Start, 2001). The total result is an increase in household earnings, a decrease in poverty, and increased food security. The need for inclusive economic development, the need to stop people from moving to big cities, and their potential to provide chances for local economic diversification are the key drivers of increasing interest in the role of secondary towns and cities in rural development. Secondary towns and cities are more appealing to impoverished and rural areas since most of the labour force there is unskilled and semiskilled, in contrast to the labour force in big cities. Small towns and urban areas are in fact offering

markets and services to small-scale producers as well as providing retail services to neighbouring communities. They also serve as "administrative towns", where a sizeable portion of households receive income from government services. They provide the role of an intermediary, facilitating the flow of goods, services, and inputs between rural communities and bigger urban centres. They are considered the best sources of non-farm employment for the poor because of this. Hence, rural growth and agricultural output could be favourably impacted by small towns and urban areas. Men and women are affected differently and in different ways by urbanization. The development of rural areas is impacted by this. For example, the growth of metropolitan regions alters gender norms, opens new economic opportunities, or exposes people to increased risks like sexual assault or the destruction of agricultural grounds. Even Nevertheless, urbanization boosts gender equality in the workforce and enhances the standard of living for women by giving them access to jobs, education, family planning, and reproductive health care. Rural women now have more economic and social independence thanks to improvements in livelihoods, notably thanks to access to public services like family planning.

It appears that remittances from urban to rural receipts are increasing in many developing nations because of increased rural to urban migration. For this reason, urban remittances and structural transformation that is partially tied to urbanization are crucial avenues for increased welfare in emerging nations. Another positive economic and social dynamic emerges as people move away from agriculture and into more varied and lucrative jobs, even those outside of rural areas; this has increased opportunities and attracted poor rural households through remittances. In this context, lowering restrictions on rural-urban movement could hasten the restructuring of the rural economy. In addition, with supportive policies, markets, and infrastructure expenditures, the advantages of urbanization through rural-urban mobility would be greater. Remittances help ease the farmers' financial constraints and enable them to reinvest locally amassed funds in agriculture and associated endeavours like the adoption of agricultural technologies. To put it another way, remittances from migrants to cities can be used to finance rural developments, and as a result, agricultural output has increased. Capitalization of rural areas and an improvement in income, living conditions, and food security are the overall effects. Remittances sent back to rural communities, according to some studies, are not large enough to encourage significant investments in agriculture; instead, they simply serve to preserve subsistence farming and to supplement a secondary household economic activity. Loss of labour and a reduction in the application of appropriate technology are two ways that migration from rural to urban areas lowers agricultural productivity. Depending on the city size and closeness to urban regions, the urbanization effect's amplitude varies. Given that the majority of the impoverished in Sub-Saharan Africa dwell in rural regions, a rise in rural residents' incomes is

anticipated to have a greater impact on rural welfare than on urban residents' welfare. Also, it is crucial to highlight that there is a sizable movement of remittances from rural to urban areas, in contrast to the traditional flow from urban to rural areas. In both the policy and research worlds, the importance of rural-to-urban remittances in the process of urbanization in the majority of Sub-Saharan African nations is frequently overlooked.

Due to migration, urbanization results in a total gain in farmland area but a drop in rural population. As a result, rural households have larger farms and hence have more cropland per person. Farm size expansion has an impact on agricultural output, particularly for smallholder farmers. In other words, increasing agricultural productivity depends greatly on farm size. Moreover, the shift of agriculture to urban uses raised land prices, particularly in regions with fast urbanization. Farmers close to cities offer easier access to markets and infrastructure like ports and storage facilities, which results in less expensive transportation. It's also likely that farms on the edges of cities offer services to the metropolitan population, which enables these farms to make more money than similar farms located further from urban centres. Also, it should be recognized that farmers close to urban areas may be more vulnerable to eviction without adequate compensation as cities grow, particularly in the absence of established land markets and farmer protection regulations. Particularly in the majority of Sub-Saharan African nations is this the case. The degree of urbanization affects land prices and is strongly correlated with the proximity of farmlands to major urban centres as well as to the characteristics of the surrounding agricultural lands, such as recreation potential. Farmlands that are close to major urban centres have higher net agricultural returns due in part to the conversion of high-value agriculture lands around urban centres, and higher farmland values. Urbanization also affects land use patterns because the possibility of conversion to residential or commercial use is one of the primary factors driving agricultural values.

Providing complementary services in the areas of transportation, credit, communication, and extension services is crucial to fostering learning and innovation and, in turn, the accumulation of human capital, which is a crucial component in the adoption of improved agricultural technologies and practices and, in turn, improved welfare outcomes. Value chain participants, such as dealers, processors, supermarkets, and logistics firms from the different trading, processing, and logistics sectors that offer services to smallholder farmers, congregate in urban centres. With the supply of inputs fertilizers, seeds, extension, financial services, storage facilities/warehouses, and other means, they can promote the effective distribution of goods and services to rural regions, which in turn encourage inclusive growth. Hence, transportation expenses would go down. They would have an economic benefit for farmers. The potential

advantages of urbanization and the urban process are, however, severely limited in Sub-Saharan Africa by serious gaps in urban service delivery. Urbanization is crucial for encouraging the flow of information and expertise from urban to rural areas, as well as for enabling the delivery of public services that will eventually enhance the development of human capital in rural areas. The adoption of new livelihood practices that boost yield or draw in a higher practice, so enhancing income or food security, may be prompted by this information flow. Rural-urban links enhance information flows or the interchange of novel ideas between urban and rural populations and offer convenient settings for social engagement among neighbours, societies, and communities. Such social connection offers a favourable setting for making decisions about migration, remittances, and employment in urban areas, as well as for disseminating knowledge generally, especially about best practices, through technology or interactions between urban and rural locations. Residents of rural and urban areas may connect frequently, work together, and communicate information more effectively as a result of urban systems, intensifying integration and interaction. This will make emigration less hazardous and expensive by making it easier for rural residents to find work or housing in cities. Urban locations offer specialized organizations economies of scale. Urban regions permit the supply of specialized institutions necessary for enhancing livelihoods, in contrast to a prevalent practice of relying on big and generalist institutions. The effects of the labour market on urbanization give rural residents the chance to engage and experience workers from industries other than agriculture. This would enable rural communities learn new knowledge, contacts, and skills that would enhance their civil rights and bargaining position, which would in turn promote social and political empowerment as well as social status. Yet, migrant labour forces might be spread because the majority of job possibilities are not nearby. An uneven distribution of migrant labour would consequently narrow the pool of potential bargaining partners, which would have a detrimental effect on the social and political empowerment of households and people.

For societal integration and cohesion, the current increasing urbanization has significant ramifications. Urbanization leads to demographic transition (rural people moving to urban areas), or the shift from a predominately agricultural population residing mostly in small, dispersed rural settlements to a population based primarily in urban areas and working primarily in the industrial and service sectors. New social contacts, ties, and changes result from this. Urbanization creates chances and the ideal setting for regular engagement, teamwork, and a more effective exchange of ideas. Settlements that are very dense make public transportation easier and cost less to build. Urbanization encourages a lively public realm and a creative setting where individuals from various backgrounds can connect. Yet, this internal change has affected/weakened social interactions between rural and urban areas. Moreover, social

cohesiveness acts as a bridge between rural and urban areas to facilitate the exchange of ideas, inputs, goods, services, people, and innovations. As people continue to use the knowledge that is available in their networks, the existence of trust between and within cultures may reduce the costs associated with relocation or searching. This would encourage labour flows even more, such as movement to and from cities in search of employment opportunities. The progress of urbanization can modify the relationship between social cohesiveness and other flows, such as remittances and agricultural markets, that were previously examined. The degree of social cohesion in the societies affects how much the positive spill over effects of urbanization on rural development. The role urbanization plays in peacebuilding, especially in conflict-affected areas, provides further evidence of the impact of urbanization on social cohesion and, consequently, rural development. Urbanization, which is fuelled by people's need for shelter and a living, may be a key factor in establishing peace in conflict zones.

Solid waste output has increased due to rapid urbanization, and it will continue to rise in Sub-Saharan Africa's rapidly expanding cities as urban populations and living conditions rise, especially if development occurs and is not properly managed. Both sustainable development and the use of agricultural products are significantly impacted by this. For instance, waste management has led to a decrease in food and horticulture waste, the main source of garbage, as a result of increased awareness among urban people. Urbanization has a negative impact on rural development outcomes because it is linked to environmental degradation, overcrowding, and the generation of greenhouse gases. Cities account for more than 70% of greenhouse gas emissions and the largest percentage of energy use (Lall et al., 2017). Cities in Sub-Saharan Africa are experiencing an increase in this condition, placing pressure on available land and natural resources. This has a significant impact on rural economies, particularly agriculture since it exposes farmers to more disaster risks. The number of people living in cities can aid in lowering the risks and expenses associated with climate change. In this way, urbanization can aid in combating climate change's effects.

In developing nations, slums, and squatter settlements house around a third of urban residents (UN-Habitat, 2012). Slums are densely populated metropolitan neighbourhoods with subpar housing and miserable living circumstances, which lead to a number of issues. These widespread informal communities in and around towns are where many low-income households prefer to live. One of the most serious problems facing metropolitan regions is poverty. Both the physical and social environment are harmed by urban poverty. In turn, this makes it more challenging for people to leave poverty. Critical obstacles must be overcome in order to provide water and sanitation services to expanding urban, peri-urban, and slum communities. The rising

population's increased need for water may put additional strain on already-stretched supplies. Water is frequently in short supply in urban areas and is being increasingly competed for by various uses. Urbanization increases the need for water for domestic and industrial purposes, which competes with agricultural needs.

Providing water and sanitation services to underdeveloped communities and the poorest citizens is particularly challenging. Many residents of these places lack access to clean water to drink and basic sanitation. Sanitation and wastewater disposal are sometimes insufficient or non-existent, even where sufficient water supplies are present. The typical means for disposing of human waste are pit latrines and septic tanks, but they have limited capacity and are occasionally unable to handle the volume of waste produced by numerous people residing close to one another. Surface water is contaminated and poses a major health danger because of overflowing toilets and septic tanks. The absence of these fundamental services puts at risk not only the environment and health of those living in slum regions, but also those in more formal urban settings. Rich and poor alike are impacted by the lack of sewers in most African metropolitan areas.

Urban watercourses are severely impacted by a lack of sewage and sanitation infrastructure. The rivers are used by people to dispose of all of their trash from their homes, businesses, and industries. Industrial wastewater contains a wide variety of hazardous pollutants, while wastewater from human settlements contains organic matter and nutrients. They endanger the fish and other aquatic life as well as plants and animals that live there, making the water unfit for human consumption and irrigation. Because the mechanisms of the water cycle connect both, any changes to the quality of surface water also have an impact on groundwater. As a result, pollutants from the surface will permeate down and contaminate both soil and groundwater. Solid waste management is ineffective or non-existent in many towns and cities. The correct collection, transfer, recycling, and disposal of all solid waste—including plastics, paper and cardboard, food wastes, electrical waste, etc.—is referred to as solid waste management. Together with infections and toxic chemicals that require handling, it also contains industrial, hospital, and institutional wastes.

Urban garbage frequently finds its way into unauthorized dumps on streets, public areas, wasteland, drains, or waterways. This is a common issue in peri-urban areas, which are handy for disposing of garbage because there is open space there and it is simple to get to them from central metropolitan centres. This may result in the contamination of surface and ground waters that are potential sources of drinking water. Wastes are occasionally collected and transported to legally sanctioned trash disposal facilities, although these facilities are not always effectively

managed to preserve groundwater and water bodies. Solid waste combustion results in yet another environmental issue. If there is no collection mechanism, people would burn their waste in their backyards because they want to get rid of it.

Air pollution from numerous different sources frequently causes very bad air quality in towns and cities. They include exhaust from moving vehicles, smoke from house fires, smoke from industry chimneys, diesel generator output, and dust from building sites and city streets. Several urban inhabitants' health is significantly impacted by poor air quality, which also causes plants, buildings, and other surfaces to accumulate a harmful and ugly layer of dust. Both positive and bad economic and social developments are a result of urbanization. Economic growth and education are two good consequences. Urbanization, however, puts strain on the infrastructure and social services that are already in place. Urbanization has negative repercussions on crime, prostitution, drug usage, and street children. Also, children frequently lack social support from their diligent but typically underprivileged parents at home and in school. Violence thrives in environments with poor living standards, overcrowded housing, and little money. Violent crime affects people's daily lives, movements, and usage of public transportation more so in urban regions than in rural ones. Residents of a city that experience crime may feel uneasy. The separation of residential areas into higher- and lower-income groups due to this sensation of unease in the streets lessens the sense of community and creates zones with varying costs, degrees of security, and incomes.

## **2.4 ADVANTAGES OF URBANIZATION IN AFRICAN CITIES**

The industrialization stage is one that most large cities typically experience. African cities can offer businesses access to a sizable labour pool, cost-effective access to suppliers, and specialized services, making them more appealing to businesses and potentially increasing their income levels. These cities can aid businesses in reducing transaction costs, fostering opportunities for information sharing, and cultivating an environment that fosters innovation. These cities benefit from having sufficient labour (as it is simple for cities to attract skilled workers), material inputs, and workspaces that are tailored to the specific requirements of businesses. Most of the people may transition from low-productivity agriculture in rural areas to high-productivity activities. Any of these elements can lead to economic expansion. Using history as our guide, we can see that during the 18th and 19th centuries, urbanization and industrialization boosted the economies of Europe and the United States, turning them into global economic powers. These may apply to Africa if the correct laws are put in place to

accommodate the metropolis' rapid growth. When government policies support growth, the scenario is more like a win-win one. It frequently results in higher living standards and a better quality of life. As enterprises and individual consumers in the city seek more agricultural products, this could lessen poverty in these rural communities, passing economic benefits down to them. Most African towns, however, have already passed this crucial industrialisation stage required for economic development. Yet it is never too late to make the proper decision. Accelerating industrialization can lead to more jobs, a higher standard of living, and the much-needed economic growth that African nations sorely need. This can be accomplished by integrating the large population and moving them from rural areas into the manufacturing sector rather than the unofficial services sector.

African companies can develop new revenue streams by actively participating in and developing new business models that can meet the needs of the expanding urban population. Companies can provide services for urban dwellers in areas including health, housing, energy, connectivity, and education. The governments of African cities must cooperate with the private sector to tackle these urgent infrastructure demands, which will need significant expenditures. This is where investors can benefit from these infrastructure issues. In some of these emerging marketplaces, investors might even be able to obtain first-mover advantages. Not only would new markets develop for infrastructure demands. These African cities are growing, which has positive economic effects that would increase the income of the middle class. The demand for products and services will be driven by a rising consumer class. Low-income households, which will make up most households in these African cities, will drive spending on clothing and other essentials. To capitalize on the population and know that most African cities are packed with "young entry-level consumers", businesses will need to identify their target market. African towns can take the lead in the continent's digital transformation. Entrepreneurs are using internet infrastructures in most African cities to provide urban residents with value in novel ways. Online retailing has emerged because of easier access to the internet, which has been a significant driver of the e-commerce growth in many African cities. The expansion of that market has in turn increased demand for logistics and postal services. Due to the volume of activity taking place in cities, many of these businesses profit from shared services and infrastructure.

Many African nations are essentially split along racial and religious lines. People from rural areas who share a common aim of pursuing economic opportunities are being relocated to urban centres through urbanization, where they are learning to coexist with those who hold different religious views and ethnocultural origins. Most often, cultural diversity thrives in large cities.

The cultural, social, and religious diversity that is seen to be essential to nations that would advance economically and socially in an era of interdependence is exemplified in African cities. Integration takes place in the workplace, schools, neighbourhoods, streets, shopping centres, and soccer fields when people are pursuing economic opportunities. These African cities serve as hubs for the development of new social institutions and patterns of consumption, production, technology, and adaptation to new ways of life in these developing nations. Cities have historically served as centres for learning and education, for governmental and administrative institutions, and as gathering places for people of a certain culture or religion. The quality of life of urban residents has significantly improved thanks to collaborations and interdependence between various cultural groups in cities, which has also strengthened the vital and transformative roles of urban centres in rural development. A development pipeline will flow from both sides with continued urban-rural connections, making them interdependent in many ways. Even though there is xenophobia and cultural discrimination in some African cities that results in violence, these issues should be considered as the first integration hurdles that cities will confront due to uneven economic growth. Most African cities continue to be quite varied. Diversity alone will not result in the continued inclusion of the various communities that make up a metropolis. Social integration is shaped by governmental entities, social organizations, and civil society. As they expand quickly, African cities will continue to be essential in fostering a socially inclusive atmosphere. They will continue to expand and become the centre of post-industrial and industrial economic growth.

