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Executive summary

The story of urbanization in Kenya should be one of cautious optimism. As an emerging middle-income country with a growing share of its population living in urban areas and a governance shift toward devolution, the country could be on the verge of a major social and economic transformation. How it manages its urbanization and devolution processes will determine whether it can maximize the benefits of its transition to a middle-income country. This is in part because no country has reached high-income status without urbanization, and in part because the devolution of state authority, resources, and functions may result in more equitable and efficient governance and services.

Kenya has seen positive economic growth in tandem with increasing rates of urbanization, but the country has not yet experienced an economic transformation. Economic growth has created a growing middle class, but poverty reduction has been less than expected. To tackle poverty requires policymakers to look across many sectors, issues, and locations. There are needs in rural areas and marginalized counties which merit attention as highlighted in other Bank studies. This comprehensive report focus on *cities* where today majority of urban residents live in informal conditions, with poor access to basic networked services and an increasing share of informal sector work.

The country's ambitious experiment in devolution should hold great promise and comes at an important period in the economic and urban transformation. But aspects of the process may weaken urban centers at a time when they need to be strengthened. On balance, Kenya still has an opportunity to leverage urbanization to drive economic growth. It is in the early stages of urbanization, and evidence suggests that cities can drive economic development—especially where they are developed through a "system-of-cities" approach and where devolution empowers counties—a second tier of government—to develop strong urban centers.

This Kenya Urbanization Review takes a deep look at Kenya's urbanization process. It provides initial policy options in several key areas including housing and basic services, land use and transport, planning, subnational finance, and local economic development. These are not the only areas of concern for Kenya's urban practitioners and policy makers. But they were identified as areas for more in-depth study during initial stakeholder consultations and as key priorities in consultations with government experts. It is hoped that the Review will serve to raise understanding of the important opportunity that urbanization presents for the country, informing policy makers and interested parties alike and expanding dialogue on Kenya's urbanization.

The review is laid out in three parts. The first looks at some of the demographic, economic, and spatial trends of Kenya's urban areas (Chapter 1). The second describes the challenges or threats to a smooth urban transition: large, growing informality and inequality within and between urban areas, in three categories of access (Chapters 2, 3, and 4). The third examines the modern institutions needed to address the challenges head on and to ensure that Kenya's cities have the opportunity to serve as true drivers of economic growth (Chapters 5, 6, and 7).

Urban Trends: An Urbanizing Middle-Income Kenya

Kenya is an under-urbanized, middle-income country with growth potential

Kenya had a gross national income (GNI) per capita of $1,280 in 2014, putting it in the ranks of lower middle-income countries. Kenya's Vision 2030 national development program set a goal for the country to join the ranks of upper middle-income countries by 2030. These countries have GNIs per capita of between $4,126 and $12,736 (2015). Attaining that status would mean improved living standards for all Kenyans. On average, urban dwellers in upper middle-income countries have 92 percent access to electricity, 97

percent access to improved water supplies and 87 percent access to improved sanitation. These figures are far better than Kenya's current levels: only about 60 percent have access to improved water sources, only 50 percent have access to electricity and only 30 percent have access to improved sanitation in urban areas. These countries are also mostly urbanized and have much lower poverty rates than Kenya's, while Kenya has a low urbanization rate of less than 30 percent and high levels of poverty.

As a rural country, Kenya's poverty reduction and economic growth strategies must include a focus on agriculture, and on locations where poverty rates are high, including "marginalized" counties. But fundamentally this must be complemented by heightened attention to the fact that urbanization and better access to urban areas can reduce rural as well as urban poverty in the long term. The majority of Kenya's poor live in rural areas: 90 percent of Kenyans in the bottom 40 percent of the income distribution live in rural areas. Hence, incomes of the rural poor would have to rise to make a big dent in poverty. Because the poor in Kenya depend primarily on labor income, the key to raising their incomes is to provide them with job opportunities. Rural poverty declined from 42.3 percent in 2000 to 37.6 percent in 2007, primarily as a result of rural workers doing non-farming work. Households that escaped poverty were more likely to have better educated members, more land under cultivation, and more non-land assets—that is, more diversified income sources. This implies that diversifying income beyond farming is an effective poverty reduction strategy. And education helps rural Kenyans to obtain the skills to perform wage work or to become self-employed. Since most of the rural poor live relatively close to the largest urban centers, promoting internal mobility—through better transport links, public goods, access to credit, and land tenure—holds promise to reduce rural poverty (World Bank, 2015).

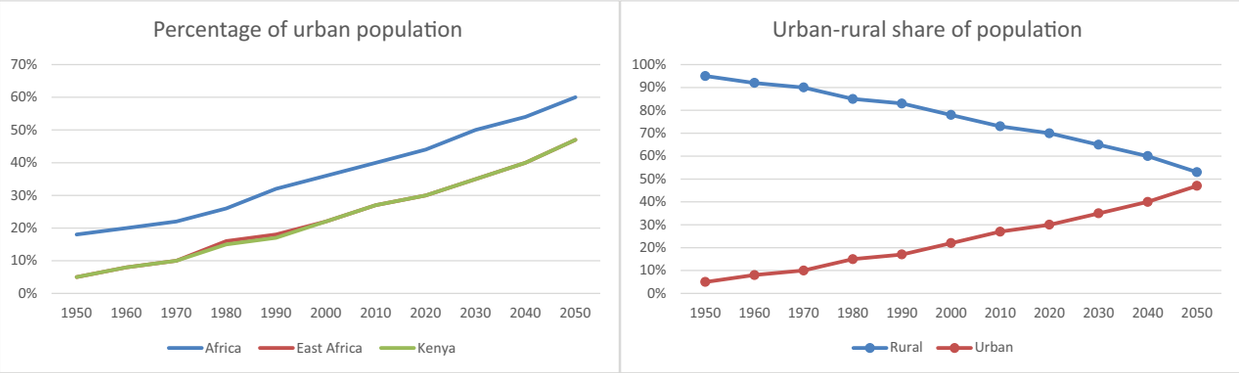
Thus urbanization has the potential to improve economic opportunities and living conditions for all Kenyans. There is a strong positive relationship between urbanization and economic growth. The two processes reinforce each other through several potential channels: "agricultural push," "industrial pull," and "consumption cities." Rising agriculture productivity, which in the early stages drives economic growth, releases excess labor that migrates to cities seeking better opportunities in the modern sector—often referred to as the "push from agriculture." The second channel is the "pull from industrial productivity," where economic transformation from agriculture to industry attracts labor from the rural economy to cities' industrial sector. This process is marked by a high correlation between urbanization and the share of industry in GDP. A third channel is seen in countries whose growth emanates from natural resource wealth. The rising incomes from natural resource exports spur urbanization by increasing demand for goods and services produced in urban areas, and by helping create urban jobs that lead to the growth of consumption cities. For such cities there is no corresponding rise in the share of industry in GDP (Freire, Lall, and Leipziger 2014; Jedwab 2013).

Kenya is urbanizing rapidly but is under-urbanized, meaning that it still can leverage the benefits of urbanization and attain its goal of becoming an upper middle-income country by 2030. Based on a correlation of GDP per capita and urbanization for several countries, about 40 percent of Kenyans (given their current GDP of US$1,200) should be living in urban areas, against the actual 27 percent. On this measure, Kenya is an underperformer on urbanization, with a rate similar to Mozambique, Bangladesh, and Zimbabwe, whose per capita incomes are far lower. At the same time, Kenya is urbanizing faster than countries like Vietnam and India, which have a similar population share in urban areas but higher per capita incomes. Kenya's under-urbanization is unique in Africa, where most countries have urbanization rates that far outpace their economic performance, creating consumption cities.

While Kenya may not exhibit classic consumption city characteristics, it has not yet used its urbanization to leverage economic transformation. Economic growth averaged 4.5 percent over 2003–13. Agriculture retains the largest share of the economy, contributing a quarter of GDP. The share of manufacturing in GDP declined from 13 percent in 2006 and is now about 10 percent. Growth is driven mainly by the services sector, which has a large informal share of labor. Over 2000–11, the services sector expanded by 2.1 percent, agriculture 1.1 percent, and industry 0.7 percent annually. Formal sector jobs are scarce and unemployment is higher in urban areas. Each year the working age population increases by some 800,000 but the economy creates only about 50,000 modern sector wage jobs. Unemployment in urban areas is about 13 percent for Kenyans between the ages of 20 and 24, and underemployment is prevalent in rural areas. Kenya's urbanization thus seems to be driven by

agricultural push rather than industrial pull, but with some elements of the consumption cities channel.**Fortunately, Kenya is at an early stage of urbanization, but by 2050 about half of the population will be living in cities.** Around 27 percent of Kenyans live in urban areas, and Kenya is urbanizing at about 4.3 percent a year (Figure 1). This pace has the potential to drive economic growth. Urbanization will strongly drive economic growth if urban firms have a better business environment, are able to create more jobs, and can benefit from a sufficiently large pool of better educated people who can migrate from rural areas to take these jobs. But growth will be weaker if uneducated migrants are forced to leave rural areas for the city by a combination of rapidly growing population density and scarcity of agricultural land.

Figure 1: Projections of urban population and urban–rural population split



Source: United Nations Department of Social and Economic Affairs, Population Division (2014).

East Asia urbanized with economic transformation driven primarily through investment in infrastructure and with industrialization. For Kenya to reach a GDP per capita comparable to East Asia's when that region reached the 50 percent urban population mark, its economy would have to show real GDP growth of 8.9 percent a year from now to 2050—but Kenya has hit 7 percent only four times in the past 40 years. Although the relationship between GDP growth and urbanization is stronger in Kenya than in most of Sub-Saharan Africa, it is still not as strong as in East Asia, yet Kenya's urbanization will require even higher sustained levels of growth. This is why its under-urbanization relative to its GNI per capita is important. The task of simultaneously speeding up growth and urbanization will not be easy.

Kenya's connective infrastructure can facilitate an economically vibrant portfolio of cities

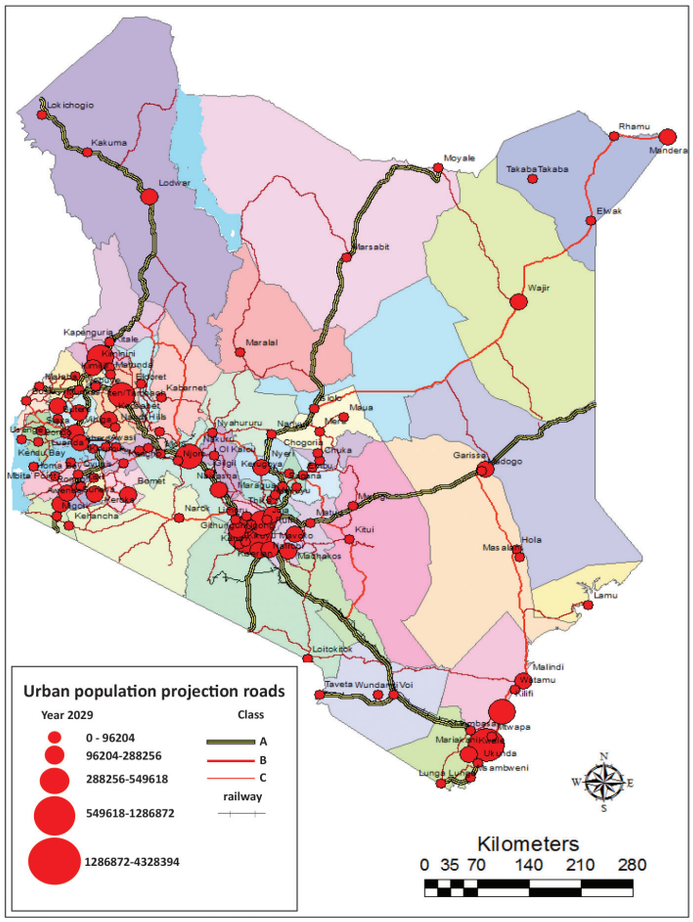
Urbanization is more than the development of individual cities, and Kenya's well-connected system of cities can help to drive economic development. Different city types play different roles in a country's development based on their size, density, and location. The economic development of a city or its wider region is closely linked to its internal connectivity, as well as its connectivity to other regions and cities. Good transport infrastructure enables companies and people in a region or city to increase production and consumption levels due to lowered logistical costs and access to larger supply and labor markets. Other factors are equally important to economic growth of a region, including population growth, agglomeration of firms, education levels of residents, and quality of life. Good connectivity (and other infrastructure), along with strong institutions and targeted interventions, are essential to reap the benefits of urban economic agglomeration.

Kenya has developed good connective infrastructure that can better develop its portfolio of cities. Urban economic growth has been established around population centers and productive agricultural regions, with most urban dwellers living near the Northern Corridor, which connects Mombasa Port through Nairobi to Malaba, with a branch line to Kisumu in the west. Less than 14 percent of urban dwellers live in remote towns farther than 35 kilometers from the Northern Corridor. In total, 76 percent and 85 percent of urban dwellers live within 15 kilometers and 35 kilometers of this corridor, respectively, underscoring its importance to urbanization. The concentration of population along

the Northern Corridor has led to the development of three important hubs: the coastal hub around Mombasa, the central hub around Nairobi, and the western hub around the urban centers of Kisumu, Eldoret, Kericho, and Nakuru.

Kenya's system of cities will develop primarily around these three hubs, which have among the fastest-growing urban populations and generate a substantial share of GDP. The Nairobi metropolitan area in particular will see rapid growth. Nairobi can expect to become a city of more than 6 million by around 2030 (Figure 2), up from its currently estimated 4 million. Good connectivity between Nairobi and its satellite towns remains the main driver of population and economic growth in its metropolitan area. Of the 25 largest urban areas in Kenya, 10 (including Nairobi itself) are within this metropolitan area. These 10 cities have about 5.77 million people and nearly 40 percent of Kenya's urban population. Of these 10 cities, three—Thika, Juja, and Kitengela—were among the 10 fastest-urbanizing areas in Kenya, and four others—Mavoko, Ngong, Ongata Rongai, and Ruiru—were in the top 25 fastest-urbanizing areas.

Figure 2: Concentration of the urban population



Source: Based on data from Kenya National Bureau of Statistics (2009)

Recent attempts to use night-lights data to calculate county-level GDP confirm the economic strength of the Nairobi metropolitan area. This region comprises Nairobi City County and the counties of Kajiado, Kiambu, Machakos, and Murang'a. Of these counties, Nairobi has the largest county-level GDP, and Kiambu County the second largest. Kajiado, Machakos, and Murang'a are estimated to have the sixth, seventh, and eighth largest county economies, and all are in the Nairobi metropolitan area. Combined, the six-county region (urban and rural) accounts for about 35 percent (2005 $9.36 billion) of Kenya's total GDP, as determined using night-lights data.[1]

Kenya's system of cities is likely to develop around its metropolitan regions. A system of this type will require the country to develop a multilevel governance framework that allows urban areas in a region to collaborate and provides incentives for local authorities to set up mechanisms to jointly deliver infrastructure and public services, along with a metropolitan area–wide planning framework.

A poorly functioning land sector is a binding constraint to urbanization

Informality, low densities, and sprawl are common characteristics across Kenya's urban areas and are exacerbated by poorly functioning land markets and land institutions. Land use planning and how effectively land markets work determines how cities develop and grow. In well-regulated and well-functioning land markets, urban expansion is led through government land use planning and regulations, but this is not strictly the case in Kenya. Historical factors underpinning land ownership have led to urban land market distortions and today, these markets are having difficulty supporting sustainable urbanization. Due to the surge in informal and illegal allocation of land of the 1980s and 1990s, there is virtually no vacant government-owned land in Kenyan cities, and the formal (and informal) urban land market is now almost entirely in the hands of the private sector, limiting the ability of the public sector to regulate land development and to make land available for public development purposes.

Yet it is critical that the formal market starts to work well. High costs, high risks of forged land documents, and long delays tied to land transactions contribute to poor functioning of urban land markets. Under the formal market system, it takes an average of 72 days and 4.3 percent of a

property's value to register it. This, with the high risks of corruption in the sale and issue of title deeds, forces many to obtain land through informal channels so that only a small fraction of land transactions are registered. The informal market therefore has become a way for most poor and nonpoor urban residents to access land for housing. This leads to a lack of infrastructure and services in poor informal settlements, as in many cases land set aside for public utilities is used for housing.

Poorly functioning urban land markets and institutions are not a new phenomenon. Over decades institutional structures have been over-centralized, and land management practices have tended to be technocratic, not always well-organized, and with too many opportunities for corruption in the system. The colonial period saw the introduction of private property, the establishment of strong central administration over land, and the preparation of urban plans intended for European, not African, cities. This period saw the consolidation of corruption and poor efficacy of land institutions, resulting in planning, land registration, and administration systems that are opaque, unreliable, costly, and in need of reform. Before the 2010 constitution and implementation of the National Land Policy of 2009, a complex set of land laws resulted in overly complex processes to administer land. Laws required different registries to be set up under each law. These were maintained at district and national levels, and it was not clear that the registries were connected. This system allowed graft. Parallel title and deeds systems further complicated the system (Walley 2011). Likewise, planning systems were mostly ineffective, as reflected in unplanned city growth and unauthorized development.

Devolution has the potential to reverse this underperformance, as national institutions for land management have been dramatically changed to enhance transparency and accountability. The National Land Policy adopted by Parliament in 2009 was intended to end inequality in land allocation. This policy laid out for the first time a comprehensive vision for the country's management of land. The legislation that followed—including the 2010 constitution, the 2012 Land Act, the 2012 Land Registration Act, and the 2012 National Land Commission Act—made significant improvements in land governance: tenure types have been changed to recognize different legal options for land ownership (such as communal ownership), and laws governing titling and land registration have been rationalized. But the policy hardly mentions urban land, focusing instead on rural and agricultural land.

But the implementation of these laws has not resulted in the expected changes, as the contestation of land management and planning functions impedes progress by devolved units of government. The most important challenge facing real reform in the land sector has been the jurisdictional uncertainties between the National Land Commission and the Ministry of Lands, Housing and Urban Development (MLHUD). Since the National Land Commission was established under The National Land Commission Act, 2012, there has been uncertainty on the roles of the Ministry and the NLC in administering functions such as land registration and the renewal of leases. The institutional dispute is now in the courts after mediation appears to have failed.[1] The continuing lack of clarity between these two actors undermines the prospects for better and more equitable planning, urban land management, and fiscal performance of counties under devolution. The poor functioning of urban land markets and institutions, combined with low incomes, continues to drive the informality of Kenya's cities even under devolution.

Urban Challenges: Ensuring a Livable Urban Kenya for All

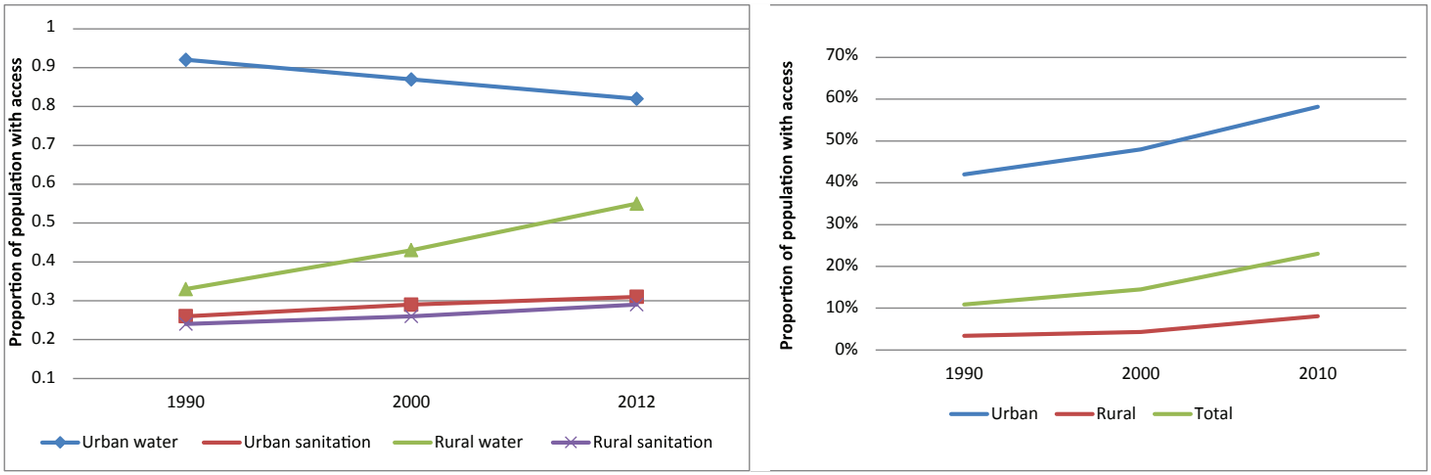
Urban services have not kept pace with urbanization

Kenya's new constitution guarantees access to basic services such as water, sanitation, and a clean environment as a basic right for all Kenyans. Despite this formal recognition, investment in network infrastructure has not yet been upgraded fully in rural areas which are the lowest served, although some improvements are being seen. But even more surprising perhaps, the investment in network infrastructure is failing to keep up with demand in urban areas, generating a large infrastructure deficit (Figure 3). In Kenya's two major cities—Nairobi and Mombasa—water demand exceeds supply by more than 150,000 and 100,000 cubic meters per day, respectively. Only about 18 percent of the total urban population has access to a sewer

[1] Since this report was finalized, a Supreme Court ruling made on December 2, 2015 determined that issuance of title deeds was under the jurisdiction of the Ministry but that the two entities should work in consultation and cooperation in matters of land registration more broadly.

system, 70 percent rely on septic tanks and pit latrines, and the rest have access to no sanitation services at all. In addition, existing wastewater treatment systems operate at very low efficiencies (about 16 percent of design capacity for 15 plants assessed in 2010), leading to discharge of untreated effluents. No urban area in the country has a properly engineered sanitary landfill, and most solid waste is dumped in open dump sites or other undesignated areas, or burned.

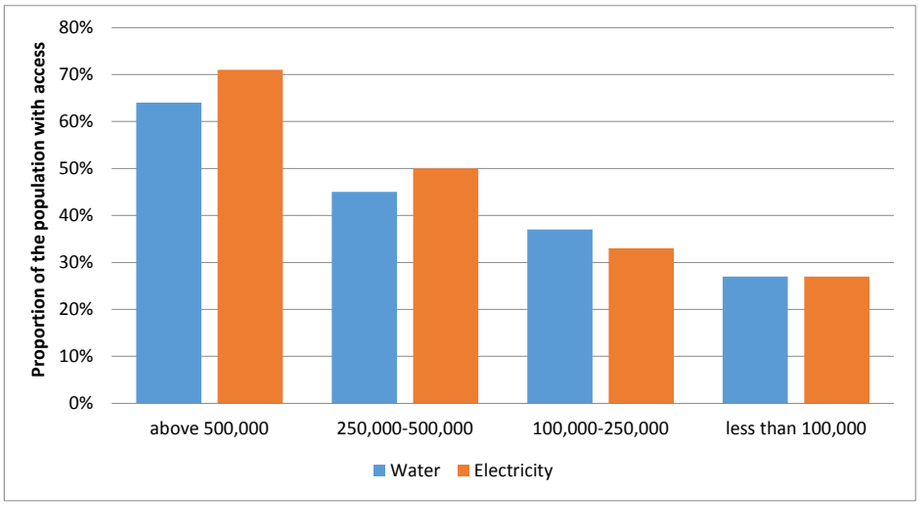
Figure 3: Access to water and sanitation (left) and to electricity (right) in Kenya



Source: WHO/UNICEF Joint Monitoring Program (2014) and Kenya Power (2014).

There is great variability in access to basic services between urban areas of different population sizes. Access to services such as water, sanitation, and electricity is generally better in more populous urban areas (Figure 4). This is consistent with international trends, as larger urban areas tend to have better access to finance (though less so in Kenya after devolution) and lower levels of urban poverty than smaller urban areas.

Figure 4: Access to water and electricity by population of urban area

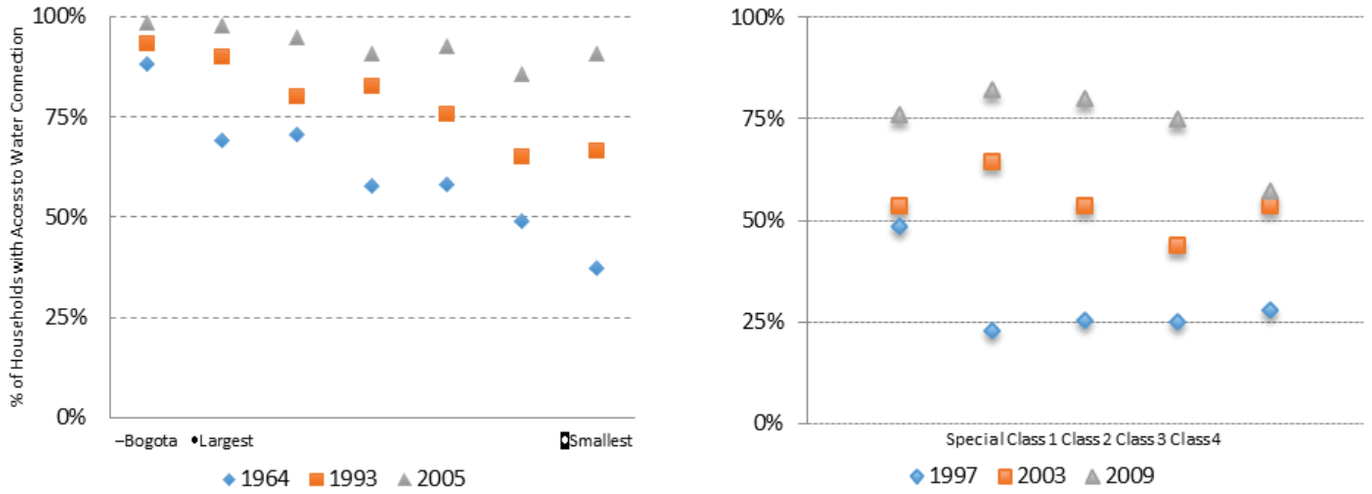


Source: Based on Kenya National Bureau of Statistics (2009).

But a convergence of living standards is possible across urban areas given adequate investment and policies aimed

at equalizing services. Colombia provides an example of how gaps in access to services across city sizes can narrow considerably over time. In 1964, Colombia's largest cities had very high (88 percent) levels of access to water, but low levels (37 percent) for the smallest cities. Today, access levels are above 85 percent for all city sizes. Vietnam saw an even more dramatic trend over a much shorter period (Figure 5). Kenya's Vision 2030 holds out these countries as middle-income comparators.

Figure 5: Access to water by city size in Colombia (left) and Vietnam (right)



Note: Special cities are Hanoi and Ho Chi Minh City. City class 1 is largest and class 4 is smallest.
Source: World Bank (2011).

Although smaller urban areas have universally worse access to basic services, larger urban areas show greater divergence in access between formal and informal areas. In Nairobi, for example, 84 percent of formal households have access to a piped water connection within the house, a figure that drops to 36 percent for households in informal settlements. This disparity holds for all other network and infrastructure services, including sanitation, electricity, solid waste collection, and access roads. It also holds across urban areas, with some variations. For non-network services such as health and education, there is much less disparity on access (although this says nothing about quality) between formal and informal areas. So the formal/informal disparity in access to basic networked services may have much to do with the legacy of policies that make it difficult to invest in infrastructure services in informal settlements.

Because the poor spend proportionally more on services than the non-poor, increasing services to the poor will require special efforts to improve affordability. Households in the lowest income quintile, for example, spend 12 percent and 18 percent of their incomes on water and electricity, respectively. The nonpoor spend on average 2 percent and 3.2 percent, respectively.[2] Spending so much on services (and on food and transport) leaves little money for housing, often contributing to informality. Measures could include lowering the costs of connecting to networked services by connecting all at once, offering loans for connections that can be repaid over time, and providing subsidies to residents of poor neighborhoods. But the challenge must be viewed in the context of devolution, which has brought new institutions with new responsibilities but often neither the capacities, clear mandates, nor resources to introduce the policies and other interventions that are needed (discussed in the section "Strong Institutions Required for Pro-Growth and People-Centered Urbanization").

At the same time, it is important that utilities properly price their services to achieve cost recovery. For example, urban water is underpriced, covering on average only 80 percent of operations and maintenance costs. This does not produce sufficient revenue to finance the capital investments for infrastructure rehabilitation or expansion that are essential to sustain the system and enable the public sector to meet

Box 1: Devolution and former institutional roles in water supply and sanitation sector in Kenya

Under the system evolved through water sector reform since 2002, WSBs (owned by the national government)have been responsible for providing water services and are authorized to do so through a license issued by WASREB (Sections 53 and 47 of the Water Act of 2002). But the actual delivery of water services is to be done by an agent of the WSBs—except where this is not possible or practical, in which case the WSB can provide the services itself (Section 55(2)). These agents are the water service providers that still deliver WSS under a contract with the WSB. The WSB is the owner of the assets (or was intended to be the owner), while the service providers are the asset operators. These licensing and contractual arrangements have largely remained since the counties came into being in 2013, but they have been controversial.

Although the counties with substantial urban areas have largely adopted service providers as service-provision vehicles, a number of counties have not been comfortable with the WSBs, which they see as instruments of national government that are insufficiently sensitive to county priorities and concerns. Some have argued that since devolution allocates responsibility for WSS provision to counties, the WSBs have become redundant. These issues remain on the agenda for several counties. In counties where bulk water and other interjurisdictional issues are prominent, such as the coast region, this has been intertwined with calls for a new bulk water arrangement, with the role of the Coast WSB—which provided bulk water services before devolution—to be renegotiated.

its constitutional mandate of universal access. Ideally, tariffs should generate enough revenues to cover operations and maintenance costs, subsidies to the poor, and, where feasible, investment costs. The electricity sector sets a good example of this, because its retail tariffs are set at levels that reflect the capital, operations, and maintenance costs of providing services. And both the electricity and water and sanitation sectors provide good examples of subsidy policies and programs to increase access for the poor. The electricity sector, because of its centralized institutional structure, has made a more concerted effort to increase access to the poor, while the more decentralized and complex institutional structure of services such as water and sanitation make universal-access subsidy programs more difficult.

Devolution poses a particular challenge for provision of some urban services, at least in the short term. This is in part because most counties are predominantly rural and have less incentive to invest in urban areas. And although urban centers produce most county own-source revenues, counties may channel their investments to rural areas. Some counties may also see urban utilities such as water companies as a potential source of revenue to divert to other areas, rather than keeping the revenues for investment in the water sector. Institutional, legal, and financing frameworks vary widely for the electricity, solid waste management, and water and sanitation sectors in Kenya.

Informality is the de facto housing solution for a majority of urban Kenyans

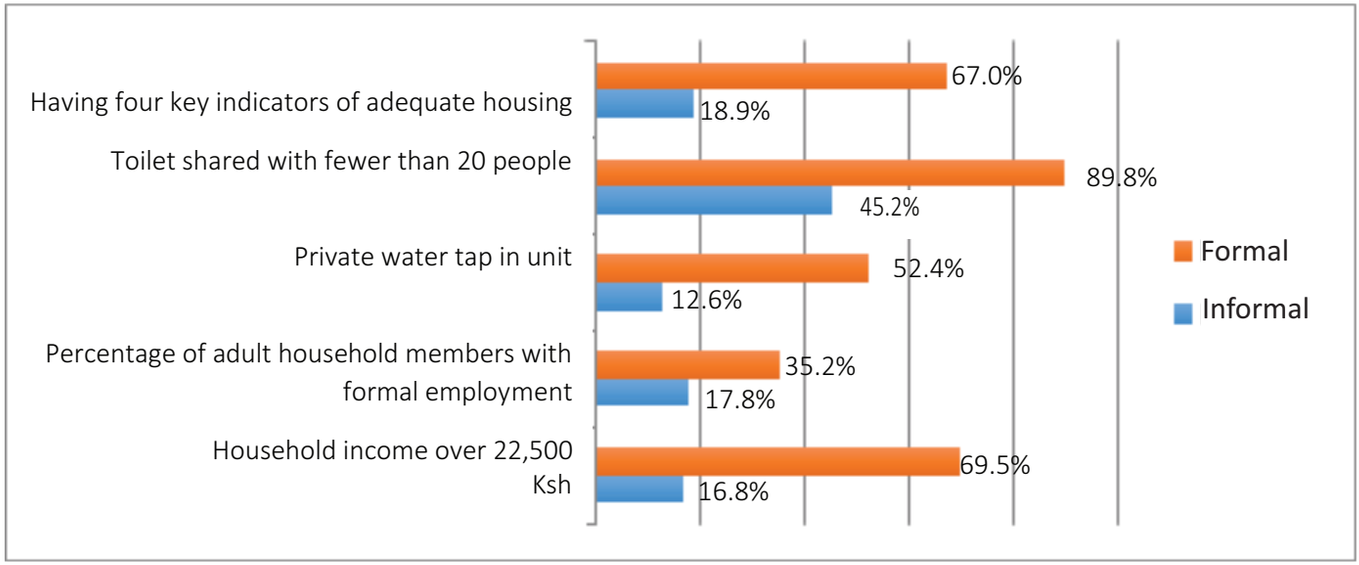
The formal–informal dichotomy carries through beyond basic services to housing choice and conditions (Figure 6). Roughly 60 percent of Kenya's urban households live in housing that would be defined as a slum under the Millennium Development Goals. Formal housing supply is not keeping pace with the growing urban population. Informal housing has become the only housing choice for most urban Kenyans. There are indications that households compromise on living conditions to remain within reasonable travel times of their jobs.

The demand for urban housing will continue to grow as Kenya urbanizes. In 2010 the demand for urban housing was estimated at around 80,000 units a year, with demand projected to increase to nearly 300,000 units a year by 2050. By comparison, in 2013 only 15,000 housing construction permits were issued in Nairobi, where most demand exists, and most of these were for high-income apartments. Only 2 percent of formally constructed houses are targeted to the lower income segments of the market, which account for the largest share of demand. Furthermore, these estimates of housing demand are for new housing only and do not speak to the high qualitative housing deficit in Kenya, as manifested in the high level of informality. The high cost of formal housing means that home ownership is out of reach for most urban Kenyans—renting, mostly in the informal market, is more accessible and affordable**.** The vast majority of urban Kenyans find housing through rental markets (91

percent in Nairobi). Few can afford mortgages (there are fewer than 20,000 mortgages in Kenya), and still fewer can access even the cheapest housing units produced by the formal market—worth about $15,300 in 2012—because the average urban household can afford to spend only about $74 a month on housing.

policy makers will need to focus on all segments of the housing market. Internationally, most governments play only a small role in providing housing. Most housing is provided by the formal or informal private sector, such as civil society groups and individual households, and informal developers yet government housing policy is largely unresponsive to the

Figure 6: Living conditions in formal and informal urban areas



Source: World Bank (2014)

The high cost of land in Kenya is a binding constraint on housing affordability. Land usually makes up 60 percent of the cost of housing in urban areas—and even more in Nairobi. Reducing the cost of land through market and policy reforms can reduce the overall cost of housing. The dysfunctional land markets and institutions described previously are largely responsible for the high cost of land in Kenya. Land costs are also raised by high land stamp costs (2 to 4 percent of land value) and legal and survey fees. Taxation policy for rental income (taxed at 30 percent) is a disincentive to producing formal rental housing, and outdated building codes can add as much as 60 percent to construction costs. Large minimum lot size standards (around 160 square meters) also drive up the cost of land. High financial and transaction costs for surveying and registering properties, inappropriate tax policies, outdated building regulations, and the high cost of construction materials keep costs high, keep the construction sector from maturing, and keep informal development growing.

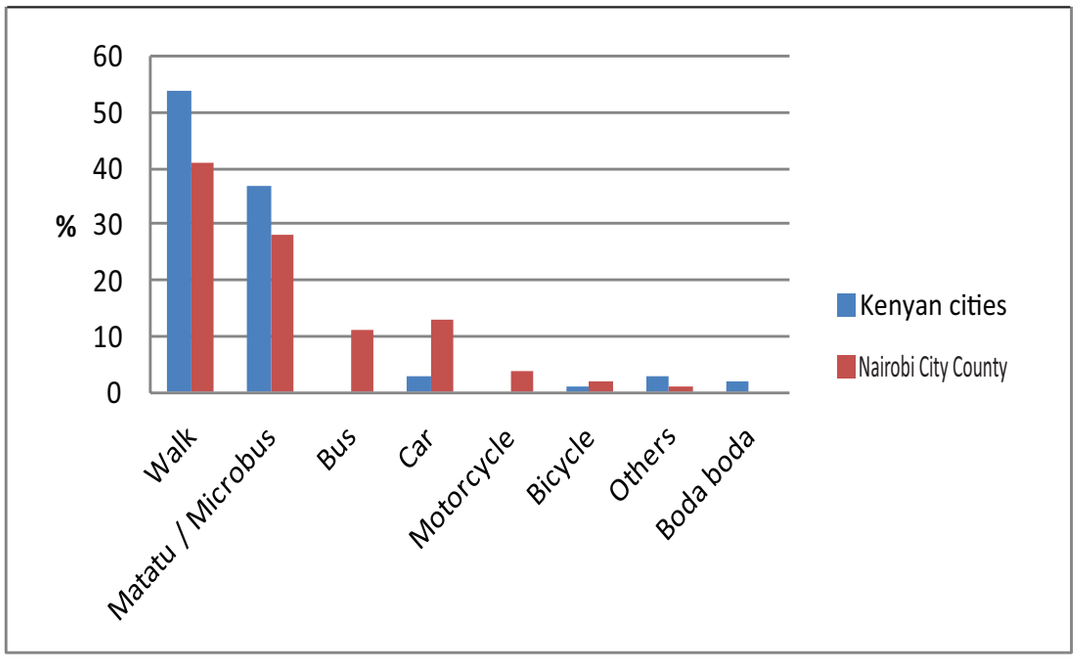
To increase access and reduce the cost of quality housing, conditions and modes of operation in the sector at large in Kenya. Responsive policies would include enabling creative ways to reduce land costs and the costs of other inputs such as finance and construction materials. Facilitating access to microfinance—not just mortgage finance—and other innovations that accommodate the incremental approach to housing used by most low-income households will be required. In addition, government policies will need to recognize the large share of urban dwellers who rent housing, rather than focus primarily on increasing home ownership.

Poor urban access hurts productivity and livability

Nairobi faces a daunting access challenge that may be the future for other urban areas of Kenya. Mobility patterns in Nairobi and other Kenyan cities do not differ drastically, making Nairobi's intracity connectivity partly representative of all Kenyan cities. Sixty-nine percent of trips in Nairobi are made on foot or by *matatu*,[3] 80 percent if buses are included (Figure 7). Yet only 11 percent to 20 percent of formal commercial or industrial employment opportunities can be reached by the average household within an hour

using one of these modes. This lack of overall access is associated with—and in part caused by—crippling congestion that has brought average door-to-door car and *matatu* commuting speeds down to 14 and 13.5 kilometers per hour, respectively.

Figure 7: Transport mode share comparison



Note: A boda boda is a two-wheeled East African bicycle or motorcycle taxi. Nairobi is the only city with an effective municipal bus service.
Source: JICA (2013) and World Bank (2014).

This poor access hurts productivity. On the production side, it holds down the size of the labor market, preventing workforce–employer sorting and hampering the potential for agglomeration economies. Firms must therefore offer higher wages. Although higher wages can benefit households with skilled workers, they might impede reaping the full benefits of productivity gains and entering international markets. From the household perspective, this constraint may be manageable in the short run, but as the nature of employment shifts from nontradable services to manufacturing and tradable services, and from informal to formal, demands for metropolitan area–wide access are likely to increase rapidly.

Poor access also undermines livability. Households are ready to compromise on living conditions to remain within reasonable travel times of jobs. In Nairobi, most residents of informal settlements have jobs and comparatively high levels of education relative to those living in formal housing, yet their living conditions remain basic. This probably reflects the premium already placed on access. With Kenya at lower middle-income status and average incomes and wages rising, the value of time lost to commuting is likely to soar and increase demand for effective policy responses from government.

Given the high inertia and path dependencies that characterize urban settings, decisions on land use and mobility will shape the future of Kenya's cities for decades. Nairobi in particular is at a crossroad and can go down one of two main routes. It can try to build its way out of congestion by investing in more roads to serve the increasing motorization rate, while managing traffic through regulation and pricing mechanisms. Alternatively, it can invest in public transport networks with careful land use planning to promote a more compact and transit-oriented urban area. Either way, the fundamental priority is to avoid a trade-off between access and sustainability, locking cities into highly land-consuming and car-dependent development patterns. Nairobi's is a cautionary tale for cities that are smaller, but growing.

Strong Institutions Required for Pro-Growth and People-Centered Urbanization

Kenya's devolved system of governance will impact urbanization.

Kenya's urbanization is taking place within a major shift toward political, fiscal, and administrative devolution. Kenya's 2010 Constitution, which came into full effect in March 2013, provides for two autonomous but interdependent levels of government; national and county. At the county level, 47 counties were established with mainly elected assemblies, elected governors, and governor-appointed cabinets ratified by the assembly. The Constitution provides for national and county governments to be distinct and interdependent. The national government has limited capacity to change the system of county government, because the key elements of the devolved structure are enshrined in the Constitution and can only be changed by referendum.

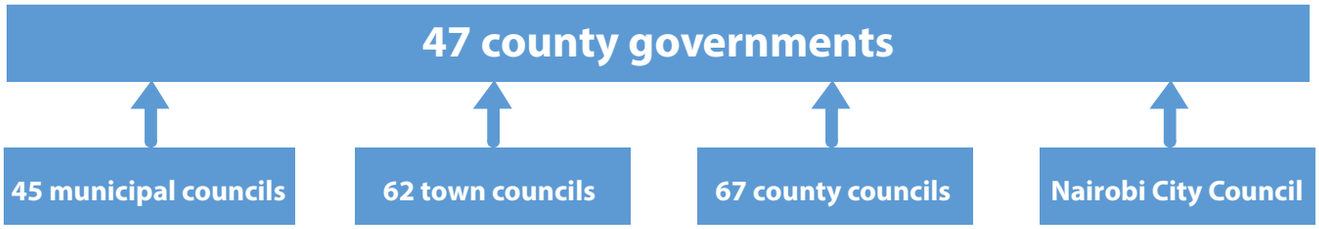
Addressing long-standing spatial inequality is a key objective for devolution, as was ensuring maximum autonomy for county governments. These twin objectives are realized through the emphasis on a single unconditional transfer, the county equitable share, which is allocated among county governments on the basis of a formula that is decided every five years by the Senate, the house of Parliament that represents the counties. Though that system is designed to address inequities, particularly the long-standing urban bias, the equitable share formula, as discussed later, creates potential financing problems for more urbanized counties. Urban areas are also challenged under devolution to put in place robust urban management institutions.

A key task during preparation for devolution was to design a system of governance and management of urban areas as required by Article 184 of the Constitution. The previous system of elected local councils has been abolished and is expected to be replaced with a system of appointed boards. The Urban Areas and Cities Act provides for a three tiered system of city and municipal boards, and town committees (Figure 8). The County Governments Act provided for existing local councils to be abolished immediately after the new county governments were elected. .

Box 2: Local government before devolution

Implementing devolution was complicated by the need to transition from the system that was in place before devolution, to the new system mandated by the laws passed between 2010 and 2012. Before devolution, Kenya had one of the oldest continuous systems of local government on the African continent. It involved elected municipal, town and county councils, but they were subject to much greater control and oversight by national government than is the case for county governments. National supervision was carried out by the Ministry of Local Government, part of which was absorbed into the Ministry of Lands Housing and Urban Development after the 2013 election. One hundred and seventy-five local authorities were created under the 1963 Local Government Act, covering the whole of the Kenyan land mass. They were classified into four categories; one city council (Nairobi), 45 municipal councils, 62 town councils and 67 county councils. Local councils were responsible for most of the urban functions that were assigned to county governments under the Constitution. A number of county councils had significant urban functions in areas where a town or municipality had not been formally established, including the tourist township of Diani in Kwale County, with an urban population of around 60,000. Local authorities were financed partly by their own revenues, which were very similar to those now assigned to county governments, and by the Local Authorities Transfer Fund (LATF) which channeled national transfers to the local authorities based on a formula. The LATF transfer fund formula was heavily weighted to urban population, so it resulted in a spatial distribution of resources that favored large urban areas.

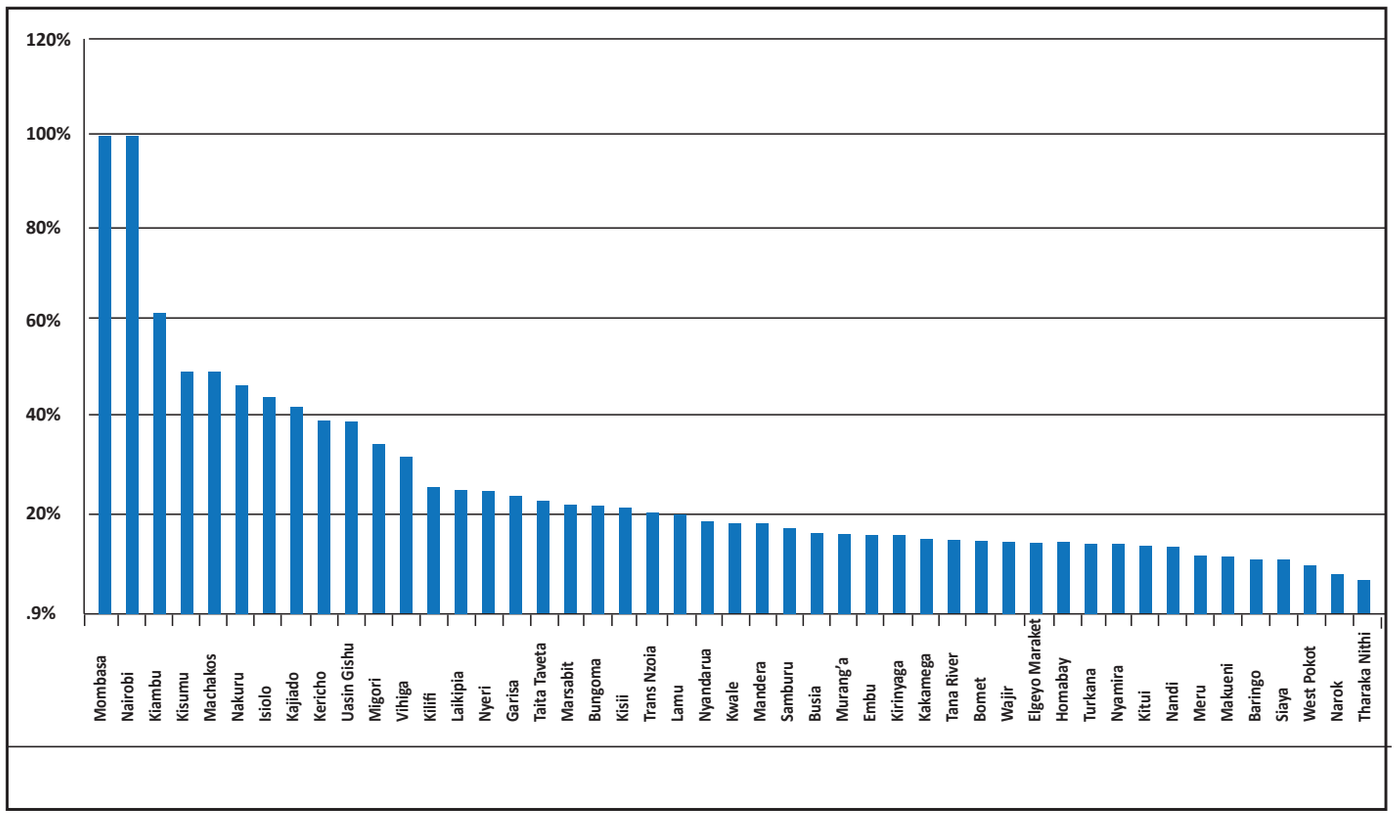
Figure 8: System of governance and management of urban areas



Urban management is not automatic under devolution

Most countries provide for a third tier of government for jurisdictions of around 30,000–150,000 residents. Even if local government is not provided for in the Constitution, it is usually established under ordinary national laws or state laws. Increasingly, even federal countries like India, Mexico, and Australia have sought to formally recognize local government in the Constitution, recognizing the increasingly important role of urbanization and sustainable urban areas for economic growth and social development. Kenya's urban areas may not receive the attention needed to manage the urbanization process effectively, because of the way urban populations are distributed across counties. Although urbanization is rising, few counties are predominantly urban (Figure 9).

Figure 9: Percentage of county population living in urban areas, by county



Source: Kenya National Bureau of Statistics population census (2009).

It was envisaged that the Urban Areas and Cities Act would provide a framework for the counties to establish their own systems of urban management but this likely not sufficient for robust urban management. In fact, few have done so, probably as the result of two factors. First, the criteria for establishing a municipality include a minimum population of 500,000. Only three urban areas outside Nairobi and Mombasa satisfy this criterion. Currently, the only option open to county governments in other urban areas is to establish town committees. Town committees

have less power than municipal boards, which have separate legal status. Neither boards nor committees will provide the managerial autonomy needed for robust urban management. The result is a potential urban management deficit at a time when Kenya will need strong urban management institutions to manage its urban transition.

Kenya's prospects for delivering sustained economic growth to its fast-growing urban population depends crucially on urban infrastructure. How urban areas are governed will likely determine how sustainable Kenya's growth will prove under fundamentally changed urban governance arrangements brought about by devolution. Establishing an urban board does not guarantee it will have either the autonomy or the finances to manage an urban area. Clear delegation and assignment of financial resources by the county government are needed.

Planning institutions need reform to be effective

Devolution provides an opportunity to reform urban planning and land management institutions. Effective institutions in these areas are integral to Kenya's economic development goals. But the rapid pace of urbanization presents daunting challenges for them, because for almost 50 years they have been centralized, technocratic, and nonparticipatory, reducing their efficacy and rendering urban planning ineffective.

The National Land Policy of 2009 created a road map for institutional reform and rationalized laws on land tenure, titling, and registration. But clarity is needed regarding the roles of the National Land Commission and the Ministry of Lands, Housing and Urban Development (MLHUD) in land management and planning**.** It bears repeating that because disputes over land management and planning functions are impeding progress by devolved units, the most immediate concern is to resolve the division of power (and functional responsibilities) between the two agencies.

Commitment to development control and public participation are critical for good planning. Development control was one of the central weaknesses in Kenya's planning system before devolution. Historically, it has been very ineffective, with much development proceeding without oversight and in contravention of prepared physical development plans (Figure 10). There is widespread acceptance of informal and extra-legal development throughout the country. Planning institutions will need to strengthen development control to increase efficacy and reduce opportunities for politicization and graft. Other weaknesses in planning have been a lack of stakeholder involvement and broader community understanding of the objectives, methods, and legality of planning. The new institutional framework mandates public participation in devolved governance and requires county authorities to design and promote civic education. But public participation is still weak and risks being no more than one-way listening, with little impact on goal setting and actual decision making.

Figure 10: The case for development control—building codes are evaded and residential structures collapse and kill residents

Source: REUTERS/Noor Khamis. Nairobi, December 17, 2014

Vision 2030 acknowledges the centrality of well-functioning cities and metropolitan regions to the country's economic future. It has identified a program of investment in six potential metropolitan regions to spur economic expansion, facilitate regional equity, conserve land and natural resources, and distribute population growth. Despite Nairobi's importance as an economic center, growth and development in the Nairobi metropolitan area are uncoordinated and unplanned. Yet the institutional framework exists for voluntary cooperative arrangements between counties, and some counties are already seeing the benefits of working together. The national government also recognizes the importance of metropolitan regions and can help enable cooperative arrangements at county level.

Better local economic planning can foster local economic development

Counties need to embrace devolution as an opportunity to drive growth. But recent anecdotal evidence suggests that, facing resource shortages, they give economic growth and competitiveness low priority. Urban counties in particular are grappling with fewer resources for development yet higher wage and service-delivery burdens. Counties need to prioritize issues of economic growth and job creation. Many young people are moving to cities—and will continue doing so—in search of jobs, inundating urban regions until the private sector develops. While central government should provide greater support in overcoming the challenges of the transition process, county governments should focus on economic development to make the most of the resources at hand.

County integrated development plans (CIDPs) could be a potent tool to identify the challenges and opportunities of devolution, especially once updated to eliminate their weaknesses. All counties are required to develop a CIDP. These are meant to combine economic, spatial, and sector plans and inform county budgets over five years. CIDPs are also expected to define priorities and provide lists of flagship investment projects. The CIDPs offer an opportunity for counties to organize their economic development efforts, but counties and the national government need to improve the current CIDP model. Too many of the first round of CIDPs were unrealistic and unimplementable.

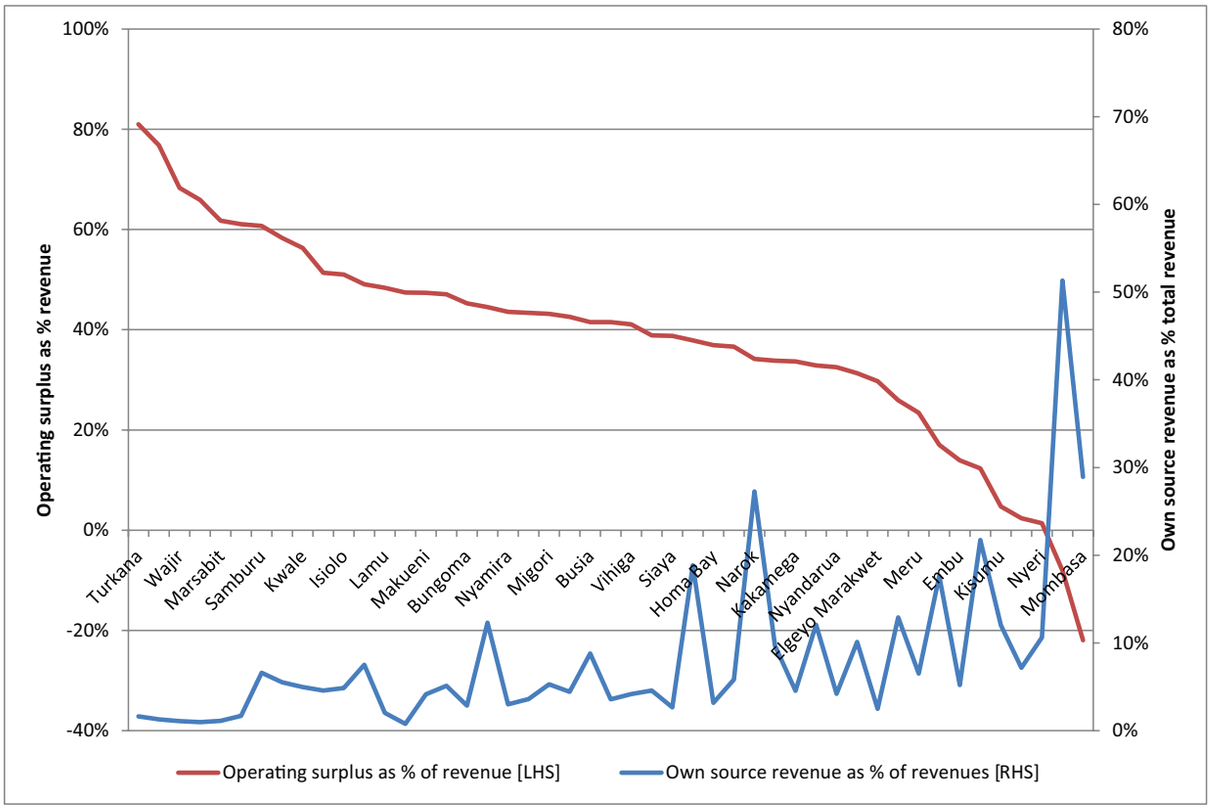
Lack of urban financing threatens progress

Urban financing is central to the success of devolution, especially for larger counties with major cities and fast-growing medium towns—the country's growth hubs. Rapid urbanization means that adequate financing of urban services and infrastructure investment are essential to sustaining growth and delivering living standards commensurate with the country's lower middle-income status. Without proper financing, there is a risk that urban services will be underfunded, deteriorating service delivery in the short term and the urban asset base over the longer run. Globally, financing of livable, well-functioning cities is increasingly recognized as paramount for economic growth, and institutional arrangements around the world are structured accordingly. But lack of clarity on how urban areas will be managed raises the risk that urban services will not be adequately financed in a context of competition with rural areas within the same county.

Measures to increase county revenues and manage costs are urgently needed. Recurrent financing of ongoing service delivery and maintenance of assets is proving a fiscal challenge in predominantly urban counties. The spatial redistribution of resources under the equitable share formula approved by the Senate (which favors counties with small populations) and was introduced in July 2013 with no provision for gradual adjustment), has led to a shift of resources from heavily urban counties with their large inherited costs, resulting in a revenue deficit in urban areas. Narrow county own-source revenue bases mean these counties have limited scope to increase their resources by mobilizing revenues (Figure 11). Property tax rates offer the most scope to increase revenues, but counties face political and information challenges to updating their fiscal cadasters and developing modern systems of collection and enforcement.

The combination of low fiscal surpluses and fiscal conservatism in the emerging county-borrowing framework could also play into an urban investment deficit. Because urban counties' budgets can barely cover their inherited recurrent expenditures and liabilities, they struggle to run the operating surpluses to finance infrastructure investment. Yet the demand for urban infrastructure requires increased investment finance. Predominantly urban counties have the largest infrastructure needs because they support far larger populations and greater economic activity and therefore will need the largest loans. Appraising the options to address these needs should balance their impact on fiscal risk against their contribution to growth and social welfare. Ultimately, if counties cannot secure established and legitimate avenues for investment financing, they will find nontransparent and possibly unsustainable ways to circumvent the national borrowing framework, increasing their fiscal risks.

Figure 11: County own-source revenues and fiscal surpluses (% of 2013/14 revenues)



Source: World Bank staff calculations.[4]

Toward Developing Policy Priorities for Urbanization

Of the immediate policy priority areas, we recommend three that policy makers should put at the top of their agendas if Kenya is to make the most of its urban future. These include ensuring effective urban management and governance structures, modernizing land and planning institutions, and ensuring a sustainable urban financing framework to finance the urban services and infrastructure agenda. In short, it means prioritizing the institutional agenda as laid out in the earlier chapters of this report. Ensuring that these institutions function well will help Kenya address its excess of informal housing, its large urban infrastructure gap, and the congestion problems caused by poor land-use/transport planning and management. That is not to say that policy priorities for housing, basic urban services, transport, and local economic development are not also important, for these too need to be addressed. But developing the basic institutions required for effective urban management and effective urbanization will enable policy makers to effectively address these challenges as well.

Therefore, the immediate policy agenda should focus on the institutional priorities required for urban areas to flourish under devolution and the new constitution. The priority areas would thus include an immediate focus on the three-legged strategy of urban management, urban land governance, and urban finance.

Ensuring effective urban management and governance structures

Devolution has given county governments far more responsibility for infrastructure and service delivery functions. But though the Urban Areas and Cities Act envisages major duties for urban boards (if they have been formed), because they are not a level of government, boards will depend on county governments for function assignments and funding.

Review and revision of the Urban Areas and Cities Act should therefore be a priority. At a minimum, policy priorities should focus on developing a formal process for counties to delegate their urban functions to urban boards. To ensure clarity of accountability, urban boards must be empowered through a formal process of assignment or delegation, which could be included in a regulation under the County Government Act (which requires that each county prepare investment plans and budgets for development of county mandated services) or the Urban Areas and Cities Act.

Modernizing land and planning institutions

Another priority should be to advance the policy and administrative reforms already started in the land sector. In the short term, the roles of the MLHUD and the National Land Commission need clarifying. Although the role and function of the National Land Commission have been the subject of explicit enabling legislation, and the transfer of functions out of the pre-devolution Ministry of Lands into the National Land Commission has been enumerated in both the Constitution and the National Land Commission Act, the remaining role for the ministry has received less attention. The resulting uncertainty has led to confusion on the administering functions like land registration.[2]

The MLHUD needs to undertake a strategic planning process through which it determines how to restructure its departments and redeploy its personnel. Plans created at county level could be submitted to the ministry for review and approval to ensure they are consistent with the National Land Policy, the (still draft) National Spatial Plan, and other forthcoming policies. While the National Construction Authority, established in 2011 to oversee the construction industry, has expertise on the quality of buildings and their inspection, its primary role is to vet and register contractors. Its role in permitting and building inspection needs to be clarified, but the authority could provide training and technical assistance to county government personnel in permitting processes, inspections, and final approvals. In the medium term, a comprehensive review of land legislation and the National Land Policy is required to determine overlaps and gaps and to ensure consistency across all legislation. This would include completing implementation of the National Land Policy.

Ensuring a sustainable financing framework

Expanded investment in urban infrastructure and services will be fundamental to Kenya's growth prospects and social outcomes. By way of example, estimates suggest that each US$1 Kenya spends on water and sanitation infrastructure can generate US$8 in saved time, increased productivity, and reduced health costs. Inadequate sanitation infrastructure costs the country roughly US$324 million annually—roughly 1.0 percent of GDP.[5] Similarly, investments in transport infrastructure can generate savings in the long run.

Increasing travel speeds could save more than US$50 million a year, the current cost of congestion in Nairobi. The value of time lost to travel in Nairobi is estimated at between US$0.8 million and US$4 million per month, based on the 47 minutes' travel time of an average trip in Nairobi. Daily time costs per capita, valued as a share of household income,[6] come to some $0.25–4.00.

County governments need adequate recurrent revenues and access to capital to finance infrastructure. But the costs of financing and maintaining urban infrastructure are not well understood, and this may have contributed to underestimation of the new formula's impact. Although the laws implementing devolution mandated a costing of county functions, it has not been done. A National Treasury "costing" exercise conducted just before devolution was based on analysis only of national budget allocation to devolved functions in 2012/13. It did not fully calculate the cost of urban services, which were only partly funded from the national budget, and excluded urban costs met from local authorities' own revenues. Analysis from the United States suggests that the unit costs of delivering urban services rise as city size and density increase (Ladd 1992). While there are no data on this relationship for Kenya, it makes intuitive sense. Connective infrastructure (roads, public transport, sewerage, and water) become far more expensive in areas of higher population density. Kenya's urban areas also have to meet the services and infrastructure demands of informal settlements and of residents from neighboring counties who come to urban areas to work, trade, and access services.

The government has four main courses of action by which to ensure adequate financing for urban areas and manage

2 Since this report was finalized, a Supreme Court ruling made on December 2, 2015 determined that issuance of title deeds was under the jurisdiction of the Ministry but that the two entities should work in consultation and cooperation in matters of land registration more broadly.

urban counties' fiscal stress. The first is to increase spending for urban functions. In the short term this would include establishing urban entities such as management boards, and in the medium term benchmarking of cost-of-area functions in selected urban counties (to establish the true costs). In addition, county governments should establish asset inventories and develop asset maintenance and renewal plans. In the long term, conditional grant instruments could be set up with matching funds from counties.

Second, address the urban revenue deficit. In the short term this would include supporting counties to modernize property tax legal and administrative frameworks. It could include assignment of some additional tax authority to counties. Of course it is incumbent on counties to use any tax and revenue-raising powers responsibly—taking care not to overburden businesses and inadvertently lose competitiveness, and to avoid regressive tax burdens that fall on the poor. An evaluation is needed to check if the impacts of county revenue raising are currently efficient, legally based, equitable, and sound in multiple dimensions. In the medium term the government should include allow counties to rebuild their fiscal cadasters. In the long term it should evaluate wider policy options to broaden the county tax base.

Third, help fiscally stressed counties to adjust. This includes developing and implementing a framework to monitor county fiscal stress in the short term and to review and restructure inherited county debt. In the medium term the government needs to build a framework for counties to address the problem of unaffordable inherited wage bills and consider more closely the needs of urban areas in the next generation of the equitable share formula.

Fourth, unlock urban finance. In the short term this step should include revisiting county borrowing limits to let them borrow adequately and to reward fiscally responsible counties. It must include a review of different models for financing urban investments.

Additional policy considerations

This report outlines policy considerations in each chapter: Access to Basic Services in Urban Areas, Access to Affordable Housing in Urban Areas, Connectivity for Access and Economic Growth, Land Management, and Urban Planning and Financing Urban Services. These recommendations consider short- and medium- to longer-term actions that can be taken at the national and subnational level to resolve the constraints in these sectors that prevent a smooth urban transition in Kenya. It is by no means an exhaustive list but rather is meant to provoke a deeper policy discussion on these important issues. These policy considerations are summarized in Figures 12–14.

Figure 12: Land, planning, and connectivity

Short Term

- Ensure the establishment of urban and rural planning offices at the county level (subnational).
- Provide web-based access to doing laws, maps, building codes, and standards to the general public (national and •subnational).
- Facilitate inter-jurisdictional cooperation by county governments for planning, services, land use, and economic development (national enabling, subnational implementing).
- Clarify the policy role of the Ministry of Land, Housing and Urban Development, especially as it pertains to urban planning and land management and administration (national).
- Clarify the role of the National Construction Authority relative to building inspection and support skills development in this area among county staff (national).
- Issue one unified set of guidelines for county integrated development plans (CIDPs), aligned to international best practice (national).
- Ensure CIDPs emphasize issues of economic development (subnational).
- Continue and accelerate efforts to make the matatu system more responsive to user needs (national and subnational).
- Implement effective traffic management measures (subnational).
- Develop and use parking policies as a way of managing transport demand (subnational).

Medium to Long Term

- Strengthen county level participatory planning capacity (subnational).
- Develop model legislation for zoning by-laws, development controls, and decision making approval processes.
- Finalize, adopt and distribute the national spatial plan (national).
- Complete the development of the National Data Infrastructure Database (national).
- Establish county-specific land information systems (subnational with national support). Develop and implement civic education about planning and development control on private land (national).
- Support third-party development-control watchdogs that are community based (subnational). Conduct a comprehensive review of land legislation and national land policy and continue with improvements to the property registration system (national).
- Adopt legislation that aligns sector operations (such as water and sanitary services) with the Constitution and other relevant legislation (national).
- Ensure counties use data from monitoring and evaluation systems to prepare county investment plans (subnational with national support).
- Continue to enhance efforts to roll out mass transport systems based on BRT options (national and subnational).
- Develop multimodal, hierarchically integrated mass transportation systems (subnational with national support).
- Develop and implement policies that direct growth towards specific polycentric centers beyond the central business district (subnational).
- Gradually reorganize land uses that will enhance accessibility even in the absence of effective transport improvements (subnational).
- Promote more compact and transit oriented design (subnational and national in metro regions). Acknowledge and continue to foster the interconnectivity of Kenya's portfolio of cities, especially noting the importance of international connector cities like Nairobi, Mombasa, and Kisumu (national).
- Promote the connectivity of Kenya's urban hubs/metropolitan areas through better connectivity linked to better land-use and transport planning (national and subnational).

Figure 13: Basic services and housing

Short Term

- Plan for and provide basic urban services (water, sanitation, electricity, solid waste management) on business principles (national enabling, subnational implementation).
- Undertake a thorough and comprehensive assessment of the capacity of counties to deliver basic services (national).
- Adopt legislation that aligns sector operations with the Constitution and other laws.
- Strengthen the current systems for monitoring and evaluating service providers to improve regulation (national).
- Host a national forum to discuss possibility of establishing a dedicated fund to subsidize the costs of connections for urban services in informal settlements (national).
- Encourage inter-jurisdictional cooperation for service provision (solid waste management, water).
- Review and revise legislation that supports small-scale housing rental options formally (national and subnational).
- Review and revise building and development codes that can formalize some informal housing and reduce the cost of providing housing (national and subnational).

Medium to Long Term

- Develop mechanisms that support incremental housing and community led housing initiatives (subnational with national enabling support).
- Investigate ways to reduce land costs closer to urban centers (national).
- Reduce construction costs through programs with the private sector (national).
- Develop mechanisms that better target access to housing financing options to include the urban poor, including subsidy policies (national).
- Establish a subsidy fund for basic urban services for the poor (National).

Figure 14: Urban governance and finance

Short Term

- Revise/reduce the thresholds for determining urban classifications.
- Develop a formal process for counties to delegate their functions to urban boards •Prioritize urban governance (national).
- Modernize legal and administrative framework for property rates (national and subnational). •Assign hotel bed tax and agricultural cess taxing powers to county governments (national).
- Evaluate the impacts of county revenue raising (national).
- Develop and implement a framework to monitor county fiscal stress (national).
- Review and restructure inheritied county debt (national).
- Revisit county borrowing limits to enable adequate county borrowing and reward fiscally responsible counties (national).
- Investigate different models for financing much needed urban investments (national).

Medium to Long Term

- Undertake benchmark costing of urban functions in selected counties (national).
- Explore conditional grant instruments, with matching funds from counties, to help ensure urban functions are adequately funded (national).
- Establish county asset inventories, and develop asset maintenance and renewal (national and subnational).
- Rebuild fiscal cadasters at the county level (subnational with national support).
- Evaluate wider policy options to broaden taxes bases, for example through piggy-backing (national).
- Develop a framework for counties to address the problem of unaffordable inherited wage bills (national).
- Take urban areas into account in the next generation of the equitable share formula (national).

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Chapter 1

Trends: An Urbanizing, Middle-Income Kenya

Introduction

1. **How Kenya manages its urbanization processes will determine whether it can maximize the benefits of its transition to a middle-income country, building on a story of optimism.** Kenya has seen positive economic growth in tandem with increasing rates of urbanization, though the country has not yet experienced an economic transformation. Economic growth has created a growing middle class, but poverty remains stubbornly high, and a majority of urban residents live in informal conditions, with poor access to basic networked services. An increasing share of employment is in the informal sector. The country's radical experiment in devolution holds great promise and comes at an important period in Kenya's economic and urban transformation, but there are aspects of it that may weaken urban centers at a time when they need to be strengthened. But on balance Kenya still has a great opportunity to leverage urbanization to drive economic growth. Its urbanization and devolution processes are still in early stages. Evidence suggests that cities can drive economic growth, especially through a "system-of-cities" approach, and that devolution can empower counties to develop strong urban centers.

2. **Kenya has a gross national income (GNI) per capita of $1,280 (2014), putting it in the ranks of lower middle-income countries.** Kenya's Vision 2030 national development program sets a goal for Kenya to join the ranks of upper middle-income countries by 2030.7 This comprises a group of countries with a GNI per capita of between $4,126 and $12,736 (in 2015). Attaining that status would mean improved living standards for all Kenyans. On average, those living in such countries have 92 percent access to electricity, 97 percent access to improved water supplies, and 87 percent access to improved sanitation in urban areas—far better than Kenya's levels.

Table 1.1: Selected comparative development indicators with other middle-income countries

Country	Population (millions)	GNI per /capita ($)	Population with access to improved water source (%)	Population with access to improved sanitation (%)	Poverty head count (%)
Kenya	45.5	1,280	62	30	45.9
Ivory Coast	20.8	1,550	80	22	40.2
Vietnam	90.7	1,900	95	75	17.0
Tunisia	11.0	4,210	97	90	15.5
Peru	30.7	6,410	87	73	23.9
South Africa	54.0	6,800	95	74	9
Malaysia	30.2	10,660	100	96	2

Source: World Bank, World Development Indicators (2015).

The Demographic Picture: Kenya is Urbanizing Rapidly, but Not Too Rapidly

3. **For this Kenya Urbanization Review, the urban population is defined as "core urban," and the urbanization rate is established at 25 percent in 2014, a rate used for consistency with estimates from the United Nations World Urbanization Prospects.** But determining the urbanization rate is not easy, with uncertainty over including "peri-urban" as part of the urban population, because beginning in 1999 and continuing in 2009, Kenya's census classified the urban population to include core urban, peri-urban, and some rural population living in urban centers. Counting only the core urban population, Kenya would have had an urban population of 18.9 percent in 1999, climbing sharply to 23.1 percent by 2009—the measure used here. But if we consider the peri-urban population and the rural population within urban boundaries, Kenya's urban population would have been 34 percent in 1999 and slipped to 32 percent in 2009.

4. **Based on these estimates, Kenya is rapidly urbanizing, albeit not as quickly as much of the rest of Sub-Saharan Africa.** The United Nations has calculated the actual and expected rate of change in the urban population from 1950 to 2050 (Table 1.2 and Figure 1.1). Kenya's urbanization rates are expected to remain high, but are also forecast to decrease over the next 35 years, more or less keeping pace with the averages for East Africa. As Kenya's National Bureau of Statistics has not made urbanization projections of its own, the Kenya Urbanization Review uses the projections prepared by the United Nations. Based on these, Kenya is projected to become an urban country (at least 50% of the population living in urban areas) only

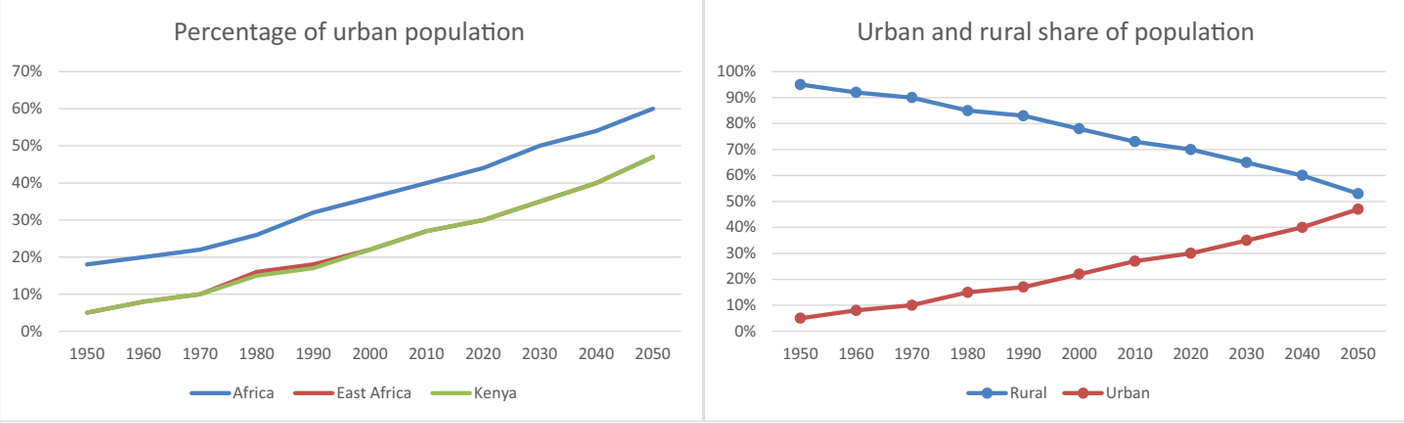
around 2050. Estimates of the Kenya Urbanization Review put the urban population at slightly more than 14 million people. By 2030 Kenya can expect to have over 22 million urban dwellers, and by 2050 about 40 million. Though the pace of urbanization is arguably manageable, the country must prepare for the rural to urban transition.

Table 1.2: Rate of change in the urban population, selected East African countries

Country	Decade									
	1950–60	1960–70	1970–80	1980–90	1990–2000	2000–10	2010–20	2020–30	2030–40	2040–50
Burundi	3.45	3.34	7.61	6.73	4.03	5.29	4.34	3.77	3.41	3.15
Ethiopia	5.37	5.39	3.94	5.03	4.60	3.63	3.57	3.56	3.25	2.74
Kenya	5.64	6.63	7.83	4.83	4.59	4.29	4.30	3.99	3.74	3.32
Rwanda	5.78	5.87	7.14	4.54	10.64*	5.83	4.45	4.20	4.01	3.62
Tanzania	6.83	7.04	9.34	5.71	4.56	4.39	4.79	4.64	4.34	3.91
Uganda	7.23	7.42	4.16	7.20*	4.00	5.49	5.61	5.08	4.56	4.02
East Africa	5.41	6.02	6.24	4.88	4.14	3.83	4.13	4.00	3.76	3.39

**Conflict period.*
Source: UN-Habitat (2010).

Figure 1.1: Projected urban–rural percentage population split



Source: United Nations Department of Social and Economic Affairs, Population Division (2014).