### **3. URBANIZATION AND ECONOMIC GROWTH**

#### **3.1. URBANIZATION AND ECONOMIC GROWTH IN AFRICA**

No nation has ever attained middle-income status without experiencing a sizable population shift toward cities. The urban development modernization idea serves as the foundation for this viewpoint. The division of labour and economies of scale are the two main sources of the economic power of urbanization (McGranahan et al.,2009). The debate over the division of labour was first raised by Adam Smith, who explained the advantages of specialization among producers for production. The industrial revolution's dramatic shift from handcrafted to factory production is thought to have been made possible by the division of labour. Many positive external consequences that benefit urban production are brought about by the specialization of production. Specialization reduced transaction costs, and production complementarities can all lead to productivity gains. Because a bigger urban scale can enable better matches between worker abilities and job requirements or between intermediary items and the production requirements for final output, the externalities resulting from lower transaction costs and stronger complementarities in production may develop. In a larger city, indivisible resources like local infrastructure, dangers, and benefits from variety and specialization can be shared more effectively. For example, a larger city makes it simpler to pay a set cost of entry for specialized input providers or to recoup the expense of infrastructure. Bigger businesses can purchase their inputs at lower prices by spreading out their fixed costs, such as rent, rates, research and development, etc., over a larger amount of output. More compatibility between employers and employees, customers and suppliers, collaborators on collaborative projects, or businesspeople and investors is made possible by a larger metropolis. This can happen by increasing both the likelihood of finding a match and the calibre of those matches when they do. A larger city can make it easier to learn about emerging technology, market trends, or organizational innovations. The invention, dissemination, and accumulation of knowledge can therefore be facilitated by more frequent direct encounters between economic agents in a metropolis. According to Quigley (2009), the impact of overall education levels in metropolitan areas on overall output can be differentiated from the impact of individual education on individual incomes. Regardless of how varied or specialized the urban industrial structure is, productivity spill overs—where educated or talented individuals boost the productivity of other workers—can occur in denser spatial areas.

In contrast to industrialized economies, urbanization in developing nations is not driven by economic expansion. In the former, rapid urbanization rates have been observed recently that are not in line with economic growth rates, resulting in the so-called urbanization of poverty. The urban bias hypothesis and the reliance theory are the two hypotheses that have been put out to explain this pattern (Bradshaw, 1987). According to the urban bias argument, governments of emerging nations favour urban areas through public policy by concentrating economic activity and institutional, social, and infrastructure services there. To experience the good life in urban regions, people from rural areas are drawn there by this. But to live a happy life, one needs money, which urban migrants lack because there has not been corresponding economic growth to produce jobs and thus revenue. China, on the other hand, has adopted anti-urbanization measures, such as the following, to pursue the opposite of the urban bias theory. mass emigration from metropolitan areas to rural areas. prohibitions on rural-to-urban migration. suppression of consumption in cities. programs for rural industrialization. Hence, China is the only nation today that is quickly industrializing without causing an increase in urbanization rates to match. As Sub-Saharan African nations and other developing economies do not adhere to this policy, the urban bias argument is likely to explain their patterns of economic development and urbanization. On the other hand, dependency theory holds that emerging economies are dependent on foreign assistance and foreign direct investments. They don't entail any technological advancement, resulting in the absence of any substantial forward and backward links within an economy.

### **Category1: The GDP rate is higher than the rate of urbanization**

In Botswana, Uganda, and Sudan the rates of real GDP growth have recently surpassed those of urbanisation. Some of the SSA countries may have encountered reversals in urbanisation rates. Given the rapid growth rates, the challenges of urbanisation might be modest in these countries compared with other SSA countries.

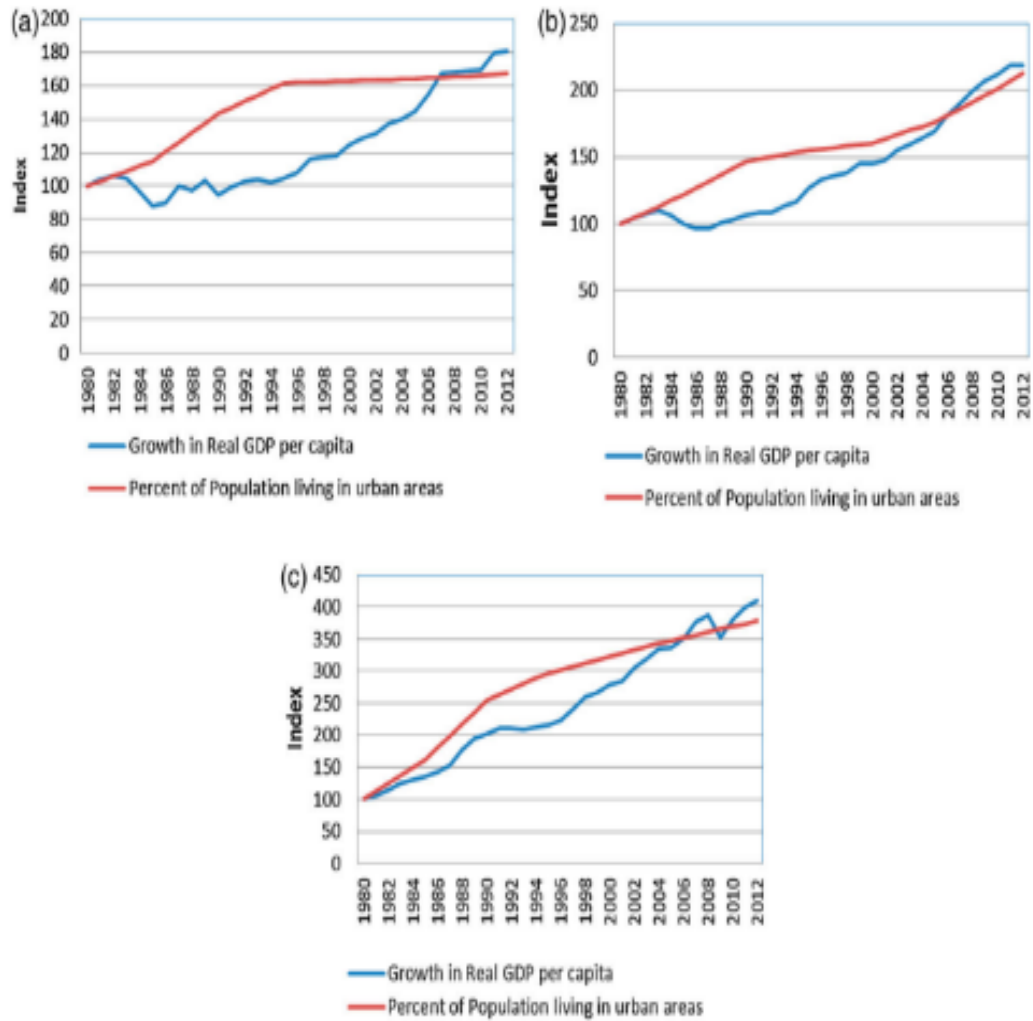


Figure 2: Urbanization and GDP per capita in (a) Sudan 1980-2012, (b) Uganda 1980-2012 and (c) Botswana 1980-2012.

Source: Joseph Onjala & Owiti A. K' Akumu (2016).

**Category2: The GDP rate is lower than the rate of urbanization**

There are Sub-Saharan African countries where urbanisation rates are slightly higher than the rates of real GDP per capita. These countries include Zambia, D.R. Congo, Mozambique, Ethiopia, South Africa, and Namibia.

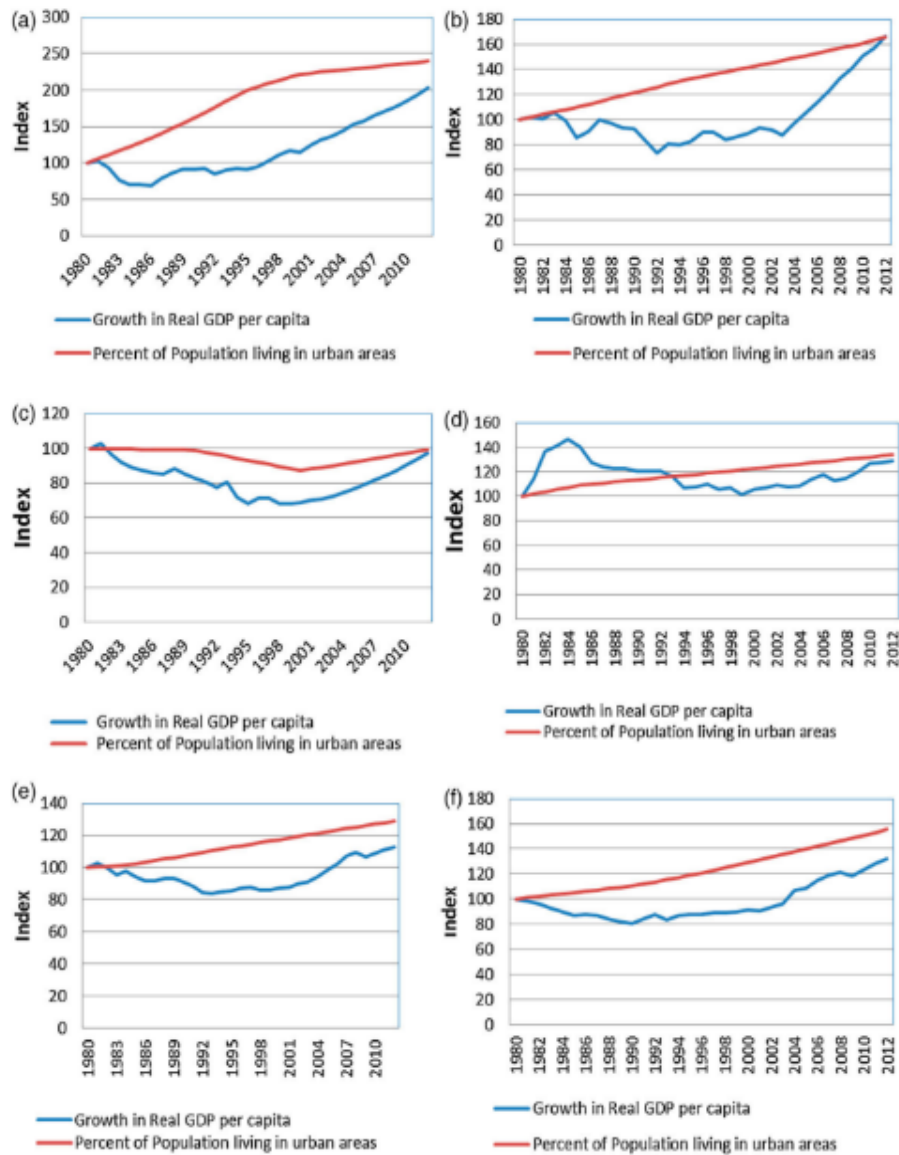


Figure 3: Urbanization and GDP per capita in (a) Mozambique 1980-2012, (b) Ethiopia 1980-2012, (c) Zambia 1980-2012, (d) D.R. Congo 1980-2012, (e) South Africa 1980-2012 and (f) Namibia 1980-2012.

Source: Joseph Onjala & Owiti A. K’Akumu (2016).

### Comparison with other world economies

The economies of Brazil, Mexico, and Uruguay, which are currently the relatively more developed countries, can be compared to those of Sub-Saharan Africa and other regions of the world where urbanization rates are higher than GDP growth rates. The historical trends in Sub-Saharan Africa, which show disconnects between urbanization and real GDP growth, contrast with those of western nations and the developing economies of India and China. Up until around

1940, when urbanization rates in the country reached close to 60%, per-capita income and urbanization rates in the country moved in tandem (Tamang, 2013). The change took place in India and China in the 1960s. In the early stages, when urbanization rates and per-capita income rise at roughly the same rates, productivity gains are likely the result of transferring resources away from rural occupations with lower productivity. Rapid productivity gains in later stages primarily reflect advancements within industries and services (Annez & Buckley, 2009).

### **Implications of observed relational patterns**

Since urbanization has been outpacing economic growth, it has been determined that economic growth has not been the primary driver of urbanization in Sub-Saharan Africa. Most of the small, underdeveloped African nations that are experiencing urbanization without growth are in Africa. This considerable structural population movement without development has come to be known as pathological urbanization, and it is a situation that is not typical of global trends. Essentially, the patterns of urbanization tend to mirror issues with the economy. There are two patterns: one in which urbanization recently outpaced economic growth, and the other in which urbanization is rapidly catching up to economic growth. Both patterns suggest urbanization and economic expansion. It is crucial to remember specific time intervals. For instance, in the Category 1 observable patterns GDP surpassed urbanisation at the same period (about 2006), so forming a single trend that implies a common economic phenomenon. Nonetheless, nations with Category 2 observable patterns have the highest chance of soon joining their Category 1 counterparts. Relational patterns in categories 1 and 2 that imply urbanization and growth are consistent with the idea that cities have a significant impact on efficiency because their network effects stimulate economic expansion. Cities, however, often provide superior long-term possibilities and larger returns than other places. A city is crucial to the economy since it serves as the greatest domestic market, the principal manufacturing hub, the hub of international trade, the residence of the wealthy, and frequently the seat of government.

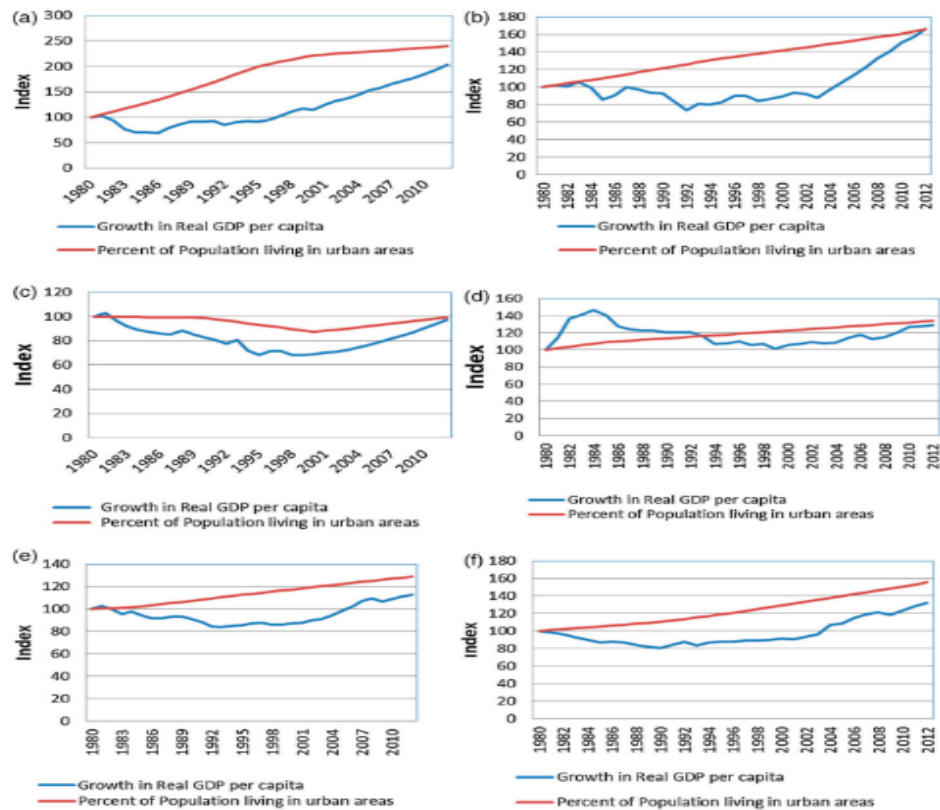


Figure 4: Urbanisation and GDP per capita in (a) Mozambique 1980-2012, (b) Ethiopia 1980-2012, (c) Zambia 1980-2012, (d) D.R. Congo 1980-2012, (e) South Africa 1980-2012, and (f) Namibia 1980-2012.

Source: Joseph Onjala & Owiti A. K’Akumu (2016).

Cities have historically served as hubs for social and cultural advancement as well as locations for economic expansion. The transition from primarily agrarian to industrial and service-based economies has been closely linked to urbanization. Urbanization has led to increased national productivity, average income growth, and general prosperity (McGranahan et al., 2009). Currently, these cities account for nearly 50% of the GDP in Sub-Saharan Africa. Its percentage is anticipated to increase to 63% by 2025. Nonetheless, Africa will continue to contribute an estimated 2% to global GDP growth (Dobbs et al., 2011). Yet, a comparison of the Sub-Saharan African nations suggests a specific turning point in their economic development. Like 2006, when GDP in Sub-Saharan African countries with Category 1 relationship patterns surpassed urbanization, the years 1988-1990 marked a turning point for several African nations when their GDPs fell below urbanization. This structural downturn might have been brought on by the World Bank and IMF’s recommended structural adjustment policies, the effects of which were most noticeable in the late 1980s and early 1990s. The relationship patterns are the same in the



does rural-to-urban migration, although the relative contributions of each tend to change as a country urbanizes, with natural increase playing an increasingly important role. Preston (1979), for example, demonstrated a strong one-to-one correlation between total population growth and urban growth. It is challenging to infer from cross-country data if the beginning of the demographic transition is a required and/or sufficient condition for the urban transition to start. If there is no overall population growth and significant economic growth, urbanization and urban growth may both only result through rural-to-urban migration. On the other hand, if the Malthusian arguments are correct, the extraordinarily rapid population growth in the area might be used to explain rapid urbanization in Africa in the setting of economic stagnation.