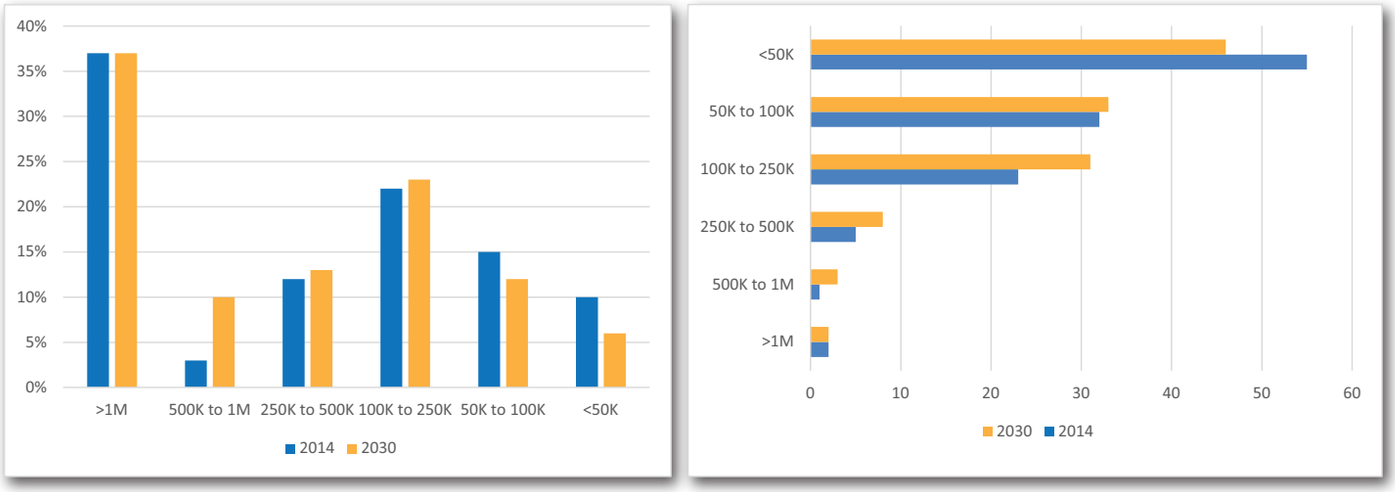
5. As in much of Sub-Saharan Africa, the urban landscape in Kenya demonstrates urban primacy, with Nairobi three times larger than Mombasa, the next-largest urban center. But most urban Kenyans live in urban settlements of less than 1 million people. Smaller urban areas, particularly medium cities, are important and are expected to remain so. Urban population projections suggest that while Nairobi's population is likely to increase to 6 million by 2030, Nairobi's share of the urban population is not expected to rise. Kenya is likely to see a larger share of the urban population living in medium cities (between 100,000 and 1 million), especially in cities with 500,000 to 1 million, while the number living in towns of less than 50,000 is expected to decline. Large (greater than 1 million) and medium cities are thus expected to remain the primary location for urban residents. Over 1999–2009 cities with populations of between 100,000 and 250,000 had the fastest urban population growth rates. By 2030 it is forecast that Kenya will have five cities with populations greater than 500,000 and 31 cities with 100,000 to 250,000 (up from 23 in 2014 (Figure 1.2).

Urbanization and Kenya's Economy

6. Kenya is under-urbanized given its per capita income. A correlation of GDP per capita and urbanization for several countries shows that Kenya's urbanization rate is below the

predicted level. Figure 1.3 (left panel) shows that at an income per capita of US$1,200 (at the top of the curve for Kenya, with a log value of 7.1, more than 30 percent of Kenyans would be living in urban areas; the right panel compares Kenya's income per capita with countries that are at a similar rate of urbanization. Kenya has an urbanization rate similar to countries income per capita is less than Kenya's (Mozambique, Bangladesh, and Zimbabwe), while it is urbanizing faster than countries with a similar share of population in urban areas but have higher incomes per capita (Kenya is urbanizing at around 4 percent a year, against 3 percent for Vietnam and 2 percent for India).

Figure 1.2: Share of urban population and number of urban centers.

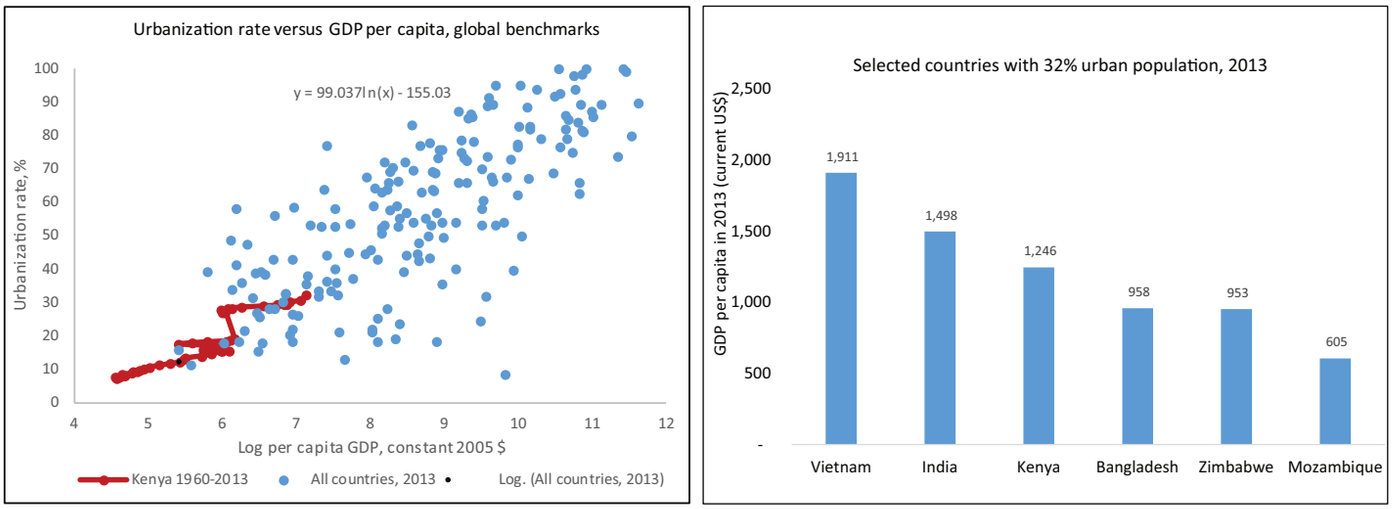


Source: Based on Kenya National Bureau of Statistics (2009).

7. Kenya's under-urbanization is unique in Sub-Saharan Africa. Many Sub-Saharan African countries have economies that are underperforming relative to urbanization. Côte d'Ivoire, for example, with an urban population of 50 percent should have a GNI per capita of around $2,700 according to economic theory, but it is just $1,550. Many other Sub-Saharan African countries are similar. Aggregate numbers indicate that the correlation between urbanization and per capita GNI in Africa is weak. Countries in other continents passed the 40 percent urbanization mark with a GNI per capita above $1,800, while in the aggregate, Sub-Saharan African countries passed it at just $1,000.[9] The low economic performance of these countries would seem to support the theory of consumption vs. production cities (next paragraph) developed by Glaser (2001) and Jedwab (2013). Kenya's urbanization process appears to be more of a hybrid but exhibits some of these characteristics.

8. **Kenya has yet to leverage urbanization for economic transformation.** There is a strong positive relationship between urbanization and economic growth, and no country has reached high-income status without urbanizing. The two processes are mutually reinforcing through several possible channels; agricultural push, industrial pull and consumption cities. In the first, rising agricultural productivity, which drives economic growth, releases excess labor that migrates to cities, seeking better employment opportunities in the modern sector. In the second, economic transformation from agriculture to industry attracts labor from the rural economy to the cities' industrial sector. This process is marked by a high correlation between urbanization and the share of industry in GDP. The third can be observed in countries where growth emanates from natural resource wealth and exports. These spur urbanization to outpace economic transformation, because the rent generated by resource-intensive sectors is consumed in cities by workers involved in nontradable (typically informal) services sectors. For consumption cities there is no corresponding rise in the share of industry in GDP (Freire, Lall, and Leipziger 2014; Jedwab, 2013).

Figure 1.3: Kenya's urbanization is below the predicted level compared to income per capita

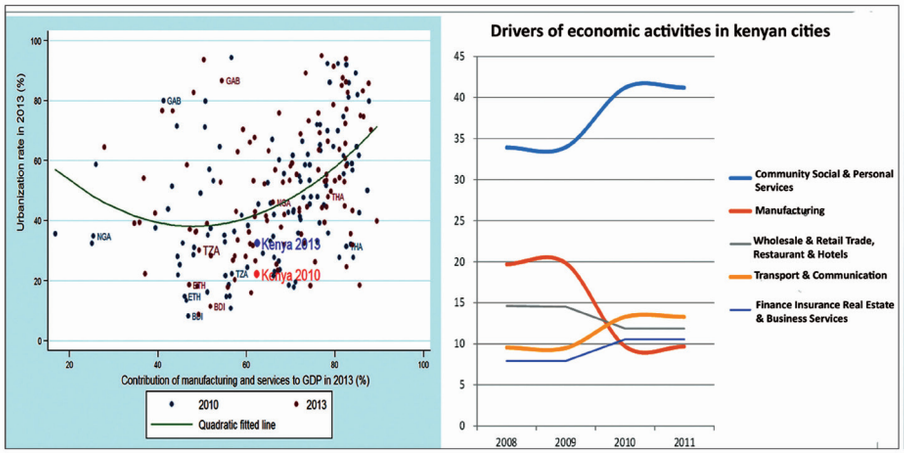


Note: African countries are represented by green dots.
Source: Based on United Nations Department of Social and Economic Affairs, Population Division (2014) and Penn World Table.[8]

9. Kenya's growth has accelerated in recent years in line with the average for Sub-Saharan Africa but has seen little structural transformation. Growth averaged 4.5 percent for 2003–13. Agriculture remains the largest sector with one-fourth of GDP. The share of manufacturing declined from 13 percent in 2006 to about 10 percent. Growth is driven by services, with its large informal share. Over 2000–11, services expanded by 2.1 percent a year, agriculture 1.1 percent and industry 0.7 percent. Agriculture is still the largest employer and accounts for 45 percent of total employment. Current estimates indicate that of the 14.3 million who are employed, 6.5 million are engaged in family farming, 2.7 million are self-employed in nonfarm work, and 5.1 million are in wage work.

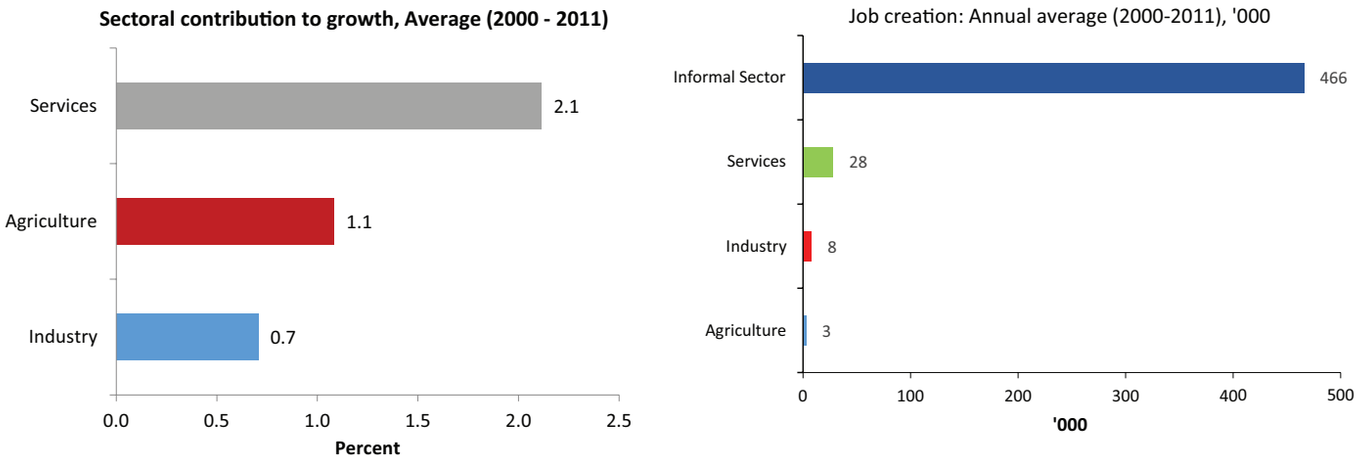
10. Kenya's urbanization seems driven more by rural push than industry pull, and has elements of consumption cities. The correlation between urbanization and manufacturing and services as a share of GDP shows that Kenya's performance is below predicted levels, with its trend line below the global trend line (Figure 1.4, left panel). The share of the urban population increased between 2010 and 2013 but the share in GDP of industry and services remained stable at 60 percent. Earnings in Kenyan cities are driven by community and personal services, contributing about 40 percent. The share of earnings from industry declined from 20 percent in 2008 to just under 10 percent in recent years. The share of earnings from transport and communication is now much larger than industry (Figure 1.4, right panel).

Figure 1.4: Kenya's urbanization is driven by services rather than industry



Note: GAB (Gabon); NGA (Nigeria), TZA (Tanzania), BDI (Burundi), ETH (Ethiopia). Quadratic line equation: Urbanization = 83.02 – 1.87; Manufacturing and services + 0.02 squared (Manufacturing and services); R squared = 0.18.
Source: World Bank, World Development Indicators

Figure 1.5: Industry performance is lackluster and formal jobs are scarce



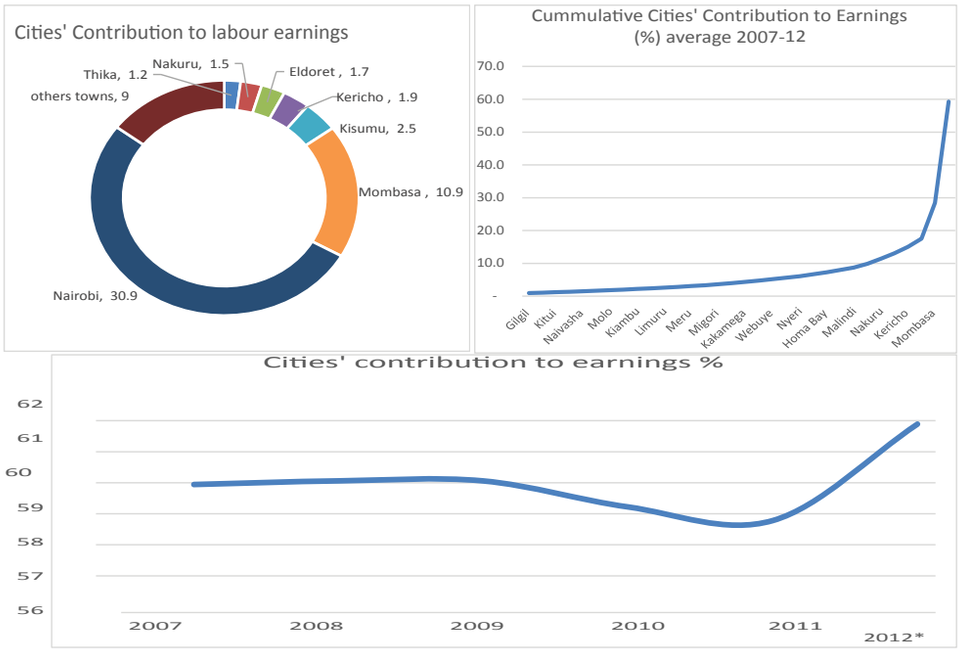
Source: Fengler and Kiringai (2013).

11. The urban economy is increasingly informal as formal sector jobs are scarce. Kenya's formal sector is not generating enough jobs to absorb the growing labor force. Estimates show that the working age population is increasing by 800,000 a year but the economy creates only about 50,000 formal sector wage jobs annually (Figure 1.5), versus 500,000 in the informal sector. Of the 5.1 million in wage work only 40 percent (2 million) are in the formal sector; the rest are in the informal sector. Unemployment is higher in urban areas, estimated at about 13 percent among those aged 20–24, and underemployment is prevalent in rural areas. Many (especially younger) people are migrating to cities to be absorbed into the labor pool, primarily in the informal economy.

12. Led by Nairobi and Mombasa, cities account for about half of national earnings.[10] Analysis of 49 Kenyan towns shows that they contribute about 60 percent of labor earnings, concentrated in seven cities (Figure 1.6, top panels) that together contribute about 50 percent of total earnings.[11] Cities' shares in earnings are rising, as expected in line with higher levels of urbanization, starting in 2011 (Figure 1.6, bottom panel). Earnings in towns are concentrated in services.

13. Kenya still has the opportunity to leverage

Figure 1.6: Seven cities contribute half of the earnings in the economy, and their share is rising as the country urbanizes



Source: Based on Kenya National Bureau of Statistics data from Statistical Abstracts, 2007–2012.

urbanization for economic transformation, but has to start now. The country is at an early stage of urbanization, but by 2050 about half of the population will be living in cities. For Kenya to reach a GDP per capita comparable to that of East Asia when it reached the 50 percent urban population mark, it will have to show real GDP per capita annual growth of 6.2 percent (aggregate growth of 8.9 percent alongside projected population growth of 2.7 percent) from now to 2050. (East Asia's economic transformation was driven primarily by industrialization and by investment in infrastructure and education.) But it has achieved annual GDP growth of 7 percent or more only four times in the past 40 years (Box 1.1). Still, it has the tailwind of being under-urbanized for its level of GNI per capita.

14. The correlation between urbanization and economic growth in Kenya depends on a combination of factors. It will be stronger if urban firms have a better business environment, are able to create more jobs, and can benefit from a sufficiently large pool of better-educated people who can migrate from rural areas to take these jobs. It will be weaker if uneducated migrants leave rural areas for cities by necessity, forced by a combination of rapidly growing population density and scarcity of agricultural land. It will also be stronger with a solid system of land use planning.

Urbanization and Devolution

15. Kenya's process of political, fiscal, and functional devolution could have profound effects on all aspects of how the country urbanizes. Kenya's Constitution, which came into full effect following the 2013 elections, provides for two autonomous but interdependent levels of government: national and county. At county level, 47 counties were established with mainly elected assemblies, elected governors, and cabinets appointed by the governor and ratified by the assembly. The Constitution provides for national and county governments to be distinct and interdependent. The national government has limited capacity to change the system of county government, because the key elements of the devolved structure are enshrined in the Constitution and can only be changed by referendum.

16. The first county governments were elected in March 2013, two and a half years after the new Constitution came into effect. The Constitution mandated that a number of implementing laws had to be passed within timelines fixed in a constitutional annex and overseen by a Commission on Implementation of the Constitution (CIC). During the 30 months after the approval of the new constitution leading up to the 2013 election, laws were passed that provided a detailed framework for devolved government:

- The County Governments Act deals with composition, election, and powers of county assemblies, executives, and public service boards and sets out a detailed planning framework and a framework for public participation.
- The Urban Areas and Cities Act provides for a system of managerial boards and committees to manage urban areas.
- The Public Finances Management Act establishes a single public financial management system for the whole country, applying to both the National Government of County Governments.
- The Transition to Devolved Government Act established a transitional authority to oversee the devolution process, determine when and how functions, staff, assets, and liabilities would be transferred to county governments, and advise on the cost of those functions (among other responsibilities).

Local government before devolution

17. Implementing devolution was complicated by the need to transition from the system that was in place before devolution, to the new system mandated by the laws passed between 2010 and 2012. Before devolution, Kenya had one of the oldest continuous systems of local government on the African continent. It involved elected municipal, town and county councils, but they were subject to much greater control and oversight by national government than is the case for county governments. National supervision was carried out by the Ministry of Local Government, part of which was absorbed into the Ministry of Lands Housing and Urban Development and part of which was absorbed by the Ministry of Devolution and Planning after the 2013 election.

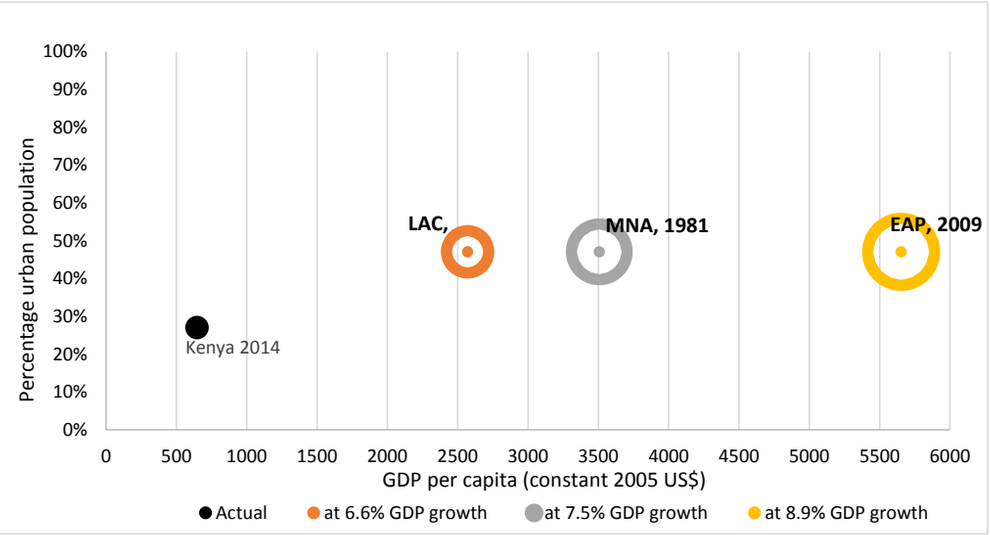
18. One hundred and seventy-five local authorities were created under the 1963 Local Government Act, covering the whole of the Kenyan land mass. They were classified into four categories; one city council (Nairobi), 45 municipal councils, 62 town councils and 67 county councils. Local councils were responsible for most of the

urban functions that were assigned to county governments under the Constitution (see Table 5.1 in Annex 5 for a description of these functions). A number of county councils had significant urban functions in areas where a town or municipality had not been formally established, including the tourist township of Diani in Kwale County, with an urban population of around 60,000. Local authorities were financed partly by their own revenues, which were very similar to those now assigned to county governments, and by the Local Authorities Transfer Fund (LATF) which channeled national transfers to the local authorities based on a formula. The LATF transfer fund formula was heavily

Box 1.1: Scenarios for reaching GDP levels in three regions at 50 percent urbanization

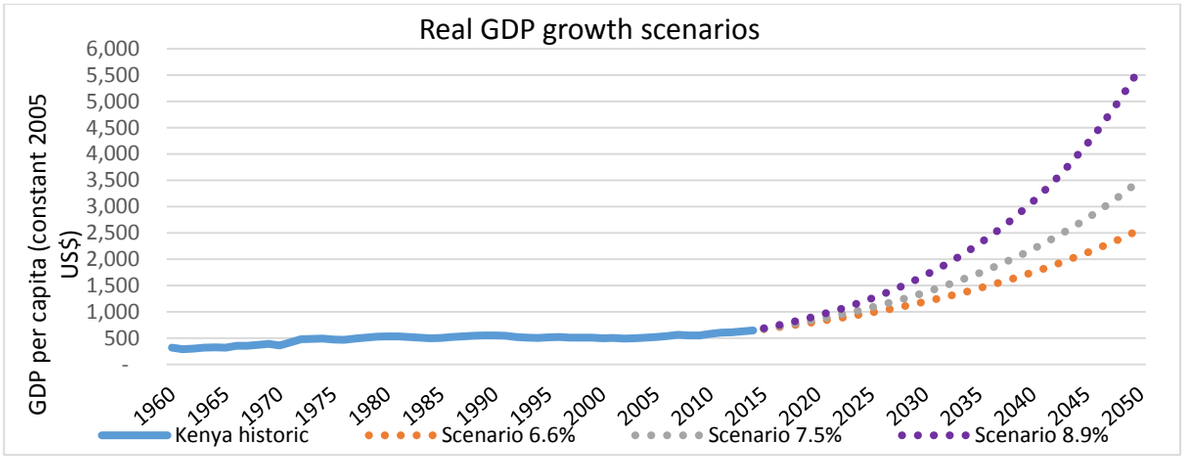
The Latin America, East Asia and Pacific, and Middle East and North Africa regions reached the 50 percent urban mark in different years with different levels of GDP per capita. Kenya's actual level of urbanization and GDP per capita in 2014 were both much lower than these figures (box figure 1). For successful urbanization—for Kenya to target and reach similar levels of GDP per capita as these regions when they each reached that mark—it will have to grow at 6.6 percent, 7.5 percent, or 8.9 percent through 2050, when its urbanization is expected to reach 50% (box figure 2). Regardless of scenario, any of these rates will be difficult for Kenya to achieve on such a sustained basis.

Box figure 1: GDP per capita at 50 percent urbanization rate for three comparator regions



Note: EAP = East Asia and Pacific, LAC = Latin America and Caribbean, MNA = Middle East and North Africa. GDP growth rates are those needed for Kenya to reach each GDP level by 2050 and are colored to match each associated target. Circle size indicates GDP per capita.
Source: World Bank calculations.

Box figure 2: Real GDP growth scenarios



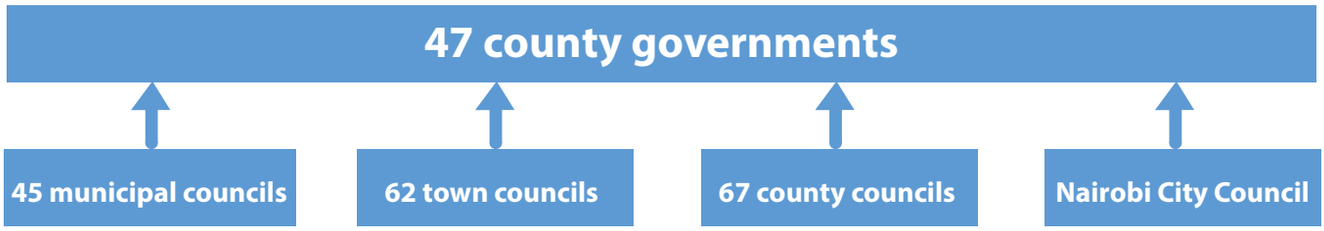
Source: World Bank calculations.

weighted to urban population, so it resulted in a spatial distribution of resources that favored large urban areas.

Urban governance after devolution

19. A key task during preparation for devolution was to design a system of governance and management of urban areas as required by Article 184 of the Constitution. Following the recommendations of the Task Force on Devolved Government, it was decided that the existing system of elected local councils should be abolished and replaced with a system of appointed boards. The Urban Areas and Cities Act provides for a three tiered system of city and municipal boards, and town committees (Figure 1.7). The County Governments Act provided for existing local councils to be abolished immediately the new county governments were elected. Very soon after the election county governments took over the staff of the former local authorities along with their core systems of administration, including revenue. In some counties, the county government absorbed as many as 12 former local authorities. In many senses therefore, the immediate effect of devolution was recentralization of urban functions in all but the two largest urban centers, Nairobi and Mombasa. They were designated city counties and in some respects have experienced relatively less change in governance arrangements as a result of devolution, since the Nairobi and Mombasa local councils were effectively transformed into county governments.

Figure 1.7: System of governance and management of urban areas



20. It was envisaged that the Urban Areas and Cities Act would provide a framework for the counties to establish their own systems of urban management. The process of establishing a municipal board or town committee is initiated by the county government itself. In fact few have done so, probably as the result of two factors. First, the criteria for establishing a municipality include a minimum population of 500,000. Only three urban areas outside Nairobi and Mombasa satisfy this criterion. So at present the only option open to county governments in other urban areas is to establish town committees. Town committees have less power than municipal boards, which have separate legal status (see Table 5.2 in Annex 5 for more description of the respective powers of municipal boards and town committees). It seems doubtful if they could provide the managerial autonomy needed for robust urban management.

21. The second obstacle to establishment of urban boards appears to be political. Submitting proposed board membership to the county assembly for ratification exposes governors to the need to negotiate support from an assembly which they do not control. Interactions of this kind are proving complex and difficult for many governors. Instead, governors are choosing to simply absorb the apparatus of former local authorities into their county administrations. In some counties, urban functions have become the responsibility of a single county department. In others, they are spread across different departments. Some counties have put land, housing and urban functions into a single department, mirroring the arrangement of the same functions at the national level.

An urban governance deficit?

22. The absence of directly elected representation at the urban level is unusual internationally. Most countries provide for a third tier of government for jurisdictions with populations of at least 30,000-150,000. Even if local government is not provided for in the Constitution, it is usually established under ordinary national laws or state laws. Increasingly, even federal countries like India, Mexico and Australia have sought to formally recognize local government in the Constitution, in recognition of the increasingly important role or urbanization and sustainable urban areas for economic growth and social development. Kenya's urban areas may not receive the attention that is needed to manage the urbanization process effectively, because of the way urban populations are distributed across

counties. While urbanization is increasing, few counties are predominantly urban.

Transferring national functions

23. The functions and revenues of county governments are enumerated in the Constitution. They include all the functions that were carried out by 175 decentralized local authorities together with a number of functions which were the responsibility of the national government (see Table 5.1 in Annex 5 for a full description). Those functions had mainly been delivered through a de-concentrated network of national civil servants based in around 280 district administrative centers across the country. In some cases a role for national government to determine policy is retained. The Constitution was explicit as to the process of transitioning to the new system of devolved government. Functions were intended to be transferred to county governments gradually, as they developed capacity to manage them. In the end this provision was overtaken by political considerations, and almost all the functions were transferred by August 2013, less than 6 months after the county governments had been established. Soon afterwards, around one third of the national public servants at this level (excluding teachers, but including all health workers) transferred to the county governments in which they were located at the time of devolution.

24. Inheriting staff of both former local authorities and district administrations has burdened some county governments with large wage bills – the most urbanized counties. Counties with large urban areas inherited particularly large workforces from the local authorities that had previously managed those urban areas. A process of rationalization is underway that is attempting to rebalance the inequitable distribution of these former national public servants between counties, but for now counties are responsible for paying the wages of these staff regardless of whether they need them or not.

25. Kenya's counties enjoy considerably more autonomy than any sub-national governments in Africa, aside from those in federal systems. As devolution is unfolding in practice, county governments have demonstrated a powerful capacity to guard their autonomy jealously, particularly through joint positions that are decided and defended by the Council of County Governors. As in devolution processes in other countries, national ministries that gave up functions following devolution are struggling to redefine their roles, and to separate their ongoing policy role from the service delivery role that has been devolved (see for example Chapters 3 and 6). They need to learn new techniques of intergovernmental policy management, and understand the real political limits of trying to control what county governments do. Many countries find that attempting to influence the behavior of state or provincial governments without the leverage of conditional financing can prove challenging. This is why the structure of financing of county governments is so important for urban management.

Intergovernmental fiscal relations

26. Addressing long-standing spatial inequality was a key objective for devolution, as was ensuring maximum autonomy for county governments. These twin objectives are realized through the emphasis on a single unconditional transfer, the county equitable share, which is allocated among county governments on the basis of a formula that is decided every five years by the Senate, the house of Parliament that represents the counties. The processes of sharing revenue annually between the levels of government, and periodically revising the formula, are informed by a consultative process that involves the Commission on Revenue Allocation (an independent constitutional body charged with providing recommendations on revenue sharing) and the Intergovernmental Budget and Economic Council, which provides a forum for consultation between levels of government on matters of finance and funding. Revenue sharing decisions are reflected in two annual laws; the Division of Revenue Act (which divides revenue between the levels of government) and the County Allocation of Revenue Act (which allocates the county equitable share, and any other conditional grants, among the county governments).

27. The equitable share formula is currently being revised. The Commission on Revenue Allocation has recommended two additional factors but otherwise recommends that the formula remain fairly similar to the first generation formula. The Development factor is a composite index of illiteracy, children not at school,

immunization coverage, access to sanitation, electricity and water, unpaved roads and total paved roads. While the personnel emoluments factor attempts to address the inherited wage bill burdens of urban counties, the low weight means the impact is likely to be limited. For Nairobi, for example, the equitable share transfer for 2014/15 would increase from Ksh 11.34 billion (using the first generation formula) to Ksh 12.33 billion (using the second generation formula; Figure 1.8).

Figure 1.8: First generation and proposed second generation formulas

Population	Basic equal share	Poverty	Land area	Fiscal responsibility		
45%	25%	20%	8%	2%		
Population	**Basic equal share**	**Poverty**	**Land area**	**Fiscal responsibility**	**Development Factor**	**Personal emoluments factor**
45%	25%	18%	8%	1%	1%	2%

Source: Commission on Revenue Allocation (2014).

28. The equitable share accounts for more than eighty percent of county revenues. County governments have a fairly limited revenue base consisting of property tax and entertainment tax, and non-fiscal revenues from fees charged for services. Some county governments are interpreting their power to charge fees very broadly, through charges that may exceed the constitutional limits on county revenue raising powers. This may put counties at risk of sudden revenue reductions, if these charges are ruled to be unconstitutional in the future.

29. Kenya has now completed three revenue-sharing budget processes—for 2013/14, 2014/15 and 2015/16. Over this period the equitable share has remained fairly constant at around 22% of government revenue in the year to which the equitable share applies.[12] Increases in county funding have mainly come in the form of conditional grants. In 2015/16 a total of Ksh 17.9 billion of government-financed conditional grants for county governments was included in the budget, compared with only Ksh 3.4 billion in 2013/14. Conditional grants are a logical way to channel tied donor funds to counties in ways that respects both the national government's role in setting policy and the county government's role in execution.

Land Use Planning, Urban Management, and Institutions

30. Land use planning and the operations of urban land markets are the defining factors in the expansion of urban areas. While in theory the spatial expansion of cities is led by government land use planning and regulations, this is not the case in Kenya. In addition, historical factors underpinning land ownership have led to urban land market distortions, and today these markets are having difficulty supporting sustainable urbanization.

31. Estimates suggest that urban land amounted to a mere 0.7 percent of the total land area. The bulk of this land was formally titled except for a few pockets of unallocated government-owned land (UN-Habitat 2010).[13] Privately owned property accounted for 18 percent of the total land base, trust land 69 percent,[14] and government land[15] 13 percent.

32. The pre-devolution system of transferring public land to private ownership has led to a near-complete absence of vacant government-controlled land in Kenya's cities (UN-Habitat 2010). From the colonial days to the 1980s, the formal process for acquiring public land required the government to advertise plots for allocation and development and invite applications to be submitted to the Commissioner of Lands office in the Ministry of Lands. Allocations were to be made on the basis of need for the land for a certain use; allocations were conditional upon the actual use of the land for the identified purpose. Theoretically, this was to ensure the most advantageous use of land while preventing speculation; proper allocation of land for planned purposes was a critical element in implementing urban land use plans for the public good. In reality, the centralized system of land allocation only

benefited a small number of well-connected people—plots were leased on terms very favorable to developers, with the land rent calculated on the basis of administrative costs to the government rather than the higher market value (UN-Habitat 2010). Throughout the 1980s and 1990s, illegal land allocations—that is, allocations of land that did not conform to the formal process detailed above—increased dramatically. Allottees often had no interest in actually developing the land—instead, they "flipped" or sold the letters of allotment to others at a higher market-based price, thus capturing a windfall. While such sales were technically illegal, corruption at the Ministry of Lands was widespread and all manner of scandals in the allocation of public land became the norm. (A high level commission, the Commission into the Illegal/Irregular Allocation of Public Land—popularly known as the Ndung'u Report—investigated and detailed the extent of land corruption in this era). The result of decades of irregular allocations and rampant "land grabbing" is that virtually no unallocated government land remains in Kenyan cities, and the formal urban land market is now almost entirely in private hands.[16]

33. The land distribution pattern is therefore skewed. Kenya's Gini coefficient for land ownership was 0.711 (World Bank 2008)—high internationally[17] and significantly higher than that in South and East Asia. This value puts Kenya closer to inequality levels in Latin America, which is renowned for its skewed land ownership. This inequality worsened rapidly throughout most of the country between 1997 and 2004 (World Bank 2008), abetted by corruption in the system for transferring public land to private hands described above. Thus most city dwellers in the country are not land owners and can now only obtain land through market mechanisms, not public allocation (UN-Habitat 2010). In Nairobi, for example, 5 percent of the land base houses 75 percent of the city's population. But the World Bank (2008) showed that landlessness in itself is not a good proxy for poverty, as roughly equal shares of the poor have land—or don't—and many of the nonpoor do not have land.

34. In the 15 urban areas surveyed for the 2014 Kenya State of the Cities Baseline Survey, only 12 percent of respondents to a owned the land and structure on which they lived.[18] This share was higher in formal areas (15 percent) than in informal areas (5 percent) but was more evenly distributed across the poor and nonpoor and along gender lines (Table 1.3). Among owners, 78 percent had ownership documents, but these ranged widely from formal titles to temporary occupancy licenses to letters from the former provincial administration (Table 1.4). Of these, only formal titles confer clear ownership rights. Not surprisingly, informal area owners held a lower percentage of titles than formal area owners. Despite this, most respondents reported feeling secure in their tenure.

Table 1.3: Land tenure in 15 urban areas, 2013

		Location		Household poverty		General (Informal)	
Characteristic	All	Informal areas	Formal areas	Poor	Non-poor	Male- headed	Female-headed
Parent of households that							
Total	100	100	100	100	100	100	100
Own the land only	0	0	0	0	0	0	0
Own structure only	2	1	2	2	2	1	3
Own land and structure	12	5	15	11	12	5	6
Rent	86	93	83	87	86	94	90
Squat	0	0	1	1	0	0	1
N	14,552	4,150	10,402	8,536	5,840	3,046	1,008
Percent of households that feel secure in ownership	87	81	84	84	84	80	80
N	2,710	381	2,329	1,730	1,730	264	107

Source: World Bank (2014b).

35. Urban areas are expanding into freehold agricultural land without any formal conversion to leasehold title. The Kenya State of the Cities Baseline Survey of urban areas revealed that most ownership documents (60 percent) were freehold titles with no tenure limitation. Historically, however, land converted to urban use should be converted to a leasehold tenure. These documents not only do not conform to the law but also indicate that no formal conversion took place. This causes two difficulties in

managing land for urban growth. First, the legal requirement to convert all urban land from freehold to leasehold (of 99 years or less) has encouraged informal land transactions. Tenure conversion (from freehold to leasehold) takes place when the land owner formally requests a land administrative task, such as a subdivision. As there is no incentive for the land owner to convert to leasehold with its reduced tenure security (since ownership is suddenly confined to a time period), the conversion requirement has incentivized land transactions on urban land to continue informally. Second, where urban land has not been formally converted to leasehold, planners feel they have inadequate regulatory control over that land. This is contrary to the language of the 2010 constitution, which asserts regulatory power over land regardless of tenure status. Governments (at any level) are reluctant to provide urban infrastructure on freehold land because it is widely believed to be not covered by urban regulations.

National Land Policy of 2009—an opportunity missed

36. The National Land Policy of 2009 was precipitated by the 2004 Ndung'u Report of the Commission of Inquiry into the Illegal and Irregular Allocation of Land. The National Land Policy of 2009 was seen as an opportunity to address inequality in land distribution as outlined in the Ndung'u Report—but inequality has been largely overlooked. This landmark document was a radical departure, laying out for the first time a comprehensive vision for the country's management of land. It evaluated the myriad problems associated with land in the country, including "landlessness and the squatter phenomenon" and "uncontrolled development, urban squalor and environmental pollution." It identified policy objectives, including more equitable land distribution, environmentally sustainable land use, and more efficient land markets, and identified the legal reforms and other mechanisms required for achieving these objectives. The National Land Policy of 2009 derives much of its content from the 2004 Ndung'u Report of the Commission of Inquiry into illegal and irregular allocation of land.

37. The National Land Policy recommended de jure changes in land tenure institutions to rationalize the system of land holding and provide different legal options for land ownership. Prior to the 2012 Land Act, the three official tenure categories were private land, trust land, and government land. Pre-devolution land laws such as the Registered Land Act regarded customary rights as an anachronism—it was assumed that customary property would be eventually subdivided and titled as individual land holdings. Accordingly, local authorities entrusted with customary lands (that is, trust lands held by the former County Councils) abused their mandates and, like the central government, illegally allocated this land to private individuals. Pursuant to the National Land Policy, the 2010 constitution reformed land tenure institutions into three new categories—public land, private land, and community land. Public land includes unallocated government land, forests, reserves, tidal lands, and so on; private land includes all land held privately under freehold or leasehold tenures; and community land includes pockets of unadjudicated[19] rural land still held under customary rules as well as the

Table 1.4: Ownership by type of document

Characteristic	All	Location		Household poverty		General (Informal)	
		Informal areas	Formal areas	Poor	Non-poor	Male- headed	Female headed
Proportion of household owners by type of land possession document							
Total	100	100	100	100	100	100	100
None	22	33	20	28	17	27	46
Freehold title	60	47	63	57	64	48	44
Temporary occupation license	3	4	2	2	3	4	2
Share certificate	2	1	2	3	2	1	1
Government certificate of title [b]	7	9	7	5	9	9	6
Letter from chief (provincial administration)	3	3	3	4	2	5	1
Other	3	4	3	2	4	6	0
N	3,004	444	2,560	1,915	1,038	307	125

Note: Long term lease from City council/Government
Source: World Bank

former trust land that was the tenure form for the group ranches set up for pastoral communities in the post-colonial period. Land owned by a community is now recognized as a legal option.[20] It also stipulated far-reaching changes to private tenure.

38. The policy aimed to rationalize laws governing titling and registration. This recommendation was reflected in Chapter Five of the Constitution. Pursuant to the passage of the Constitution in 2010, seven land acts were repealed and two—the 2012 Land Act and the 2012 Land Registration Act—were passed in their place.[21] These two laws require the development of just one registration system and one land registry. The Land Act changed the terminology related to titling to make tenure clearer: titles were to be called certificates of lease or certificates of title. The policy also called for an overhaul of the institutional framework for land administration and management and identified three new institutions: the National Land Commission, District Land Boards, and Community Land Boards. Functions identified for the district and local authority level came under the purview of county government. The National Land Commission Act, however, does not establish county-owned land institutions, since three to seven members are appointed by the National Land Commission and only one by the County.

39. The ambiguity in objectives underlying urban land legislation has led to poor management of urban land. Despite a need for clear objectives to guide urban land management, the National Land Policy focused on rural, agricultural land. As the country urbanizes, rural land is increasingly being used for urban uses without a clear vision of how to handle conflicting priorities resulting from this informal conversion of land use.

40. Critics argue that subsequent legislation has not reflected the deep land redistribution envisioned in the Constitution and the National Land Policy. The National Land Policy and the 2010 constitution were a break from the past because they made the link clearer between land and justice, but legislation failed to follow through as had been hoped for. In particular, progress on the legislation to enact the community land provisions of the Constitution has been halting; investigations into illegal allocations and land grabbing have been obstructed by jurisdictional struggles between the central government land ministry and the National Land Commission established by the Constitution.

Land registration and administration—an institutional dualism pricing out all but the wealthy

41. Land registration and administration are opaque, unreliable, and costly and need reform. Since independence in 1963 and before the reforms of 2012, a complex set of land laws evolved—some of which were incompatible, resulting in overly complex processes to administer land. The multiplicity of laws required a series of different registries to be set up, each registering interests in land recorded under each law. Registries were maintained at district and national levels, and although these registries were under the authority of the pre-devolution Ministry of Lands, it was not clear that they were connected, allowing multiple interests in the same piece of land to be registered. This opaque system opened the door to graft. Multiple laws also meant that a title system and a deeds system each ran in parallel, further complicating the system (Walley 2011).

42. Given that most land is private, it is critical that the formal land market works well. Yet the market is distorted by a high risk of forged documents and corruption surrounding title deeds. Investors hesitate to buy land due to the opacity of land records and the high risks entailed. They are also put off by the high costs and long delays linked to the mandatory bureaucratic processes: the nine steps to register property take on average 72 days and cost 4.3 percent of the value of the property (Table 1.5). Kenya is ranked 136 out of 189 economies on the ease of titling and registering property in Doing Business.

43. Securing approvals for subdivisions and change of user is particularly cumbersome, as it involves multiple government institutions. An application for an urban subdivision may take 29 months—going through subnational and national government layers—before it is approved. Slow processes also apply to applications for lease extensions (UN-Habitat 2010). The many professionals that have to be involved (lawyers, valuers/appraisers, surveyors, planners, and so on) add to costs and delays.

44. Thus only a fraction of land transactions are documented and registered, and given the weak state of the formal system many people turn to informal

Table 1.5: Nine steps to register a property

No	Procedure	Time to complete	Associated costs
1	Apply and obtain land rent clearance certificate from the commissioner of lands	19 days (simultaneous with procedures 2 and 3)	No cost
2	Apply, pay and obtain rates clearance certificate from the Nairobi City Council	5 days (simultaneous with procedure 1 & 3)	KES 10,000
3	Apply for a search on the title at the Lands office	3 days (simultaneous with procedure 1 and 2)	KES 500
4	Apply and obtain consent to transfer from the commissioner of lands	9 days	KES 1,000
5	File the transfer instrument at the lands office and obtain appointment for valuation	4 days	KES 500
6	Receive site inspection by government valuer and obtain valuation report	20 days	No cost
7	Endorsement of value for stamp duty purposes and assessment of stamp duty	4 days	No cost
8	Payment of stamp duty at commercial bank and receive confirmation of payment from Kenya revenue authority	4 days	KES 600 (charge for banker's cheque) + 4% of property value (stamp duty)
9	Lodge stamped transfer document for registration and receive duly registered documents	12 days	KES 500

Note: 1 USD = 87.77 KES as of the date table was published (June 1, 2014).
Source: Doing Business (2014).

land markets, creating additional tenure insecurity. The informal market is how the poor access urban land for housing. Access to public land for housing for the urban poor, although illegal (that is, both access and housing), is endorsed by public administrators who allocate parcels of land and grant people "temporary occupation permits." These simple letters of agreement that allow occupancy are witnessed by the local administration (such as former chiefs at subdistrict level) with an appropriate number of witnesses chosen by the parties. In other cases, informal land transactions have no documentation, relying on social recognition of ownership and security of tenure (UN-Habitat 2010). This "institutional dualism" reflects the difficulty of owning land for all but the wealthy, which was one of the problems that the 2009 National Land Policy and subsequent legislation sought to combat.

Other land management issues

45. Affordable housing is scarce because of the current land distribution pattern and the way land is used. Poor public land management has contributed to the spread of informal settlements, as land suitable for low-income housing development is scarce. Land averages 60 percent of the cost of housing in urban Kenya and even more in Nairobi. The country still has very little serviced land, meaning that developers often face infrastructure hurdles when building a project. Driven by the rising cost of land and building materials, developers have shifted to high-density developments, favoring apartments (HassConsult 2013): in Nairobi in 2013, for example, planning was approved for 628 detached houses, 795 semi-detached houses, and 13,914 apartments.

46. In Nairobi, the trend to more affordable residential units on the periphery hurts connectivity. Formal development of residential opportunities for Nairobi's low-income populations is often proposed for the urban periphery or in exurban areas such as Athi River and Mavoko, some 25 kilometers away. The poor living in these locations incur substantial time and money costs when commuting to work in the capital (UN-Habitat 2010).

47. Misallocation of public land has also led to poor access to basic network services and urban amenities for most urban residents. The irregular and illegal allocation of land in urban areas has led to many areas that were set aside for public utilities and amenities being lost to private development such as private housing and commercial properties. Misallocated land includes land that was set aside for public parking, public toilets, public playgrounds, parks, and road reserves.

48. Poor land information (such as accurate, digitized cadasters) affects the efficacy of planning and the potential of urban revenue generation. Planning requires accurate information on the land base, including information on boundaries, parcel sizes, existing land uses

and improvements, ownership status, and past land use–related approvals and permits. Clarity on parcel boundaries and ownership is particularly important for notification purposes and implementing a planning process informed by citizen participation and stakeholder involvement. In addition, the potential of property rates in urban Kenya as a key source of urban financing will only be realized if the cadasters can be updated and maintained accurately.

49. Considerable political commitment will be needed to carry out land management reform. Given that public land is scarce and its underlying function—to provide public goods—is being undermined, a thorough inventory of remaining public land is needed. Public land management also needs to be strengthened. These objectives require support to counties to conduct proper audits of the land transferred during devolution; establishment of the county level land boards and clear institutional delineation of responsibilities between the pre-devolution and post-devolution subnational land management institutions; and the full implementation of the National Land Policy. Because most of the land is in private hands, support in identifying cost-effective ways to transfer private land to the state would also be critical. Until these issues are solved, many public utilities cannot expand their services, including connectivity, due to illegally settled land, blocking cities from becoming a single "portfolio."

Kenya's Portfolio of Cities

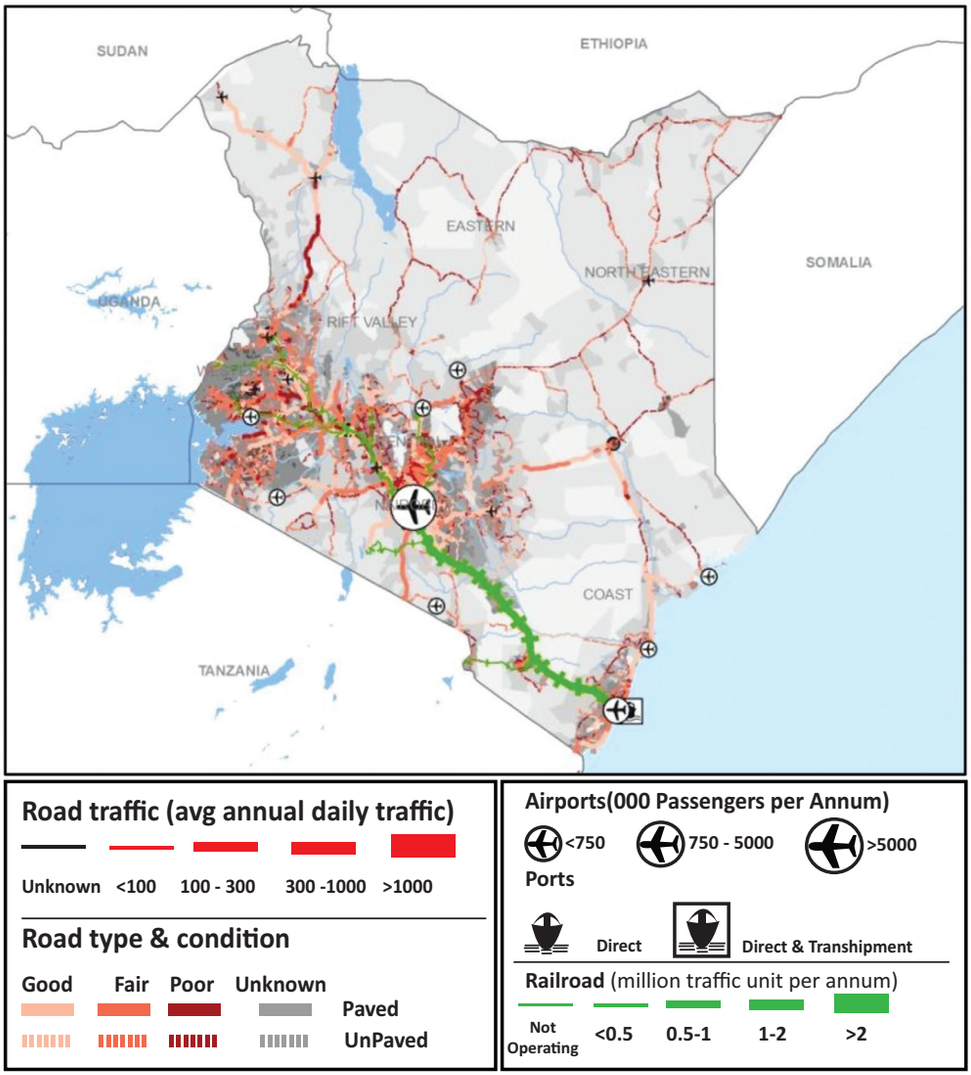
50. Urbanization is not just about the development of individual cities within a country; developing a portfolio of cities is essential. Kenya should approach its urbanization process as a system of cities within which different types of cities can play different roles in the country's development, based on population size, location, and density. The *World Development Report 2009* identified such a portfolio in which small cities facilitate internal economies like hosting a large firm to process agricultural products. Secondary cities encourage localization economies through competition between firms operating in the same sector, while large cities boost urbanization economies through a diverse economic base that favors innovation. Developing the current portfolio of cities will be essential to leverage the benefits of urbanization and move Kenya to its Vision 2030 goal of becoming an upper middle-income country.

51. The economic development of a city or region is closely tied to its internal connectivity and its connectivity to other cities and regions. This is because good transport infrastructure enables companies and people there to increase production and consumption levels on lowered logistical costs and access to larger supply and labor markets. Other important factors include population growth, agglomeration of firms, education levels of residents, and quality of life. Good connectivity (and other infrastructure), along with strong institutions and targeted interventions, are essential to reap the benefits of urban economic agglomeration.

52. Kenya has much of the connective infrastructure to develop a vibrant portfolio of cities. The backbone of its transport network is the Northern Corridor, which includes four major international roads connecting with Tanzania to the south and one each to Ethiopia and South Sudan to the north. The distribution of transport is skewed toward roads, mainly serving areas of high population density. Infrastructure also includes a seaport at Mombasa; international and national urban and rural roads; international and national airports; a rail line from Mombasa through Nairobi to Uganda, with branch lines; a fuel pipeline from Mombasa through to Eldoret and Kisumu; and some inland waterways (Figure 1.9). There are also plans for a new port at Lamu, railway construction on the Kenya–Uganda railway line, and a range of investments from Lamu to Ethiopia and South Sudan.

53. Kenya's portfolio of cities is increasingly diverse, with global gateway cities such as Nairobi and Mombasa, regional connectors such as Nakuru, Kisumu, and Eldoret, and small cities that anchor local economies and provide services to the area (Figure 1.10). Mombasa is a major tourist destination and the main seaport serving Kenya and the larger Great Lakes countries of Uganda, Rwanda, Democratic Republic of Congo, and South Sudan. Nakuru is a populous town some 160 kilometers west of Nairobi in the Great Rift Valley that is agriculturally rich. Its growth is driven by agriculture, some industrial production, tourism, and services demands from communities working at two national universities. Eldoret is about 400 kilometers west of Nairobi, along the Northern Multimodal Transport Corridor. It is also an agriculturally rich area and the country's breadbasket. It has an international airport, rail line, fuel

Figure 1.9: Transport infrastructure, Kenya



Source: Africa Infrastructure Country Diagnostic (2011).

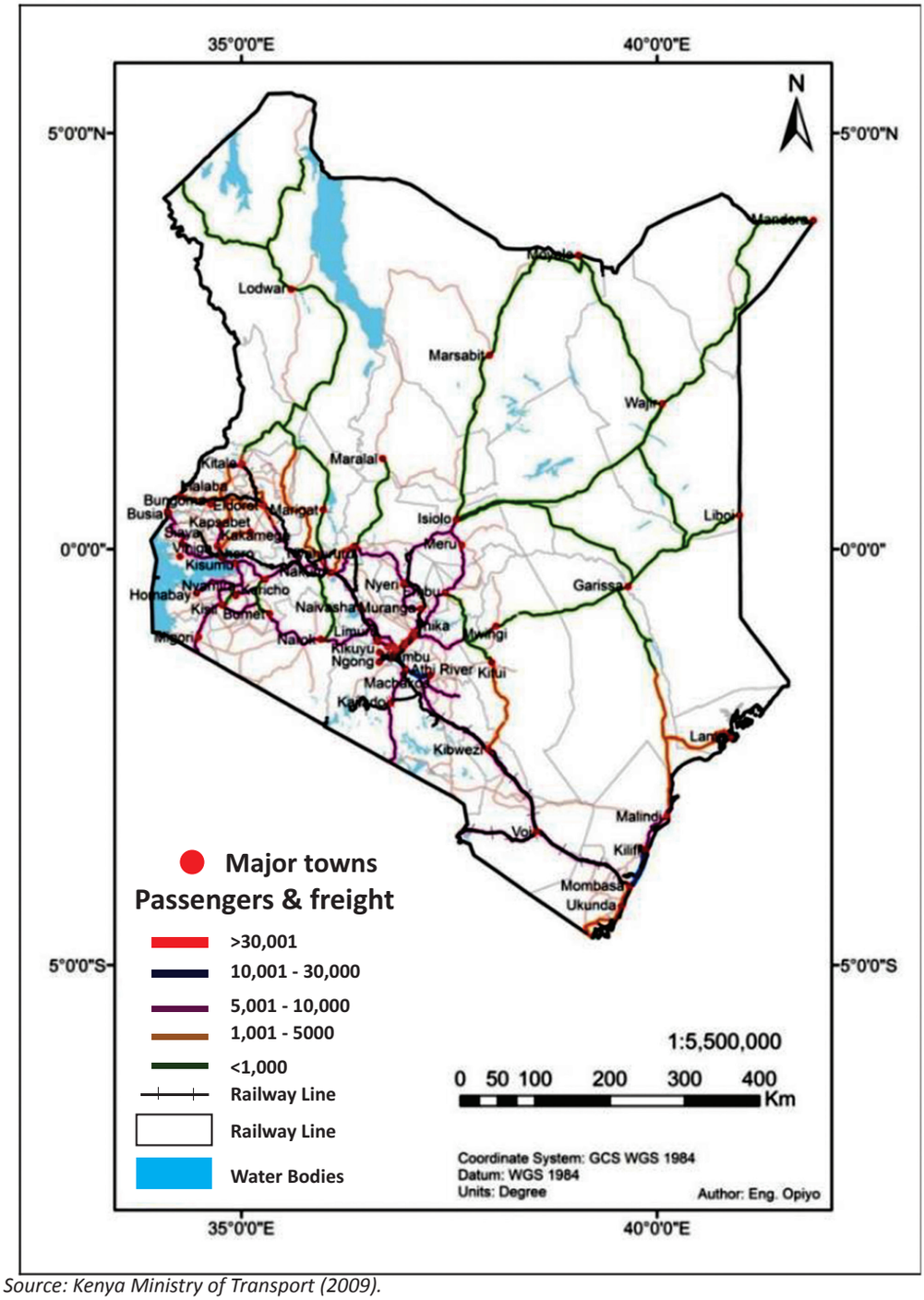
depot, and the two national universities. Kisumu lies on the shores of Lake Victoria and within an agriculturally rich zone. It is connected by rail to Nairobi and Mombasa, with a harbor for lake transport between Kenya, Tanzania, and Uganda and a fuel depot. A new international airport has recently been completed.

54. Urbanization is spatially concentrated along the Northern Corridor. Kenya's transport infrastructure investment has reinforced urbanization patterns, and Kenya's urban and economic growth has been established around population centers, with most urban dwellers living near the Northern Corridor between Mombasa and Malaba, with a branch line to Kisumu. In fact, less than 14 percent of urban dwellers live in towns farther than 35 kilometers from that corridor. In total, 75 percent and 85 percent of urban dwellers live within 15 kilometers and 35 kilometers of the corridor, respectively, underscoring its importance. Furthermore, Kenya's urban system and transport infrastructure are concentrated in the southern and western areas along the Northern Corridor, aligned with dense populations and areas of high urbanization and agricultural potential (Figure 1.11).

55. The Northern Corridor has three hubs: the Coastal hub around Mombasa, with Kilifi and Malindi; the Central hub around Nairobi and Thika; and the Western hub, with a cluster of four leading towns: the three described just above (Kisumu, Eldoret, and Nakuru) and Kericho. At the heart of these hubs is good air and road connectivity. Each has two airports and is also well connected by road. Rail, however, carries only a small percentage of cargo. Despite this, construction has begun on a new standard-gauge rail line following a similar route..

56. The portfolio will increasingly develop around metropolitan areas. Kenya's policy makers are already developing a system of cities by creating six metropolitan regions: the Nairobi metropolitan area and five others (Table 1.6). Of these six, four are in the urban belt along the Northern Corridor and combined account for 61 percent of Kenya's GDP per the night-lights study (Bundervoet, Maiyo, and Sanghi 2015). Estimates suggest that about 39 percent of GDP is generated in the most urbanized counties in Kenya—those where at least 50 percent of the population is living in urban areas (Nairobi, Mombasa, Nakuru, Kiambu, and Machakos). In addition, the two 100 percent urban counties—Nairobi and Mombasa—are estimated to generate about 16 percent of the country's GDP and

Figure 1.10: Kenya's transport infrastructure



Source: Kenya Ministry of Transport (2009).

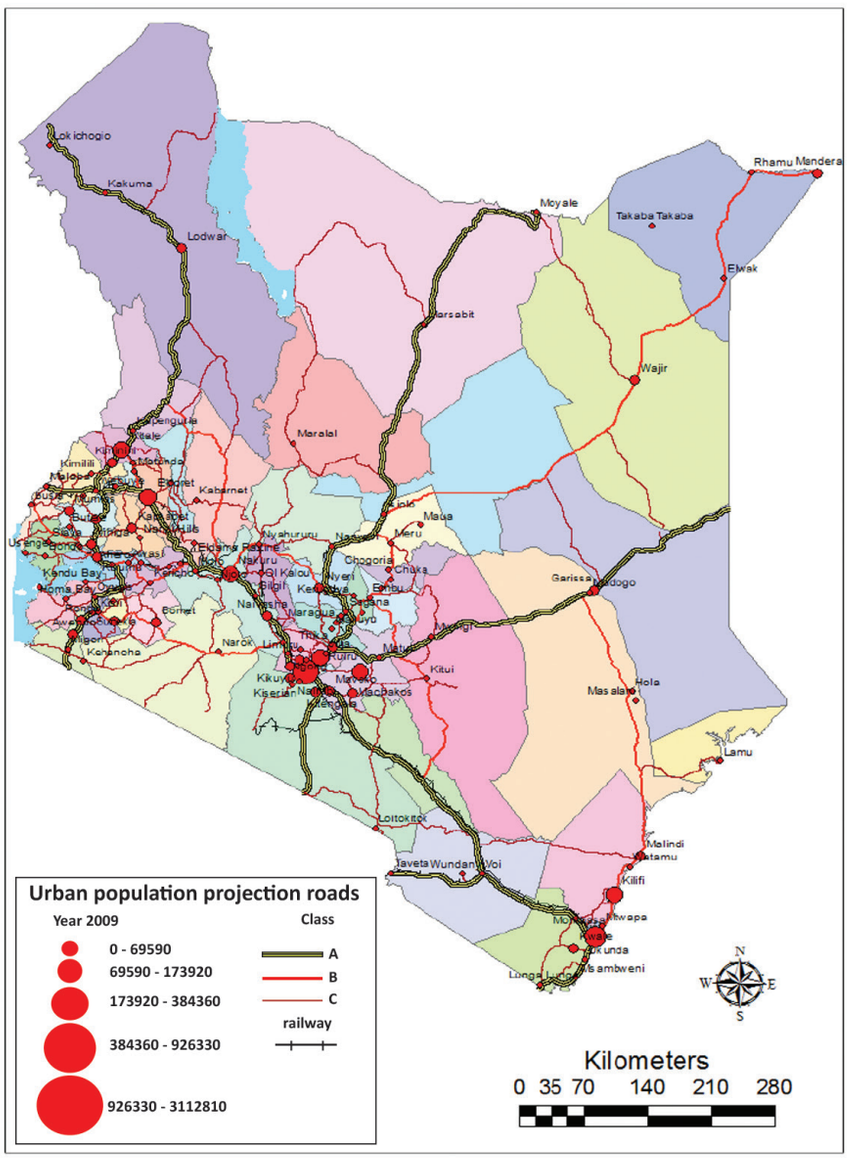
Table 1.6: Six envisioned metropolitan areas

Metropolitan area	Area GDP in 2013 in constant 2005$	Percentage of total national GDP
Nairobi–Kajiado–Kiambu–Machakos–Murang'a	9,361,960,314	35
Mombasa–Kilifi–Kwale	2,801,259,764	10
Nakuru–Uasin Gishu	2,840,572,182	11
Kisumu–Kakamega	1,343,938,891	5
Kitui–Meru–Isiolo	1,282,578,660	5
Wajir–Garisa–Mandera	804,229,850	3

comprise about 12 percent of the country's total population. Kenya's cities have the potential to drive economic growth, especially in its metropolitan regions.

57. Kenya's system of cities is therefore likely to develop around metropolitan regions. The most important will be the Nairobi metropolitan area, the Coastal region around Mombasa, and the linked metropolitan areas of Nakuru–Eldoret and Kisumu–Kakamega (both rich agricultural zones). Kenya is on the right track in improving connectivity among its portfolio of cities and in thinking about the development and roles of its metropolitan areas. This will require Kenya

Figure 1.11: Urban concentration of population and earnings



Source: Based on Kenya National Bureau of Statistics (2009) and Kenya National Bureau of Statistics data from Statistical Abstracts, 2007–2012

to develop a multilevel governance framework that allows urban areas in a single metropolitan area to collaborate and incentivizes local authorities to deliver infrastructure and public services jointly, along with a metropolitan area–wide planning framework (see Chapter 6).

58. The urban population will grow considerably in the Nairobi metropolitan area. Nairobi is projected to become a city of more than 6 million by 2030, up from an estimated 4 million in 2015. Good connectivity between Nairobi and surrounding satellite towns remains the main driver of population and economic growth of the smaller towns in its metropolitan area. Of the 25 largest urban areas in Kenya, 10 (including Nairobi) are in the Nairobi metropolitan area. These 10 cities have about 5.77 million people and nearly 40 percent of Kenya's urban population. Of these 10 cities, three—Thika, Juja, and Kitengela—were among the 10 fastest-urbanizing areas in Kenya, and four others—Mavoko, Ngong, Ongata Rongai, and Ruiru—other were in the top 25 fastest-urbanizing areas.

59. Recent attempts to use night-lights data to calculate county-level GDP confirm the economic strength of the Nairobi metropolitan area. The Nairobi metropolitan area comprises Nairobi City County and the counties of Kajiado, Kiambu, Machakos, and Murang'a. Of these counties, the authors estimate that Nairobi has the largest county GDP, with Kiambu County the second largest. Kajiado, Machakos, and Murang'a are estimated to have the sixth, seventh, and eighth largest county economies. Combined, the six-county region (urban and rural) is estimated to generate 35 percent ($9.36 billion in 2013$) of Kenya's GDP.[22]

60. While the development of connective infrastructure is important to developing the portfolio of cities, planners and policy makers need to be careful to avoid further "peri-urbanizing." Nairobi's metropolitan area is a good example of this problem: new highway infrastructure has encouraged growth in peri-urban settlements and along major road corridors, pushing land prices higher and increasing rates of car ownership, further lengthening commutes to jobs in the urban core and adding to congestion. Residential areas have also developed beyond county boundaries in Thika, Ngong, Machakos, and other satellite communities, even though well-located privately-held land within urban areas is plentiful.

61. These are some of the transport challenges to planners and infrastructure providers. We revisit them in more detail in Chapter 4, but before that in Chapters 2 and 3 we look at some of the more "static" challenges in access to basic services and affordable urban housing.

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Chapter 2

Access to Basic Services in Urban Areas

Key Messages

1. Access to basic services is critical for livable cities and economic growth. Urban infrastructure and services—primarily transport, water supply and sanitation, electricity and solid waste management—are key to successful cities that attract and retain satisfied and productive residents. In its development blueprint—Kenya Vision 2030—the government recognized the need for good urban planning and infrastructure development to meet the anticipated increase in urban population. The document gives special emphasis to expanding the access of the poor to basic services. The 2010 constitution of Kenya further reinforces this emphasis by making access to some basic services, like water and sanitation and a clean environment, basic rights for all citizens. Universal access to improved sanitation could reduce diarrhea-related morbidity by more than a third. Bulk supply and trunk infrastructure can meet the requirements of the poor as well as support urban economic growth.

2. Few urban services are keeping pace with urban population growth. This has led to a huge infrastructure and service provision backlog, with demand for services far outstripping supply in most urban areas. In Kenya's two major cities—Nairobi and Mombasa—current water demand exceeds supply by more than 150,000 and 100,000 cubic meters per day, respectively. Only about 18 percent of the urban population is covered by a sewer system, 70 percent rely on septic tanks and pit latrines, and the rest have access to no sanitation services at all. Existing wastewater treatment systems operate at very low efficiencies (about 16 percent of design capacity for 15 plants assessed in 2010), leading to discharge of untreated effluents. No urban area has a properly engineered sanitary landfill, and most solid waste is dumped in open dump sites or other undesignated areas, or burned.

3. Larger urban areas have generally better access to networked urban services. In 2009 Kenya had some 215 urban centers, of which only 14 had a population above 100,000 according to the Kenya National Bureau of Statistics. Consistent with international trends, access to basic services is generally better in larger—those with populations over 500,000—than smaller urban areas. For example, rates for access to piped water, a sewer connection, and electricity were much higher in the largest urban centers than in any smaller centers. Thus in 2009, nearly 40 percent of residents of the primary cities had access to a sewer connection, while only 1 percent of those in the smallest cluster did.

4. Within urban areas there is considerable inequity, with formal settlements and wealthier households having better access. Although this is now changing, Kenyan authorities and utilities have long avoided bringing infrastructure services to informal settlements, either because of unclear land ownership or because it appeared unprofitable without subsidies or innovative billing practices. Access to services is much less in informal settlements, where most of the poor live, than in formal areas. In Nairobi, only about 36 percent of households living in informal settlements have access to piped water in the house or compound, while 84 percent of households in formal areas do. With a few exceptions, the disparity holds for access to in-house electricity, access to solid waste collection services, and quality of internal access roads.

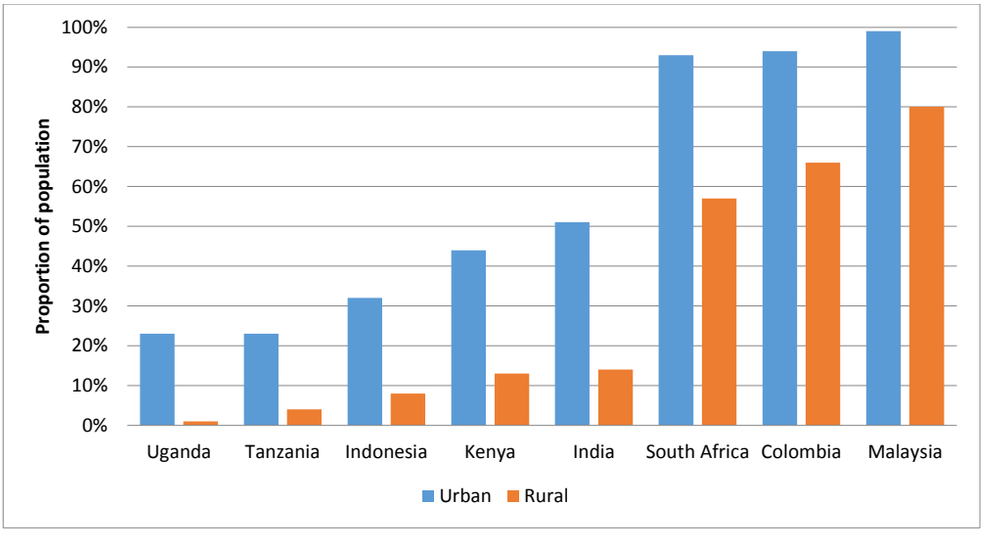
5. Unlike access, the quality of basic infrastructure services does not vary much between formal and informal areas. In eight of 15 cities, people with access to piped water in their homes or compounds who live in informal settlements have service for at least as many days a week as those living in formal areas. Generally, people living in informal settlements receive fewer hours per day of electricity service than people in formal areas, but the gap is not large.

6. Poorer households spend a much larger proportion of their incomes on basic infrastructure services than do the better off. The poor—most of them renters in informal areas with worse living conditions—are exactly the people who lack access to formal networked services and pay proportionally more for the services they have. Households in the lowest income quintile (earning KSh 6,000 per month or less) spend 12 percent of their income on water and 18 percent on electricity (Figure 2.9 below). This contrasts with households in the highest income bracket (earning from KSh 22,500 to 100,000 per month), who spend an average of 2 percent of their income on water and 3.2 percent on electricity.

7. Devolution poses a particular challenge for the provision of urban infrastructure and services. This is because most counties are predominantly rural and have little incentive to invest in urban areas. Although urban areas produce most of county own-source revenues, counties may channel their investments to rural areas instead, where most people live and where access to services is poor. In addition, devolution has shifted responsibility for provision of water and sanitation services (WSS) from the national government to county governments and for solid waste management from the former urban local authorities to the counties. This increases the risk of underfunded services in urban areas due to fiscal constraints and political bias favoring investment in rural areas. Governments at all levels and service providers will have to engage in dialogue and experimentation to find the most effective institutional structures to deliver services, which may entail much political brinkmanship.

8. To rapidly increase services to the poor will require special measures to improve affordability. These could include lowering the costs of connecting to networked services by connecting all at once, offering loans for connections that can be repaid over time, and providing subsidies to residents of poor neighborhoods. But these issues need to be dealt with in the context of devolution, which has brought new institutions with new responsibilities but often without the capacities, mandates, or resources to meet them.

Figure 2.1: Access to piped water on premises across selected countries, 2012



Source: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (2014).

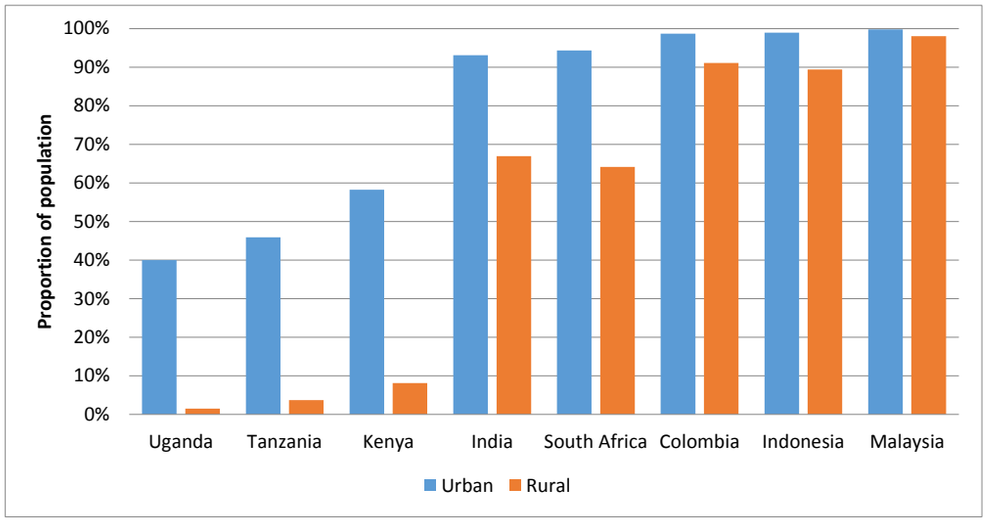
Assessment of Basic Services in Urban Centers

9. Access to basic infrastructure services is critical for livable cities and for economic growth. Urban infrastructure and services—including transport, WSS, electricity, and solid waste management—are key to successful cities that attract and retain satisfied and productive residents. In Kenya Vision 2030, the government recognized the need for adequate urban planning and infrastructure development to meet the forecast increase in urban population. The document gives a special emphasis to expanding the access of the poor to basic services, including WSS and electricity. The 2010 constitution further reinforces this emphasis by making access to some basic services—including water and sanitation and a clean environment—a basic right for all citizens.

10. As in many developing countries, access to basic services in Kenya is better in urban than in rural areas. Kenyan urban residents benefit from the broader availability of services associated with urban agglomeration. A huge disparity exists between access to services in urban and in rural areas, with urban residents experiencing far better access. About 44 percent of urban inhabitants had access to piped water on their premises in 2012 compared with only 14 percent of rural dwellers (Figure 2.1); some 58 percent of urban households had access to electricity in 2010, while only 8 percent of rural households did (Figure 2.2). Although in general access to services in urban areas in Kenya is better

than in its East African neighbors, access levels fall below those in the countries to which Kenya compares itself in Vision 2030, including South Africa, Colombia, and Malaysia (see Figure 2.1 and Figure 2.2).

Figure 2.2: Access to electricity across selected countries, 2010



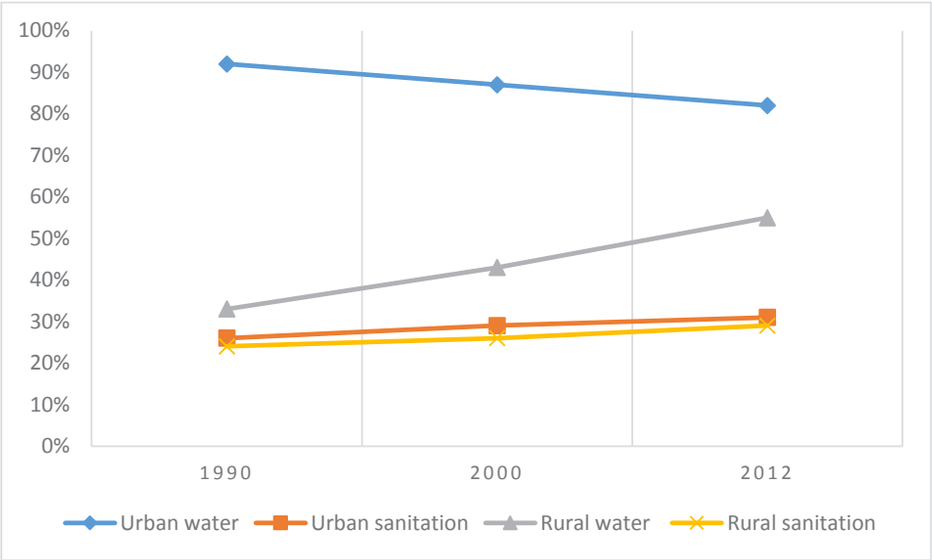
Source: World Development Indicators database.

9. **Kenya's urban infrastructure and service provision have not kept pace with its high urbanization rates.** This has created an infrastructure and service-provision backlog, with demand for services far outstripping supply in most urban areas. In Nairobi and Mombasa, water demand exceeds supply by more than 150,000 and 100,000 cubic meters per day, respectively. Only about 18 percent of the total urban population has access to a sewer system, 70 percent rely on septic tanks and pit latrines, and the rest have access to no sanitation services at all.[23] Wastewater treatment systems operate at very low efficiencies (about 16 percent of design capacity for 15 plants assessed in 2010), leading to undertreated effluents. No urban area in the country has a properly engineered sanitary landfill, and solid waste is generally dumped in open dump sites or other undesignated areas, or burned. Authorities are unable to keep pace with the growing demand because of inadequate financing for capital investments; inadequate capacity for planning, operating, and maintaining urban infrastructure and services; and institutional fragmentation that muddies mandates and hampers coordination of services.