### **Toward a historical theory of world urbanization**

According to a persuasive logical argument, cities can only exist where there is a surplus of energy, such as food and fuel, to support a sizable non-agricultural population. Economic historians offer a complementary explanation for the limited size of urbanization prior to the nineteenth century (Lowry, 1990). Considering the foregoing, the size of the urban population in any region is a function of the amount of excess energy it can obtain, which is in turn governed by the productivity of agriculture and the cost of transportation (Bairoch, 1988). The geography of early cities, which arose almost exclusively in regions naturally conducive to surplus food production, such as fertile river valleys or locations with naturally low trade costs on coasts and along rivers, is largely explained by the constraints imposed on urban population growth by agricultural productivity and transport costs. In fact, using a straightforward ordinary least squares regression analysis in which a country's level of urbanization and urban population size in 1960 (the earliest date for which comprehensive data are available) are modelled as a function of relatively time-invariant geographic factors, it is still possible to detect the significant and enduring influence of natural geography on patterns of urbanization. In the premodern age, increasing agricultural output was predominantly fuelled by cultivating additional land as opposed to increasing yields. As a result, even though the world urban population may have increased in absolute terms, it was unable to increase in relative terms due to the extremely modest increase in surplus productivity. The potential for regional specialization and agricultural trade was thus severely constrained because transportation costs remained significantly higher than what would have made such trade profitable (Braudel, 1984; Bairoch, 1988). A legally enforced "surplus constraint" would state that increasing the food surplus is a requirement for the growth of urban populations. So, it is possible to interpret the

growth and decline of cities during the preindustrial era as a reflection of both shifting disease burdens and changes in the ability of various communities to get surplus food supplies.

The beginnings of global urbanization can be traced to a combination of social and technological changes in Northern Europe in the eighteenth and nineteenth centuries according to both the illness constraint and the surplus constraint theories. The use of machinery, crop rotation, and nitrogen fertilizer among other innovations led to a rise in agricultural production (Bairoch, 1988; Cameron, 1997; Maddison, 2007). Transportation expenses dropped significantly because of the use of inanimate sources of energy to power railroads, steamships, and later vehicles (Bairoch, 1988; Crafts & Venables, 2003). A secular drop in death rates was brought about by advances in sanitation, medicine, maternal education, urban planning techniques, and the availability of health care. These developments were strengthened and maintained by political-institutional reforms like the strengthening of private property rights, enhanced third-party contract enforcement, and an extension of the role of governments in the provision of public goods like infrastructure, health care, and education. The major institutional and technological advancements that fuelled urbanization in Europe were disseminated to other regions through trade, colonization, and, in the latter half of the 20th century, international development assistance. So, rather than just being the result of endogenous economic and demographic pressures, the beginning of the urban transition in any specific country or region should be regarded as a component of a worldwide historical process linked to technical and institutional development and spread. Technical and institutional advancements also support economic growth, which increases rural-to-urban migration as the demand for labour in non-agricultural industries rises. Economic development has a favourable impact on urbanization and urban expansion. Yet, economic expansion is not required for urbanization to take place. Countries may enjoy net positive rates of urbanization provided disease control and food security are maintained in urban areas, given that noneconomic reasons for migration are constantly present. The fallacious assumption that urbanization is basically a by-product of economic development is a result of the fact that many of the technological and institutional innovations that drive mortality drop and permit surplus expansion also drive economic development.

Natural geographic endowments can account for a major part of Africa's late urbanization. Africa's climate, soils, geography, and disease ecology provide significant barriers to agricultural production that is in excess (Diamond, 1997; Bloom & Sachs, 1999). Significant natural trade barriers include a high land-to-coastal area ratio, a dearth of navigable rivers, and low population densities. These factors nonetheless result in extraordinarily high transportation

costs in the region and little room for specialization and innovation. The area is particularly prone to infections and parasite disorders due to its climatic and biological features. The colonial era saw the beginning of the easing of geographic restrictions on urbanization. Early colonial events including the slave trade, bloody battles, the introduction of alien infections, and the disruption of established trade and production networks all caused the population of the area to decline (Iliffe, 2007). However, after World War I, colonial governments started investing more heavily in the production of basic commodities, started public health campaigns to fight epidemic diseases, expanded the transportation network, and introduced new agricultural technologies and cultivars like cassava, which is drought resistant and has become a crucial antifamine crop throughout Africa (Iliffe, 2007; Clapham, 2006). Urbanization remained constrained due to colonial restrictions on African mobility and residence in urban areas, poor urban living conditions, and scarce wage employment opportunities, even though these changes collectively improved surplus availability and stimulated a secular decline in mortality rates.

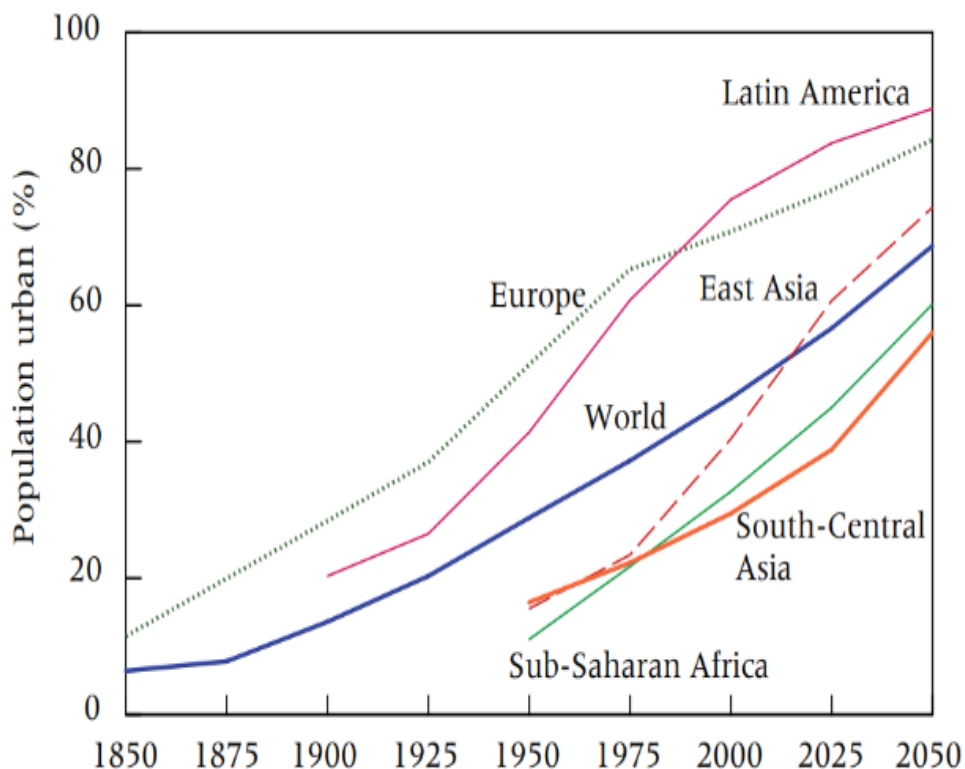


Figure 5: Levels of urbanization by major world regions, 1850-2050, estimates and projections.

Source: Grauman (1977); United Nations (2010).

The colonial powers, particularly Britain and France, shifted course after World War II and started a modernization campaign to get the colonies ready for eventual independence. This required substantial improvements to public health and education programs, more infrastructure construction, and modest industry expenditures (Cooper, 2002; Iliffe, 2007). Children's mortality rates started to decline due to improved polio, measles, diarrhoea, and malnutrition treatments. Additionally, improved road and rail transport helped to lower famine-related mortality by making affected areas more accessible to emergency aid. Vaccination programs also contributed to these declines in child mortality rates. When mortality rates decreased, the continent of Africa's population grew quickly. Rural-to-urban migration was hastened by the government's gradual easing of prohibitions on African travel as well as the increased need for labour in metropolitan regions during and soon after World War II. Increasing urbanization exacerbated the region's housing shortage, increased unemployment, and consumer price inflation—factors that were crucial in fostering the formation of labour unions, which were crucial in guaranteeing the region's independence. Technologies and institutions adopted in the late colonial era, which made it easier for mortality rates to fall, a population boom to follow, and an increase in the supply of surplus food supplies, laid the stage for Africa's urban transition. The nature and effects of colonialism, however, differed greatly between nations, and this diversity offers a way to evaluate the relative impact of colonialism on urbanization.

Due to a nexus of demographic, political, and economic causes, the growth of urban populations that had started in the late colonial period intensified throughout the independence era. The population increased at a historically unparalleled rate because of the mortality drop that started in the late colonial era and the persistence of very high fertility rates. Due to the removal of limitations on Africans living in urban areas, the growth and Africanization of civil service administrations, and investments in urban public works, several countries experienced a spike in rural-to-urban migration during the early stages of their independence. Following the 1973 oil price shock, an unsustainable fiscal expansion, weak macroeconomic management, decreasing terms of trade, and a global recession led to a regional economic disaster. By the early 1980s, structural adjustment initiatives pushed by donors were forcing Sub-Saharan Africa to reduce spending and experience negative per capita income growth. The effects were disastrous in metropolitan areas. Employment in the public and commercial sectors shrank significantly, real salaries fell, investments in housing and urban infrastructure practically ceased, and the rural/urban wage disparity that had developed in the early independent era essentially disappeared (Potts, 1995; Weeks, 1995; Becker and Morrison, 1995). Yet, with a few noteworthy exceptions, Africa's rates of urbanization and population growth in cities continued to be high. Continued mortality dropped and consistent surplus increased supported by imports

and aid can both be used to explain this. Even throughout the 1980s and 1990s food crises, excess food supply (measured in tons of cereals and starchy roots) generally kept up with the growth of urban populations. Additionally, it demonstrates that imports rather than increased productivity were more responsible for this expansion.

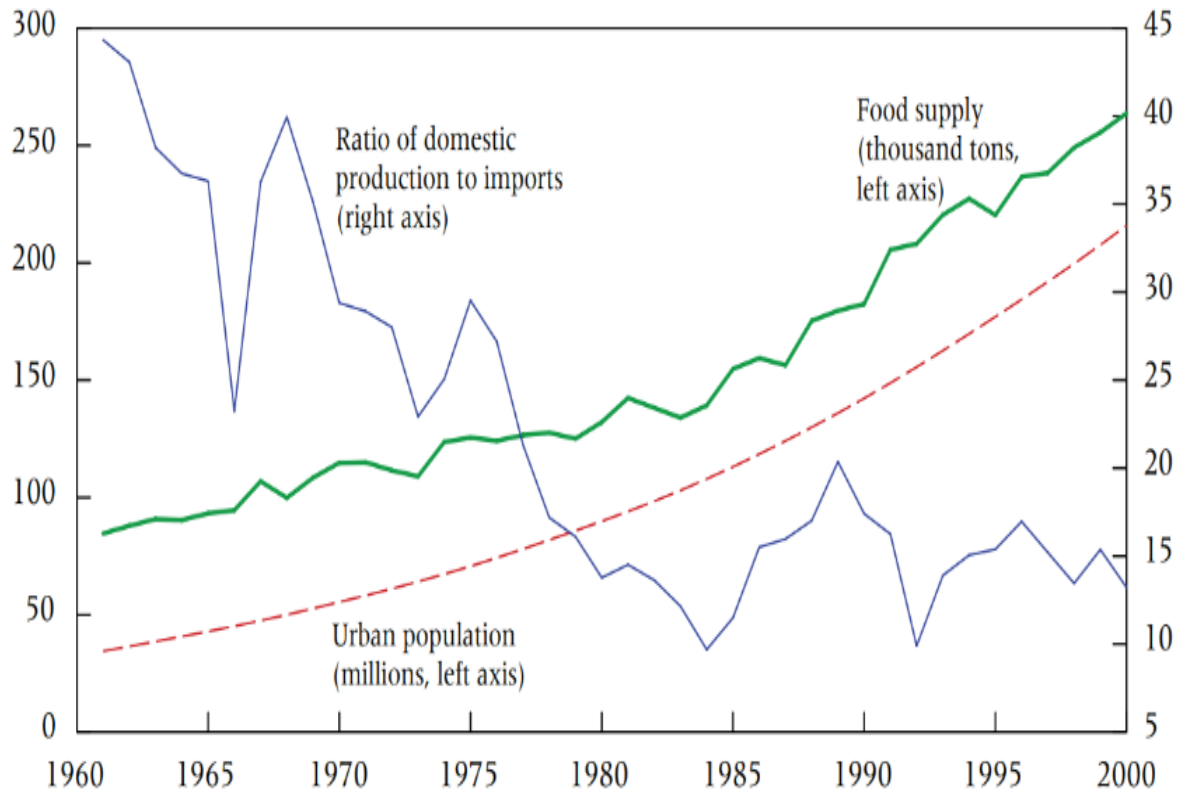


Figure 6: Urban Population growth and food supply in Sub-Saharan Africa, 1961-2000.

Source: Food supply data from FAOSTAT online database, accessed June 2010; population figures from the United Nations.

The rapid population growth that was set in motion in the late colonial period, the postcolonial adjustment that involved the Africanization and expansion of employment opportunities in urban areas, and early international aid and investment all contributed to Africa's urban transition during this time. The transition was supported by ongoing demographic increase throughout the depressed years of 1975–1990 and the 1990s' gradual economic recovery. In other words, once Africa's distinctive post-war political and population dynamics are taken into consideration, both urbanization without economic growth and extraordinarily high urban growth rates in the late twentieth century are explicable.

### **3.2. URBANIZATION IN AFRICA COMPARED TO THE REST OF THE WORLD**

The world has been rapidly urbanizing in recent decades. Just 30% of the world population resided in urban regions in 1950; by 2018, that number had increased to 55%. The rate of global urbanization obscures significant regional variations in the degree of urbanization. The most urbanized region is Northern America, where 82% of the population lives in cities. By contrast, Asia is about 50% urban, and Africa is primarily rural, with only 43% of its people living in cities as of 2018. (United Nations, 2018). The topic of whether some places urbanize more quickly or more slowly is brought up by regional disparities in urbanization levels. The research that follows compares historical trends of urbanization in more developed regions with the rise in the percentage of urban residents in many less developed regions between 1950 and 2015. The research across areas analyses the rate of urbanization at equivalent levels of the percentage urban since the pace and level of urbanization are related.

Figure 7 shows trends in the proportion of urban areas in various world regions or subregions. The black line acts as a baseline for comparison and represents urbanization in the more developed regions between 1800 and 2015. The black line has an S-shaped profile, which illustrates that the rise in the percentage of urban residents was first relatively modest at low levels of urbanization before speeding at medium levels and then declining once more at heightened levels.

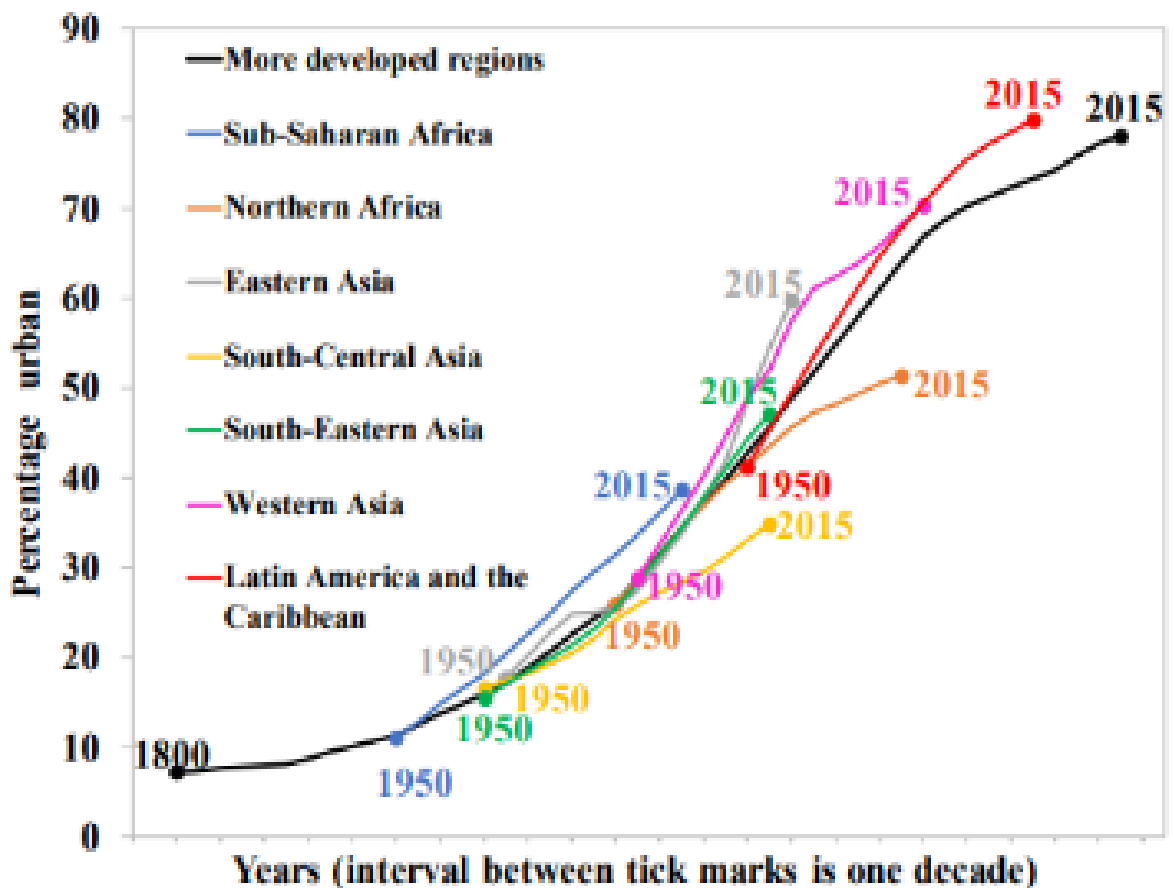


Figure 7: Levels and trends of urbanization in selected regions.

Sources: 1800-1925, taken from Grauman (1976: 32); 1930-1945, interpolated values; 1950-2015, United Nations (2018); based on and updated from Dyson (2010: 148); the x-axis shows the number of years from the starting year of the trajectory of each region.

Plotted at the point along the black line, 1950, when the percentage of the population living in urban areas was the same in more developed regions, trends in urbanization for less developed regions begin in each case with the percentage urban. The pace of urbanization, starting from an equivalent degree of urbanization, was relatively faster in that region, even if it happened later, when the subsequent trajectory of a region is above the black line. On the other hand, if a region's trajectory is below the black line, that region's rate of urbanization has historically been slower than that of the more developed regions. Sub-Saharan Africa's rate of urbanization, for instance, increased more quickly between 1950 and 2015 (blue line) than it did in more developed regions between 1850 and 1915 (black line). Sub-Saharan Africa's urbanization rate in 1950 was about 11%, which was on par with that of the more developed regions in 1850. Sub-Saharan Africa's urbanization rate increased more quickly over the ensuing 65 years,

reaching 39% in 2015 compared to the more industrialized regions' urbanization rate of 34% in 1915. Similar comparisons can be made between the rates of urbanization in other less developed regions and those in more developed ones. Since 1950, some less developed regions have seen faster urbanization than the more developed ones, except for Northern Africa and South-Central Asia. Sub-Saharan Africa, Eastern Asia, Western Asia, and Latin America and the Caribbean have all experienced rather fast urbanization. The fastest rate of urbanization has been seen in Eastern Asia, particularly in the previous 20 years. A similar transition in the more developed regions took around 80 years, between 1875 and 1955, whereas the share of the urban population in Eastern Asia more than quadrupled in 65 years, going from 18 to 60% between 1950 and 2015.

Throughout Western Asia, Central America, and the Caribbean, as well as Northern Africa, the rate of urbanization has slowed recently. In the decades immediately following 1950, urbanization in Northern Africa closely mirrored that in the more developed regions; the recent trend, however, is plainly different. Throughout the past few decades, Northern Africa's rate of urbanization has slowed dramatically. Like Western Asia, urbanization in Latin America and the Caribbean has slowed down in recent years after experiencing a period of tremendous growth in the decades following 1950. Since 1950, the rate of urbanization in South-Central Asia has been consistent, and the region has not gone through the phase of increased urbanization seen in the other regions (as shown in Figure 7). Despite these unique trajectories, since 1950, urbanization has been a constant trend throughout all regions. The rate of urbanization also differs greatly between nations. Figure 7 shows how the rate of urbanization varies for certain populous nations in the regions under consideration. Trajectories of urbanization have been remarkably similar for China and Indonesia, starting at nearly identical levels in 1950. While Egypt and Brazil both experienced rapid urbanization after 1950, the trend in Egypt has been flat since the 1970s. This is because the official definition of cities does not consider the recent urbanization of rural settlements. Brazil, on the other hand, experienced rapid urbanization. India's rate of urbanization has advanced more slowly than that of other nations with comparable percentages of rural to urban areas because of the lengthy process of reclassifying rural areas as urban. Ethiopia, on the other hand, has seen relatively rapid urbanization compared to both the historical experience of the more developed regions and to other emerging countries at similar degrees of urbanization, having started from a very low level of urbanization in 1950. Different rates of natural population growth in rural and urban areas, rural-to-urban migration, international migration, the growth of urban settlements through annexation, and the reclassification of rural settlements as cities are some of the factors that affect changes in the level and pace of urbanization. The urbanization rate reaches

saturation at very high levels and typically slows down. Economic change and spatial planning, which includes housing, infrastructure, and service delivery, are strongly related to the extent and pace of urbanization as well as the underlying demographic dynamics.

By 2050, it is anticipated that both South Asia and Sub-Saharan Africa will have rapidly expanding urban populations. In comparison to 261 million in 2010, the "middle-of-the-road" scenario for Sub-Saharan Africa predicts an urban population of around 840 million by 2050. (UNDESA 2020). According to the same scenario, South Asia's urban population is expected to grow from 545 million to 1.2 billion people. In addition to the inherent uncertainties associated with estimates for the future, it is important to consider that different countries' definitions of urban areas have evolved through time. Furthermore, many localities include traits of both rural and urban areas, so the line that is often drawn between them is actually more of a gradient. Large cities in South Asia and Sub-Saharan Africa are expected to house an increasing proportion of the world's urban population. Large city expansion is anticipated to continue current trends. Nonetheless, a sizable portion of the newly urbanized population is anticipated to reside in the peri-urban regions around these sizable cities. Cities in other parts of the world are frequently less compact and less dense, particularly in Sub-Saharan Africa. In other words, the continent is "suburbanizing", with more people residing in newly emerging neighbourhoods or in small towns along the highway, farther from established urban centres (Tieleman, 2020). It is crucial to understand that urbanization is related to the growth of small and medium-sized cities, the majority of which are deeply ingrained in their rural surrounds, as well as the development of towns.

Region	City size	Percentage of urban			Total population (million)		
		2000	2020	2030	2000	2020	2030
South Asia	< 300,000	47%	42%	39%	199	298	350
	300,000–1 million	13%	13%	13%	56	90	119
	> 1 million	40%	42%	47%	167	321	421
Sub-Saharan Africa	< 300,000	52%	48%	42%	105	219	289
	300,000–1 million	17%	15%	15%	32	71	101
	> 1 million	31%	37%	43%	65	169	276

Table 1: Population development in different city sizes

Sources: UNDESA 2018 (United Nations Department of Economic and Social Affairs)

The idea of city size is significant from the perspective of the food system because smaller cities frequently have stronger linkages to the agricultural economy than larger cities and serve roles in the local and global food systems. Nevertheless, national governments in both South Asian and Sub-Saharan African nations typically invest less in these smaller cities and favour the capital region and urban deltas, which have a number of benefits including better access to financial assets, import-export licenses, and better public service provision.

### **Rising demand for food**

Due to the expanding urban population and rising average income, it is anticipated that the demand for food in cities will shift and grow. In South Asia and Sub-Saharan Africa, the total amount of food consumed is anticipated to increase by 2050 compared to 2010 in a scenario with "average" fertility and economic growth (Tabeau et al., 2019; Van Ittersum et al., 2016; de Bruin et al., 2021). Compared to Sub-Saharan Africa, South Asia's population growth estimates are lower, but the region's predicted per capita income growth through 2050 is higher. Overall, it is anticipated that urban food demand will increase two to four times faster than rural food demand (Zhou & Staatz, 2016; Pingali et al., 2019). There are changes in the kind of food that are in demand in addition to the overall growth in food demand. The fact that urban food environments differ from rural food environments, with a broader variety of food products available and more diversified places to acquire and consume food, contributes to the diversity of urban diets. This greater selection of food alternatives includes highly processed, unhealthy meals with high levels of sugar, salt, and fat as well as a variety of healthier foods for those who can buy them. All socioeconomic groups that live in cities are increasingly likely to eat meals away from home, and urban food settings now provide a variety of options. Other social and economic factors are also influencing consumer choices, even though food settings do influence consumption habits. According to the evidence, urbanites' rising wages are the primary driver of dietary shifts toward a greater consumption of animal products, fruits and vegetables, and oils (Tacoli & Vorley, 2015; Zhou & Staatz, 2016; Bren d'Amour et al., 2020). Although purchasing power is typically higher in urban areas, it should be emphasized that, in contrast to most of Asia, the pattern of poverty diminishing alongside urbanization is less obvious in many regions of Sub-Saharan Africa. Instead, urbanization frequently also results in greater economic

disparity and a rise in the number of urban poor people. Nonetheless, due to the greater total purchasing power, food security levels are generally higher in cities than they are in rural areas.

The demand for numerous food product categories is anticipated to rise across the board in South Asia and Sub-Saharan Africa. The predicted growth in wealth, which is largely due to urbanization, is tied to the higher increase in fruits and vegetables as well as animal items. In addition to a change in product categories, processed food consumption is anticipated to increase significantly, particularly in major cities.

Food product group	Region	Total demand (million tonnes)		Index (2010=1)	
		2010	2050	2010	2050
Fruits & vegetables	South Asia (ex. Iran)	188	901	1,0	5,0
	Sub-Saharan African	102	321	1,0	3,1
Meat	South Asia (ex. Iran)	10	42	1,0	4,3
	Sub-Saharan African	11	48	1,0	4,2
Cereals	South Asia (ex. Iran)	283	479	1,0	1,7
	Sub-Saharan African	141	337	1,0	2,4

Table 2: Projected food demands for three food groups in South Asia and Sub-Saharan Africa

Source: IFPRI 2017 (International food policy research institute)

Larger markets are produced by an increase in food demand generally as well as an increase in demand for more varied and processed foods, opening new options for millions of farmers, food processors, and dealers. In the past, farmers who have good access to metropolitan markets or storage/processing facilities have tended to be more productive and well-served by agribusinesses. This can be connected to the finding that farmers near urban markets typically get higher returns on their agricultural products because of improved access to and knowledge of the expanding markets, as well as lower transaction costs (Diao et al., 2019; Tadesse, 2012). However, compared to farmers near large cities, returns are lower for farmers in the rural hinterlands of smaller cities and towns. But most of smallholder farmers in remote or

inaccessible hinterlands are still kept off from the opportunities that expanding urban food markets might provide. This disparity in opportunity is related not only to geographic factors but also to social exclusion, gender obstacles, trade policies, and political decisions. Because of the evolving infrastructure required to link consumers and producers, urbanization has in some circumstances resulted in more formal and complex market ties. Other factors, including as brokers and processors, are involved in more intricate market links between farmers and customers (Debonne et al., 2021a). These market connections provide chances for some rural and peri-urban households living close to cities to diversify their incomes in the longer value chains, such as in the processing and transportation of agricultural products. In Sub-Saharan Africa, employment in the agrifood sector outside of farms is currently rising more quickly than employment in agriculture. The absolute contribution to new jobs is still higher on farms than off farms, even though this expansion came from a lower base. Yet, even though the transformation of the food system has the potential to increase employment, particularly in post-harvest and agricultural services, this will not result in the 20 million more jobs that will be required yearly in Sub-Saharan Africa by 2040. (Abdychev et al., 2018).

Although outdoor markets, kiosks, and street sellers account for most of the food commerce in Sub-Saharan Africa, the proportion of formalized marketplaces is growing in many areas. Despite the fact that informal outdoor markets, kiosks, and street sellers also predominate, South Asia's official markets arose slightly sooner than those in Sub-Saharan Africa. In South Africa, Battersby (2017) demonstrates that low-income communities have not benefited from more formal food value chains because these frequently have a negative impact on small farmers and neighbourhood businesses. Although several nations in Sub-Saharan Africa, most notably Kenya and South Africa, as well as significant portions of South Asia, experienced an increase in formal markets, most regions are still projected to have informal markets. Yet, in regions where formal value chains grow, like in South Africa and Kenya, this process has an impact on costs, quality, and safety requirements, frequently limiting small producers' access to markets. Value chains, as opposed to informal market links, imply more stringent contracts and delivery deadlines. When food markets become formalized, production and retail processes will shift, raising issues of equity and inclusion. With a more formalized and sophisticated food chain, small farmers play different roles, particularly when efficiency standards and minimum buy volume per order needs alter. Some have suggested that small farmers have no future while working towards a more formal food system (Collier & Dercon, 2014), while others emphasize that supporting small farmers is essential for sustainable development (IFAD, 2015; Wiggins et al., 2010).

Land use is influenced by urbanization, which also has an impact on rural livelihoods. The livelihoods of those living in or reliant on these lands are impacted by the conversion of agricultural land to urban land, especially in rural areas near to cities. To offset the conversion of agricultural land near cities to urban space, additional cropland is being developed farther away, which typically results in the loss of natural regions. Additionally, since land rents in Sub-Saharan Africa and South Asia are frequently excessively high and agriculture is frequently not prioritized by spatial planning strategies, urban expansion poses hazards to farmers' security of tenure, particularly in the urban outskirts. Also, due to legal diversity, planning officials and farmers may interpret customary land rights differently. The impact of urban land growth on global food production will continue. According to Van Vliet (2019), between 1992 and 2015, the area of urban expansion was relatively low in South Asia (2.4 Mha) and Sub-Saharan Africa (1.9 Mha), compared to the global average of roughly 38 Mha. More than 75% of this urban growth in South Asia was on agricultural land, compared to less than 40% in Sub-Saharan Africa. In South Asia and Sub-Saharan Africa, respectively, the equivalent loss in cereal output each year was about 7.1 Mton and 1.1 Mton, respectively. According to Bren d'Amour et al. (2017), between 2000 and 2030, urbanization is predicted to cause Asia as a whole to lose around 3% of its agriculture. This will result in a 6% decrease in production. In Africa, the effects are tripled: a 3% loss of cropland results in a 9% drop in agricultural production over the same period, with Egypt and Nigeria bearing the brunt of this decline (Bren d'Amour et al., 2017). This leverage effect results from the fact that agricultural land adjacent to cities is frequently more fertile, which is a key factor in why cities historically grew in these places, and from the fact that land management intensity in these areas is typically higher, resulting in smaller yield disparities.

Depending on factors including the security of the land tenure, non-farm options, and the volume and impact of land acquisitions by urban buyers, urbanization has varying effects on farm sizes and, consequently, on rural livelihoods. Farm sizes in low-income nations have shrunk from an average of 2.5 ha in 1960 to an average of 1.5 ha in 2000 because of increasing population numbers. Due to the limited amount of land accessible per family, family members frequently look for jobs off the farm, frequently in cities. In contrast to Africa, where average farm sizes are anticipated to continue to shrink, Asia has already reached the turning point where average farm sizes stop declining, creating issues in both the hinterlands and commercialized regions. Parallel to this change, urban dwellers in Sub-Saharan Africa are acquiring more farmland, which raises the average farm size (Jayne et al., 2016), however these dynamics vary by region. The expansion of medium-scale farms in various Sub-Saharan African nations is partially due to the purchase of property by salaried urban residents, which worsens rural

income disparity. The rise in large-scale land acquisitions (LSLA) that have occurred elsewhere, like in India and Zambia, is another factor relating to far-off and frequently urban consumers (Narain, 2009; Chu et al., 2015). The effects of the LSLA on rural areas are uneven. The adverse effects of land appropriation are widely known and have an impact on rural livelihoods through displacement or income loss. Yet, most of the employment opportunities offered by LSLA are likely to be low paying. It will probably diminish the rural benefits of agricultural growth and local spill over to the rural non-farm economy, and hence reduce prospects for rural livelihoods, the overall implications for rural livelihoods will vary depending on the situation. Urbanization can impact land-use patterns in terms of intensification and diversification in addition to actual farm size. Access to inputs and services, as well as greater access to (urban) food markets, are driving forces behind these shifts. The patterns of agricultural diversification and intensification in the vicinity of urban centres, however, are not uniform.