10. **Progress in expanding urban WSS access has been weak.** The proportion of the urban population with access to improved water sources declined from 92 percent in 1990 to 82 percent in 2012,[24] while the proportion of the rural population gaining access rose from 32 percent to 55 percent. The proportion of the urban population with access to improved sanitation, excluding shared sanitation, increased by only 5 percentage points, from 26 percent to 31 percent over the same period, while the proportion of the rural population enjoying access rose from 24 percent 29 percent (Figure 2.3).[25] High population growth—the urban population rose from about 4 million in 1990 to 10.4 million in 2012[26]— makes it harder to achieve the Millennium Development Goal (MDG) 2015 target for proportion of population with access. Continuing the current trend—a 0.75 percentage point increase per year—would take more than 200 years to reach universal sanitation coverage.[27] Thus the universal water and sanitation coverage as envisaged in Vision 2030 (Figure 2.4) will require huge investments, much improved operational efficiencies, and innovative technologies—particularly for sanitation services, which have traditionally received less attention and financing than water services. They also are more fragmented: utilities are in charge of piped sewerage services, but households and firms are responsible for non-networked services such as septic tanks.

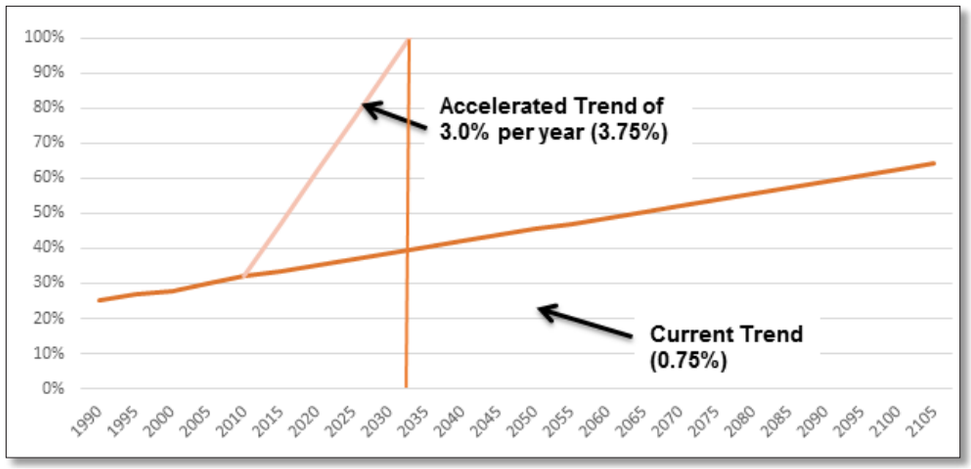
11. **Access to some basic services is improving, particularly in urban areas.** The proportion of people in urban areas with access to electricity climbed from a little over 42 percent in 1990 to over 58 percent in 2010 (Figure 2.5). Nevertheless, at this pace of improvement—16

Figure 2.3: Access to improved water and sanitation in Kenya, 1990–2012



Source: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (2014). [Layout: Sentence cap variables]

Figure 2.4: Current rate of access to sanitation and rate needed to achieve universal access by 2030

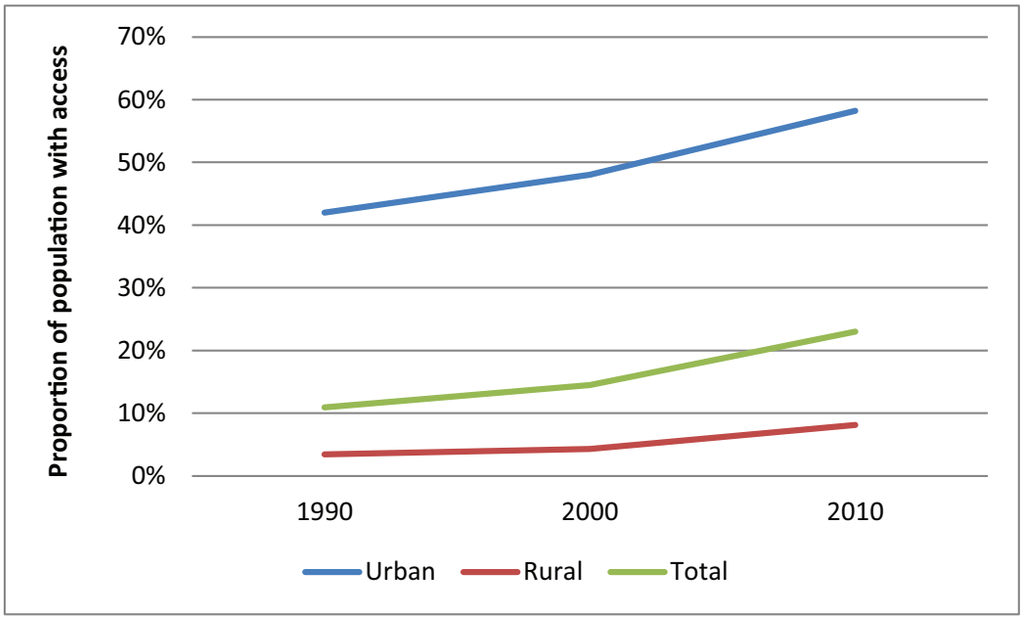


Source: World Bank (2013).

percentage points in 20 years—it would take more than 50 years to provide universal access to urban residents. But the push to provide access to electricity has accelerated in the past five years, with the number of connections in urban and rural areas doubling between 2009 and 2014, from about 1.1 million to 2.2 million (Figure 2.6).[28] The grid has been extended to the majority of rural settlements with a market and up to 1,000 residents. As of September 2015, 91 percent of primary schools are connected to electricity services, and all secondary schools are scheduled to be connected by 2016.

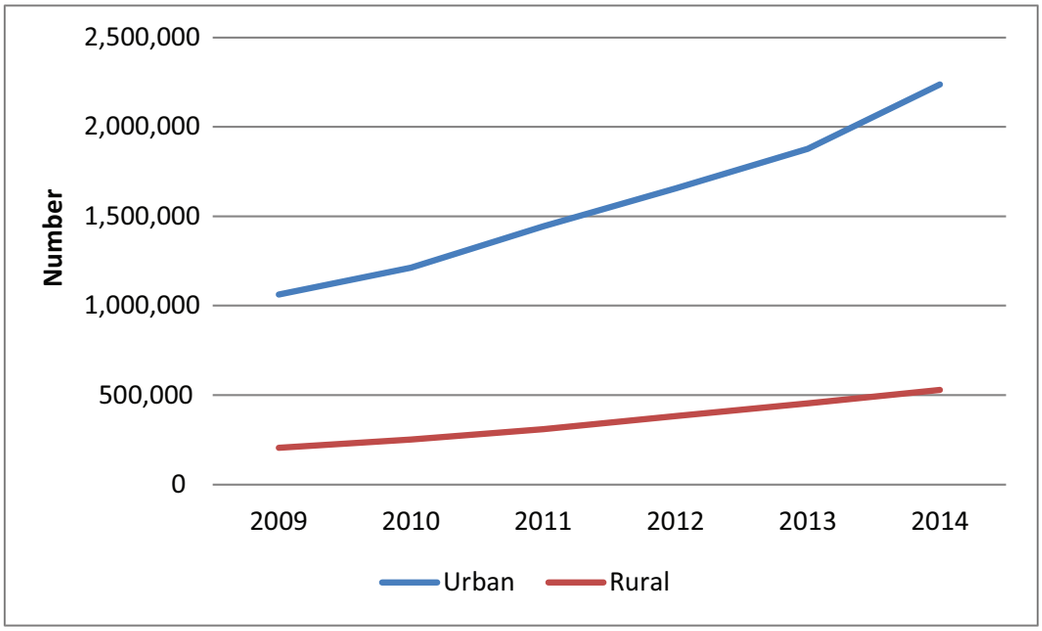
12. **There is great variability in access to basic services between urban areas of different population sizes.** Access to services such as water, sanitation, and electricity is generally better in more populous urban areas (Figure 2.7). This is consistent with international trends, as larger urban areas tend to have better access to finance (though less so in Kenya after devolution) and lower levels of urban poverty than smaller urban areas.

Figure 2.5: A growing proportion of the population has access to electricity, especially in urban areas



Source: World Development Indicators database.

Figure 2.6: Electricity connections in urban and rural areas, 2009–2014

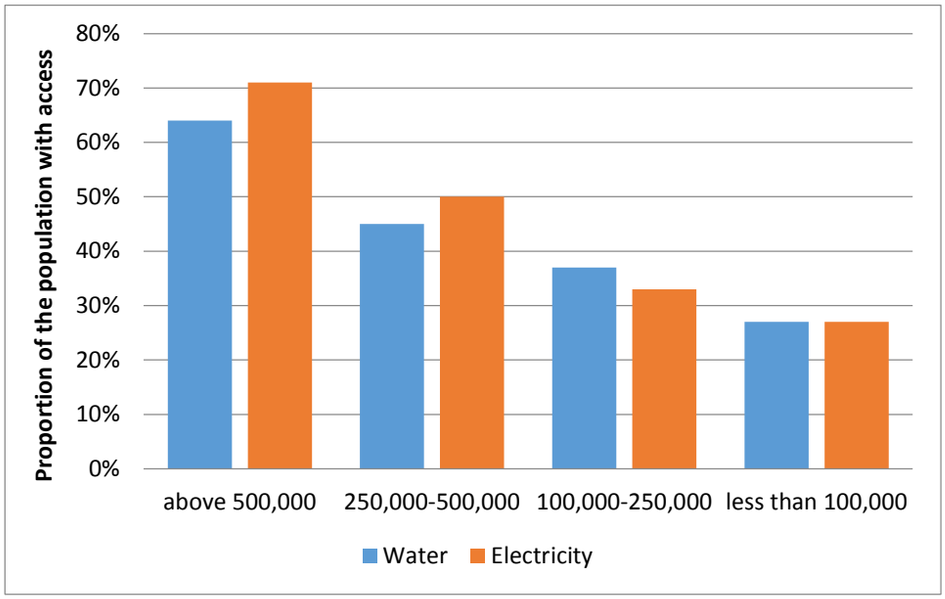


Source: Kenya Power (2014).

Access to Basic Services within and across 15 Large Urban Areas

13. **Access to basic infrastructure and services in urban centers varies greatly by formality of neighborhood of residence and by household poverty status.** The Kenya State of the Cities Baseline Survey, completed in 2014, examined access to services in 15 urban centers (Figure 2.8). A study of the demographic, infrastructure, and economic profile of 15 of Kenya's largest cities, it covers 56 percent of all people living in urban areas. It collected data from 14,581 households, focusing on living conditions in informal versus formal areas. For the purposes of this chapter, the services analyzed are WSS, electricity, solid waste collection, quality of neighborhood roads, and attendance and completion of primary school.[29]

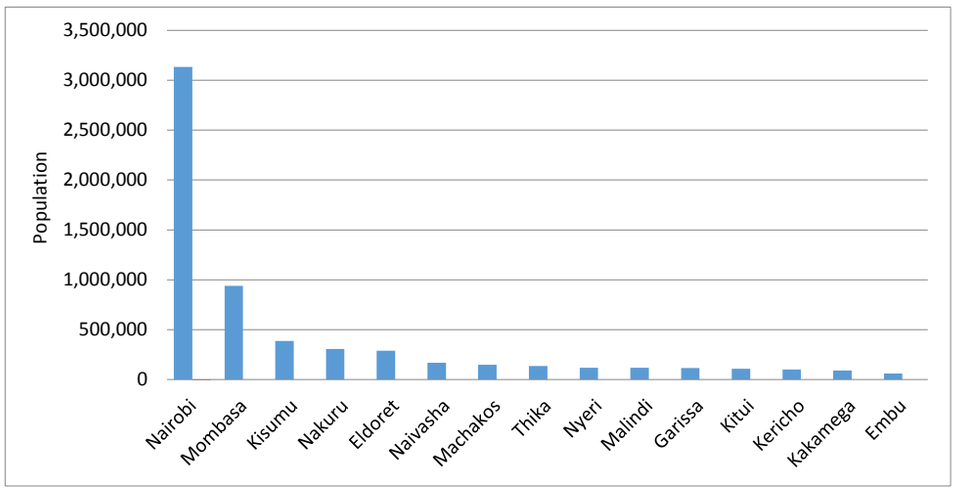
Figure 2.7: Access to water and electricity by population of urban area



Source: Based on Kenya National Bureau of Statistics (2009).

14. Access to basic infrastructure services is much better in formal than in informal areas. Although this is now changing, Kenyan authorities and utilities have long avoided bringing infrastructure services to informal settlements, either because of unclear land ownership or because it appeared unprofitable without subsidies.[30] Moreover, most of the population growth in cities is in the underserved informal settlements. As a result, access is much worse in informal settlements than in formal areas. In Nairobi, only about 36 percent of households in informal settlements have access to piped water in the house or he compound, while 84 percent of households in formal areas do. With a few exceptions, the disparity holds for access to in-house electricity, access to solid waste collection services, and quality of internal access roads.

Figure 2.8: Population of 15 urban areas



Source: Kenya National Bureau of Statistics (2009).

15. Providing networked services (water, sewerage, and electricity) to informal areas requires innovative mechanisms and capital investment. Service providers first need to work with local communities to earn their trust first and only then to encourage people to connect legally to services rather than obtain them through cartels that connect illegally and charge more than formal service providers would. Providing payment alternatives that take into account income levels in informal settlements helps reduce defaults and service interruptions, and such

mechanisms are being piloted in the water and electricity sectors. After extending water and sewer networks in one informal settlement, the Nairobi Water and Sewerage Company launched a mobile phone platform that enables customers to report meter readings and to receive and settle bills. This allows customers to pay their bills when funds are available. Kenya Power provides each household in an informal settlement (including tenant households) with a prepaid meter, allowing them to control exactly how much they spend on electricity each month—something that is not possible with cartel-provided service.

16. Unlike access, the quality of basic infrastructure services does not vary much according to whether people live in a formal or informal area. [31] In eight of the 15 cities in the survey, people with access to piped water in their home or compound who live in informal settlements have service for at least as many days per week as those in formal areas. Water utilities operate an "equitable water distribution program" that ensures all neighborhoods receive water on a regular schedule. The Nairobi Water and Sewerage Company publishes its schedule in the local newspapers and on its website. Generally, people living in informal settlements have access to fewer hours per day of electricity service than people in formal areas, but the gap is not large. The biggest challenge is for the operators to provide the network in informal areas. Once this is achieved, the quality of the service provided will be similar, regardless of location.

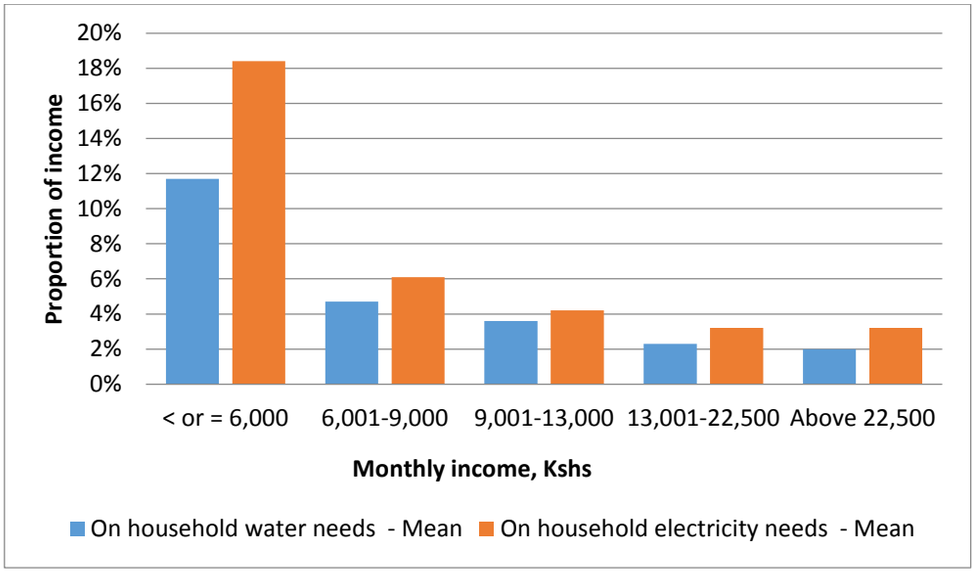
17. As expected, access to most basic infrastructure services is much lower for the poor than the nonpoor. For example, over 70 percent of nonpoor households in Nairobi have access to piped water in their house or compound, against just over 50 percent of poor households. This finding holds across cities of all sizes and across most infrastructure services. The main exception is for the quality of access roads in several cities, where some newer housing estates on the periphery of the city—which serve the nonpoor—do not have access to networked services, according to city officials. Because there is a close correlation between formality of neighborhood and poverty status, it is unsurprising that the nonpoor have better access to infrastructure services than the poor. But some nonpoor households reside in areas classified as informal.

18. School attendance does not vary by household location or poverty status. In eight of the 15 cities, a higher proportion of youths living in informal areas were attending school than those in formal areas. This is consistent with data from the baseline survey that show no difference by location of residence in access to a primary and secondary school within a 20-minute walk of home. Based on discussions with city officials and others, informal areas have many private schools and schools operated by nongovernmental organizations (including faith-based organizations), providing opportunities for youths to attend school.[32] Though not part of this analysis, it is likely that the quality of education for the poor in informal areas differs from that of the nonpoor in formal areas.

19. Access to basic infrastructure services in cities does not vary much by gender of household head. Female headed households in eight cities are at least as likely to have piped water in the home or compound as male-headed households. This may be because the burden of fetching water traditionally falls primarily on women, and having access to piped water frees women to pursue other activities—especially important for women heading a household. There is some variation in access to other infrastructure services, with female-headed households having better access in some cities and male-headed households in others. It is certainly not the case that female-headed households are systematically worse off in access to basic services than male-headed households.

20. P**oorer households spend a much larger proportion of their incomes on basic infrastructure services.** Households in the lowest income quintile (earning up to KSh 6,000 per month) spend 12 percent of their income on water and 18 percent on electricity (Figure 2.9). This contrasts with households in the highest income bracket, earning from KSh 22,500 to 100,000 per month, who spend an average of 2 percent of their income on water and 3.2 percent on electricity. Since poor households have lower connection rates to the public network, they resort to alternative sources, which are often more expensive and of lower quality than services from public utilities. In addition, the cost of connection to services through public networks without any subsidies is unaffordable for households in lower income quintiles. For instance, the average cost for a standard water connection in Nairobi is about KSh 13,215 (US$140), which includes a domestic connection fee, costs for piping and fittings, and a refundable meter rent.[33]

Figure 2.9: Poor households spend a much larger proportion of their income on water and electricity than the nonpoor, 15 cities.



Source: World Bank (2014).

Institutional, Legal, and Financing Framework for Selected Basic Services

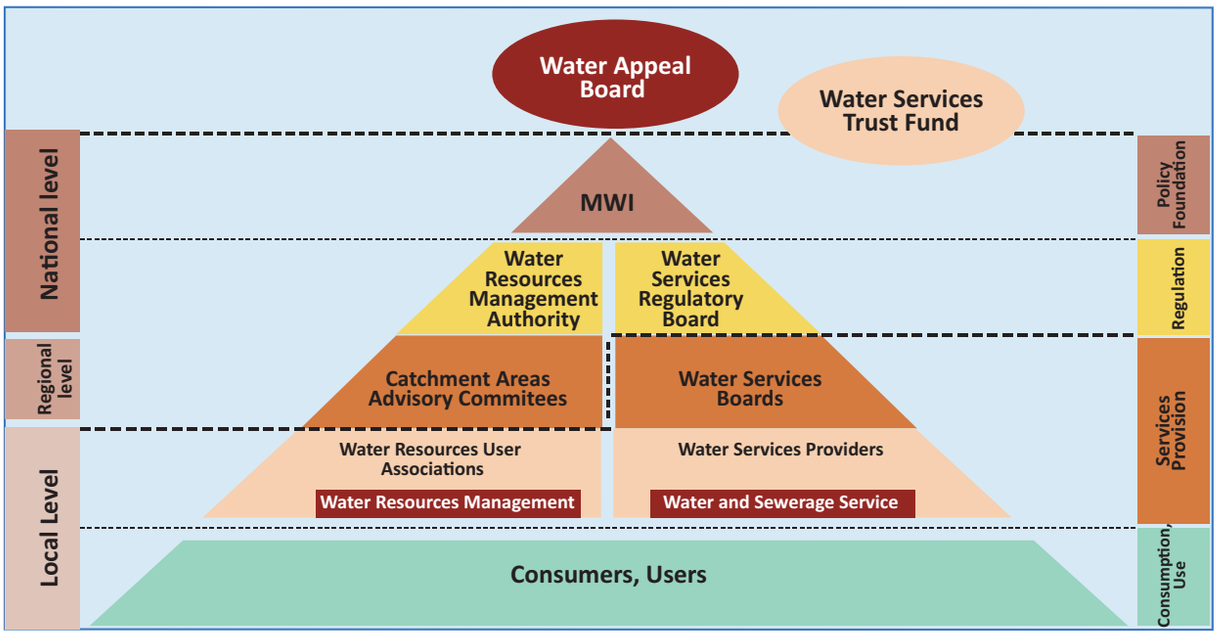
21. D**evolution poses a particular challenge for the provision of urban infrastructure and services.**[34] This is because most counties are predominantly rural and may have little incentive to invest in urban areas. Although urban centers produce most of county own-source revenues, counties may choose to channel their investments to rural areas instead, where most people live and where access to services is poor. In addition, devolution has shifted responsibility for provision of some basic services from the national government to county governments, which raises the risks that services will be underfunded. This section explores the institutional, legal, and financing frameworks for provision of three basic services—WSS, electricity, and solid waste management—each of which operates under unique institutional and financing arrangements.

Water and sanitation services—institutional structure

22. Urb**an WSS is a devolved function under the 2010 constitution, with pronounced implications for their governance, financing, and delivery.** Access to them is now a basic right and the responsible institutions need to demonstrate that they are upholding this right. This is complicated by the fact that devolution to county level has shifted the ownership of mostly corporatized urban water utilities (with ring-fenced accounts tied to urban water service) from local governments to new political entities (the counties), some of which may not want utilities exclusively to serve urban areas. Devolution may also affect fiscal flows to water and sanitation as the new intergovernmental system unfolds.

23. Water sector reforms since 2000 have left a supportive, reformist legacy for the transition now happening. The Water Act of 2002 still provides the legislative framework for the sector (see Annex 2). It also encapsulates a supportive legacy to build on, having underpinned sector modernization (Figure 2.10): separation of the functions of water resource management, water service delivery, policy, regulation, and financing; commercialization through the creation of autonomous urban and rural water service providers accountable to local governments, but clearly distinguished from the asset ownership and the investment function of regional water services boards (WSBs); and the establishment of an independent Water Services Regulatory Board (WASREB).

Figure 2.10: Institutional setup under the Water Act of 2002



24. The adoption of the 2010 constitution brought a need for new water legislation. A water policy was drafted in 2011 and a national water bill has gone through several renditions since 2012, but neither has been adopted. The bill aims to clarify roles and responsibilities in the delivery and regulation of WSS, in line with the Constitution. It encourages county governments to establish water service companies and contains enabling clauses for public–private partnerships. It also provides for a national regulator to set and enforce standards for service delivery, monitor and report on services, and license water service providers. The potential regulatory role of counties has become an issue—it is now agreed that it is legally possible to share regulatory responsibility between the national and county governments, but how such sharing would work has yet to be resolved.

25. With a range of service delivery performance and price setting issues at stake, WASREB has an important role. Established in 2003 under the Water Act of 2002, it regulates eight WSBs and 103 water service providers with an annual budget of about US$150 million. Its role covers licensing providers and monitoring their performance, with the annual WASREB "impact" report providing a comparison of performance of each WSB and provider for the year under review. Since 2009, WASREB has issued six such reports. The introduction of a constitutionally guaranteed right to water provides a strong basis and rationale for regulation of the service to ensure that this right is progressively realized over time. If the logic of the reforms since 2000 is to be followed, this would imply a national regulatory function to monitor allocation of funding to the sector and the effectiveness with which this funding is used; set, monitor and regulate minimum standards related to the provision of water; and monitor and regulate the institutions providing the service to ensure that these minimum standards are met.

26. WASREB has contributed in these regulatory areas over the past decade, bringing to the water sector greater transparency and scrutiny of performance. But with the advent of devolution, there have been calls from some counties for the regulatory function to be devolved to county level, though the draft water bill retains a national role for the regulator. The case for having a national regulator is that water service provision is a natural monopoly, so self-regulation is inappropriate. Public reporting though an independent institution should help ensure the integrity of information.

27. The Water Bill will need to harmonize with other legislation. It especially should harmonize with the County Government Act of 2012 and the Urban Areas and Cities Act of 2011. The Constitution and the County Government Act require that each county government prepare investment plans and budgets for development of county mandated services. For water services this means specifying how universal access to WSS will be achieved. In setting out what this means for WSS institutions, the water

bill must be consistent with other laws that affect planning, tariff setting, monitoring, and other aspects of governance and service delivery beyond the sector.[35]

28. After devolution, institutional roles are in transition. The shift from a centralized to a more decentralized architecture poses considerable challenges to consistent and accountable service delivery. Although much of the system that has emerged since 2002 is likely to remain, devolution means that specific features and relationships of these institutions are in transition. An example is the considerable emphasis placed in the decade before devolution on separating asset-holding from operating functions (Box 2.1). (In the early 2000s, it was common for private operators to manage water systems.) This helped address public concerns about private firms owning water assets and potentially depriving low-income households of services. Separate public asset-holding companies (the WSBs) were duly established with the functions of planning and investing in assets. But the relevance of this approach in the current arrangement is not self-evident. In most countries with public provision, the operator of a service is considered best able to plan for future investments, due to its superior knowledge (compared with an asset-holder) of the infrastructure system being operated and thus its presumed ability to make decisions on maintenance versus asset-rehabilitation or replacement spending.

29. Devolution has shifted the ownership of mostly corporatized urban water utilities (with ring-fenced accounts) from local governments to county governments. Since the majority of counties include both urban and rural areas, this means that urban water utilities may be required to also serve nonurban areas, affecting both their operational models and their ability to cover their costs, as pricing for rural water is significantly less than for urban water. In addition, the principles and practices for ensuring water utilities' ability to use water revenues in support of constitutional obligations to deliver these services have not been firmly secured. Diverting water revenues from the sector could undermine service delivery.

30. There has been some movement to cluster and share capacity and resources, though many urban water service providers remain intact. But stronger utilities are concerned that absorbing weaker ones would dilute their own capacities and financial positions, especially where different tariff rates exist. In cases where one provider serves more than one urban area in different counties, some counties have concluded that a joint provider does not serve their best interests. The Kakamega-Busia Water Services Company, for example, supplies water to two urban areas in two counties (Kakamega in Kakamega county and Busia in Busia county). Since devolution, the two counties have pressured the company to split into two, with each company focusing on its own county. The

Box 2.1: Devolution and former institutional roles: Water boards and water service providers.

Under the system evolved through water sector reform since 2002, WSBs (owned by the national government) have been responsible for providing water services and are authorized to do so through a license issued by WASREB (Sections 53 and 47 of the Water Act of 2002). But the actual delivery of water services is to be done by an agent of the WSBs—except where this is not possible or practical, in which case the WSB can provide the services itself (Section 55(2)). These agents are the water service providers that still deliver WSS under a contract with the WSB. The WSB is the owner of the assets (or was intended to be the owner), while the service providers are the asset operators. These licensing and contractual arrangements have largely remained since the counties came into being in 2013, but they have been controversial.

Although the counties with substantial urban areas have largely adopted service providers as service-provision vehicles, a number of counties have not been comfortable with the WSBs, which they see as instruments of national government that are insufficiently sensitive to county priorities and concerns. Some have argued that since devolution allocates responsibility for WSS provision to counties, the WSBs have become redundant. These issues remain on the agenda for several counties. In counties where bulk water and other interjurisdictional issues are prominent, such as the coast region, this has been intertwined with calls for a new bulk water arrangement, with the role of the Coast WSB—which provided bulk water services before devolution—to be renegotiated.

counties argue that they have different needs and require dedicated institutions. The company has not yet been split.

31. Clarity is also needed on future institutional responsibility for planning, financing, and investing in water services infrastructure. Under the 2002 reforms, eight regional WSBs have filled this role, both within and across counties. The draft water policy and water bill anticipate that developing cross-county infrastructure will be taken over by new waterworks development boards, which would hand over new infrastructure to the counties on completion. But several counties want to assume responsibility for investing in WSS infrastructure and argue that they have the constitutional right to do so. Therefore any future role of WSBs (or water works development boards) will have to be negotiated with the counties. Consideration may have to be given to a system of intergovernmental consultation, such as the joint national–provincial committees at political and technical levels that South Africa established after its own reforms in the 1990s.

32. Better integrated planning and coordination remain major challenges, underscoring the importance of coordinating platforms, from planning infrastructure to construction and operation:

- Strategic planning across levels of government is lacking. There is no system for cascaded strategic planning from national to county to provider levels. This compromises the robustness of cross-sectoral vision and implementation, so that infrastructure investment planning is often discretionary and devoid of clear criteria for appraising and prioritizing projects.
- Planning capacity within WSBs and providers is inadequate. This has led to weak multiyear investment planning, so that the sector lacks comprehensive investment and financing. This not only weakens the capacity of the public sector to invest in urban services, but also discourages potential private financiers from investing in water infrastructure.
- County responsibilities for urban infrastructure and services are fragmented. At county level, related urban services—storm water drainage, solid waste management, and all sanitary services other than waterborne sewerage—were the responsibility of the former local authorities. These services now fall under the counties in departments or agencies other than the water utilities. There may be a rationale for assigning potentially revenue-generating functions like water supply to separate agencies, but most cities no longer have clear platforms for coordinating these agencies and their functions, and county administrations are overwhelmed trying to meet their huge new responsibilities. It is a complex challenge, as the case of storm water drainage demonstrates. In the current system, this function typically resides with the county roads departments. While these departments may (or may not) manage the risks of storm water away from roads, bridges, and the like, they are not necessarily linked to the water sector institutions responsible for the safe disposal and treatment of storm water.

33. Interjurisdictional issues have assumed new significance in the devolved system, as water-flows across county borders reinforce the need for planning and managing bulk water systems in some regions. The Constitution allows counties to develop institutional arrangements with other counties or the national government on interjurisdictional issues of common concern. This is important because the flow of water across borders often is a complex and risky matter that may require special institutional arrangements stretching across jurisdictions. But the exact institutional form, status, and mandates of such institutions in the water sector are likely to demand considerable bargaining over the next few years. Kenya's two largest urban counties, Mombasa and Nairobi, both need to work with neighboring counties on water resource management (Box 2.2).

Box 2.2: Interjurisdictional water flows and bulk water in Kenya's biggest urban centers

Mombasa and Nairobi both need to work with neighboring counties on water resource management to assure water supplies to residents. But the solutions may not be the same for both cities.

Mombasa City County is Kenya's second-largest urban area, a major port, and one of the six counties that make up the Coast region. Water demand for the region has been projected to more than double by 2035, with half of that demand coming from Mombasa. Current water supply to the city meets less than half of its demand, leading to water rationing, with different areas of the city receiving water on scheduled days. With no water source of its own, the city relies on water from neighboring counties, delivered through an interconnected bulk water supply system. This system comprises four main water sources originating in Kwale, Kilifi, and Taita-Taveta counties and supplies these counties plus Mombasa—the other two counties in the region (Lamu and Tana River) have their own sources. The system is managed by the Coast WSB through a bulk water unit responsible for operating and maintaining the system and for selling bulk water to the counties through its providers.

Several studies indicate that water resources are adequate to meet the Coast region's demand until 2035, but substantial storage and augmentation are required for the long term. This requires suitable institutional arrangements that the counties can accept, both for infrastructure development and bulk water supply. Currently, some of the counties are concerned that the Coast WSB, as a national government institution, is not sufficiently responsive to their demands. Discussions are in progress on how to manage interjurisdictional issues. An answer may lie in the constitutional provision for cross-boundary institutions, but this will require effective mediation to accommodate the interests of the counties while maintaining effective service provision.

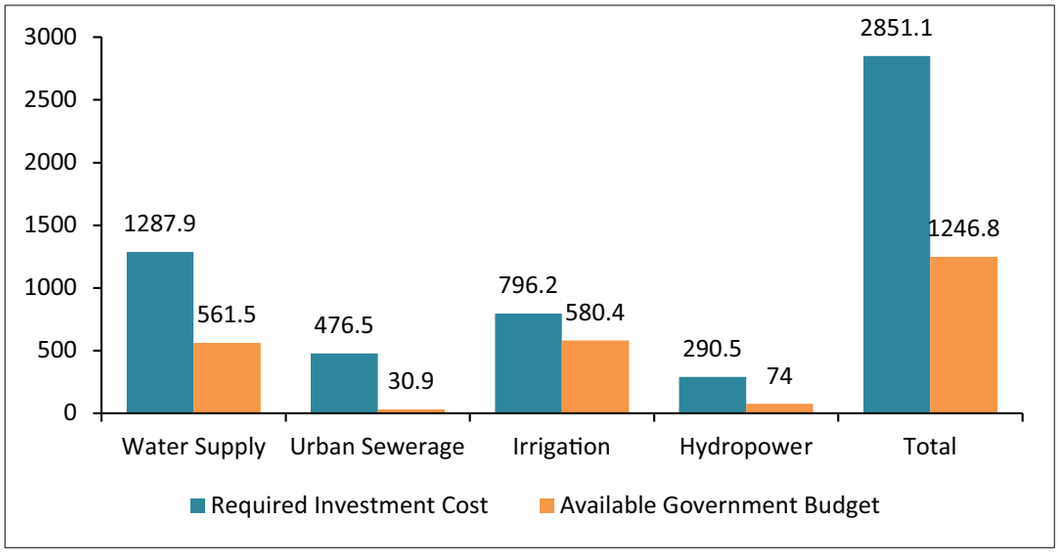
Nairobi City County is more dominant in water supply in its regional intercounty context, but large parts of its bulk water system are in neighboring counties. The county sells only 2.5 percent of its bulk water to neighboring counties as a bulk supplier. The scale of this business is therefore very small relative to its total business, which makes a dedicated bulk water institution less viable. Also, there is little merit in setting up an intercounty water service provider to address small intercounty water issues, because the costs and complexities of establishing an intercounty provider far outweigh the benefits. This may change as the share of bulk water used by other counties increases.

Water and sanitation services—financing

34. Under the Water Act of 2002, WSBs were responsible for planning, financing, and investing in water and sewerage infrastructure. The national government was responsible for financing water and sewerage infrastructure through regional WSBs, which also owned the assets. The WSBs entered into agreements with water service providers, which are responsible for providing WSS in specified service areas and for operating and maintaining the infrastructure. Because water revenues are ring-fenced, providers are expected to meet their operation and maintenance costs as well as remit to the WSB any administrative levies and loan repayments for infrastructure financed through loans. Since the institutional setup is in transition, the modalities of financing capital investments are also changing.

35. Achieving universal access to improved WSS requires huge capital expenditure. The National Water Master Plan 2030 estimates that about US$14 billion in investment in water supply is needed over the next 15 years, based on government projections (Figure 2.11). Urban sewerage infrastructure is projected to cost about US$5.2 billion, of which 96 percent is targeted for new sewer infrastructure and the remainder for rehabilitation. Construction of new sewer systems will generate operation and maintenance costs, bringing the total financing needs to about US$5.4 billion (KSh 500 billion). This points to funding shortfalls of 56.6 percent for water supply investment and 93.5 percent for urban sewerage (Table 2.1). Given that development partners now contribute more than half of financing, a sharp increase in mobilizing new financing will be required.

Figure 2.11: Financing gap to meet Vision 2030 targets (KShs) billions)



Note: No urban–rural breakdown is available.
Source: Kenya Ministry of Environment, Water and Natural Resources (2013).

Table 2.1: Water supply and sanitation financing gap for Vision 2030 targets, KSh billion

Development	Required investment	Central government resources (2013/14–2030/31)	Shortfall
Water supply	1,287.9	561.5	726.4 (56.6%)
Urban sewerage	476.5	30.9	445.8 (93.5%)

Source: Based on Kenya Ministry of Environment, Water and Natural Resources (2013) and historic annual investment figures.

36. Budgetary allocations for WSS have increased steadily over the past decade. The total approved budget for the water sector increased more than sixfold from KSh 6.6 billion (US$82.5 million) in financial year 2005 to KSh 41.8 billion in 2014 (US$465 million) (Figure 2.12). The budget for capital investment grew almost ninefold over the same period. The total budget approved in 2013/14, the first fiscal year after devolution, recorded a decline of almost 30 percent from the previous year, partly because some of the funds previously allocated to the Ministry of Water were given directly to counties to perform their devolved functions.

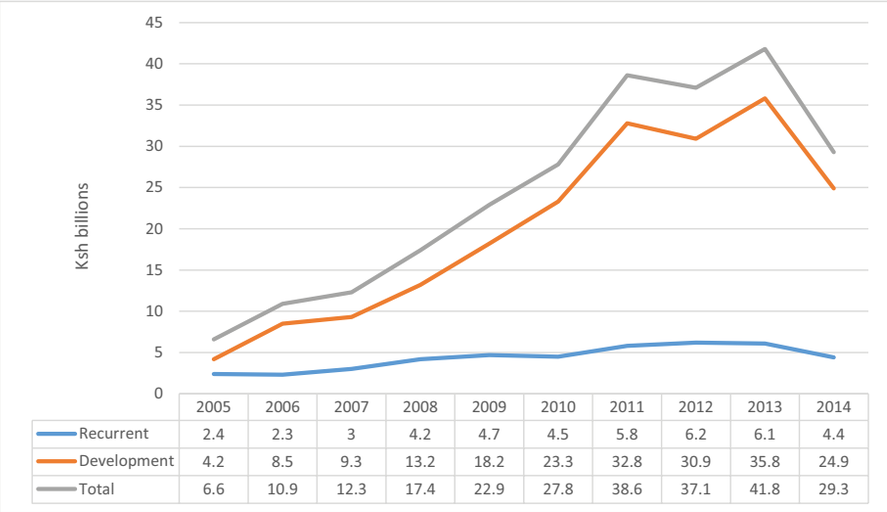
37. The actual expenditure has been lower than the approved budget over the years. For example, the budget approved in financial year 2014 was KSh 29.3 billion, but actual spending was KSh 21.4 billion. The reason provided by the Ministry of Water for the difference was a low absorption rate by the various water sector institutions. Donors contribute some 69 percent of funds for capital investment in WSS. In the total water sector budget, the WSS subsector receives the highest allocation—65 percent in 2014) (Figure 2.13). Still, funds are far too low to deliver the services commensurate with middle-income status. To achieve Vision 2030 targets for universal WSS coverage, the national and county governments would need to double their budget allocation for capital investments in water supply, while that of urban sewerage would need to increase more than fifteen-fold. Additionally, the absorption capacity of various sector institutions would need to improve to avoid underutilization of approved budget.

38. Urban water supply is underpriced. Achieving a cost-recovery ratio of over 100 percent in urban areas is important because it allows capital investments to rehabilitate and expand the system. This is essential to sustainably increase access to services and enable county governments to meet their constitutional obligations. But most service providers still operate below full cost recovery, continuing to operate largely on low margins or deficits even

without factoring in capital investment costs. Operation and maintenance (O&M) cost coverage is the first step toward full cost coverage. Between 2005/06 and 2009/10 cost recovery rates for O&M for 61 urban providers increased from an average of only 80 percent to 120 percent. They have since declined to 113 percent in 2012/13, mainly because costs have risen more than revenues.[36]

household—considered the minimum quantity required for basic needs—and increasingly more for higher levels of consumption. While the providers use rising block tariffs, the maximum tariff for residential consumers remains low, which means even well-off households with swimming pools pay little for water. For example, at Nairobi Water

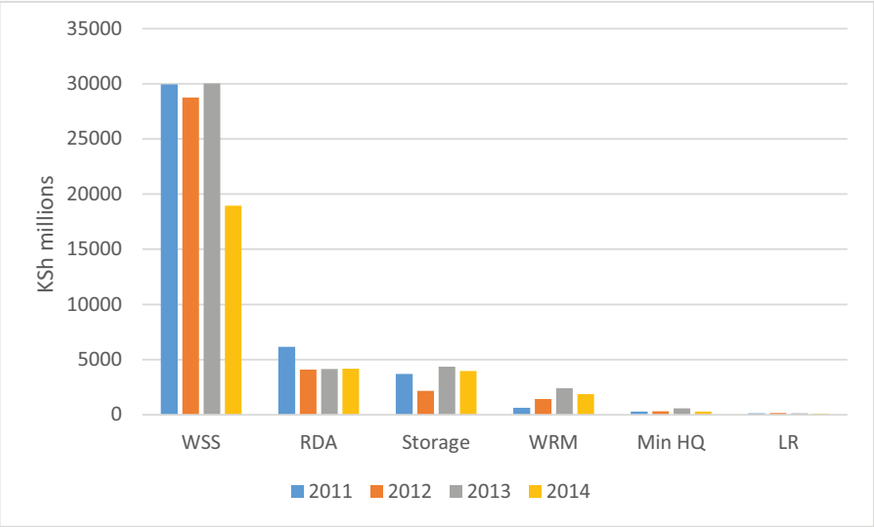
Figure 2.12: Trends in approved budget for Water and Sanitation Services, 2005–14



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Recurrent	2.4	2.3	3	4.2	4.7	4.5	5.8	6.2	6.1	4.4
Development	4.2	8.5	9.3	13.2	18.2	23.3	32.8	30.9	35.8	24.9
Total	6.6	10.9	12.3	17.4	22.9	27.8	38.6	37.1	41.8	29.3

Source: Ministry of Water data.

Figure 2.13: Water sector budget allocation by subsector, 2011–14



Notes: WSS= water supply and sanitation; RDA=Regional Development Authorities; WRM=water resources management; Min HQ=Ministry headquarters; LR=Land reclamation.
Source: Kenya Ministry of Environment, Water and Natural Resources annual water sector review, 2014.

39. Ideally, tariffs should mobilize enough revenues to cover O&M costs, subsidies for the poor, and, where feasible, expansion of networks. But WASREB attempts to balance commercial and social interests in service provision through its tariff review process. To address concerns about affordability of water services, providers can offer a low price for the first six cubic meters per month per

and Sewerage Company, the maximum tariff for residential, commercial, and industrial consumers, which starts for consumption above 60 cubic meters, is only KSh 60 per cubic meter, compared with the per cubic meter charge of KSh 34 for the first six cubic meters for the same category of consumers (flat rate of KSh 204 for 0 to 6 cubic meters).

40. In principle, WASREB guides a process of water pricing that is common among all utilities. Procedurally, utilities periodically submit tariff proposals to the regulator. A regular tariff adjustment is typically set at three to five years, although the WSB or provider can request an extraordinary tariff adjustment for specific changes approved by the regulator. An extraordinary tariff adjustment can be granted only once a year and not less than 12 months before or after a regular tariff adjustment takes effect. This implies that changes such as in the cost of fuel and exchange rates are normally not reflected in the tariff until the next tariff review, which for most providers comes three years after the previous review. Once a final rate is agreed on, utilities consult with their stakeholders to obtain acceptance of the set tariff levels.

41. While WASREB has challenged utilities that proposed very low tariffs, it also advises utilities not to depend purely on tariff increases to improve their revenues. It urges them, foremost, to focus on efficiency improvements, such as containing water losses (nonrevenue water), ensuring optimal staff ratio per connection, and improving general management. But the tariff adjustment process does not play out consistently. Not uncommonly, utilities miss the deadlines for proposing higher tariff levels to WASREB, which delays needed tariff increases. Some utilities also price water below the tariff levels approved by the regulator after they have consulted with customers. This severely affects the sustainability of service delivery. The slow process of adjusting tariffs for WSS is in contrast to the practice in the electricity sector, in which tariffs change monthly to reflect changes in the price of fuel and other costs.

42. The cost of connection to urban water and sewer networks is too high for households. The cost of connection to the water supply network—both in monetary terms and the steps involved—is an obstacle for households wanting to connect to the network. In Kenya, customers pay application fees, buy their own materials, and hire service providers for trenching, backfilling, and connecting the household or compound to the water system. The average cost of connecting a household within 50 meters of the distribution line is US$220, beyond the reach of many and especially of poor households. The cost of connecting is higher in urban areas, especially in densely populated cities where it could involve digging up and reestablishing paved areas. Some service providers also require customers to provide land-ownership documents, or proof of guarantee of payment by the landlord (such as lease provisions) to accompany an application by a tenant. Where the distribution line is more than 50 meters away, the application must be made to the head office, when customers may even be required to undertake or finance the necessary designs for extending the line. These additional requirements all act as powerful disincentives for legal connections.

43. Some urban water utilities have adopted social connection policies to reduce connection obstacles for poor households. The Nairobi, Eldoret, Malindi–Mombasa, and Mumias WSS companies have adopted policies aimed at expanding WSS services in informal settlements. Under the social connection policy, the companies created a fund that is to be used to bring water and sewer distribution networks to informal settlements. The companies have also created credit facilities to pay initial connection costs over 24–60 months. Some residents of informal settlements are benefiting from subsidies for WSS connections under the Global Partnership on Output-Based Aid, which covers about 50 percent of the connection costs.

Electricity—institutional structure

44. The 2010 constitution did not alter the institutional or financing framework for delivery of electricity services, unlike as for WSS. Under current legislation (Energy Policy 2004 and Energy Act 2006, discussed below), the national government is responsible for exploration, production, importation, exportation, and refining or processing of fossil fuels; geothermal and other energy-based natural resources; transport, storage and bulk sales of fossil fuels and their derivatives; and generation, transmission, distribution (including reticulation), and retail sale of electrical energy.

45. The sector operates on commercial principles supported by transparent financial relationships between utilities. The Kenya Electricity Generating Company (KenGen) and Kenya Power—both of which are majority owned and controlled by the government through 50.1 percent direct equity interests—are listed on the stock exchange and are required to make profits and pay dividends. KenGen, the leading electric power generation company in the country, is responsible for generating electric power from various sources including hydro, geothermal, thermal, and wind.

Kenya Power is the single buyer and sole distribution company for all power produced in and imported into the country. It is the source of all the revenues of KenGen and all the existing and future independent power producers.

46. The policy and institutional framework for electricity distribution is anchored on the Energy Policy 2004 and Energy Act 2006. Once vertically integrated, since 2006 the sector is unbundled, with separate generation, transmission, and distribution companies. A semi-autonomous regulatory agency, the Energy Regulatory Commission, formulates, enforces, and reviews regulations, codes and standards and reviews and adjusts electric power tariffs and tariff structures. A special-purpose public company, Geothermal Development Company Limited, carries out geothermal resource development. The Kenya Electricity Transmission Company Limited constructs transmission lines. The Rural Electrification Authority constructs electricity infrastructure to connect rural centers, schools, and other public facilities. Kenya Power connects households, businesses, and institutions to the electricity system and is responsible for retail distribution of electricity.

47. A draft Energy Policy and Energy Bill 2014 seek to consolidate energy laws into one Act of Parliament and to align the energy sector's legal and regulatory framework with the 2010 constitution. The Energy Bill creates a national obligation to provide energy services at affordable prices to all areas of the country. It also establishes a national electrification program and a national electrification program fund to accelerate electrification. It also clarifies the role of the county governments in preparing county energy plans to be used as inputs into national planning and policy making processes and in regulating and licensing retail energy suppliers and small-scale producers, transporters, and distributors of biomass and charcoal products. Other key provisions of the 2014 draft Energy Policy and Bill are requiring a periodic review of electricity market competitiveness; establishing a committee to advise the national government on licensing; providing open access over transmission and distribution networks to eligible parties; and introducing greater transparency and an open competitive process in awarding concessions and licenses for exploitation of natural energy resources.

48. In contrast to WSS, electricity retail tariffs are set at levels that reflect capital and O&M costs of providing services. Fuel, foreign exchange, and other costs are passed through and recovered from customers, with tariffs adjusted annually. Kenya Power does not receive any subsidies (except for rural electrification) and its revenues are fully dependent on the regulated tariff and electricity sales/market demand. Maintaining cost recovery retail tariffs is critical for the short- and long-term financial sustainability of Kenya Power and the power producers.

49. The Energy Regulatory Commission is responsible for reviewing electricity tariffs. While the periodic tariff review has sometimes been challenging and faced delays, the tariff-setting process has not been subject to the same degree of political interference as has the setting of tariffs for WSS. This may be because electricity tariffs are set at the same level countrywide, while tariffs for WSS are set locally. Moreover, access to electricity, unlike water, is not regarded as a basic right, because people have access to alternative sources of energy, such as charcoal for cooking, to meet daily needs.

50. **Increasing access to electricity in urban and rural areas—cost-effectively—is a national priority.** The government is revisiting the current approach to electrification with the preparation of a National Electrification Strategy. The strategy will specify the most cost-effective approaches to bringing electricity to all people in Kenya. Such approaches include extending the grid from underused infrastructure (primarily medium- and low-voltage transformers) in rural and peri-urban areas to connect nearby households and promoting off-grid electrification (mini-grids and individual home systems) in remote regions.

Electricity—financing

51. **Very large investments are needed to assure services to meet projected electricity demand after 2018.** Capacity is expected to be sufficient to meet demand until 2017, and there is adequate reserve capacity. According to the government's least-cost power development plan, investment of almost US$45.3 billion will be required for generation and US$4.5 billion for transmission over 2012–2030 to meet forecast electricity demand and improve quality of services. Financing the investments will require long-term financial planning by Kenya Power and best use

of funding sources, including access to commercial financing at lowest possible cost.

52. The government's target of universal access to electricity by 2020 requires additional investment exceeding US$3 billion. Expanding the network to meet electrification targets needs a combination of a tariff levy on all customers, concessional funding of development partners, and contributions from central government. Universal access to electricity will require provision of subsidies to cover costs of connecting low-income households. Recent experience shows that these should come from the central government's budget rather than Kenya Power's funds. During 2011–2013, Kenya Power followed a government directive to connect rural households living within 500 meters of a transformer at a fee of KSh 35,000 (US$400). This charge was well below the actual costs of a connection—about US$1,000—forcing Kenya Power to borrow commercially and placing a heavy burden on it. Kenya Power's financial position deteriorated and it suspended participation in the rural electrification program in August 2013. Adding to these challenges, most potential rural customers cannot afford the connection fee and opt to not connect, leaving the rural network underused and the costs of serving connected households very high.

53. In view of this experience, the government has agreed to subsidize connections for low-income households in rural and peri-urban areas. This is in line with international practices for successful electrification programs. Funds for the subsidies will come from development partners, a levy on electricity charges, and other sources. It is expected that once 60 percent to 70 percent of households are connected, the levy will generate enough funds to cover the subsidies.

54. Kenya Power is running a slum electrification program aimed at connecting 40,000 households in informal settlements to formal services by April 2016. Households in informal settlements pay only about US$15 to connect to a prepaid meter, with the rest of cost met with a grant from the Global Partnership on Output-Based Aid. The program has encouraged residents of informal settlements to connect to Kenya Power's network instead of relying on cartels. Kenya Power is taking measures to greatly reduce the costs of connecting households. These include connecting all houses within a given area at once to benefit from economies of scale.

Solid waste management services—institutional structure

55. The 2010 constitution has shifted management of solid waste collection, transport, and disposal from urban local authorities to county governments. Although this shift is not as dramatic as that for WSS, it creates risks that counties will not adequately fund a service that primarily serves urban areas.

56. Multiple solid waste management laws and regulations need to be harmonized. These include the County Governments Act of 2012, the Environmental Management and Coordination Act (EMCA) of 1999, the Urban Areas and Cities Act of 2011, the Physical Planning Act of 1996, and the Public Health Act. The National Environment Management Authority (NEMA), established under EMCA, is responsible for ensuring that solid waste management services are carried in an environmentally sound manner. The Environmental Management and Coordination (Waste Management) Regulations of 2006 were enacted by NEMA to regulate the handling, transport, and disposal of various types of waste. The National Environment Policy of 2013, prepared by NEMA, calls for a national solid waste management strategy.

57. As solid waste management services are a devolved function, county governments are also drafting legislation to provide legal frameworks in line with the 2010 constitution. But some provisions in the county legislation appear to conflict with national legislation. For example, Nairobi's framework requires transporters and operators of an incinerator, recycling, or composting facility to obtain licenses and permits from the county administration. Yet under EMCA's waste management regulations, NEMA licenses transporters, incinerators, landfills, composers, recyclers and transfer stations. Thus the roles and responsibilities of entities regulating solid waste management services need to be clarified.

58. Different counties have differing laws governing solid waste management services. For example, under the Nairobi Solid Waste Management Act, services are financed through fees on users of services, permits, and incinerators, while the Nakuru County legislation establishes a solid waste management fund for payment of services to be financed with appropriations from the county assembly,

with no mention of user fees. Nairobi City County manages its services through the administration's department of environment, continuing the arrangements established under the previous city government. Nakuru has established a solid waste management board to formulate policies, approve and monitor implementation of local waste management plans, and mobilize resources for efficient management of solid waste.

59. Kenya does not have a single modern sanitary landfill. Although most governors and other policy makers refer to solid waste management as one of their top priorities, all solid waste is deposited in open dumpsites. Some counties have identified sites for sanitary landfills, but none so far has obtained clearance from the Civil Aviation Authority, which is concerned that landfills will attract birds and pose a hazard to aviation. Efforts are underway to find sites in relatively sparsely populated areas to serve multiple urban centers and towns. Approaches to reduce the waste destined for landfills are also being tried, including a commercially operated incinerator in Naivasha that earns a profit by selling energy to the grid.

Solid waste management services—financing

60. P**ublic funding of solid waste management services has not kept pace with urbanization.** Thus local governments provide services primarily to central business districts, leaving residents and businesses outside this zone to contract with private operators. Under this arrangement, high-income and some middle-income residential areas receive good services, but poor areas often receive none at all. Those that do receive services obtained them through community-based organizations. Only about one third of Nairobi's waste is collected and legally disposed of at the city's only licensed dumpsite at Dandora.[37] The rest is burned or dumped illegally in unauthorized areas. Some 95 percent of the waste collected and disposed of properly is handled by the private sector.

61. The Nairobi Solid Waste Masterplan estimates the funding gap for Nairobi. Completed in 2010 with support of the Japanese International Cooperation Agency, it estimates that some US$74.1 million is required for capital investment and O&M costs to properly collect, transport, and dispose of Nairobi City County's waste between 2011 and 2030,[38] or about US$4 million a year. The costs cover purchase of about 600 collection vehicles (but not O&M costs) and the construction and operation of a new sanitary landfill. Fees collected from households and businesses are expected to cover only a fraction of the costs, with the remainder coming from the county's own budget, development partners, and other sources of revenue.

62. Nairobi is piloting a zoning and franchise system, following the recommendations of the masterplan. Under this system, Nairobi is divided into nine zones, each with relatively well-off residential areas and informal settlements. Franchisees are selected through bidding to obtain exclusive rights to serve each zone. The company is expected to collect enough revenues from households and businesses in the well-off areas to provide services elsewhere in the zone at low charge. Each company is also expected to remit 15 percent of its revenues to the county council for use in collecting market waste and road sweepings and other waste management services. The zone and franchise system is expected to bring order to the solid waste system by reducing the number of private waste collection companies from more than 50 unregulated operators to nine carefully monitored service providers. The city started a pilot in a single zone in early 2015.

63. Nairobi's new system is being challenged by the private companies that would be put out of business. The county has refused to license any private companies other than the selected franchisees to operate in the selected pilot zone and have asked households and businesses not to pay any company other than the franchisee. The companies have in turn staged protests and filed a lawsuit on the grounds that the county has no right to interfere with their contracts with residents and businesses. Many people who have contracted with these companies also say they are happy with their current arrangements and refuse to comply with the county's directive. A court has stayed the county's ban on private operators for the time being, so they continue to operate in the pilot zone. Despite the resistance to the new program, the county plans to implement the system in three additional zones starting in late 2015.

Recommendations

1. Strengthen the financing frameworks for provision of basic services

Short term	Provide basic services—water and sanitation, electricity, and solid waste management services—on business principles
Service providers and different levels of government need to greatly expand their investments in basic infrastructure and services. Funds will have to come from increased tariffs and user charges, central and county governments, and development partners. To provide services along business lines, service providers need to focus on five areas: asset creation, customer management, financial management, effective use of staff, and asset management and operations. Only Kenya Power operates on these principles. By contrast, water service providers must sharply improve their cost-recovery ratios by raising tariffs, reducing nonrevenue (wasted) water, and improving efficiency. Financing of solid waste services will have to come primarily from increased user fees.	

2. Improve the institutional functioning of devolved services

Short term	Start with a thorough assessment of current capacity
In WSS, government at all levels and water sector institutions such as the WSBs and water service providers must improve information on their capacities and critical areas for improvement. Better understanding of capacity is especially important in three areas: Service delivery outcomes, sustainability, and performance Budgets of water service providers—revenues, expenses, and capital budgets—as well as grants and loans for capital investment Experience and skills of staff of the providers to support county needs (such as for planning and budgeting). In solid waste management services, county governments need to review their capacity under the former local urban authorities and establish new institutional setups to maintain existing services before attempting to scale up.	

Medium term	Adopt legislation that aligns sector operations with the Constitution and with other laws
It is critical to adopt a revised Water Act and to harmonize it with other laws governing counties.	

3. Consider providing subsidies to households in informal settlements to allow access to basic infrastructure services

Short term	Host a national forum to discuss the possibility of establishing a dedicated fund to subsidize the costs of water and sanitation connections for these households
With the support of development partners, households in informal settlements in several urban areas are benefiting from subsidies for WSS connections and formal electricity supplies. These subsidies are set at levels that account for what poor households can afford. Consideration should be given to how the subsidies should be financed. Requiring service providers to finance subsidies would not work unless tariffs were significantly increased to cover the costs, which has proven difficult in the past. Instead, the government at central or county levels should consider establishing a dedicated fund to which it and partners contribute. Such a fund could be wound down once most households were connected.	

Medium term	Establish the subsidy fund (or other subsidies mechanism) and start its operation
The electricity sector offers an example of how funding for subsidies can be raised and managed. Expanding the network to meet electrification targets needs a combination of a tariff levy on all customers, concessional funding of development partners, and contributions from central government. It is expected that once 60 percent to 70 percent of households are connected, the levy will generate enough funds to cover the subsidies.	

4. Establish accounting, monitoring, and reporting systems and processes

Short term	Strengthen systems of monitoring and evaluation
To improve services demands, operating costs need to be known. In WSS, the regulator requires water operators to monitor and report on indicators such as nonrevenue water, staffing per connection, proportion of customers connected to a functioning meter, and proportion of bills paid. These data allow the water institutions and the regulator to assess the institutions' performance relative to others, which is an essential first step in making improvements. The existing systems to collect and report on data need to be strengthened to ensure the accuracy and timeliness of the data collected. A real effort will be needed to build systems to monitor and assess the performance of solid waste management service providers, which are lagging those of the other two services.	

Medium term	Encourage counties to use the information to prepare county investment plans
Counties should use the data on service performance in preparing county investment plans and to determine tariffs, allocate budgets, and identify operational strengths and weaknesses along with ways to address them.	

5. In devolved services, counties and their service providers must pay attention to interjurisdictional issues

Short term	Counties that share a resource should enter into a dialogue among themselves and with the national government on how best to manage interjurisdictional issues
In WSS, where bulk water systems are integrated across counties, a regional body to plan and manage the bulk water system should be considered, though there are benefits to integrating the entire water supply chain into one entity. In solid waste management, counties should consider establishing landfills that can serve more than one county and working out an institutional structure to manage the relationship.	

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Chapter 3

Access to Affordable Housing in Urban Areas

Key Messages

1. The shortage of high-quality, affordable housing in urban areas undermines livability for residents. The shortage is both quantitative and qualitative. As Kenya urbanizes, formal housing supply is not keeping pace with the growing urban population, and informal housing construction fills the gap. While definitions of informality are not standard, most estimates suggest that not less than 50 percent of the urban population lives in informal settlements, and most studies suggest that this share is not decreasing. Following the MDGs in defining a slum dwelling by the absence of running water, permanent walls, a toilet shared by fewer than 20 people, or a sleeping room shared by fewer than three people, nearly 61 percent of urban households occupy slum housing. There are indications that urban residents make trade-offs between housing conditions, proximity to jobs, and high food costs, opting to stay in poorer living conditions to afford food and live closer to jobs.

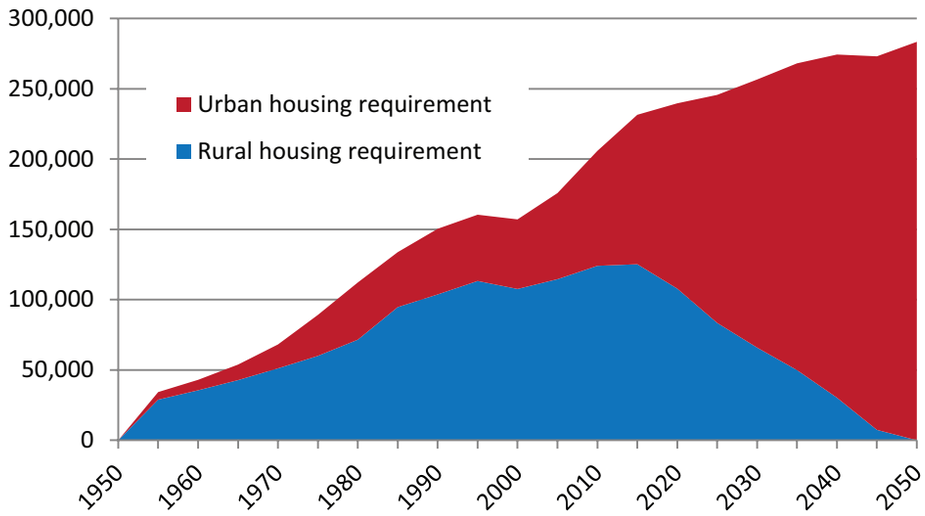
2. The main constraints to affordable housing are high costs of land and of formal construction, poor access to housing finance, and inappropriate taxes and regulations. Home ownership is out of reach for most urban dwellers, and renting is more accessible and affordable. The majority of the urban population, due to the level and informality of their income, do not qualify for a mortgage. In Nakuru, for instance, only 15.7 percent of the population earns its income from formal employment. But more formal housing is being built in the formal sector for upper-middle and high-income groups than for low-income families, even if they could qualify for a mortgage. The majority of people who live in cities are renters—91 percent, for instance, in Nairobi—and current approaches to ownership do not reach them.

3. To reduce the cost of housing and increase access, Kenya's policy makers will need to focus at both ends of the housing market. Internationally, most governments play only a very limited role in housing provision. As most housing is provided by the formal or informal private sector or by civil society groups, housing policy needs to be responsive to the conditions and modes of operation in the sector at large. This will include finding ways to reduce land costs and the costs of other inputs to housing. Facilitating access to microfinance (not just mortgage finance) and other innovations will be required that take into account the incremental approach to housing used by most low-income households. Policies will also need to recognize the large share of urban dwellers who rent housing as the most affordable option rather than focus on increasing home ownership.

Demand for Housing: Growing Urban Population with Low, Informal Incomes

4. Population growth in urban areas is set to continue raising demand for housing. Roughly 32 percent of Kenya's population lives in cities today, a figure expected to grow to 50 percent around 2050.[39] Urban areas are projected to grow at 4.4 percent against a national rate of 2.7 percent. Projections in 2010 show that the annual housing requirement that year was estimated at around 82,000 in urban areas (60 percent of the total) and would rise to over 280,000 units by 2050, at which point all of the population growth and the quantitative housing requirements are in urban areas (Figure 3.1). (This projection took into account the core urban population only and assumed a household size of four people, which means that projections would be higher if the core plus peri-urban population is used and the Kenya National Bureau of Statistics (KNBS) 2012 household size of 3.4 is employed.) These projections are for the quantitative gap only (the qualitative gap is discussed below under Supply of Housing).

Figure 3.1: Annual housing requirement, 1950–2050



Source: Walley (2011).

5. Incomes are low and informal, putting home ownership out of reach for most urban dwellers. To obtain a mortgage on the lowest-priced property, a borrower would need KSh 1 million a year of formal income (KSh 84,000 or US$1,024 a month).[40] The average annual income in the largest 15 urban areas is KSh 21,748 a month (US$265). This average income does not paint the full picture as the distribution of income is weighted toward top income earners (Table 3.1). A more accurate picture of income can be seen in that three-quarters of households earn less than KSh 22,500 a month ($257) or KSh 270,000 ($3,078) a year. A family earning KSh 22,500 a month (roughly the 75th income percentile) would only be able to afford a mortgage of KSh 485,968 (US$5,926). This means that the family purchasing a low-cost house (KSh 2,000,000) would need to earn well into the top income quintile. Thus as Paul Collier and Anthony Venables noted, "ordinary people live in informal housing which does not adhere to costly building standards" (Collier and Venables 2014.)

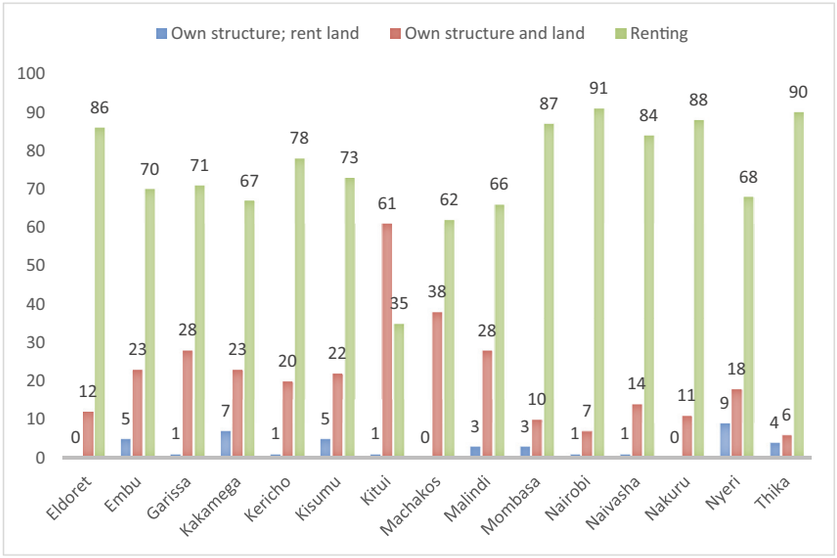
6. Interest rates are high—even when subsidized. The current interest rate for mortgages is approximately 18 percent—higher in some cases—for a 20-year amortization period. On these terms, a family at the 75th income percentile with a monthly income of KSh 22,500 per month could afford a mortgage with a principal of KSh 485,968 (US$5,926) if they spend 30 percent of their income on mortgage payments. In 2014, only 1 percent of properties in Nairobi sold for less than KSh 2,000,000, more than four times what the family at the 75th income percentile could afford. Even if the interest rate in the market was only 13 percent—the rate charged by the National Housing Corporation (NHC; the government agency for housing development)—the amount a borrower could mortgage would only increase to KSh 640,163 (US$7,806), well below the price of the lowest-priced house on the market. But the vast majority of urban Kenyans cannot access mortgage markets anyway, as most of the income they earn is through casual or informal sources: salaried employment ranges from 14 percent in Kakamega to 23 percent in Nairobi.[41] For these reasons, most urban Kenyans rent (Figure 3.2).

Table 3.1: Annual income distribution in selected urban areas (%), 2013

KSh	Kakamega	Nairobi	Nakuru
< 6,000	28	11	23
6,001–9,000	17	12	18
9,001–13,000	15	17	19
13,001–22,500	19	26	24
Above 22,500	22	33	17

Source: World Bank (2014).

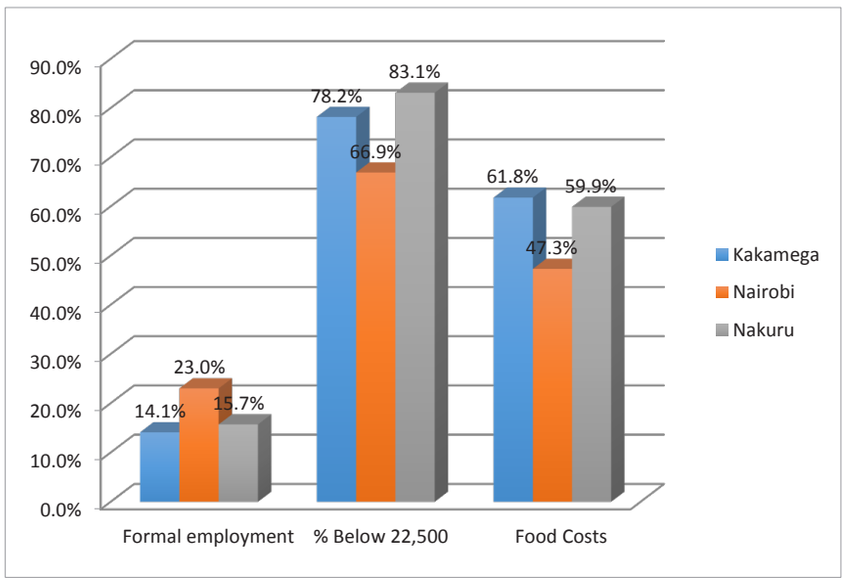
Figure 3.2: Renting vs. homeownership in cities



Source: World Bank (2014).

7. Food costs are high, further reducing budgets for housing. International benchmarks consider 30 percent of income spent on housing the maximum affordable level, and 50 percent to be a severe burden.[42] But even allocating 30 percent to housing is difficult because food prices place heavy pressure on household incomes. Food costs range from 47.3 percent of income in Nairobi to 61.8 percent in Kakamega (Figure 3.3). A recent World Bank study shows the trade-offs families make in housing and other areas, such as transport, when food as a share of income is high (Lozano-Gracia and Young 2014).[43] One example of these tradeoffs is urban residents' willingness to live in low-quality informal housing.

Figure 3.3: Employment formality, income, and food costs, three urban areas



Source: World Bank (2014).

8. Rental housing is more affordable and accessible. The share of renting households ranges from a low of 61 percent in Kitui to a high of 91 percent in Nairobi. For a household earning the average income, 30 percent of its income—the international standard maximum for housing expenditure—means spending no more than KSh 6,524 ($74.38) a month. In the 15 urban areas, the average monthly rent was KSh 4,482 ($51) for both formal and informal rentals. This equates to 20.3 percent of income,

well within the 30 percent standard (Table 3.2). With electricity and water, the proportion rises to 28.8 percent. In informal areas, the average rent was KSh 2,753 ($31) without water and electricity, and KSh 5,299 ($60) with these utilities. Interestingly, the percentage of income spent on rent in informal areas without utilities was very similar to that in formal areas without utilities: 21.2 percent in formal areas and 19.4 percent in informal ones. Most of the rental properties are owned by landlords with demographics similar to their tenants'. Despite the affordability of rental housing, this housing often lacks basic services and is in poor condition, particularly when there is no formal rental agreement.

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Table 3.2: Rent levels and percentage of income spent on rent in urban areas

	All 15 cities	Nairobi	Kakamega	Nakuru
For all urban households				
Monthly household income in KSh—Mean	21,748	26,774	16,710	15,788
Household size—Mean	3.05	3.07	3.42	3.05
Monthly rent without water and electricity included in KSh—Mean	4,482	6,503	2,171	2,761
Monthly rent without water and electricity included as % of income—Mean	20.3	22.4	17.2	18.4
Monthly rent with water and electricity included in KSh—Mean	8,102	11,340	5,749	5,146
Monthly rent with water and electricity included as % of income—Mean	28.8	30.3	24.7	26.9
For urban households living in informal areas				
Monthly household income in KSh—Mean	16,218	17,485	11,436	11,685
Household size—Mean	2.92	2.85	3.20	2.87
Monthly rent without water and electricity included in KSh—Mean	2,753	3,234	1,395	1,624
Monthly rent without water and electricity included as % of income—Mean	19.4	20.2	18.0	21.4
Monthly rent with water and electricity included in KSh—Mean	5,299	5,806	3,890	3,398
Monthly rent with water and electricity included as % of income—Mean	27.1	26.8	18.2	30.6
For urban households living in formal areas				
Monthly household income in KSh—Mean	24,572	34,083	17,025	16,019
Household size—Mean	3.12	3.23	3.43	3.06
Monthly rent without water and electricity included in KSh—Mean	5,943	11,933	2,244	2,840
Monthly rent without water and electricity included as % of income—Mean	21.2	26.2	17.1	18.2
Monthly rent with water and electricity included in KSh—Mean	9,743	17,494	5,821	5,259
Monthly rent with water and electricity included as % of income—Mean	29.8	34.1	24.9	26.7

Source: World Bank (2014)

Supply of Housing: Poor Conditions and Inadequate Formal Supply

9. **Nearly 61 percent of urban households live in housing that meets the MDGs' definition of a slum.** This proportion was determined by using the criteria for slum-like conditions developed for the MDGs and modified by the categories available in Kenya's State of the Cities Baseline Survey of 15 cities. Such dwellings lack one or more of the following: running water in the unit or building, permanent walls, a toilet shared by fewer than 20 people, or sleeping rooms shared by fewer than three people. The share varies by combination of conditions (Table 3.3). Kenya's large share on this metric is not unique—Africa has the highest rate of informal conditions in the world, at 70 percent.

10. Quality of housing is uneven within urban areas. Those in Nairobi who had formal tenure, whether through formal ownership or by a formal lease agreement, had higher incomes and lived in better conditions (Figure 3.4). They were twice as likely to have the majority of their income coming from formal employment and four times as likely to have incomes over KSh 22,500 (US$245) a month. These households were also likely to have twice the number of rooms and twice the unit size of those with informal tenure status (Figure 3.5). Roughly 62 percent of urban households lived in one-room units.[44] Given that the average family size is 3.4 (KNBS), this indicates that overcrowding is common.

Table 3.3: Living conditions in Kenyan cities

Measure	All 15-cities		Nairobi		Nakuru		Kakamega		Malindi	
	N	Value	N	Value	N	Value	N	Value	M	Value
Composite indices of living conditions										
Composite index #1(water + toilet + perm wall)										
% of households who has all three components	13490	37.8	1041	46.2	1092	36.6	925	31.9	955	33.8
% of households with none of the three components	13490	12.7	1041	17.9	1092	3.4	925	8.2	955	6.2
Composite index #2 (water + toilet + perm wall + road) and percentage of households with:										
% of households with all the four components	13482	22.2	1040	31.3	1092	14.8	925	14.8	955	15.1
% of households with none of the three components	13482	10.5	1040	15.4	1092	2.6	925	7.0	955	4.5
Composite index #3 (water + toilet + perm wall + persons/room <=2)and percentage of households with:										
% of households with all the four components	13482	29.1	1022	34.6	1052	27.5	919	26.5	941	26.2
% of households with none of the four components	13482	60.	1022	8.5	1052	1.2	919	3.7	941	2.1
Composite index #4 (water + toilet + perm wall + persons/room <=2) and percentage of households with:										
% of households with all the five components	13276	17.2	1021	23.7	1052	11.4	919	12.7	941	12.4
% of households with none of the five components	13276	5.1	1021	7.5	1052	1.0	919	2.8	941	1.5
Distribution of number of rooms occupied by households in current residences	14201		11.8		1095		967		956	
% of households with 1 Room		60.3		61.7		62.0		38.0		62.7
% of households with 2 Rooms		18.2		15.7		20.3		29.1		18.6
% of households with 3 Rooms		12.0		12.5		9.5		19.6		9.8
% of households with 4 Rooms		4.1		4.0		3.9		9.1		3.8
% of households with 5 Rooms		2.5		3.3		1.6		2.6		1.8
% of households with 6 Rooms		1.0		1.1		1.5		0.9		1.1
% of households with more than 6 Rooms (7-15 rooms)		1.9		1.7		1.2		0.8		2.2

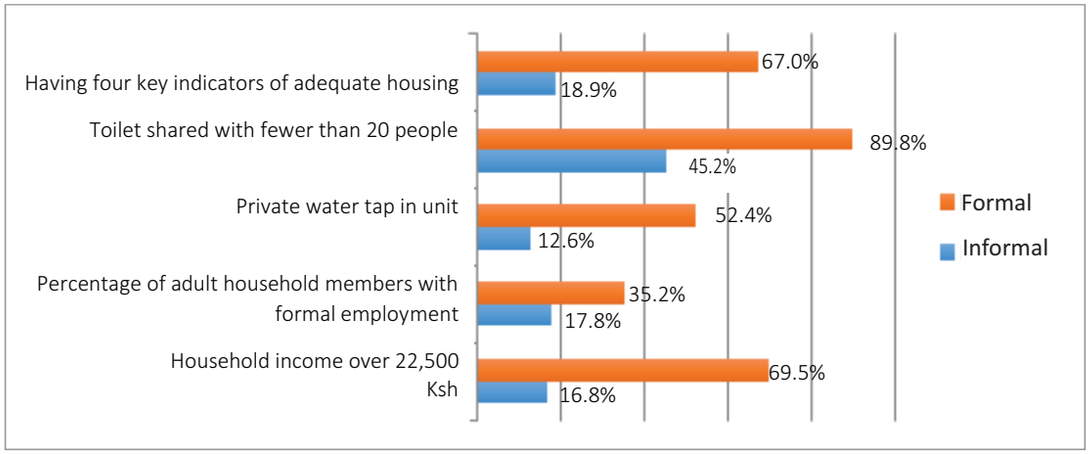
Note[1] All the estimated values are based on household sampling weight adjustments

Source: Based on World Bank (2014).