The ties that unite individuals in rural and urban areas, social safety measures, the norms and knowledge that influence the behaviour of urban customers, and the knowledge and skills that enable rural actors to meet this urban demand are all examples of social enabling conditions. Migration flows, which link rural and urban areas through social and commercial ties and the financial advantages of remittances, are among the factors that shape social networks (Crush & Caesar, 2017; Scheffran et al., 2012). Migration dynamics support the transmission of knowledge, remittances, and other resources, as well as building social resilience in the communities of origin. Concerns about emigration for rural communities, however, include a loss of an essential labour and a skewed population composition because most emigrants are young. Urban and rural social networks enable producers to effectively adapt their production to shifting urban demand and to seize urban job possibilities. According to Walther et al. (2019), in Niger, Nigeria, and Benin, factors in the food chain with strong connections make more money. Commercial success is consistently influenced by social capital, or the social norms and networks that enable people to function as a community. Cross-border trade, which is characterized by price instability, unreliability of trading partners, and governmental policies on imports and exports, places a premium on social capital. By boosting incomes and preparing for hazards, social protection measures can increase agricultural production and lower (rural) poverty and food insecurity. Small farmers are more susceptible to environmental and economic threats, which frequently prompts risk-averse livelihood options. As a result of the low input usage caused by these tactics, their revenue potential may be reduced, leading to a continuance of the status quo or even greater impoverishment. South Asia and Sub-Saharan Africa have the lowest investments in social protection (Lowder et al., 2017), compared to 72% in Latin America and the Caribbean, the percentage of the poorest quintile receiving social assistance in

these rural areas is approximately 27% and 22%, respectively (Lowder et al., 2017). Farmers can be enabled to increase productivity and incomes by enhancing structural social protection mechanisms like insurances and cash transfers. This will improve rural lives and lower food insecurity and poverty.

Research suggests that greater urban awareness of the financial and health benefits of purchasing locally grown fruits, vegetables, and grains may help the rural areas nearby by increasing demand for these goods. Yet, media and its advertising increasingly shape urban standards about preferred cuisine, leading urban consumers to unhealthy food selections. Garforth (2011) examines the various forms of knowledge and information farmers require to meet the rising and shifting food demand. Information on both old and new technologies is at the top of the list, followed by access to business counsel, information on markets, especially fast price information, and information on domestic policies and regulations. Informal communication can be used to exchange this information through social networks, non-state organizations as farmers associations, commercial firms, and the government. The East African digital platform Mkulima Young, where rural farmers may advertise their agricultural output and stay up to date with the urban demand for agricultural items, is an intriguing example of a social network. This platform has increased the number of young people involved in agriculture while also bridging the gap between rural supply and urban demand.

The state of the physical infrastructure connecting rural and urban areas, the infrastructure surrounding food markets, the availability of fertile land, and the water infrastructure all play a role in whether or not rural livelihoods can gain from urbanization. Investments in rural transportation and communication infrastructure, according to numerous studies, are essential for lowering transaction costs for farmers and traders, enhancing the quality and freshness of local goods, and boosting production. Similar dynamics are shown in Madagascar, where Stifel and Minten (2008) discover a substantial inverse relationship between levels of remoteness, as measured by the distance and cost of transportation to the nearest primary metropolitan centre, and both agricultural productivity and welfare. Because of this, households in remote places frequently spend little in their land and instead move to less fruitful territory due to increased input prices. More remote households underinvest in their agricultural property when the rewards are uncertain and there is violence and other types of instability. Travel times vary significantly across South Asian and Sub-Saharan African nations. Most people in India and Nigeria live an hour or less from a metropolis, the majority of individuals must travel less than three hours to reach a city, while on average, half of the population in low-income nations lives more than an hour distant from a city. Infrastructure for communication can improve

connections between rural and urban areas and offer current market data. The use of mobile phones and the internet is a major role in Sub-Saharan Africa's economic growth, farmers' income tends to be positively impacted by their access to (digital) information about market pricing via internet connections. Yet, for farmers to increase their revenues, particularly those who grow high-value crops, more precise information is required the better the current information streams.

Investments are needed in infrastructure for transportation, packaging, storage, cooling, and processing as well as physical markets in towns and cities to provide farmers with the livelihood prospects that come with diverse and increasing urban food demand. Important post-harvest facilities include collection hubs, storage, distribution, and processing centres. Pre-harvest facilities include financial services and the ability to purchase inputs and equipment. Farmers also profit from having access to storage because, if they can wait, they can boost their income by taking advantage of seasonal price swings. Torero (2014) emphasizes the significance of energy generation in Sub-Saharan Africa, where electricity shortages in all sectors result in up to a 20% loss of overall sales in the unofficial sector. Although less severe, the issue of energy shortages also exists in South Asia, where in 1970 the region's energy production capacity per person was about three times that of Sub-Saharan Africa and was nearly twice as high in 2000. (Torero, 2014). Real food markets are crucial in bridging the gap between rural production and urban consumption. Cities all around Sub-Saharan Africa are designing and constructing markets or renovating existing ones with suitable sanitation, storage, and lighting. These formalized markets have benefits for food safety, the prices for stalls there are frequently high, making them less accessible for the majority of farmers and dealers. Improvements in formal markets will not benefit these actors because most smallholder farmers, traders in agri-commodity markets, as well as many micro- and small-scale food processors and retailers, do not operate in the formal food economy in Sub-Saharan Africa. National and local African governments frequently exclude, evict, and relocate informal food markets or sellers, which has an impact on urban food security and rural actors' access to urban markets. So, investing in infrastructure and space planning for informal markets is at least as crucial as investing in formal markets. It is also crucial to understand how to best maintain these informal market links, yet this knowledge is frequently lacking. Bad water quality, which is a major problem for farmers that rely on flood irrigation and is caused by industrial operations and untreated urban wastes. In developing countries today, less than 10% of wastewater is treated, and if it is, sludge is frequently discarded (Kookana et al., 2020; Bricas, 2019). Many problems are associated with nutrient build-up and water pollution, including dangers to human and animal health, deterioration of soils, and contamination and plant diseases. Even in the more optimistic

scenarios, it is anticipated that the underdeveloped wastewater treatment in South Asia and Sub-Saharan Africa will significantly increase nutrient output by the year 2050 (Van Puijenbroek et al., 2019). Up to 10% of the agricultural demand for nitrogen and phosphorus may be met by correctly collected nitrogen and phosphorus in wastewater systems in both rural and urban regions. The reclosure of nutrient cycles, which connects urban development with rural agriculture, is thus a crucial urban food policy concern.

Urban and rural demand for water is rising, particularly in some parts of South Asia, rural water use is likely to increase since it is necessary for irrigation, which will result in a growth in food demand because of urbanization. Sub-Saharan Africa currently has limited irrigation, whereas South Asia has a greater reliance on irrigation, leading to overuse of (ground)water in many areas. In addition to water usage, anticipated effects of climate change, particularly in significant portions of South Asia, may worsen water stress, in both locations, additional investments in climate adaptation and sustainable irrigation can help reduce vulnerability to changing weather patterns and allow crop harvests all year long. Physical access to fertile land is another enabling factor influencing the possibilities for rural lifestyles. Little more agricultural land is available in Nigeria and certain other highly populated nations like Uganda, Burundi, and Rwanda. This has an impact on the present land rush in these nations, which is intensified by relatively wealthy urban households buying land in rural areas because they anticipate good returns on their investments and favourable laws. Although there is still plenty of land available in many other Sub-Saharan African nations, this land is typically less fertile than the land that is already used for agricultural production (Doelman et al., 2018), and urbanization itself is adversely affecting fertile and productive land in disproportionate amount. In South Asia, there is a shortage of arable land that is particularly problematic in Afghanistan, Bangladesh, and India, where agriculture already takes up more than 50% of the available space (Srinivasa Rao et al., 2016). Nonetheless, due to the generally high population strain on the land, land scarcity is high across most of South Asia. Hence, a lack of available land might hinder efforts to enhance rural livelihoods, especially if there are few possibilities for intensification.

Rural-urban dynamics and rural access to metropolitan markets are shaped by spatial patterns of urbanization and infrastructure quality. More smallholder farmers should have physical access to food markets, input, and knowledge, as well as off-farm work, according to a scattered pattern of urbanization (Henderson, 2010; Christiaensen et al., 2013). By exhibiting more inclusive growth patterns, smaller cities' growth is associated with better levels of poverty reduction than that of major cities. According to projections (UNDESA, 2018), large cities in

South Asia and Sub-Saharan Africa will increase particularly, which could weaken the relationship between urban growth and decreasing poverty, small and medium-sized cities serve crucial roles for both the larger cities and the surrounding rural areas. Local labour markets are stimulated by the availability and accessibility of facilities and services on the market, which has an impact on how appealing small- and medium-sized cities are. In order to connect with their hinterlands and strengthen regional commercial relations, secondary cities are expected to upgrade their infrastructure, especially utilities and transportation infrastructure (FCA, 2016). Because of this, productivity, and efficiency rise, improving incomes as a result. By facilitating access to non-farm jobs, transportation and communication services in towns and small cities assist rural residents.

The opportunities created by urbanization and changes in the food system for rural communities are shaped by economic factors, including trade rules and financial incentives. The equilibrium between possibly increasing food imports and a consolidation of the domestic agricultural industry is influenced by trade policies and financial incentives. Nonetheless, the question of what the best economic conditions are is still up for debate because the solution is influenced by varying interests, data, and ideological viewpoints. Trade policies can promote the growth of domestic market connections because they prevent import and export restrictions from negatively affecting food security. Urban riots that occurred between 2008 and 2010 because of skyrocketing worldwide market prices demonstrated how vulnerable low-income countries are to the volatility of global food prices (Bricas, 2019). Another illustration is the impact of food "dumps" from European nations' sponsored producers. In many low-income countries, this decreased incentives to increase local productivity throughout the 1990s and 2000s (Vorley & Lançon, 2016; Bureau & Swinnen, 2018). Countries can implement temporary import restrictions or raise import taxes to induce a supply response and lessen the extremes of international price volatility to stimulate the domestic agricultural sector. Border controls are often used in conjunction with other tools to stimulate domestic production and rural lives, notably in large-scale initiatives like Nigeria's Agricultural Transformation Agenda (ATA) (Vorley & Lançon, 2016). By expanding production of five essential commodities, such as rice, sorghum, and cassava, and streamlining the levels of government to better promote private sector agricultural growth, Nigeria launched the ATA in 2012. The goal of the initiative was to decrease food imports. But there are intricate trade-offs involved. Temporarily restricting borders to food trade may cause food costs to rise, affecting consumer food security levels, but in the long term, it may also strengthen national defences against high global food prices. Clapp (2017), depending on the national context there are a variety of options between free trade and

completely banning imports when it comes to enhancing food security and livelihoods in rural communities.

Agriculture subsidies are a second economic prerequisite. Currently, subsidies on growing staples result in relatively high levels of cereal consumption, which contributes to imbalanced diets by keeping market prices low in comparison to other products. In addition to greater and more consistent wages, farm output diversity influences household dietary diversification.

An important factor in ensuring that rural people may benefit from urbanization is "good" governance, which includes the existence of solid institutions. Institutional circumstances are a crucial component of food systems. The production, distribution, and consumption of healthy food can be severely harmed by conflict, a lack of institutional capacity, unstable land tenure, bad policy formulation, and a slow implementation pace. Particularly for smallholder farmers, issues with unequal power distribution among stakeholders limit their access to knowledge and resources as well as their capacity to exercise influence, reducing the likelihood of fair and sustainable outcomes. It is crucial to develop customized solutions as a long-term component of initiatives and investments that support the transformation of the food system because institutional characteristics vary greatly between nations. Having access to government services may help to lower the risks to rural economies, good urban planning, integrated infrastructure expenditures, and enhanced urban transportation could help reduce risks associated with urbanization for rural communities. The ability of farmers to produce more in response to the growing and shifting urban demand can be significantly increased by government programs that increase farmers' access to capital, inputs, and knowledge. For instance, urbanization in Meru, Tanzania, has increased demand for milk, a dependable source of income for smallholders in an area with a shortage of (fertile) land. Availability to inputs and the presence of reliable institutions were crucial prerequisites for intensification, which raised revenues. Also, some farmers in rural areas around Delhi's expanding city region benefit from rising fruit and vegetable consumption in the Indian capital. Even though some farmers are making money, welfare increases are not equitably dispersed due to the uneven distribution of land ownership and market access (de Bruin et al., 2021).

Improved land tenure security is a crucial component of better governance because it protects peri urban farmers from losing their land and enables landowners and renters to make long-lasting, sustainable investments in their properties. Because those who possess use rights to their property do not usually have the right to rent it out, they risk losing their land if they leave the village, which limits their ability to (temporary) migrate for off-farm jobs. According to research by Muraoka et al. (2018) for Kenya, land rental markets underperform in areas where

they are already established in terms of return on long-term investment. There is also a high level of tenure instability among farmers in Malawi, which discourages investment in high-quality land. When tenure is uncertain for female operators in Malawi, agricultural productivity is 9% lower, Ethiopia has had findings akin to this (Holden et al., 2011). Understanding the size of production losses enables cost-benefit analyses of public initiatives enhancing tenure security.

### 3.3. THEORETICAL FRAMEWORK

Our starting point is the augmented production function of (Mankiw, Romer, & Weil, 1992),

$$Y(t) = K(t)^\alpha H(t)^\beta (A(t)L(t))^{1-\alpha-\beta},$$

which expresses Output  $Y(t)$  as a Cobb-Douglas function of effective labour  $A(t)L(t)$ , physical capital  $K(t)$ , and human capital  $H(t)$ . Dividing both sides by  $L(t)$  yields an expression for income per capita  $y(t) = \frac{Y(t)}{L(t)}$ :

$$y(t) = k(t)^\alpha h(t)^\beta A(t)^{1-\alpha-\beta},$$

where  $k(t) = \frac{K(t)}{L(t)}$ , and  $h(t) = \frac{H(t)}{L(t)}$  represent per capita levels of physical and human capital respectively. To obtain the expression for growth of output per capita, we take logs of both sides and differentiate the resulting equation with respect to  $t$  to obtain:

$$\frac{\dot{y}}{y} = \alpha \frac{\dot{k}}{k} + \beta \frac{\dot{h}}{h} + (1 - \alpha - \beta) \frac{\dot{A}}{A},$$

where  $\frac{\dot{k}}{k}$  is the growth rate of physical capital per capita,  $\frac{\dot{h}}{h}$  is the growth rate of human capital per capita, and  $\frac{\dot{A}}{A}$  denotes technological progress. Thus, urbanization affects growth of income per capita indirectly through  $\frac{\dot{h}}{h}$  and  $\frac{\dot{A}}{A}$ .

#### Urbanization and human capital formation

Cities avail individuals with access to resources for education, health, and other similar services (Bertinelli & Black, 2004). It is more cost effective to provide health services and build universities in cities, than in communities with scattered settlements (Turok & McGranahan, 2013). According to Bertinelli and Zou (2008) some of the reasons why urbanization promotes human capital formation include factors that encourage learning in cities, such as the existence

of local human capital externalities coming from interactions between economic agents, and better skill matching between employees and employers.

### **Urbanization and technological progress**

The proximity of people, businesses, and industries creates a setting where ideas are readily passed from one person to another. If geographic closeness makes it easier for ideas to spread, then knowledge spill overs should be more significant in urban areas (Glaeser, Kallal, Scheinkman, & Shleifer, 1992). One company's expertise frequently benefits the technologies of another, and the pace of replication and improvement of the innovator's ideas is accelerated by local rivalry. Although this kind of competition lessens the rewards for innovators, it also puts more pressure on them to create, and companies who don't innovate face bankruptcy at the hands of their innovative rivals (Porter, 1990).

### **Agglomeration economies**

Agglomeration due to urbanization avails firms to benefit from external economies of scale. These are advantages that accrue due to firms being in proximity to one another. One way this occurs is via lower transportation costs due to proximity to consumers and suppliers. In addition, cities have bigger marketplaces and more options accessible, assist businesses in better matching their specific needs for labour, material inputs, and space than towns do. A larger pool of suppliers results in cheaper prices and greater variety because to competition and specialization (Turok & McGranahan, 2013). Martin and Ottaviano (2001) argue that that growth and agglomeration can be self-reinforcing processes. Their rationale is that if the economic activities that drive innovation and growth employ products from imperfectly competitive industries as inputs, then this creates a "forward linkage" that pulls these industries toward the region where the invention occurs. A "backward linkage" also ensues due to lower transaction costs which result in a reduction in the cost of innovation, an increase in the motivation to innovate, and a faster rate of growth. Furthermore, through exchanges between rural and urban areas and remittances, there can be spillover effects of development from urban to rural areas (Cali & Menon, 2009).

### 3.4. LITERATURE REVIEW

Jedwab et al. (2015), Marx et al. (2013), Duflo et al. (2012) and Duflo and Banerjee (2007) claim that, over the past 20 years, Sub-Saharan Africa's urban population has increased rapidly with a significant concentration in the outlying areas of cities where many households reside in slums. Migration from rural to urban areas can help to explain some of this rapid increase. Recent data, however, also indicate that internal urban population increase is a significant factor. Slum regions are typically characterized by high population density, unstable land tenure, limited access to essential facilities, and higher rates of poverty than the general population living in formal urban districts. According to recent estimates, 881 million people worldwide lived in slums in 2014, and nearly 201 million in Sub Saharan Africa (UN Habitat, 2016).

The expansion of slum populations in areas with limited access to basic infrastructure presents a significant obstacle to the progress of these areas. The reasons why this situation continues to exist are still the subject of many unsolved issues. By assembling new empirical data on the impact of infrastructure and access hurdles in developing nations, the goal of this brief essay is to aid in understanding the impact and durability of this predicament.

Recent studies have demonstrated the significant positive effects that access to basic services like electricity, water, and sanitary facilities may have on both economic and health results. Because the investments necessary to offer basic services are typically relatively substantial in comparison to the budgetary capacity of developing economies, the existing state of low access may continue. Additionally, there may be significant supply and demand side failures on the market for essential infrastructures.

Even though their percentage of the total urban population has slightly decreased, from 45% in 1990 to 30% in 2014, the number of people living in slums has increased significantly over the past 20 years, from 689 million in 1990 to 881 million in 2014 (UN Habitat, 2016). According to UN-Habitat (2016), 55% of the urban population in Sub-Saharan Africa still resided in slums in 2014. The Sustainable Development Goals (SDG) have expanded upon the Millennium Development Goals (MDG), which are still in effect as of 2015, and include access to essential services including power, water and sanitation, safe housing, and slum upgrading. Despite not meeting the MDG objective, there has been progress achieved in Sub-Saharan Africa's urban population's access to better water, which climbed to 87% in 2015 (UN Habitat, 2016). However, only 40% of Sub-Saharan Africa's urban population has access to better sanitation

(UN Habitat, 2016). In Sub-Saharan Africa, just 63% of urban residents have access to electricity in 2014 (International Energy Agency, 2016).

The issue is obviously worse in slums because they typically developed and grew on unsecure land at the outside of cities without any pre-existing infrastructure. Even though there is no data that is compiled over all slums in the world, several socioeconomic surveys are constantly used to get some data. Most slum inhabitants lack access to private latrines (between 92% in Kibera, Kenya), private water (92% in Kibera), and a rubbish collection system (74% in Kibera). Similar numbers for the urban poor—those making between one and two dollars per day—are reported for 11 different nations. Although there is some variation between nations, access to water, sanitation, and electricity is also restricted.

It might be difficult to gauge how much infrastructure contributes to development. There is a sizable empirical literature that attempts to examine the effect on macroeconomic growth. However, because infrastructure placement is typically endogenous and country-level analysis offers limited flexibility to address the issue, the majority of articles encounter significant identification issues.

However, there is growing data at the micro level about the impacts of access to basic services on outcomes in terms of health, happiness, and economic performance. Numerous studies have demonstrated that inadequate access to water, sanitation, and sanitation practices have serious detrimental effects on health. Increased access to clean water and sanitation facilities has a significant impact on the decline in diarrheal illnesses. Several studies in urban settings indicate the beneficial health impacts of policies that increase access to water, particularly for young people. Access to piped water has significant effects on life satisfaction. However, there are certain instances where initiatives to increase access to water and sanitation may not result in improved health outcomes because households do not abandon bad behaviours or inadequate hygiene practices. In South Africa (although in rural regions) access to electricity enables women to shift time from home production to investing in microenterprises.

Although the substantial benefits of basic services on wellbeing are highlighted by this research, which comes from a variety of settings and policies, it offers little advice on how to remove access barriers.

Building extensive infrastructure (such as water pipes, sewer lines, and an energy grid) is one of the most obvious ways to increase access to basic amenities, as is the case in all cities from industrialized nations. However, these infrastructure projects all share the need for significant investments that might be well outside of emerging economies' financial reach. It is unclear

whether the public sector, private businesses, or public-private partnerships should support the development of these infrastructures, with estimates of the financial shortfall relative to what is now spent reaching as high as billions of dollars. It may be the case that "micro-solutions" are preferred in the near term to improve the lives of the poor due to the high expenses involved with these expenditures.

The provision of these essential products is accompanied by several supply-side and demand-side market failures, with often insufficient policy responses to address them.

The nature of the items is uncertain, to start. For instance, sanitation combines elements of both a private and public good. The private benefits of better sanitation (greater comfort and dignity) can be enjoyed by households, but the public health advantages will primarily depend on how other households behave in the neighbourhood. Only if a significant enough segment of the population embraces better sanitation will disease incidence drop. Externalities play a crucial role in high-density regions like slums. This may also apply to other necessities like access to water, rubbish removal, and, to a lesser extent, power. How such public goods might be offered given the issues with collective action is still an open subject. It is also mentioned that good knowledge, strong social links, and frequent interactions increase the likelihood of collection action. Universal access reduces the externality issue yet calls for widespread engagement.

The level of market competition may be restricted given the substantial investments necessary to create the infrastructure. For instance, monopolies typically exist among those who provide water or electricity. Additionally, if governments do not effectively manage the market, there may be an equilibrium where the poorest groups are not catered to, services are not well-maintained, or contracts are not upheld. Micro-local solutions (such as on-site sanitation) may be vulnerable to market failures due to issues with incomplete markets or collusion in circumstances when large providers are not investing in these locations.

Furthermore, a lack of competition may accentuate any potential political economic problems with the delivery of these public goods. A person's choice for the leader, their ethnicity, their regional preference, or some combination of these factors can influence how resources are distributed. For instance, using cross-country evidence that when there is political accountability, residential users—who represent most voters—benefit more from the distribution of power than industrial units.

Demand issues are another issue that could hinder access to infrastructures. Poor urban households might not be as inclined to spend money on adopting new technologies. There are a lot of market failures on the demand side, but the low uptake can also be the result of an

insufficient supply. Low demand could be explained by the nature of the good; a household wary of the benefits to their health might refrain from using it unless enough of their neighbours do. Furthermore, the absence of effective (formal) property rights is a crucial aspect of informal settlements. The evidence available suggests that most people living in slums do not have legal land title, even while there can be a continuum in land tenure rights which makes the problem serious. This is a significant market failure that might have a negative impact on investments in fundamental infrastructure and home improvements. If property owners face a high danger of losing both their home and the future rewards on their investment, they might not have many incentives to invest in their plots. There are many studies examining how property rights affect economic outcomes, including labour supply, investment, and access to credit among others, but there is comparatively little empirical data on how much money urban people invest in home improvements. Findings are made where they also find beneficial effects on children's educational attainment and a decrease in household size (but no influence on credit access). Additionally, political economy concerns may also have an impact on title decisions in slum regions.

Other demand-side market imperfections like credit restrictions, information asymmetries, a poor understanding of the benefits of the commodities, temporal inconsistencies, etc. may also contribute to low willingness to pay. The relatively high price elasticity for preventative health products, such as bed nets, water purification, or vaccines, which all share the trait of being relatively cheap even when they are charged without subsidies, is well documented in the field of health and development economics. Households with low levels of education may also lack knowledge about the benefits of public health, which can be exacerbated. Additionally, significant temporal inconsistencies may be at play due to households' strong preference for current expenses over future advantages. Infrastructures required to get private water, appropriate sanitation, or power require substantially greater upfront expenditures for homes and lower but recurring payments coming from the water or electricity bill, in contrast to inexpensive preventative health items. In the absence of a functioning economy, poor households may not be able to afford these high expenditures market for credit. On consumers' willingness to pay for these kinds of products in urban environments, there is a dearth of data. Even if the trial also included the provision of administrative help along with credit, easing the financial burden with credit can have very large effects on the uptake of piped water in rural areas. Offering little payments over time via loans or saving choices rather than a single sum payment for ceramic water filters which cleanse the water greatly boosts willingness to pay. These findings are in line with the existence of both time preferences present bias or hyperbolic discounting and binding credit limitations. Similar findings are made regarding the payment of

electricity bills in urban South Africa, where the poorest sections of the population prefer small, frequent payments, made possible by pre-paid electricity meters over monthly bills, potentially pointing to issues with limited liquid resources and/or inconsistent schedules. Among other treatments, the impact of a community-level information and motivation campaign and the provision of subsidies on the ownership of latrines in countries with densely populated rural districts. The campaign did not have an impact on take-up on its own, but the combination of information and incentives raised ownership by 20%. By altering at random the percentage of families receiving the subsidy within the clusters, the design was created to analyse potential spill overs. Results demonstrate that take-up increased for non-subsidized households as well, but by a smaller amount, pointing to information spill overs or adjustments in social norms. Finally, coordination problems between tenants and landlords might also have an impact on demand. They can disagree about the importance of expanding access to basic infrastructure, and landlords might not be aware of tenants' financial capabilities. This is a problem that is exacerbated in locations where tenants make up the bulk of the population. According to research, 92% of slum dwellers in Kibera (Kenya) are tenants, and rent increases are one of the most common reasons why landlords and tenants argue.

## 4. EMPIRICAL FRAMEWORK

### 4.1. MODEL AND DATA

We test whether urbanization is in a positive association with economic development by estimating the following two-way fixed effects model for GDP per capita growth:

$$\Delta GDP PC_{ct,t+1} = \beta \log(GDP PC_{ct}) + \gamma \Delta Urban Population_{ct,t+1} + \sum_{i=1}^n \delta^i X_{ct}^i + \mu_c + \nu_t + \varepsilon_{ct},$$

where the dependent variable denotes the yearly growth rate of GDP per capita in county  $c$  between years  $t$  and  $t + 1$ , and is defined as follows:

$$\Delta GDP PC_{ct,t+1} = \log(GDP PC_{ct+1}) - \log(GDP PC_{ct}).$$

The right-hand side of the regression equation includes the beginning-of-the yearly growth period GDP per capita variable, and our explanatory variable of interest for urbanization, which defined as the yearly percentage growth rate of urban population. It also includes the vector  $X_{ct}^i$  of control variables defined at time  $t$ , namely: percentage of urban population; unemployment rate; number of pupils enrolled in primary education per inhabitant; percentage of agricultural land; percentage of population with access to electricity; industry sector value added as a percentage of GDP; primary sector value added as a percentage of GDP; and a synthetic index of institutional quality normalized in the interval  $[0, 1]$ , which encompasses the dimensions of voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.

Some of the control variables highlighted here can be seen as different variables all representing the variable  $A(t)$  from the theoretical framework. According to (Romer, 2012),  $A(t)$  can represent the quality of property rights (which is proxied by the aforementioned index of institutional quality), the strength of infrastructure, and other related factors.

Finally, the regression equation includes country-specific fixed effects ( $\mu_c$ ), year-specific fixed effects ( $\nu_t$ ), and the error term ( $\varepsilon_{ct}$ ). All variables are based on data provided by the World Bank Group, except for urban population data which are drawn from the United Nations' World Population Prospects database.

The regression equation is estimated on an unbalanced panel dataset of 42 Sub-Saharan African countries observed over the period 2012-2019 (Table 3). Tables 4 and 5 report some descriptive

statistics of the dependent and the explanatory variables, and the correlation matrix of the explanatory variables, respectively.

Angola	Equatorial Guinea	Mozambique
Benin	Eswatini	Namibia
Botswana	Ethiopia	Niger
Burkina Faso	The Gambia	Nigeria
Burundi	Ghana	Rwanda
Cabo Verde	Guinea	Sao Tome and Principe
Cameroon	Kenya	Senegal
Central African Republic	Lesotho	Sierra Leone
Chad	Liberia	South Africa
Comoros	Madagascar	Tanzania
Democratic Republic of Congo	Malawi	Togo
Republic of Congo	Mali	Uganda
Cote d'Ivoire	Mauritania	Zambia
Djibouti	Mauritius	Zimbabwe

Table 3: Sub-Saharan African countries included in the estimation sample.

Variable	Mean	Std. Dev.	Min.	Max.
$\Delta$ GDP PC <sub>ct,t+1</sub>	0.00	0.11	-0.59	0.47
log(GDP PC <sub>ct</sub> )	7.17	0.88	5.47	9.99
$\Delta$ Urban Population <sub>ct,t+1</sub>	3.61	1.25	-0.15	6.25
Urban Population <sub>ct</sub>	40.75	16.71	11.19	77.78
Unemployment Rate <sub>ct</sub>	8.04	7.47	0.52	27.04
Pupils Primary Education PC <sub>ct</sub>	167,810.80	38,834.21	65,507.96	251,487.20
Agricultural Land (%) <sub>ct</sub>	50.51	18.69	6.84	80.15
Population with Access to Electricit (%) <sub>ct</sub>	42.65	23.66	6.50	99.61
Industry Sector Value Added (% of GDP) <sub>ct</sub>	23.48	10.10	4.56	77.31
Primary Sector Value Added (% of GDP) <sub>ct</sub>	20.46	12.94	1.00	60.61
Institutional Quality <sub>ct</sub>	0.43	0.22	0	1

Notes: Descriptive statistics are based on 262 country-year observations.

Table 4: Descriptive statistics of the dependent and the explanatory variables.

Variable	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	
$\log(\text{GDP PC}_{ct})$	[1]	1									
$\Delta\text{Urban Population}_{ct,t+1}$	[2]	-0.57	1								
$\text{Urban Population}_{ct}$	[3]	0.59	-0.30	1							
$\text{Unemployment Rate}_{ct}$	[4]	0.63	-0.49	0.49	1						
$\text{Pupils Primary Education PC}_{ct}$	[5]	-0.43	0.32	-0.47	-0.22	1					
$\text{Agricultural Land (\%)}_{ct}$	[6]	-0.04	-0.04	-0.20	0.22	0.18	1				
$\text{Population with Access to Electricit (\%)}_{ct}$	[7]	0.79	-0.60	0.61	0.46	-0.51	0.06	1			
$\text{Industry Sector Value Added (\% of GDP)}_{ct}$	[8]	0.40	0.02	0.24	0.31	0.01	-0.26	0.09	1		
$\text{Primary Sector Value Added (\% of GDP)}_{ct}$	[9]	-0.72	0.49	-0.51	-0.67	0.21	-0.06	-0.60	-0.51	1	
$\text{Institutional Quality}_{ct}$	[10]	0.56	-0.40	0.24	0.36	-0.16	0.07	0.55	-0.03	-0.45	1

Notes: Correlation coefficients are based on 262 country-year observations.

Table 5: Correlation matrix of the explanatory variables.

## 4.2. EMPIRICAL RESULTS

Table 6 presents our baseline results. Looking at column (4), where all explanatory variables are included in the regression model, we find that a 1% increase in urban population growth is associated with a 12% increase in GDP per capita growth. Moreover, the estimated coefficient is stable when comparing it across columns (2) to (4). We also find evidence of less developed countries growing more than more developed ones, as suggested by the negative coefficient for the beginning-of-the growth GDP per capita variable. Finally, we find that yearly growth of GDP per capita is positively associated with basic education, industrial development, and high-quality institutions; by contrast, it is negatively associated with increased primary sector contribution to GDP.

The finding that less developed countries grow faster than more developed ones is consistent with the assumption of diminishing marginal product of capital that is common to most models of economic growth, which coupled with other suitable assumptions leads to the result that countries with lower initial levels of capital per worker – typically less developed countries – grow quicker as they catch up to more developed ones (Solow, 1956). Also, in terms of embracing technologies and information already available in more developed countries, growth rates may increase more quickly in less developed countries as they implement these technologies and benefit from the experiences of others.

Dependent Variable	$\Delta\text{GDP PC}_{ct,t+1}$			
Estimation Method	Two-Way Fixed Effects			
	(1)	(2)	(3)	(4)
$\log(\text{GDP PC}_{ct})$	-0.389**** (0.091)	-0.386**** (0.089)	-0.381**** (0.089)	-0.532**** (0.098)
$\Delta\text{Urban Population}_{ct,t+1}$	...	0.111** (0.054)	0.144** (0.061)	0.121*** (0.041)
$\text{Urban Population}_{ct}$	...	...	0.015 (0.012)	0.011 (0.016)
$\text{Unemployment Rate}_{ct}$	...	...	...	-0.007 (0.008)
$\text{Pupils Primary Education PC}_{ct}$	...	...	...	0.000*** (0.000)
$\text{Agricultural Land (\%)}_{ct}$	...	...	...	0.001 (0.009)
$\text{Population with Access to Electricit (\%)}_{ct}$	...	...	...	-0.003 (0.002)
$\text{Industry Sector Value Added (\% of GDP)}_{ct}$	...	...	...	0.007** (0.003)
$\text{Primary Sector Value Added (\% of GDP)}_{ct}$	...	...	...	-0.006* (0.003)
$\text{Institutional Quality}_{ct}$	...	...	...	0.467* (0.253)
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
No. Observations	262	262	262	262
No. Countries	42	42	42	42
Model F Statistic	13.72	11.88	12.10	12.99

Notes: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; \*\*\*\*  $p < 0.001$ . Robust standard errors are reported in parentheses.