11. Variations in population density and housing materials also indicate spatial inequity. While the country's overall population density is moderate, there is significant overcrowding in urban areas. In Nairobi, density ranges from 4,515[45] to 75,000 or more persons per square kilometer.[46] An estimated 70 percent of the housing stock is small shacks (10 feet by 10 feet) built with wood, tin, galvanized iron sheets, and latticed wooden strips covered with mud, which often contains cow dung (Ayani Inclusive Financial Sector Consultants 2013.). Roofing, generally galvanized tin, accounts for nearly half the total costs.

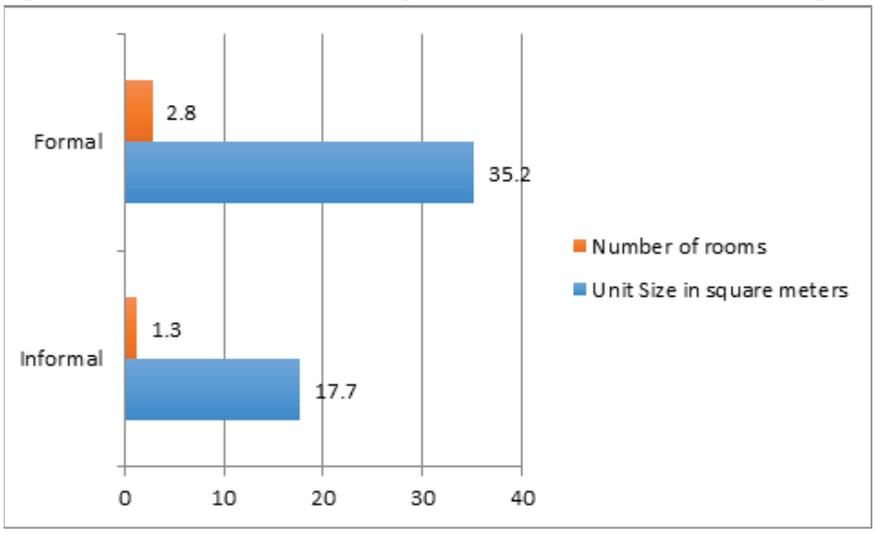
12. Despite poor housing quality, families tend to stay in place. On average, households have lived in their dwellings for a little over five years (5.1 years for informal areas and 5.6 years for formal areas), and within their neighborhoods one or two years longer than that (6.6 years in informal areas and 7.2 years in formal areas). The highest average number of years living in a dwelling is in Kitui (13.9 years in formal areas) and the lowest in Naivasha (2.9 years in informal areas).

Figure 3.4: Household incomes and living conditions by formality of tenure



Source: Based on World Bank (2014).

Figure 3.5: Indicators of overcrowding in informal areas: unit size and average number of rooms by formality of tenure



Source: Based on World Bank (2014).

13. The government's goal of increasing the formal supply of affordable housing is not being met. Vision 2030 set a goal of producing 200,000 units a year for all levels of income earners.[47] Yet the government's investment in housing brought forth only 3,000 units between 2009 and 2012. And despite a dynamic property market, even the private sector is not producing anywhere near enough housing. Nairobi has a public target of developing 150,000–200,000 properties a year but planning applications in 2013 were only 15,000, and 90 percent of these were for apartments. More than 80 percent of supply is for upper-middle (48 percent) and high-income (35 percent) households, and only 2 percent for low income, despite the far greater need.[48] The gap is also seen geographically. Of the top four areas in Nairobi receiving permits, two were the wealthy neighborhoods of Karen and Westlands, one was the industrial area, and the fourth was the central business district.

14. Property prices in the formal market have been steadily increasing, creating an even greater affordability gap. Prices in 2013 were nearly three times those in 2000, creating fewer opportunities for low- and middle-income families. The Knight Frank Prime Global Cities Index ranked Nairobi as the highest priced city in Africa, followed by Cape Town.[49] The lowest-price house built by a formal developer cost KSh 1,342,106 ($15,300) in December 2012. But market experts interviewed by the authors noted that there is very little on the market for less than KSh 4 million (US$43,956), especially in Nairobi. Much of this formal property market is speculative, with 75 percent of apartment buyers doing so to rent out the apartments and 16 percent purchasing to "flip" them. The Haas Property Index[50] shows that the

provision of infrastructure can have a dramatic increase in prices. In one case, when a road was being developed in the areas of Ruiru and Juja, prices for one-eighth of an acre jumped from KSh 1.5 million to KSh 2.5 million in one year. These recent price rises are symptomatic of longer-term constraints on building affordable housing.

Constraints on Affordable Housing

Constraint 1: High cost of land

15. The cost of land is a large part of high property costs. Vision 2030 notes an insufficient amount of serviced land and a pace of infrastructure provision that lags demand.[51] Land generally constitutes the majority of the cost of housing in urban areas and even more so in Nairobi. Developers note that the high cost of land is largely due to infrastructure costs,[52] and estimate that the price of a plot of serviced land accounts for up to 60 percent of total development costs.

16. The Kenyan property registration system—one of the world's least efficient—also contributes to the high cost of land. The *Doing Business Report 2014* ranks Kenya 163 out of 189 countries, a decline of two places from the prior year. The May 2014 land records audit in the MLHUD that attempted to clean up land records discovered 10,000 records that had been lost.[53] Police arrested several employees for smuggling documents from the ministry.[54] Even if the owner believes land is formally owned, there is sometimes no documentation to prove the claim—with serious implications for a person's ability to borrow, as banks will not lend without proper documentation. For example, an owner might have a sales receipt from a previous owner, but unless the property was duly registered and proof of that registration can be found, a bank would likely not consider this proper documentation. This lack of documentation affects 24 percent of land-owning households in Nairobi, 11 percent in Nakuru, and 8.6 percent in Kakamega. The uncertainty engendered by this inefficient and corrupt system makes investors hesitate to invest. Despite efforts to improve the registration system through digitization, reform has been slow. The difficulty of registering property has contributed to a growing informal housing supply in urban areas. Nearly 80 percent of property bought is not formally registered.[55]

Constraint 2: High cost of formal construction

17. **The cost of construction materials varies greatly between the informal and formal housing markets.** Most families who own their homes build informally because they cannot afford formal housing. But there is a lack of systematic data on the contributors to housing costs and, more importantly, on the factors contributing to housing prices themselves, so that it is hard to identify the parts of the housing chain most easily addressed by policy interventions. To resolve this problem, small contractors, builders, materials suppliers, and hardware shop owners were consulted by the authors. The average material cost of constructing a shack, based on the 10 foot by 10 foot common standard described earlier, is KSh 100,000 ($1,091), far less than the cost of a formally built home but still out of range for most tenants, who pay monthly rents ranging from KSh 1,500 (US$16) for the least preferred units to KSh 3,500 (US$38) at the higher end.

18. In comparison, material costs in the formal market are high. Formal housing generally uses more cement than informal housing, both because of building size and because informal housing uses tin sheets for walls. Cement is also preferred by 83 percent of formal developers, whereas informally built houses can have dirt floors. Kenya is the largest cement producer in East Africa and produced 4.7 million tons of cement in 2012, up from 2.8 tons in 2008.[56] But it has the second highest prices, likely due to industry concentration. The top two producers control nearly two-thirds of the market: Bamburi Cement with 40 percent and East Africa Portland Cement Company Limited with 24 percent. Lafarge, the world's largest cement company, has large investments in both these firms: 59 percent in Bamburi and 41 percent in East Africa Portland Cement,[57] and the government has accused Lafarge of anticompetitive practices. The National Housing Survey 2012 noted that materials accounted for 40 percent of housing costs and that the cost of materials increased by nearly 40 percent between 2007 and 2009.[58] This steep increase is cited by development professionals as one of the main challenges to affordable housing.

19. The expense of building sound buildings is worsened by tax policies. Formal building construction relies heavily on cement as a primary building material. An informally built 10 foot by 10 foot structure will use 96 bags

of cement, but a formally built two-bedroom apartment will use more than five times as much (Table 3.4). The Ministry of Mining recently imposed taxes on cement of KSh 140 ($1.60) per ton. While the direct costs equate to only KSh 7 per 50 kilogram bag, some companies, such as National Cement, have increased their prices by 25 KSh.[59] Bulk prices for builders are now roughly KSh 625 per 50 kilogram bag, though people buying smaller amounts for incremental construction have been paying KSh 700–750 per bag. The tax further increases building expenses and encourages local *fundis* (mixers) to mix cement with high quantities of sand to reduce costs, heightening the risk of weakened structures.[60] Alternatively, if the structure of the house is built with mud, costs decline to $350–400. Both approaches create weak and potentially dangerous structures, particularly structures of more than one story.

Table 3.4: Cement costs by type of structure, 2014

	Bags	Cost per bag (KSh)	Total cost (KSh)	Total cost ($)
3-bedroom house	958	625	598,750	6,825.75
2-bedroom apartment	546	625	341,250	3,890.25
10 ft. x 10 ft. room	96	725	69,600	

Source: Based on authors' interviews and other reports.

20. The inefficiency of the construction market and the narrow capacity of firms have limited the country's capacity to build housing on a large scale. While the construction industry is one of the key economic drivers, concerns exist about other major construction projects. In 2013, the construction sector contributed 4.4 percent of GDP. But the government expressed concern that Kenyan firms are likely "incapable of efficiently executing the large scale projects anticipated within the Vision 2030," and unless improvements were made major construction projects would be awarded to foreign firms.[61]

Constraint 3: Limited access to housing finance

21. The mortgage market is inaccessible to lower-income households, but microfinance institutions provide an opportunity for access, albeit at high interest rates. The mortgage market is underdeveloped, with the ratio of mortgage loans outstanding to GDP at 3.46 percent.[62] Only 19,180 outstanding mortgages account for a total amount of debt of $1,401,000,000. The base lending rate from the central bank is 8.5 percent. Mortgage rates range between 15.5 percent and 28 percent, with an average of 18 percent.[63] Compared to this market, 1.4 million borrowers held an outstanding portfolio of $4.2 billion from 41 microfinance institutions in 2013, of which the central bank formally licensed nine.[64] The largest lender is Kenya Women Finance Trust, with a 53 percent market share in 2013.[65] Interest rates vary from NGO-subsidized rates for small loans of 10.1 percent to nonsubsidized loans of over 70 percent, with the majority of loans having rates of 30 percent to 50 percent.[66] These institutions bring finance closer to low-income and informal borrowers.

22. Microfinance is having an impact on the housing sector. Nearly 29 percent of microfinance institutions originate some type of loan for housing.[67] A small share of these specializes in loans for housing microfinance, such as Jamii Bora Bank ($9.5 million) and Makao Mashinani ($412,000). Others, such as Rafiki Microfinance Bank (with the fourth-largest market share of 7.7 percent) include housing microfinance loans for those with no deeds (maximum amount KSh 1 million, two-year term), lot purchase and incremental housing (maximum KSh 1.5 million, three year term), mortgage loans (maximum KSh 5 million, 20-year term), and multifamily housing (maximum KSh 7.5 million, five-year term). As an example of the potential of microfinance for housing, the National Cooperative Housing Union (NACHU) provides housing loans at below-market rates thanks to subsidies from international donors. Its loan terms are 14 percent for up to 10 years.

Constraint 4: Inappropriate taxes and regulations

23. Taxes and fees affect affordability and whether properties are formally registered. To formally purchase a plot of land in Nairobi, the buyer must pay for the land, stamp duties (ranging from 2 percent of the land value outside municipalities to 4 percent within municipalities), legal and survey costs (Ksh 2,450 to Ksh 15,000 per lot), and appraisal fees. If the land is not serviced, the owner must agree to follow all of the physical guidelines from several agencies and install all needed utilities. In 2013, Nairobi increased the construction permit fee by KSh 200–1,250, from 0.001 to 0.006 percent of the cost of construction to 1.25 percent. These increases improved revenue for

the county (an additional KSh 114 million, or 23 percent of the city council's revenue),[68] but somewhat reduced affordability.

24. **Taxes on rental housing create a disincentive for property owners to register and formally own it.**[69] Rental income is subject to a corporate tax of 30 percent of taxable income for resident companies, after deducting expenses that are "wholly and exclusively incurred in the production of income," such as maintenance, management costs, insurance, repairs and other items. Nonresidents are not permitted to deduct any expenses. Individual Kenyan property owners are given more favorable treatment: they can also deduct expenses and have a sliding scale (Table 3.5):

Table 3.5: Tax rates for Kenyan individual residential rental property owners, 2014

From	To KSh	To $	Rate (%)
0	121,968	1,390	10
121,969	236,880	2,700	15
236,881	351,792	4,010	20
351,793	466,704	5,320	25
466,705	above	above	30

Source: iHR Consulting (2014).

25. Building codes keep housing out of the formal sector. The current code was passed in 1968 and is based on British building codes of 1926 and 1948. The code is prescriptive and specifically permits "the use of any type of material or any method of mixing or preparing materials or of applying, using or fixing materials, which conforms with a British Standard or a British Code of Practice." It prohibits the use of alternative technologies, such as interlocking bricks or precast concrete. A former Permanent Secretary of Housing estimated that this adds roughly 60 percent to the cost of housing construction.[70] A new building code was promulgated in 2009 but has yet to be made law. The minimum lot size of 162 square meters[71] also reduces affordability (Box 3.1).

Box 3.1: The impact of large minimum lot sizes

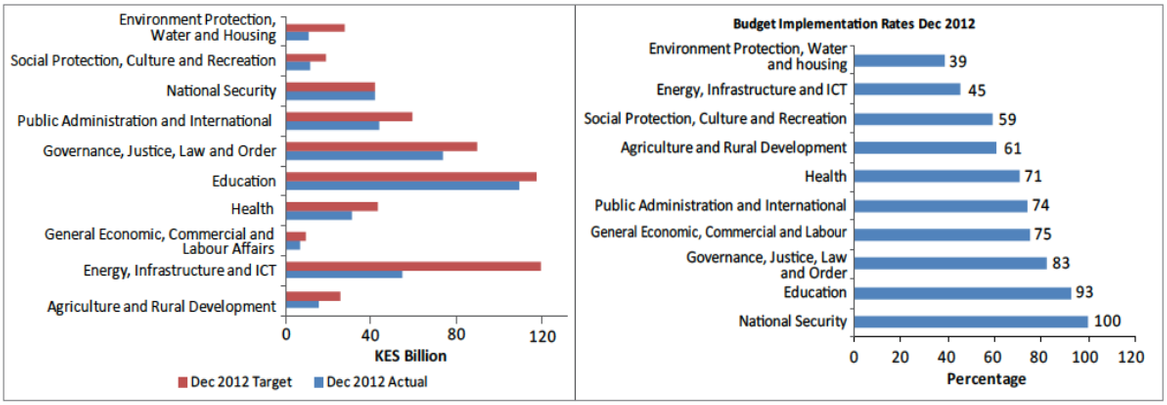
- Land is the major cost input to low-cost housing production in cities
- In many developing-country cities, government-mandated minimum lot sizes can be very large (75 to 110 square meters)
- The poor often have no viable option but to illegally access and subdivide land into very small land parcels, creating slums
- Reducing the required minimum lot size may bring down the overall cost of housing.

26. Existing regulations aimed at protecting tenants discourage landlords from providing formal low-income rentals. The Rent Restriction Act (Cap. 296) and the Landlord and Tenant Act provide protection for those households with rents at or below KSh 2,500 a month (US$27), such as notice requirements and limits on rent increases. Unfortunately, a side effect is that formal sector landlords avoid renting apartments at or below this level. Moreover, since this rent level was set in the 1980s, this will only apply to very low-rent units, which are the most likely to be unregistered and informal.

Government Efforts to Address Constraints: Limited and Expensive

27. The government's budget for housing does not reflect the constitutional commitment to adequate shelter. The Constitution (Section 43 (1) (b)) grants that every person has the right to "accessible and adequate housing and reasonable standard of sanitation." The budget for housing, which is combined with environmental protection and water, is one of the smallest in the government.[72] Moreover, at 39 percent, the implementation rate is the lowest and one of only two functional areas scored below 50 percent (Figure 3.6).

Figure 3.6: Government of Kenya budget and implementation



Source: Kenya Ministry of Land, Housing and Urban Development data.

28. Slum upgrades are expensive and inefficient. One large project in Kibera has used nearly three years of its national slum-upgrading budget. While no budget breakdown from MLHUD was available, officials from the ministry noted that its main budget line item was for slum upgrading, with a budget of KSh 1 billion (US$11,389,969) a year. The project will house 2,452 people for a direct cost per beneficiary of KSh 1,182,708 (US$13,483).[73] Comparisons from slum upgrading in other countries show that this per beneficiary cost is extremely high.

29. NHC housing units are not affordable for low- and moderate-income families.[74] The NHC has built or provided sites and services for only 43,000 units since its inception in 1965. It has developed projects for rental, outright purchase, and subsidized NHC financing, but its primary emphasis is on units for purchase. The majority of its properties are well out of the reach of most Kenyans, priced from KSh 4.5 million (US$50,000) to KSh 13 million (US$142,857). And of the four NHC projects with units for sale listed on its website, three are sold out. As NHC financing is not available on these properties, a buyer will need more than six times the average income for a mortgage. Even under NHC's Tenant Purchase program with NHC's below-market financing, a buyer will need 2.3 times the average income to afford the lowest-cost units. Here, the resident provides a 10 percent down payment and NHC lends the balance at 13 percent interest for 20 years (the mortgage market average is 18 percent). Most units in this program range from KSh 2 million to 3.5 million (US$22,000–US$38,500). NHC has a strong incentive to build and sell higher-priced housing because it does not receive government operating subsidies and pays all costs from rental housing management and the Tenant Purchase program.

30. In 2009, the then Ministry of Housing unveiled incentives for developers to build at the lower end of the market, but developers have not taken them up. Developers cite two reasons for lack of uptake. First, construction at the upper end of the market reaps profits high enough to justify forfeiting the incentives. Second, proper use of the incentives is unclear and sometimes contradictory, and the bureaucracy dissuades well-meaning developers from using them.

Private Sector and Civil Society Efforts to Address Constraints: Effective but Small Scale

31. The private sector is attempting to increase access to affordability with no government support. Incremental building is the way the majority of urban Kenyans build, spreading the cost of construction over many years. Cooperative housing is also being developed, and the National Cooperative Housing Union (NACHU) is building housing along this model. In cooperation with Homeless International (U.K.), it built 412 units at a cost of KSh 971,000 ($11,068) each, partially subsidized by donors. It has also built simple homes in new projects for KSh 450,000 ($5,130), which can then be expanded incrementally. These are outside the urban core, but near places of employment for residents. But NACHU's capacity is limited to roughly 500 homes a year. NACHU notes that local property taxes reduce affordability and that infrastructure services to the properties are not always provided, even when taxes are paid. Developers typically bear the costs of infrastructure provision within a site, while the public sector provides

the trunk infrastructure. But often this infrastructure is not provided, forcing the developer to install wells, onsite wastewater treatment plants, generators, and so on.

32. Small community-savings and land-purchase programs have made housing accessible for lower-income people. For example, through working with the Akiba Mashinani Trust, groups of slum dwellers organized a savings program to buy property and secured a five-year bank loan worth KSh 55 million (US$653,600) with a 44 percent loan guarantee by the Gates Foundation. Some 2,200 slum dwellers contributed to paying off the loan in full 19 months later and saw a significant increase in the value of their property. The trust is developing 2,500 small units in Mukuru, a slum in east Nairobi, that can then be expanded incrementally. This type of housing can be paired with infrastructure upgrading.

Recommendations

33. There is no one solution to make housing more affordable. What is needed is to take incremental steps that can together improve affordability. A great barrier to affordability is what people earn and how they earn it. Those with low, informal incomes will continue to have difficulty accessing formal markets.

1. Build on efforts—small and unsupported by government—to increase the supply of high-quality, affordable housing

Short term	Support rental options, particularly small units
In South Africa, 10 percent of the population lives in 850,000 small rental units. Landlords often have this rental housing as their only source of income. The greatest challenge has been in encouraging policy solutions to promote this type of housing.[75]	

Medium term	Develop mechanisms that support incremental building, including community initiatives for improving neighborhood services and utilities
As the majority of housing is built incrementally, solutions that build on this approach can strengthen and expand low-income housing. A recent study of Jinja, Uganda, and Babu Village, Philippines, by the World Bank[76] outlined techniques to upgrade neighborhoods through skill building, land pooling, using locally produced materials, and providing temporary housing. Addressing WSS particularly is a key to improving living conditions. Cooperative housing and the community-savings and land-purchase programs should be paired with infrastructure upgrading.	

2. Address the four constraints to housing affordability

Constraint 1: High cost of land

Medium term	Continue with improvements to the property registration system
Bring down the cost of property by improving the titling and registration systems. Improving property registration is a key to lowering land costs. Rwanda demonstrated that with a concentrated effort significant improvements could be made in the registration process in a short period of time. By making the process more efficient, including digitalizing the titles, Rwanda's process was reduced to three steps: conduct a title search at the Office of the Registrar of Land Titles, notarize the sale agreement, and finalize the registration/obtain a new deed. The low cost of registration does not create a hindrance to registration at the full value. In Rwanda, the cost is now .02 percent of the property value in comparison to 9 percent in Sub-Saharan Africa and 4.4 percent in the OECD. Kenya could accomplish the same goal with a focused effort and cooperation between different ministries.	

Long term	Investigate ways to reduce land costs closer to urban centers
Countries trying to find ways to solve the affordable housing problem will often try to lower housing costs by providing land or building housing on a city's periphery where land costs are lower, as has been done in countries as varied as Mexico, Chile, and China. Unfortunately, this can create additional problems, including urban congestion and abandonment of the housing. In Mexico, "the concrete sprawl around Mexico City and other big towns grew faster than demand. Commutes proved unbearable, and residents abandoned their homes."[77] To avoid this, Kenyan policy makers will need to consider other measures.	

Constraint 2: High cost of construction

Medium term	Reduce construction costs through programs with the private sector
Mexico's largest cement company, CEMEX, established Patrimonio Hoy (Property Now) as a way to expand its business by providing microfinancing to low-income families that had no access to credit. Patrimonio Hoy extends collateral-free loans to people who pay a fee to join the program and form groups with other customers and then finances the purchase of cement and other building materials. It also provides technical assistance in construction techniques. This enables families to build more quickly than they would ordinarily. For CEMEX, the Patrimonio Hoy customer base is now 265 million people. [78]	

Constraint 3: Regulatory obstacles

Short term	Identify and remove regulatory obstacles that encourage informal constructions at all levels of income
Revise building codes and other development control regulations to encourage construction in the formal sector. While not quantified, an increasing pool of informal housing has good living conditions but does not comply with formal requirements by registering property or seeking construction permits, which pushes them into informality. Drawing this existing housing into formality may improve annual government figures for the supply of new units. The ongoing decade-long revision of the building code should be finalized and legislated.	

Constraint 4: Access to financing

Medium term	Develop mechanisms for proper targeting of access to financing
Different population income levels will require different interventions to increase access to financing, and tiered housing subsidies are necessary for proper targeting. The majority of the urban population in Kenya falls into the lower income categories—they cannot afford to purchase a new constructed home, do not have access to formal mortgage finance, and do not have access to all basic services. They are most in need of safe and sound houses and neighborhoods. Those with incomes high enough to afford a home would benefit from private sector–oriented solutions that streamline regulations and make capital more accessible. Brazil's housing policy contains different strategies and incentives for different income levels. At the upper income, the strategy is primarily aimed at improving the market. At middle income levels, subsidies are linked to mortgage credit. For low-income levels, Brazil uses urban upgrading, social support, and direct subsidies. [79]	

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Chapter 4

Connectivity for Access and Economic Growth: Mitigating Congestion, Enhancing Accessibility

Key Messages

1. **Nairobi, the primary city of Kenya and its principal economic driver, faces a daunting challenge in accessibility.**[80] Some 69 percent of trips are made on foot or by *matatu*[81]—80 percent if buses are included (Japanese International Cooperation Agency [JICA] 2013)—yet only 11 percent to 20 percent of formal commercial or industrial employment opportunities can be reached by the average household within an hour using one of these modes. This poor accessibility is associated with and partly caused by crippling congestion that has brought average door-to-door car and *matatu* commuting speeds down to about 14 kilometers per hour. Indeed, IBM ranked Nairobi fourth highest in its 2011 "commuter pain" survey, given that the city had one of the world's longest average journey-to-work times.

2. **From an economic perspective, congestion poses a dilemma for the long-term health and competitiveness of a metropolitan area.** The city's main rationale is bringing together people, ideas, and capital to generate agglomeration economies (Ciccone 2002). On the productive side, it limits the size of the labor market, thereby preventing workforce–employer sorting and hampering the potential for agglomeration economies (Duranton and Puga 2004). To attract skilled workers, firms must compensate for their travel costs by offering higher wages. While this can benefit skilled workers, it might also impede the country generally from reaping full productivity gains and entering international markets.

3. **From a household perspective, these constraints may be manageable in the short run.** As long as employment within low-wage, nontradable, and often informal service sector occupations dominates, the value lost is relatively low. But as employment shifts from nontradable services to manufacturing and tradable services and from informal to formal, the demands for metropolitan area–wide access will no doubt jump.

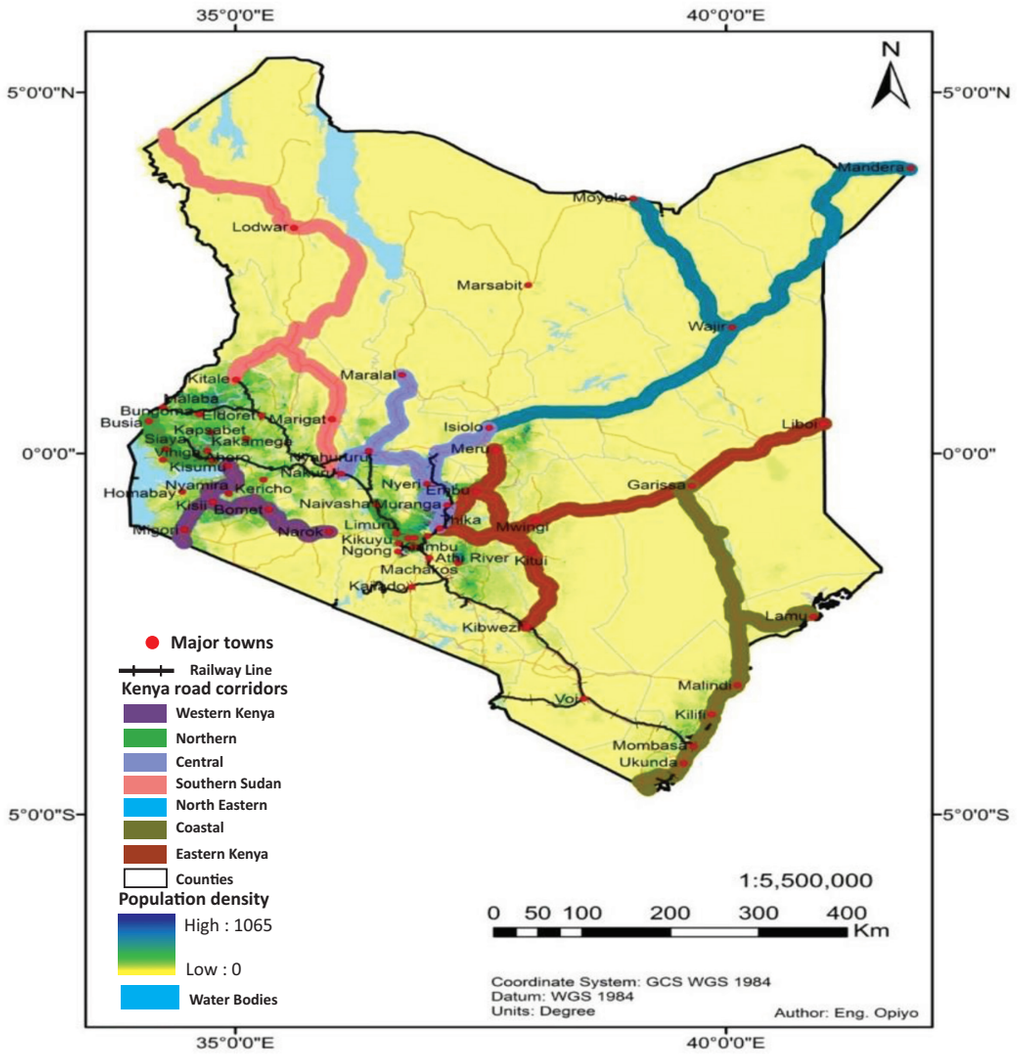
4. **Poor access also hurts livability. To remain within reasonable travel times of jobs, households may be ready to compromise on living conditions.** In Nairobi, most residents of informal settlements have jobs and comparatively high levels of education relative to those living in formal housing, yet their living conditions remain basic (Gulyani, Talukdar, and Jack 2010), probably reflecting a premium already placed on access. With Kenya at lower middle-income status and average incomes and wages increasing, the value of time lost to commuting for Kenyans, and Nairobians in particular, is likely to increase sharply.

5. **Given the high inertia and path dependencies that characterize urban settings, decisions made today will shape the future of Nairobi for decades.** Nairobi is at a crossroad and can follow one of two main paths. It can try to build its way out of congestion by investing in more roads to serve the increasing motorization rate while managing traffic through regulation and pricing mechanisms. Or it can invest in public transport networks, using careful land use planning to promote a more compact and transit-oriented urban area. Either way, its priority should be to avoid a trade-off between access and sustainability that locks itself into highly land-consuming and car-dependent development.

Kenya Today—Spatial Development and Mobility Patterns

6. **The spatial distribution of Kenya's cities is deeply structured by its transport networks.** The Northern Corridor connects Mombasa on the Indian Ocean to Malaba, Uganda, with a branch line to Kisumu on Lake Victoria. Four major urban areas are located along this historical rail infrastructure: Nairobi (with 57 percent of Kenya's urban dwellers according to the 2009 census), Mombasa (with 12 percent), and Eldoret and Kisumu (sharing 7 percent). These high concentrations (Figure 4.1) indicate strong path dependencies despite a steep fall in rail passenger and freight volumes in past decades (Jedwab, Kerby, and Moradi 2014). Less than 14 percent of urban dwellers live in towns farther than 35 kilometers from the Northern Corridor. In all, 76 percent of urban dwellers live within 15 kilometers of this corridor, reflecting its importance.

Figure 4.1: Major transport corridors in Kenya showing the importance of rail infrastructure and the Northern Corridor



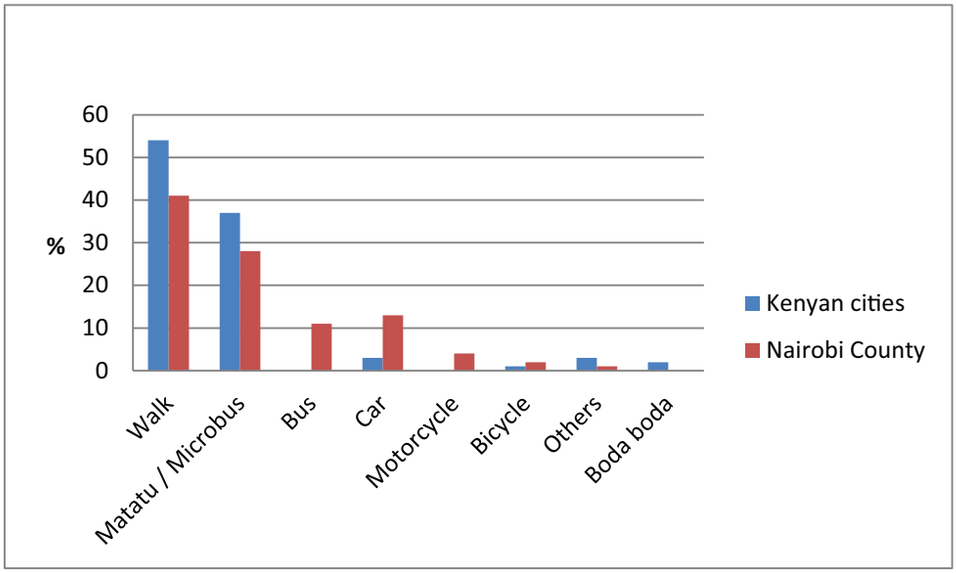
Source: Africa Infrastructure Country Diagnostic (2011).

7. **Most people in cities (53.3 percent) walk to school or work, and matatus (informal buses) are used for another 37 percent of these trips**. Cars account for only 3.2 percent of trips, and motorization rates, though growing, remain low (5.4 percent of households own a car). The average journey to work or school takes 28.5 minutes across all surveyed cities (National Opinion Research Center [NORC] at the University of Chicago 2013), far lower than Nairobi's 47 minutes. This difference can be explained by not only the larger physical size but also the larger population size of Nairobi which, with about 3 million residents (KNBS 2009), is more than three times more populous than even Mombasa, Kenya's second-largest city.

8. **The average Kenyan household spends 21.7 percent of its budget on housing and transport—very low by international standards.** Housing dominates this expenditure as most trips are on foot, which is to be expected when many people work in the informal sector and try to live near their places of employment—often in informal settlements.

9. **Transport mode patterns in Nairobi and other Kenyan cities do not differ drastically.** Overall conclusions drawn for Nairobi are thus likely to be valid in all Kenyan urban settings, although the specifics will differ by city (Figure 4.2). It can be seen from the figure that buses and *matatus* in Nairobi account for 39% of mode share, very close to the 38% mode share for *matatus* in other Kenyan cities. Cars have a much higher market share in Nairobi than elsewhere, with approximately 12% of all trips. This is to be expected in the largest and wealthiest city of Kenya.

Figure 4.2: Transport mode share comparison of Nairobi City County with all Kenyan cities

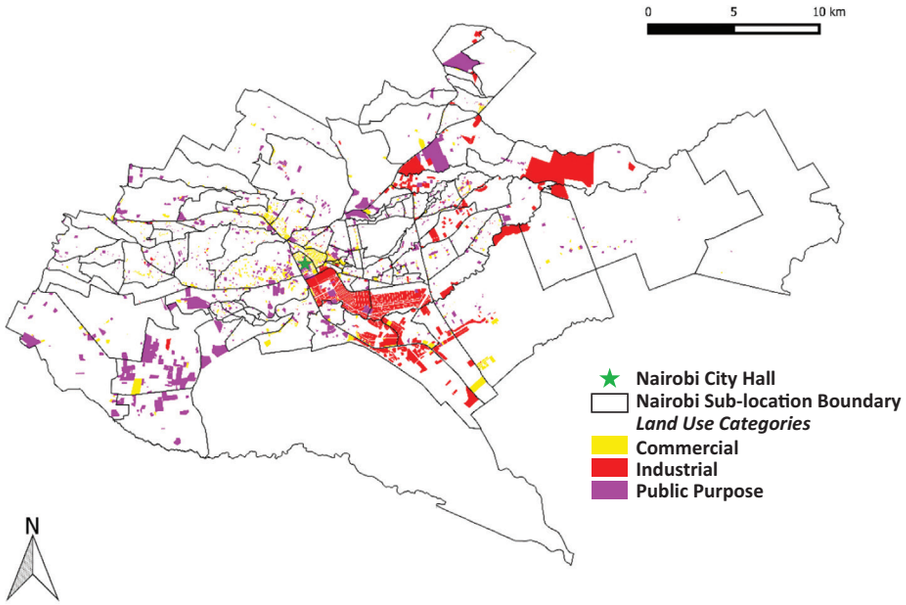


Note: A boda is a two-wheeled East African bicycle or motorcycle taxi. Nairobi is the only city with an effective municipal bus service.
Source: JICA (2013) and World Bank (2014). [Layout: Use new Excel file]

Nairobi Today—Spatial Development Patterns, Travel, and Accessibility.

10. This analysis describes intracity connectivity in Nairobi, highlighting the hurdles to providing Nairobians with good access to economic opportunities. The focus on Nairobi is justified on two counts. First, because of its primacy, Nairobi represents an urban growth trajectory that other Kenyan cities (both within and outside the Nairobi metropolitan area) are likely to follow on the way to middle-income status in the absence of proactive policies and infrastructure investments to influence urban growth, with higher average distances and travel times and higher mode shares for cars. Second, detailed data for other cities limited the analysis in those cities. Achieving a better understanding of the accessibility and mobility situation in Nairobi can also provide important lessons for other Kenyan cities, in particular on mistakes to avoid.

Figure 4.3: Distribution of commercial, industrial, and public land uses, Nairobi City County, 2005

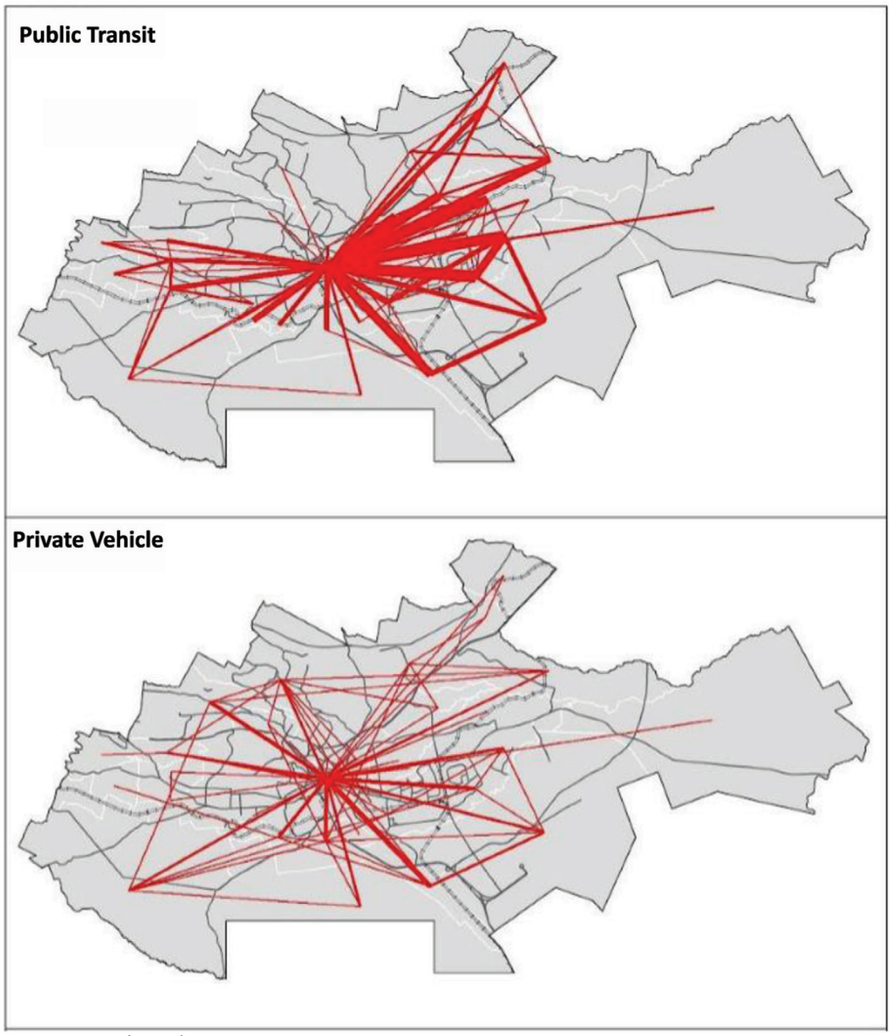


Source: Columbia University CSUD (2005)

Urban form: monocentric and rapidly expanding

11. **Nairobi's urban form is a dominantly monocentric structure associated with rapid spatial expansion.** While residential development is spread out, with clusters of high-density pockets throughout the city, Nairobi's employment arrangements follow a highly monocentric pattern. Land use areas that are likely to host the most formal jobs, such as industrial, commercial, and public facilities, remain highly concentrated in the urban core (Figure 4.3), with only little activity in other emerging centers.