Table 6: Baselined results.

We now augment the regression equation by interacting the variable for urban population growth with the control variables in order to understand whether countries' structural conditions contribute explaining, and potentially drive, the positive association between urbanization dynamics and economic development. Interaction terms are assessed individually in the regression model. Table 7 reports the results of this exercise with respect to the interaction terms that emerged to be statistically significant. We find that the positive association between yearly

growth of urban population and yearly GDP per capita growth is amplified by basic education, primary sector contribution to GDP, and institutional quality. These effects can be seen clearly in Figures 8 to 10, which report the estimated marginal effects of urbanization dynamics on GDP per capital growth mediated by the three abovementioned variables. These result that basic education amplifies the positive effect of increasing urban population growth on GDP per capital growth can be explained by the fact that cities encourage human capital spillovers via interactions between agents (Bertinelli & Zou, 2008), hence serving as an engine for continued human capital formation. The higher the existing level of basic education, the more the benefit from interaction between economic agents will be, as spillovers are more. The impact being amplified by institutional quality can be explained by the fact that one of the benefits to urbanization is the fact that cities encourage the formation of businesses, which are essential to growth (Turok & McGranahan, 2013). Better institutional quality implies less corruption, more stability, and better property rights, which are essential for businesses to operate. Therefore, the better is the institutional quality, the more the formation of cities will yield the establishment and operation of businesses. According to Statista,<sup>1</sup> the service sector represented the primary economic sector for Sub-Saharan countries in 2021, and this has been the case for the preceding years. This sector of the economy is typically enhanced by agglomeration (which is usually due to urbanization). This means that the more the service sector (being the primary sector) contributes to GDP, the more increasing urban population contributes to the growth rate of GDP via enhancing the development of this sector.

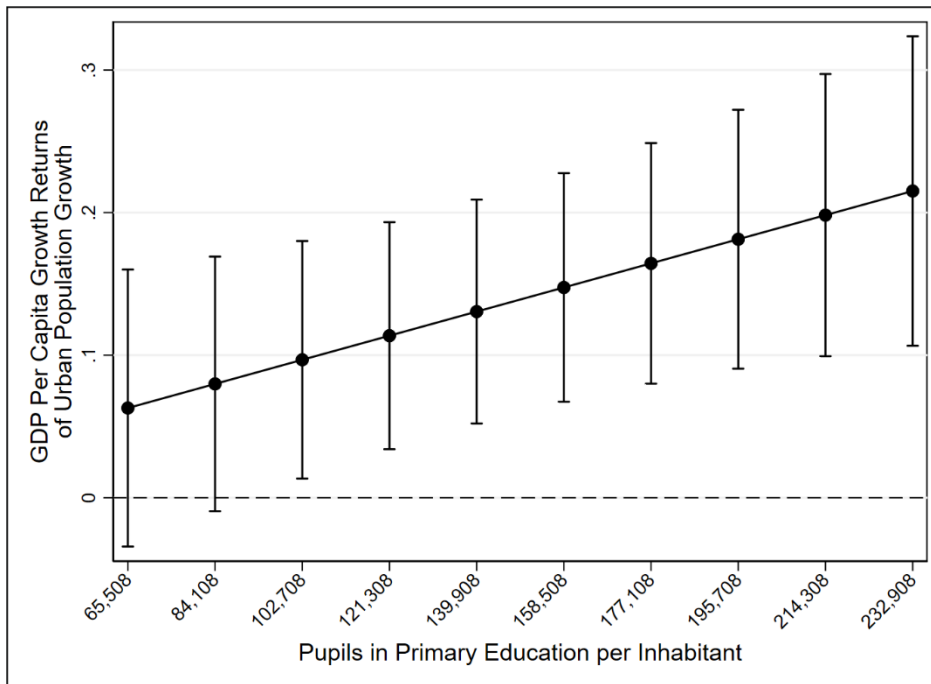
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<sup>1</sup><https://www.statista.com/statistics/1322302/share-of-economic-sectors-in-gdp-in-sub-saharan-africa/#:~:text=In%202021%2C%20services%20were%20the,hand%2C%20represented%20by%20agricultural%20activities.>

Dependent Variable	$\Delta \text{GDP PC}_{ct,t+1}$		
Estimation Method	Two-Way Fixed Effects		
	(1)	(2)	(3)
$\log(\text{GDP PC}_{ct})$	-0.539**** (0.098)	-0.517**** (0.098)	-0.545**** (0.097)
$\Delta \text{Urban Population}_{ct,t+1}$	0.003 (0.082)	0.020 (0.064)	0.023 (0.074)
$\text{Urban Population}_{ct}$	0.021 (0.016)	0.010 (0.015)	0.005 (0.016)
$\text{Unemployment Rate}_{ct}$	-0.008 (0.007)	-0.007 (0.007)	-0.007 (0.008)
$\text{Pupils Primary Education PC}_{ct}$	-0.000 (0.000)	0.000*** (0.000)	0.000**** (0.000)
$\text{Agricultural Land (\%)}_{ct}$	0.002 (0.008)	0.003 (0.009)	-0.002 (0.009)
$\text{Population with Access to Electricit (\%)}_{ct}$	-0.003* (0.002)	-0.002 (0.002)	-0.003 (0.002)
$\text{Industry Sector Value Added (\% of GDP)}_{ct}$	0.007* (0.003)	0.008** (0.003)	0.007** (0.003)
$\text{Primary Sector Value Added (\% of GDP)}_{ct}$	-0.007** (0.003)	-0.022*** (0.007)	-0.006** (0.003)
$\text{Institutional Quality}_{ct}$	0.458* (0.247)	0.482** (0.226)	-0.450 (0.456)
$\Delta \text{Urban Population}_{ct,t+1} \times$			
$\text{Pupils Primary Education PC}_{ct}$	0.000* (0.000)	...	...
$\text{Primary Sector Value Added (\% of GDP)}_{ct}$	...	0.004** (0.002)	...
$\text{Institutional Quality}_{ct}$	...	...	0.236** (0.113)
Country Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
No. Observations	262	262	262
No. Countries	42	42	42
Model F Statistic	11.02	15.34	12.53

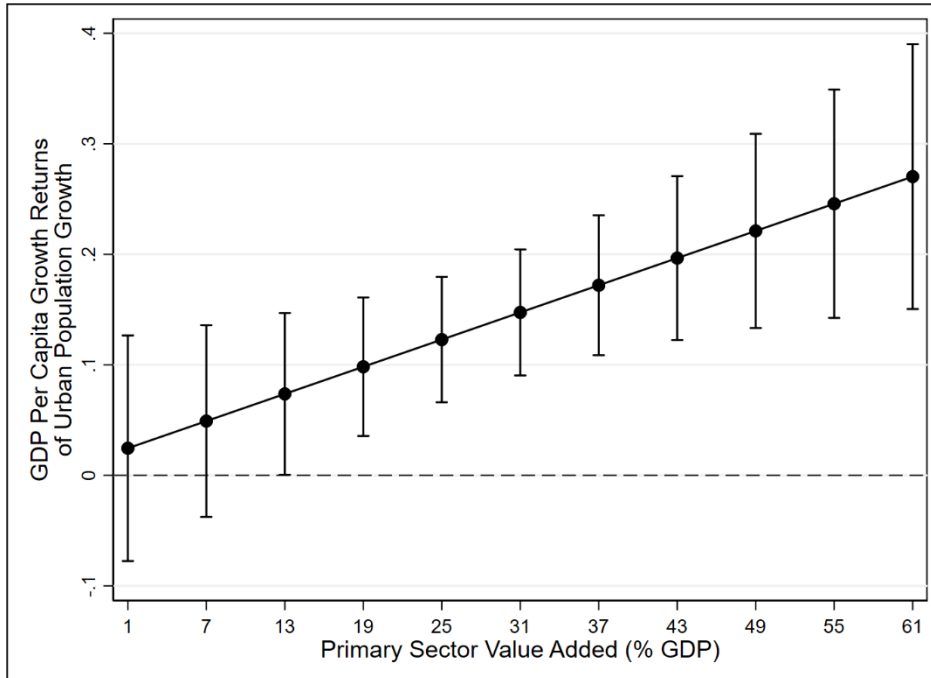
Notes: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; \*\*\*\*  $p < 0.001$ . Robust standard errors are reported in parentheses.

Table 7: The role of basic education, primary sector, and institutional quality.



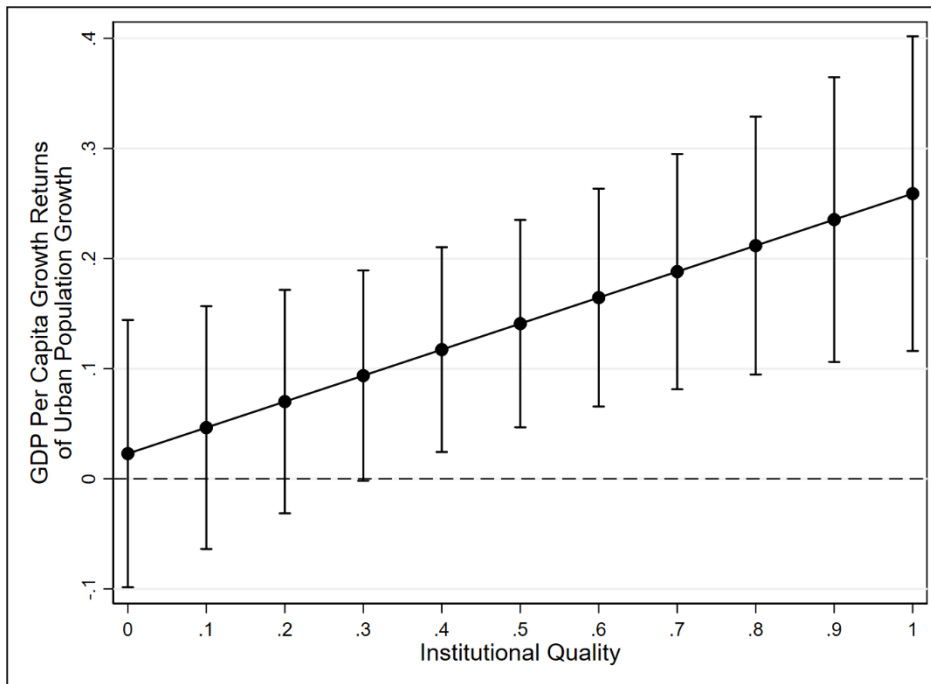
Notes: 90% confidence intervals. Marginal effects computed from column (1) in Table 7.

Figure 8: The role of basic education.



Notes: 90% confidence intervals. Marginal effects computed from column (2) in Table 7.

Figure 9: The role of primary sector contribution to GDP.



Notes: 90% confidence intervals. Marginal effects computed from column (3) in Table 7.

Figure 10: The role of institutional quality.

## 5. POLICY RESPONSES

Africa's development pathways have long been of interest to the international development community. Global think-tanks and multilateral organizations are constantly disseminating extensive assessments of the expenses related to achieving the global development goals in Africa. These expenses are occasionally stated in absolute terms and other times as the difference between the current budget and the required investment. They are referred to by a variety of titles in the documents, such as the budget shortfall, finance deficit, and finance gap (Move Humanity, 2018; World Bank, 2015). Despite significant problems with the comparability of the underlying data sets, estimates for meeting the continent's service delivery demands range from billions to trillions of US dollars, depending on the metrics, assumptions, and even the definition of Africa used. Various goal-setting procedures have focused on these service delivery demands and goals, with cascading effects on African nations and cities. The MDGs predominated global development discourses in Africa between 2000 and 2015 (Besada et al., 2017). There were notable discrepancies and gaps in reaching the MGDs and their associated targets among African governments, even while there was some progress achieved toward the eight goals, particularly in the areas of gender parity, combating HIV/AIDS, and education. This reality, along with significant shifts in the global discussions around sustainable development, paved the way for a new era of development that paid more attention to regional variance and a larger variety of urgent global challenges.

A flood of new development philosophies has emerged after the end of the MDG era, many of which have highlighted the crucial role of cities. This post-2015 agenda has been anchored by the SDGs (United Nations, 2015b). SDG 11–Sustainable Cities and Communities and the New Urban Agenda (NUA) of the United Nations together outline a "2030 vision" for cities and urban regions (UN 2015b, 2017). SDG 11 is the only expressly urban target, even though most SDGs have urban consequences. "Inclusive, safe, resilient, and sustainable cities and human settlements" are demanded. It includes goals for gaining access to housing, providing essential services, enhancing mobility, participatory and democratic planning, reducing sprawl, protecting cultural heritage, mitigating disasters, reducing pollution, improving public spaces, reducing gender-based violence, promoting regional integration, and ensuring the use of sustainable, resilient, and resource-efficient materials for construction and retrofit. It is significant because it places the urban at the centre of the conversation about global development. This has special consequences for Africa, which is frequently thought to be primarily rural despite the continent's fast urbanization. SDG 11 does not outline how all these goals must be accomplished. The extent of the requirement, however, is overwhelming, as

shown by a recent analysis titled Closing the SDG budget gap; combating urban development indisputably necessitates huge increases in public spending. SDG 11 does not offer any advice on how to finance the agenda for urban development and the variety of investments that support it. SDG 17—Partnerships for the Goals provides some general insights into this issue of resource mobilization for the SDGs. The global partnership for sustainable development must be revitalized and the mechanisms of implementation strengthened to achieve this goal. SDG 17's section on finance makes the case that it is crucial to boost domestic revenue generation methods like local taxation, increased international aid to low-income nations, long-term debt sustainability, and investment promotion, especially for the least developed nations. These are, of course, not novel arguments; in many ways, they simply reflect the way that financing for development is now done. The Addis Ababa Action Agenda (AAAA), which is particularly referenced in SDG 11 of the SDGs, is used to support succinct financial recommendations (United Nations, 2015a). The Third International Conference on Financing for Development produced the AAAA, which offers a list of pledges to raise money and finance infrastructure. Urban infrastructure and governments do not constitute a significant portion of the AAAA (UCLG, 2020). The statement does, however, recognise in one case that spending and investments in sustainable development are being transferred to the subnational level, which frequently lacks sufficient technical and technological ability, funding, and support (United Nations, 2015a: section 34). The document continues by pledging to promote resilient investments in infrastructure for electricity, water, transportation, and sanitation (United Nations, 2015a: section 34). In this regard, the AAAA acknowledges that sub-national governments must participate in the creation of urban infrastructure and that this infrastructure must be sustainable. While this is helpful, there is not much information given on how the agenda will help with this urgent yet structurally challenging necessity.

There have been promising developments in financial technology (fintech) and impact investing since the SDGs and AAAA were introduced. The increasing use of mobile devices and the inclusion of climate risk in financial modelling are only two significant shifts that have the potential to inspire innovative thinking about the future of financial and fiscal flows, challenging established models and legacy systems. However, according to the Inter-agency Task Force on Financing for Development, 2020, the world of finance faces substantial problems in the coming year. All levels of government have failed to increase domestic revenue and have been forced to reorder expenditure priorities to pay for urgent needs (OECD, 2020). International market instability and a rise in nationalism have further restricted the already constrained private sector funding for infrastructure in developing nations. According to the Inter-agency Task Force on Financing for Development's 2020: xvii report, "the international

economic and financial systems are not only failing to deliver on the SDGs, but... there has been substantial backsliding in key action areas."

This reality is even more apparent in the context of urban Africa, which makes up 27 of the 32 "low-income countries" in the globe and has been structurally blocked from access to international credit for decades. Urban service delivery and the underlying economic and financial ramifications in this context urgently require conceptual and practical breakthroughs. The parts that follow track the development of urban government and physical infrastructure in African cities to address these concerns. By doing so, it demonstrates how various processes of layering, rewriting, and reform have built cities in Sub-Saharan Africa. Urban authorities and service delivery networks are fragmented because of these developments.

It is commonly acknowledged that considerable amounts of public spending are necessary to finance the SDGs. grasp public expenditures necessitates a grasp of the public agencies involved as well as their makeup, financial structure, types of political and technological roadblocks, and degree of function decentralization to lower tiers of government. The political and economic aspirations of the leading colonial powers influenced the early form of decentralized governance in Sub-Saharan African towns, much like how the continent was more broadly territorialized. Local administrations in most Sub-Saharan African nations have been weak since the emergence of post-colonial states because they have received minimal authorities, responsibilities, and funding from the national government. Strong national liberation parties that emerged after colonization used centralized power to forge national identity and launch large-scale development initiatives. For management or basic administration, they utilized or modified the local authorities set up by the colonial rulers, giving little thought to their financial empowerment and access to resources. Donors and international decision-makers supported continued centralization in many nations, including Kenya (Rocaboy et al., 2013; Widner, 1993), as it allowed former colonial powers and multilateral lenders to keep access to decision-makers in independent nations and thus continue to have influence over processes at the national level.

Since the 1980s, fiscal decentralization changes have been actively pursued throughout Africa (Ribot, 2002; Smoke, 2003). Neoclassical economic justifications for efficiency, political arguments for democracy and accountability, and budgetary arguments for austerity served as the foundation for these policy initiatives. Decentralization was one of several reforms that focused on institution building and good governance, concepts that had become commonplace in development discourse by the mid-1990s. These reforms were designed to work in tandem with the structural adjustment of African economies led by the World Bank and the

International Monetary Fund (IMF). Such reforms were encouraged by the central government in various African nations to qualify for debt relief. In other situations, such as Ethiopia and South Africa, decentralization permitted authorities to control localized racial or ethnic tensions by giving local elites access to resources, authority, or political influence. Regardless of the motivation, most African nations pursued a combination of administrative, political, and budgetary decentralization.

Numerous of these decentralization measures required reclassifying the continent's geographical entities. According to Paulais (2012), the 1990s witnessed a sharp increase in the number of minor local governments known by a variety of names, including cities, communes, municipalities, villages, and so on. After local governments underwent rapid change, they needed to increase their ability for self-sufficiency to meet the increasing demands that decentralization imposed on them. During this time, several international programs targeting newly established urban authorities and municipal and local government service delivery were developed. The Urban Management Programme (UMP) was created by the World Bank, the United Nations Development Programme, and the United Nations Centre for Human Settlements (UN-Habitat). The first phase of the program started in 1986, with a focus on local governments that were taking part on financial management and income generation. The World Bank and other multilateral organizations worked to synchronize national financial management information systems by developing extensive IT programs across the continent, much to how the UMP focused on sub-national financial management. These programs are examples of pioneering worldwide initiatives to solve budgetary issues on a local level.

The issue of revenue production has been crucial to the discussion of financial management. One of the main goals of reform initiatives has been to increase the ability of sub-national governments to generate income and manage their affairs. throughout general, grants have accounted for most local government revenues throughout Africa, placing local authorities at the mercy of higher governmental levels (OECD & UCLG, 2016). Property tax has been an important component of local government systems around the world, but it has been significantly hampered by out-of-date cadastres, incomplete valuation rolls, and inadequate collection procedures. Local governments in Africa have less control over determining priorities for spending due to the difficulties associated with revenue production. Strong city revenue systems are only found in capital cities, which frequently have unique sorts of governments (like the Nairobi City County of the South African Metropolitan Munis) or income-sharing agreements (as in Addis Abeba).

Studies on fiscal decentralization in Sub-Saharan Africa show the variety and difficulties in designing and putting decentralization measures into practice. The African cases, perhaps most consistently, demonstrate the persistent opposition of central governments to decentralization, despite national constitutions and laws that ostensibly favour it. Few national governments have taken adequate steps to decentralize fiscal power, even when local governments are given political authority. There are many justifications for this, such as the lack of local capacity, the requirement for extensive coordination of significant infrastructure, and the necessity of separating development investments from local politics. When it comes to financing urban infrastructure, state-owned companies (SOEs) or public-private partnerships (PPP) are often used to circumvent local governments (McDonald, 2016).

Overall, fiscal decentralization has been uneven and fragmented over much of Africa. City governments are under pressure from their continually growing to-do lists, the population that has to be served, and competition from other local, state, and federal agencies. They frequently receive the policy directive, but they do not have influence over the financial resources. These procedures have caused financial division between the many governmental levels, divisions, and actors involved in governance. Donors and lenders direct spending priorities through line departments, national agencies and utility companies are given exclusive access to key revenue sources, and local governments are constantly forced to endure taxing fiscal accounting exercises that do little to improve real resource accountability.

There are a few notable outliers to this pattern, though. The most eloquent illustration of the financial empowerment of African city governments may be seen in the case of South Africa. The strong decentralization framework for local administration created over the past 25 years has helped South Africa's eight metropolitan municipalities. The metropolitan municipalities have substantial budgets and a great deal of power over the priorities for urban expenditure, urban planning, and urban administration thanks to the National Treasury's Cities Support Programme and other financial measures established to support essential urban operations. Select cities inside various other African nations have attained fiscal empowerment through decentralization procedures. This is the situation with Addis Ababa, the capital city of Ethiopia, which enjoys the authority and independence of a regional government thanks to its designation as a Chartered City. Both Nairobi, the nation's capital, and Mombasa, its second-largest city, enjoy special status as "city-counties", where the administrative limits of the newly created county governments overlap with the city's functional regions. These cases, however, stand in contrast to the more prevalent tendency, which involves either nesting smaller cities within much larger rural jurisdictions (as in Kisumu) or dividing metropolitan areas into small and

separately managed sub-administrations (as in Dakar or Cairo); both approaches lead to a disconnect between the needs of the cities' spatial development and the authorities charged with their development.

To address urban development in Sub-Saharan Africa, it is important to comprehend how governance structures interact with the physical systems of cities. Colonial infrastructure development in much of Sub-Saharan Africa concentrated on building infrastructure to support the colonial effort. Most of the time, the colonial powers themselves paid for these investments using the money made from their own business ventures and taxation of the local populace. To assist imports and exports, this generally included small investments in the public works of settlement towns and substantial regional infrastructure, such as dams and ports. The mining industry and regional transportation development, particularly for smaller urban centres, affected the infrastructure expenditures made in these regions, influencing which cities prospered and which withered.

International lenders and donors like the World Bank and the UK Colonial Development Corporation/Colonial Development and Welfare focused on national infrastructure projects when Sub-Saharan African countries gained independence in the late 1950s and early 1960s, lending money to newly established African states (Cowen, 1984; World Bank Group, 2014).

The key to economic growth, according to development theory at the time, was industrialisation, notably through infrastructure. Investments in national ports and highways have been made in the Gambia, Rwanda, Equatorial Guinea, Comoros, and Guinea-Bissau (World Bank Group, 2014). The capital-driven growth tenet of development theory was closely matched with the ambitions of many liberation parties to deploy highly visible infrastructure projects and even newly built capital cities in nations like Tanzania and Nigeria to display and solidify power. As Luiz (2010) noted, heavy industries were parachuted in without the requisite economic linkages, dooming them to failure. Investments, however, rarely produced the projected returns.

The building of rural infrastructure was a second significant area of post-colonial investment. These initiatives were viewed as essential remedies to the colonial emphasis on metropolitan regions. Agriculture modernization was the main emphasis of World Bank programs in Kenya, Libya, Liberia, and Cameroon (Arrobbio et al., 2014; World Bank Group, 2014). Lenders and African authorities agreed that Sub-Saharan Africa was primarily a rural region with few urban needs. In many ways, the rural component of Africa's development story has persisted over the years.

In the 1970s, international organizations in Asia and Latin America began to incorporate urban development into their development agendas, but Sub-Saharan Africa remained primarily concerned with regional infrastructure and rural social development. However, the development of site-and-service plans was prompted by the apparent housing problem in expanding cities like Nairobi and Dar es Salaam. These were substantial housing developments that offered infrastructure services and partially subsidized land locations. In Sub-Saharan Africa, housing programs alone cost close to three and a half billion US dollars between 1972 and 1996 (Farvacque & Godin, 1998). However, these investments might be considered as the first significant urban infrastructure initiatives in African cities, despite being packaged as housing projects.

Sub-Saharan Africa and most of the developing countries are heavily indebted because of huge borrowing between the 1950s and 1970s. When the oil crisis and following economic recessions struck the world in the late 1970s, this debt became unmanageable, leading to a spike in interest rates. Debt defaulting started in Latin America and then extended to other continents. To make loan repayments easier for national governments, the World Bank and the IMF attempted to restructure loan agreements. Through the Heavily Indebted Poor Countries (HIPC) debt reduction program, most African countries underwent significant structural adjustment in the 1990s (World Bank Group, 2014). In a cutthroat, global market economy, this meant lowering government investment, particularly on local development, and putting more emphasis on exports. The World Bank's worldwide realignment and this structural adjustment in Africa occurred at the same time. Instead of making significant infrastructure investments, the World Bank has changed its emphasis to technical support and governance changes. Therefore, during a crucial stage in Sub-Saharan African cities' growth, infrastructure expenditures to support their expansion were restricted as they were subject to austerity programs and tough institutional reform processes.

Only in the middle of the 2000s did international multilateral organizations and financiers once more turn their focus to Sub-Saharan Africa's urban development demands. Bilateral country agreements have grown more commonplace in addition to the growing interest of multilateral lenders in funding the infrastructure and development of Sub-Saharan African city centres. Numerous nations, notably France, the United Kingdom, the Netherlands, Germany, and Japan, have launched or expanded direct investment programs. Most significant has been China's changing involvement. Chinese private equity investments in Africa through the Chinese Development Bank have increased since the formation of the China-Africa Development Fund in 2007. Large-scale urban transportation infrastructure projects are increasingly being financed

by Chinese banks and many are being completed by Chinese building firms. Ring roads in Luanda and Addis Abeba, significant road construction in Nairobi and Kigali, a rail line in Abuja, and a light rail in Addis Abeba are a few examples. These initiatives can be considered as an extension of the strong emphasis on mobility that China has embraced throughout the continent, which is evident in both its urban investments and the regional and global rail infrastructure projects to which it has made contributions. The Mombasa-Kisumu Standard Gauge Railway, the Lagos-Kano Standard Gauge Railway, and the Addis Ababa-Djibouti Railway all exhibit a persistent interest in capital-intensive transportation infrastructure. China's significant contribution to the development of urban infrastructure in Africa is still hotly debated, with arguments citing violations of human rights, the use of soft power, and a constant concentration on glitzy mega-projects.

The result of this growing interest in filling the infrastructure deficit in Sub-Saharan Africa has been to increase investment for urban infrastructure. These millennial visions are built on massive projects in a variety of industries, including new cities, super-highways, large-scale housing projects, and the like. A variety of intentions are reflected in large infrastructure projects. They continue to strive to demonstrate economic potential to elites throughout the world and foreign investors. This global perspective increasingly has an Asian and Eastern aesthetic to draw funding from a new group of international investors. These procedures put African states in a position where they must deal with the geopolitical goals of lenders as well as risk-return formulas that favour centralized and sizable investments. Mega-infrastructure projects also have a domestic audience and are utilized to increase domestic political support and legitimacy. For instance, the government of Angola's investment in the Bay of Luanda served as justification for concentrated control. Like this, the South African government's backing for large-scale housing projects is meant to demonstrate the might of the developmental state and its capability to quickly fulfil national commitments. Regardless of the intentions, the result is that several poorly planned development investments have been funnelled into African cities.

In Sub-Saharan Africa, both traditional and non-traditional lenders and donors are currently showing a great deal of interest in the region's urban infrastructure, which builds on decades of haphazard, ad hoc, and uncoordinated investments in cities. The results have been a persistent fragmentation of urban infrastructure in Africa. The redundant areas, holes, and irregularities in the physical networks are manifestations of this fragmentation.

Increasing the competitiveness, bankability, or good governance indices for Sub-Saharan African nations and localities is frequently called for to finance sustainable development

objectives. The same can be said for rough estimates of the overall amount of funding required, the majority of which are based on standard infrastructure delivery costing and insufficient knowledge of the current surroundings. While it is true that African cities require substantial amounts of cash and investment for infrastructure and its upkeep, framing them as places with infrastructural or governance deficits in need of any available funding is counterproductive.

Over the past few decades, cities in most Sub-Saharan African nations have seen a wide range of material investments and institutional reforms. They are places of diversity rather than shortage. A variety of reactions have emerged because of the fiscal authority's fragmentation and the infrastructure's fragmentation across networks. Where centralized systems fall short, these reactions have filled in the gaps, taken advantage of overlaps, and offered alternatives. Lack of a centralized, waterborne sewerage system has led to the development of a complicated web of septic tanks, vacuum trucks, and dumping stations in several African towns, including Addis Abeba and Dakar. Communities in informal settlements frequently lack access to bulk water and electricity infrastructures, necessitating the use of micro-extensions and creative distribution methods. Like this, public transportation systems like buses and trains receive little funding in many African cities; even where they do, many areas of the city are not efficiently served by them. To cover these gaps in the availability of public transportation, paratransit—which includes minibuses and motorcycles—has evolved, typically operating without state subsidies.

The importance, usefulness, and limitations of this diversity are currently being discussed more and more in urban studies and planning. Hybrid service delivery methods have developed in reaction to the large-scale, formal, centralized infrastructure funding, development, and operations systems' incapacity to serve most urban people, as experts have noted. These systems are also described using other words including post-networked city, popular economy, and heterogeneous infrastructure.

Both their physical design and their governance exhibit hybridity. Hybridity helps to piece together and connect infrastructure shards in terms of material diversity. Household and community scale technologies and retrofitting are used because people are frequently not physically connected to grids for energy, water, or sanitation. At times, these technologies are tenuously connected to formal networks, and at other times, they create alternative systems with varying degrees of network endlessness and durability. Diversity in governance is a dynamic problem as well. One of the many actors in these hybrid systems is local government. The delivery of urban services is dominated by utility companies and state-owned enterprises, and urban authorities must deal with this heterogeneity within the state, which includes party

politics dynamics (particularly in opposition-run cities), tensions between levels of government, especially in urban areas of national significance, and more. Urban service delivery and administration involve a wide range of actors outside of the state, including labour unions, religious organizations, water vendors, and motorbike taxi drivers. Many of these actors, some formally recognized and others not, oversee networks that offer services and generate substantial sums of money. Overall, these systems have involved a diverse spectrum of public/private, local/international, formal/informal actors, each with their own motivations, incentives, and perspectives on the potential and proper development of Sub-Saharan African cities.

Although this variation in material and governance structures is essential to how African towns function daily, it has frequently gone unaccounted for in projections of infrastructure and financial shortfalls. These calculations presuppose that specific infrastructure types are both desirable and feasible. These presumptions are mirrored in the initiatives of national agencies, lenders, and donors. States, for instance, have opposed accounting for hybridity because they view such systems as antiquated and prefer to control them rather than encourage their development. Large-scale investments with predictable risk-return profiles are those that financial institutions want. By design, innovative, off-the-grid, and informal service delivery systems and technologies are difficult for financial institutions and governments to include into their plans, forecasts, and portfolios. Because of their scattered arrangements and unknown risks, making decisions regarding them is challenging. Overall, centralized decision-making and significant investments in major infrastructure systems are favoured by the present financial models that support development. Few efforts have been made to date to create workable finance models that can support hybrid service delivery systems.

Despite these obstacles, it is crucial to create service delivery systems that consider various urban environments and the need for sustainability. For instance, using centralized waterborne sewerage systems in extremely dry regions with a lack of water is not practical. Like this, the donor preoccupation with BRT systems makes no sense in areas with bad roads and low population densities. The identification of new chances for urban intervention is made possible by recognizing popular modalities of service delivery, the complexity of their material and governance structures, and the historical processes that compelled them to exist. Authorities must invest in integrating, regulating, coordinating, digitizing, and gradually increasing informal and small-scale delivery networks from a financial standpoint. Along with capital, these investments also include the operational systems that support them. Overall, this paper makes the case that the financing agenda for sustainable urban development must work with

these existing systems, creating fiscal and financial systems that reflect the governance and material configurations on the ground, rather than trying to raise as much money as possible to plug the frequently mentioned gap in the infrastructure systems of African cities. The financing agenda must consider the material and institutional realities of African cities and how they have evolved over the post-colonial period if it is to depart from the conventional approach, which has failed to meet developmental objectives in terms of access, affordability, and sustainability. Overall, funding must be viewed as a means, not as the ultimate objective. Only if it can be organized to adapt to the actual and existing urban development processes in Sub-Saharan African cities will raising money be effective. Without this careful and contextual understanding of the hybridity and heterogeneity within the current urban service delivery systems, resource mobilization is likely to lead to African governments incurring pointless debt to support outdated infrastructure systems at the expense of significant investments in sustainable urban development.

## 6. CONCLUSION

More than anything else, the findings given above highlight the significance of looking at urbanization's causes and impacts in emerging regions via a different set of methodological lenses. In particular, urbanization has been known to be a driver of economic growth via several channels – being an engine for human capital formation; cities being catalysts for technological progress; urban areas allowing for agglomeration economies, etc. We explore whether this is the case for Sub-Saharan Africa. Using a panel dataset spanning the years 2012 to 2021, we estimated a two-way fixed effects model to measure the impact of urbanization on economic growth in the region. Overall, our results show a positive relationship between the growth of urban population and economic growth as measured by the growth of GDP per capita. This positive relationship is amplified by basic education, primary sector contribution to GDP (where the primary sector is services), and institutional quality. What this implies policy wise is that authorities in these countries should embrace the observed phenomenon of increasing urbanization rates, and implement measures that enhance basic education – for instance via increasing enrolment rates –, invest more in the services sector, and improve their institutions – for instance via sustained efforts aimed at reducing corruption and enforcing the rule of law.

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