Figure 4.4: Trip distribution by mode, Nairobi City County

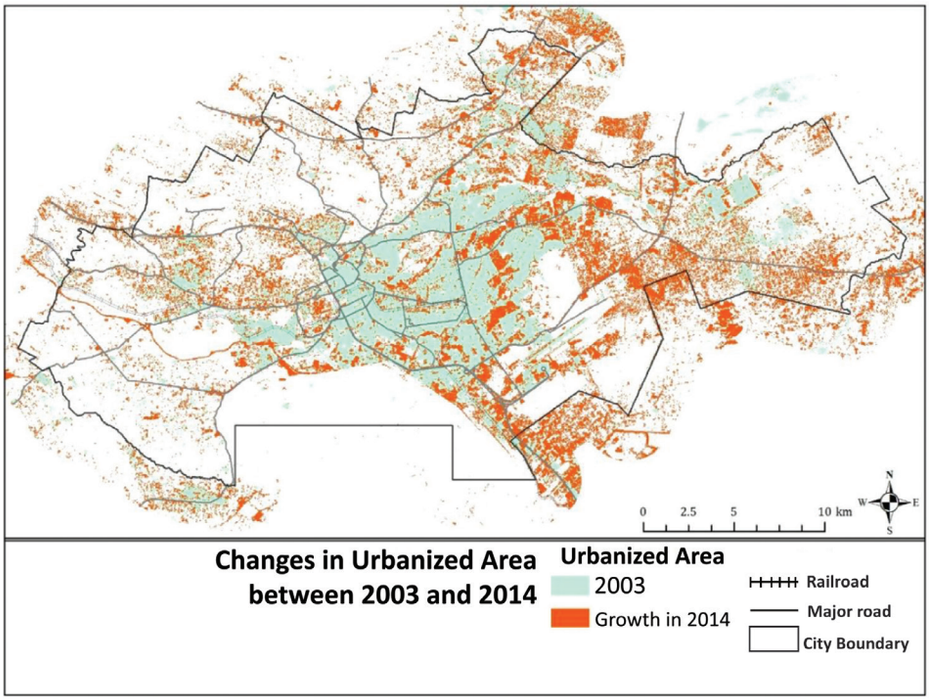


Source: JICA (2013).

12. **Nairobi's high monocentricity is also evident from the distribution of trips in the urban area.** Of the 2.7 million daily public transport trips, most pass through the central business district (Figure 4.4). But trips are more heavily concentrated in the eastern parts of the city, where population densities are high and the development pattern is more compact. For 900,000 private car trips, the majority of origins and destinations are also concentrated in the central business district, with trips generally evenly distributed in each direction (JICA 2013). These patterns are typical of monocentric cities with high employment concentration in the urban core and strong radial transport networks.

13. **Nairobi's population is rapidly growing. Its population grew by 1 million over the past decade and is now about 3.8 million, up from 3.1 million people in the 2009 Census.** In the populous central locations, the population grew by roughly 600,000, or 37 percent, while peripheral areas within the city boundaries grew by nearly half a million, or 55 percent. This rapid peripheral growth is driving an increasing rate of land cover conversion from forest, farm, and grassland to urban land used for population settlement, industry, roads, and other infrastructure (Figure 4.5). From 2003 to 2014, the total urbanized land area in central locations grew by 16 square kilometers and in peripheral locations by 77 square kilometers.

Figure 4.5: Changes in urbanized area between 2003 and 2014, Nairobi City County



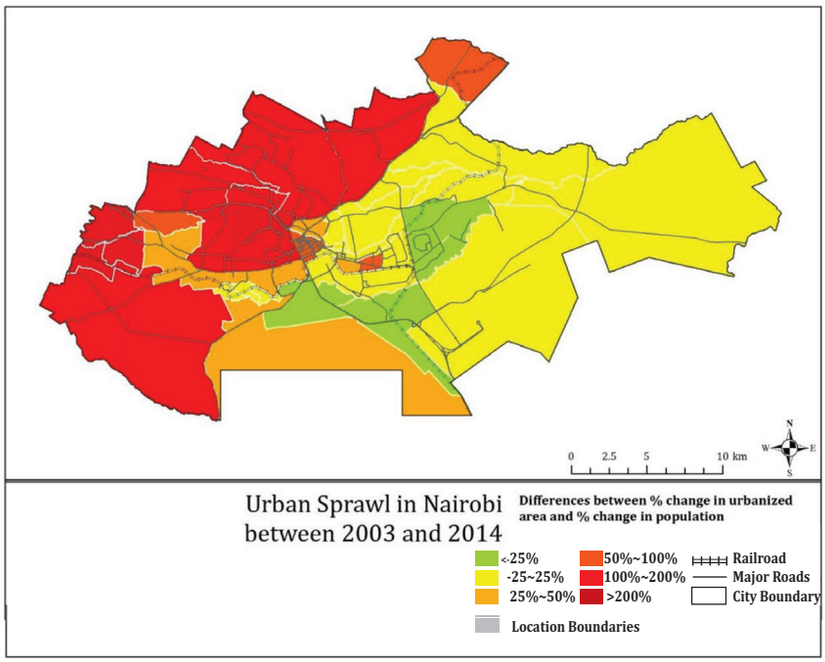
Source: U.S. Geological Survey (2013).

14. **The city's urbanized area is growing faster than its population.** Nairobi's development pattern is generally characterized by low-density, noncontiguous residential settlements. Between 2003 and 2014, total urbanized land in Nairobi City County increased 29 percent more than its population. During this time, the ratio of land use per person rose by 20.5 percent (Kenya Population and Housing Census 2009). Most of the urbanized area growth is happening in the east of the city at very low densities, similar to the development patterns of past decades. But growth to the west of the center is occurring at much lower densities. In some peripheral areas to the west, urbanized area grew 300 percent faster than the population (red areas, Figure 4.6), while in the east and central city (yellow areas), population growth was almost equal to the urbanized area change.

15. **New highway infrastructure has further encouraged growth in peri-urban settlements and along major road corridors.** New roads and highways, higher land prices, higher rates of car ownership, and other factors appear to be supporting fragmented and non-contiguous patterns of outward growth. Residential areas also developed beyond county boundaries in Thika, Ngong, Machakos, and other satellite communities, even though well-located land is plentiful within municipal boundaries. Longer commutes to jobs in the urban core contribute to the city's daily congestion.

16. **Rapid spatial expansion feeds a job–housing imbalance outside the central business district.** A consequence of the rapid urban expansion associated with a highly monocentric formal job distribution pattern is the segregation of residences and formal jobs (Figure 4.7). Areas that are balanced provide greater access for residents, because many jobs are close to homes. Areas with more jobs than residents require many individuals commuting into that location, while areas with a lower number of jobs require residents to commute to other zones to work. The overall job–housing balance is increasingly made uneven by urban peripheral growth.

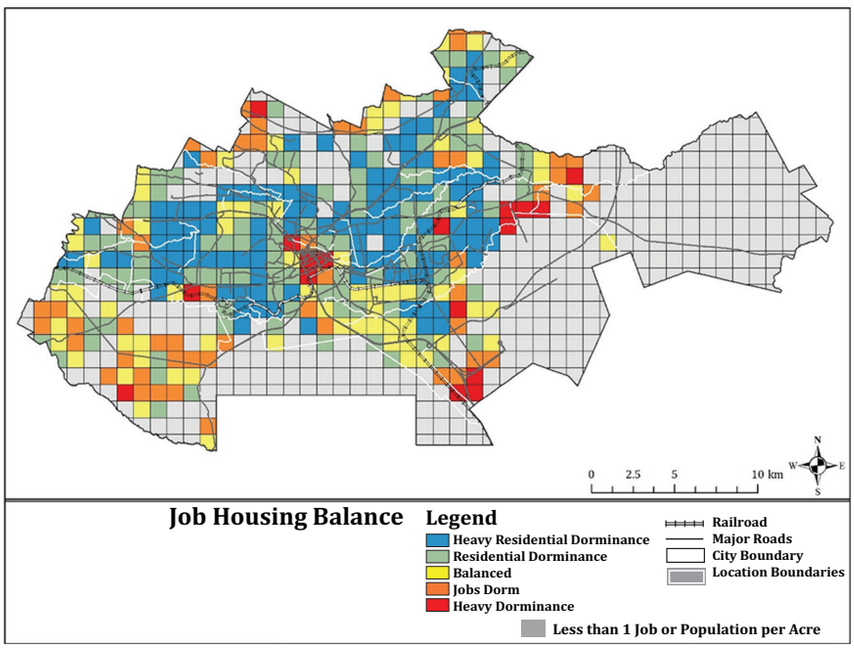
Figure 4.6: Urbanized areas grew faster than the population in Nairobi City County between 2003 and 2014



Source: U.S. Geological Survey (2013), Kenya National Bureau of Statistics (2009).

17. **The geographic separation of jobs and housing is found in many successful cities in developed countries.** This spatial pattern often reflects positive agglomeration economies. But it requires efficient transport networks to ensure that the segmentation of jobs and housing does not reduce access. An efficient transport system enables residents to access formal employment and other amenities within limited transport time and spending budgets. In the absence of these, the job–housing imbalance causes high commuting costs that make difficult the transitions from informal to formal employment and from low- to high-productivity jobs.

Figure 4.7: Job–housing balance, Nairobi City County (1 kilometer2 grid cells)

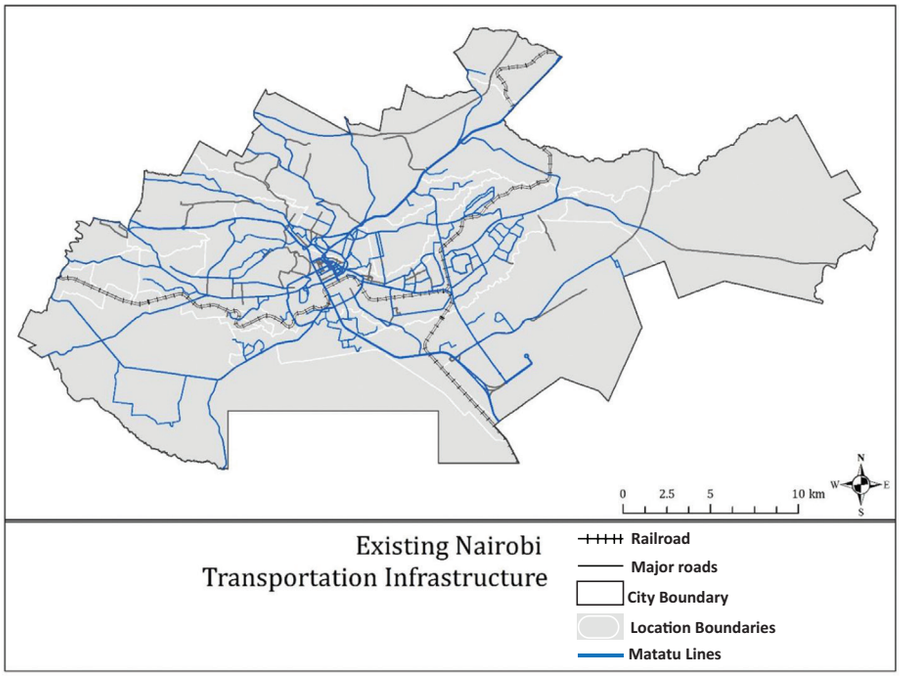


Source: JICA (2013); OpenStreetMap; Columbia University CSUD (2005).

Transport system and mobility characteristics: pedestrian and informal

18. **Several transport modes and networks coexist in Nairobi.** Small, privately owned, and individually operated buses and vans, known locally as *matatu*s, form the backbone of public mass transport services in the Nairobi metropolitan area along with rail and bus. While rail only serves a small share of travelers, bus companies operate alongside *matatu*s, often competing for passengers on the same routes. Increasing numbers of residents are acquiring cars and traveling on Nairobi's road network.[82] The potential for congestion in the central business district is evident, because roads, rail, buses, and *matatu*s all converge near the center of the city (Figure 4.8).

Figure 4.8: Existing transport infrastructure, Nairobi City County, including major roads, rail lines, and matatu routes



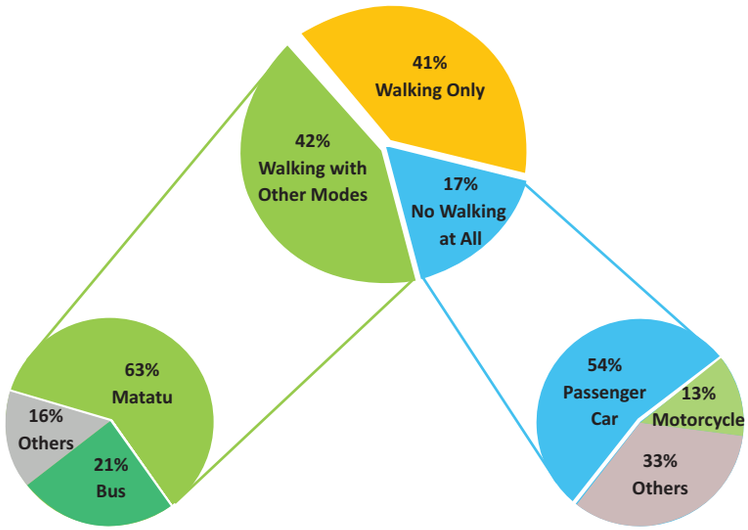
Source: Google Maps, OpenStreetMap, Digital Matatus (2015).

19. ***Matatus* and walking dominate transport mode shares.** Eighty-three percent of all trips include walking as the primary or secondary mode of travel (Figure 4.9). Forty-one percent of all trips are walking only, and 42 percent involve other modes, the vast majority of which (63 percent) involve *matatu*s. Only 17 percent of all trips are made without walking, among which more than half (54 percent) are completed by passenger car and 13 percent by motorcycle (JICA 2013). Compared with other African primary cities, Nairobi has the largest share of walking trips (Figure 4.10).

20. **As incomes rise among Nairobi commuters, the mode share of walking generally decreases and the share of private car use rapidly increases.** But the income group with the highest car use makes the smallest number of daily trips, while the lowest income group (which mostly walks or uses public transport but has the fourth highest car use) makes the third largest number of daily trips (Figure 4.11). The mode shares of motorcycle and public transport (buses and *matatus*) peak at a monthly income level of $116–464 (JICA 2013), which includes the income groups with the first and second largest number of daily trips.

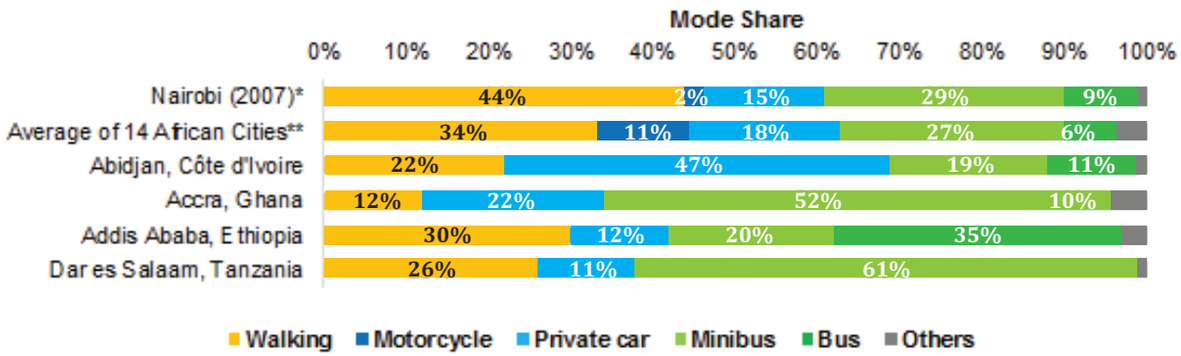
21. **Motorization rates are growing, with Nairobi experiencing a 67 percent increase in private automobiles (from 207,339 to 345,685) from 2004 to 2013.** Car ownership per household has increased from 0.23 to 0.30, and the ratio of private cars per 1,000 persons has increased from 78 to 96 (Figure 4.12) (JICA 2006, 2014). Against other cities in Africa, Nairobi has a high number of private cars per 1,000 persons, although cars are only used for a small share of trips (Figure 4.13).

Figure 4.9: Trip mode shares, Nairobi City County, 2013



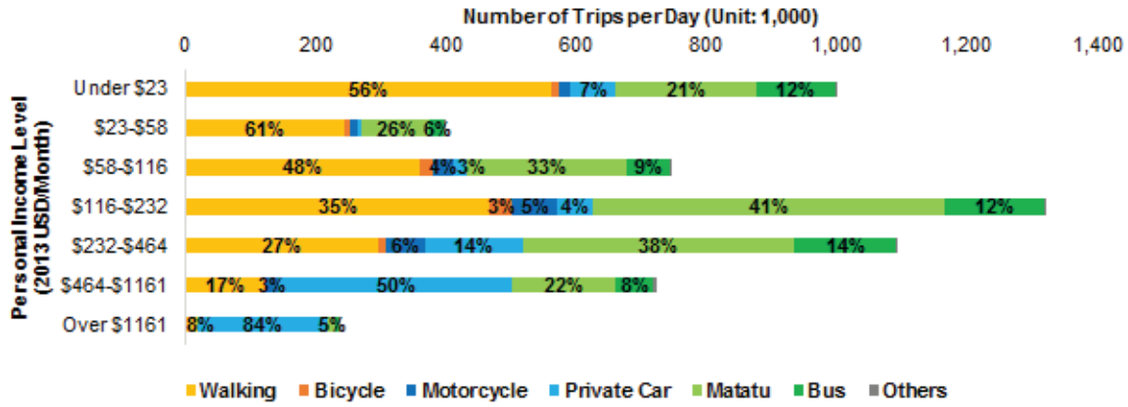
Source: JICA (2013).

Figure 4.10: Trip mode shares, selected African cities



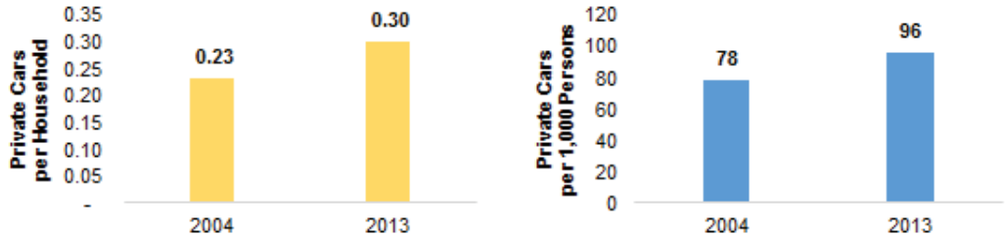
Source: JICA (2006, 2014).

Figure 4.11: Number and mode share of trips by income bracket, Nairobi City County, 2013



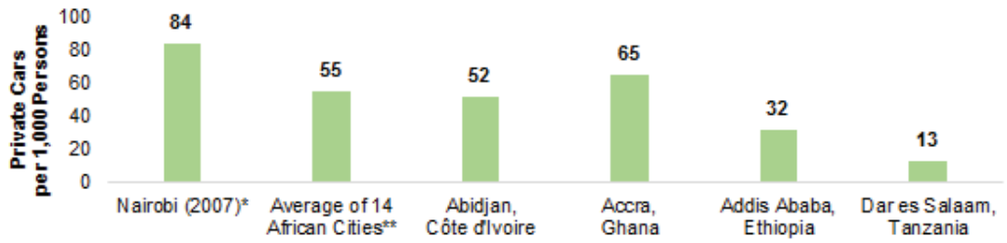
**Interpolated from 2004 and 2013 data. **14 African cities: Abidjan, Accra, Addis Ababa, Bamako, Conakry, Dakar, Dar es Salaam, Douala, Kampala, Kigali, Kinshasa, Lagos, Nairobi, and Ouagadougou.*
Source: JICA Master Plan (JICA 2006, 2014); Kumar and Barrett (2008).Source: JICA (2013).

Figure 4.12: Motorization rates, Nairobi, 2004 and 2013



Source: U.S. Geological Survey (2013).

Figure 4.13: Motorization rates, selected African cities.



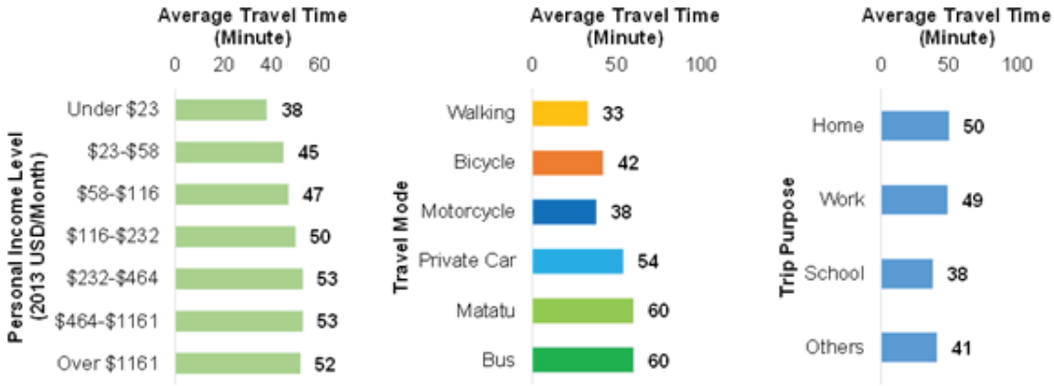
**Interpolated from 2004 and 2013 data.*
***14 African cities: Abidjan, Accra, Addis Ababa, Bamako, Conakry, Dakar, Dar es Salaam, Douala, Kampala, Kigali, Kinshasa, Lagos, Nairobi, and Ouagadougou.*
Source: JICA (2006, 2014); Kumar and Barrett (2008)

Urban transport institutions in transition

22. **The overall average travel time per trip in Nairobi City County is 47 minutes but differs by gender, age, personal income level, mode, and trip purpose**. The average travel time for trips made by men (49 minutes) is longer than that for women (44 minutes). Trips made by middle-aged adults (35–64) have the longest average travel time by age group (54 minutes). Higher earners generally make longer trips, while average travel times for motorized modes hover between 54 and 60 minutes per trip (excluding motorcycles, which average 38 minutes per trip). Home trips (that is, all trips returning home) and work trips are longer than school trips and trips for other purposes (Figure 4.14). Roughly 30 percent of low-income individuals walk more than 60 minutes a day (JICA 2013).

23. **Before devolution, much of the authority over urban transport was centralized at the national level—but divided by partial and sometimes overlapping and contradictory mandates and responsibilities.** The institutional framework involved several entities, including the Ministry of Roads, responsible for formulating national road policy and road subsector administration; the Ministry of Transport, overseeing national transport policy and transport sector administration (including public transport services within cities); the Kenya National Highways Authority, developing and maintaining national roads,

Figure 4.14: Average travel times, Nairobi, 2013, by income, mode, and trip purpose



Source: JICA (2006, 2014).

including important arterials in urban areas; and the Kenya Urban Roads Authority (KURA), developing and maintaining urban roads. There was also a national ministry for Nairobi metropolitan development. In addition, local authorities had authority to manage some roads and streets within their jurisdictions. The resulting tangled web confused ordinary citizens, diluted scarce financial resources, and led to chronic underinvestment in transport.

24. **Since devolution, counties have more responsibility for urban transport.** Nationally, the Ministry of Transport and Infrastructure has replaced the former Ministries of Roads and Transport, and implementation of infrastructure projects is still managed by the Kenya National Highways Authority and KURA. But county governments have assumed responsibility for urban transport, and KURA's role is expected to diminish steadily. In Nairobi, functions for both development of infrastructure and jurisdiction over services comprising the Nairobi Mass Rapid Transit System will be entrusted to a Nairobi Metropolitan Transport Authority, currently being formed through interjurisdictional agreement. In October 2014, the Ministry of Transport and Infrastructure and four counties—Nairobi, Kajiado, Kiambu, and Murang'a—signed a memorandum of understanding to constitute the authority.

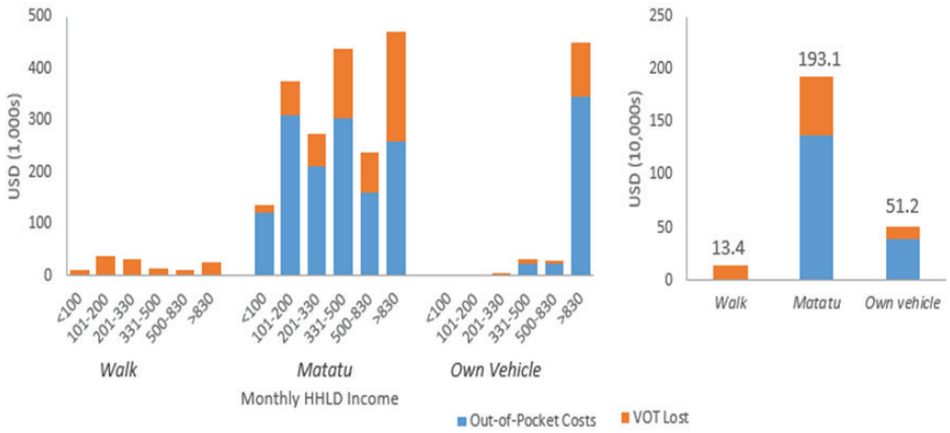
25. **The coordinated creation of an institution for governance of urban transport among different jurisdictions is not globally unique, but is relatively new for Kenya and for Africa.** It is an innovative and welcome step in developing coherent institutional structures to reflect important metropolitan needs. It might have been simpler—in the short run—for either Nairobi City County or the Ministry of Transport and Infrastructure to develop a mass transport authority on their own, and their mutual recognition of the benefits of coordinating with other jurisdictions in a rapidly growing metropolis is more complex in the short-run, but in the long-run may lead more successful outcomes.

Crippling congestion costs in Nairobi

26. **Traffic congestion is a growing problem, resulting from a rapidly increasing population and the crowding of motorized traffic onto a limited street network.** For a city of close to 4 million inhabitants, Nairobi has far fewer streets to serve traffic demand relative to cities of similar size (Gonzales, Chavis, Li, and Daganzo 2009). While radial links to the central business district are extensive, the arterial (inter-district) network outside the central business district is thin. Even connectivity between the central business district and its immediate surroundings, such as the area south of the train station or Upper Hill, near the business district, is limited. As a result, traffic management in the metropolitan area is challenging. There are no signalized intersections outside the grid-like streets of the central business district. Major intersections are typically managed with roundabouts that were not designed to accommodate the increased traffic volumes. When unexpected congestion occurs, or intersections near the central business district are unable to serve traffic demand, vehicles have no way to bypass the congestion. Small and localized traffic incidents thus can have widespread and lasting effects. Congestion also stems from inadequate off-street parking space and the lack of a formal addressing system, which increases confusion as drivers attempt to find their destinations.

27. **In 2013, households in Nairobi City County spent on average US$2.5 million per day in travel costs. These costs were examined by quantifying the out-of-pocket costs of travel (fuel, public transport fares, and so on) as well as the value of time (VOT) spent traveling.** Of the aggregate passenger travel cost, 75 percent was spent on *matatu*s, 20 percent on private vehicles, and the remaining 5 percent walking (VOT only). The average car driver spent roughly twice as much per trip on transport as the average *matatu* rider(US$2.93 versus US$1.44 according to the Kenya State of the Cities survey; see table 4.1), but aggregate spending on *matatu* rides exceeded that spent on private cars by nearly four times. The aggregate value of the time component alone for *matatu* costs was nearly equal to the *total* aggregate travel cost of private vehicles (Figure 4.15).

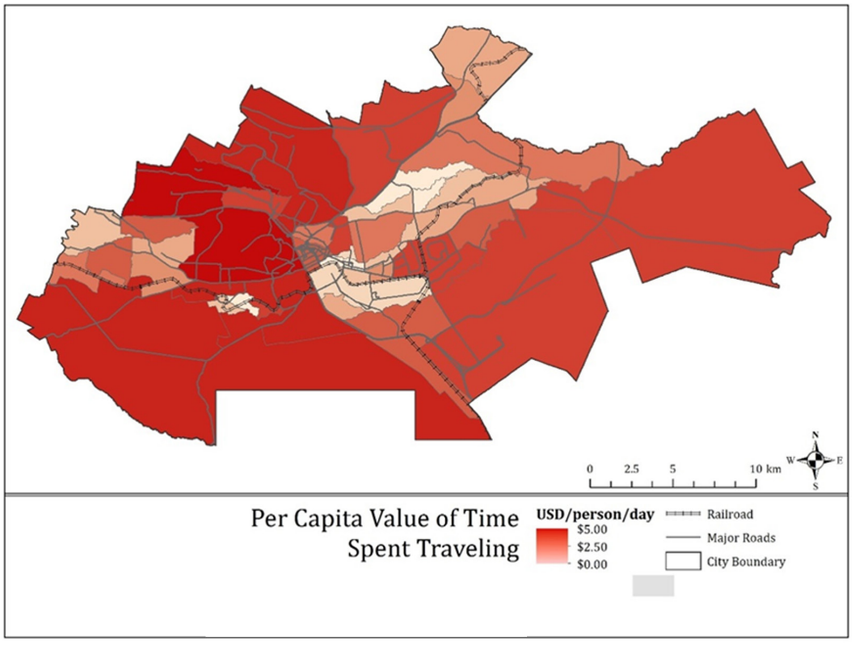
Figure 4.15: Aggregate daily personal commuting costs, Nairobi City County



Source: World Bank (2014).

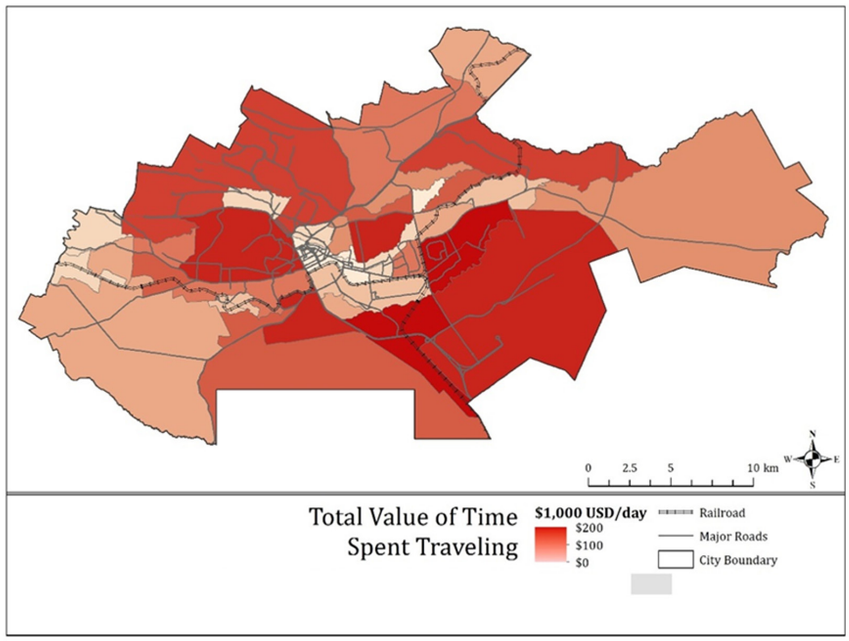
28. **The VOT lost to travel in Nairobi is estimated at US$0.8 million–US$4 million per workday.** This is based on the 47-minute average travel time of a trip in Nairobi, daily time costs per capita, valued as a percentage of household income,[83] ranging from $0.25 to roughly $4.00. Depending on the survey data used, estimates for total VOT spent commuting range from $0.8 million (World Bank 2014) to over $4 million (JICA 2013) per workday. Commuters in zones removed from the city center, especially those in the relatively wealthy exurbs to the west, spend far more time traveling to the city center. But due to the larger population concentrations near the city center, the combined value of time spent traveling from central areas is considerably higher than in the exurbs (Figure 4.16 and Figure 4.17).

Figure 4.16: Per capita VOT spent traveling, Nairobi City County



Source: Google Maps, OpenStreetMap, JICA (2013).

Figure 4.17: Total VOT spent traveling, Nairobi City County



Source: Google Maps, OpenStreetMap, JICA (2013).

Table 4.1: Travel costs by mode, citywide and per trip, Nairobi

	Daily citywide travel cost (US$)					Per capita cost per trip (US$)		
Mode	Out-of-pocket cost		Value of time lost		Total	Out-of-pocket cost	Value of time lost	Total
Matatu	1,367,032	71%	563,724	29%	1,930,756	1.02	0.42	1.44
Walk	0	0%	134,094	100%	134,094	0	0.08	0.08
Own vehicle	392,093	77%	120,315	23%	512,408	2.24	0.69	2.93
Total ($USD)	1,759,126		818,132		2,577,258			

Source: World Bank (2014).

29. **Increasing travel speeds could save more than US$50 million per year, the current cost of congestion in Nairobi.** Costs can be assigned to congestion measured against reasonably attainable travel speeds. In 2004, JICA conducted a survey of travel speeds on 15 major Nairobi roads, including two-, four-, and six-lane divided and undivided highways. Eight of these roadways reported higher volumes than their planned capacity, and four reported a volume-to-capacity ratio above 1.2. Average recorded travel speeds on these thoroughfares were 37 kilometers per hour, 77 percent of the designed free flow speeds (design speeds varied between 40 and 60 kilometers per hour). This difference means that 23 percent of time spent traveling on these roads is a result of congestion delays. On local roads, which see the bulk of congestion in Nairobi, home-based work trips in private vehicles average 14 kilometers per hour, and home-based work trips in *matatu*s average 13.5 kilometers per hour.[84] Increasing average travel speeds to 20 kilometers per hour would save $54.1 million a year and decrease time spent traveling by 30 percent. Increasing average travel speeds to 30 kilometers per hour would save $93.4 million a year and decrease time spent traveling by 54 percent.

30. **Out-of-pocket costs are higher than VOT but barely affected by congestion.** Out-of-pocket costs are the majority of travel costs in Nairobi. They totaled US$1.8 million per day in 2013. For drivers, the average out-of-pocket cost per trip equates to US$2.24, for *matatu* users US$1.02. *Matatu* fares are 71 percent of *matatu* user costs while vehicle ownership, parking, and fuel expenses are 77 percent of driver user costs. Pedestrians do not incur any out-of-pocket costs from travel (Table 4.1). As out-of-pocket

costs represent the bulk of overall travel costs, changes in speed have a small effect on overall travel costs. Drivers receive the highest individual gain from changes in travel speed, but the aggregate saving for *matatu* passengers is much higher.

Accessibility of employment opportunities today: too few, too long, and unequal

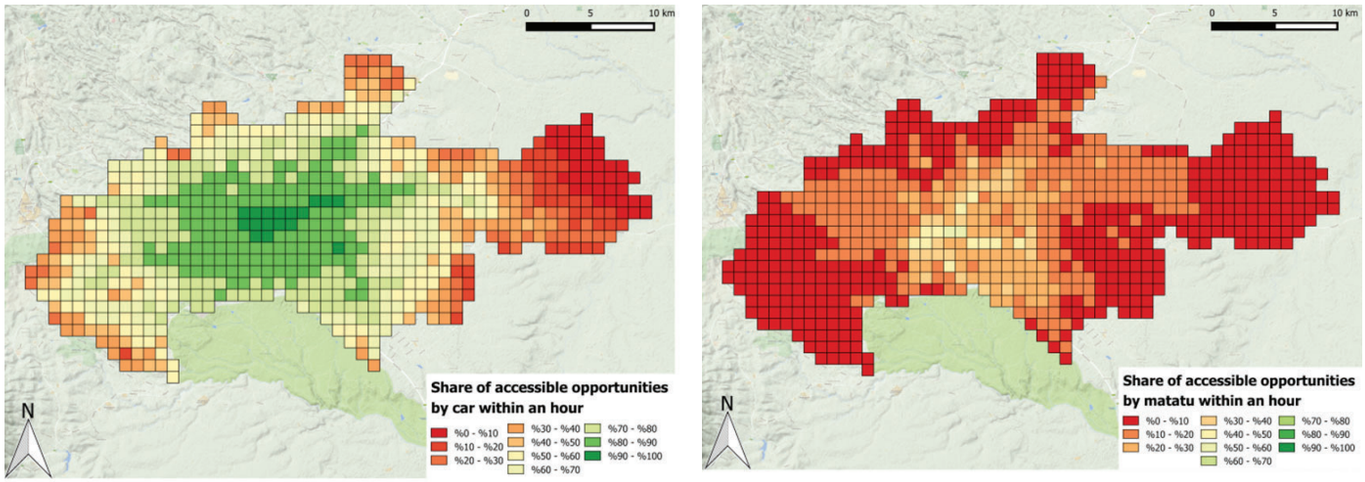
31. The share of total employment opportunities that can be accessed in Nairobi in a given timeframe favors private car users. On average, car users within Nairobi can access 31 percent, 58 percent, and 77 percent of total employment opportunities within 30, 45, and 60 minutes, respectively, when congestion occurs (Table 4.2). For *matatu* users the situation is drastically different as on average they can access only 4 percent, 10 percent, and 20 percent within these three timeframes. These figures suggest that Nairobi is better accessed by car, even though car use accounts for only 13 percent of trips for all purposes, while *matatu*s and walking are massively favored—at 28 percent and 41 percent, respectively (JICA 2013, 2014) (see Figure 4.9). Although private car ownership rates are higher in Nairobi than in other African cities, by world standards they remain low at around 84 cars per 1,000 persons (JICA 2006, 2014). These differences in accessibility by car versus *matatu* can be seen by comparing the respective panels of Figure 4.18.

32. Accessibility is spatially unequal in Nairobi City County whether using cars or walking and using matatus is the transport mode. Access to formal economic opportunities within a given timeframe (here 30 minutes) is slightly less equally distributed throughout the urban area of Nairobi for a combination of walking and *matatu*s than for cars (Figure 4.19).[85] Because residents of Nairobi rely much more on walking and *matatu*s than they do on cars, and because of the inherently localized nature of informal collective transport, access to employment opportunities in Nairobi City County is unevenly distributed.

Table 4.2: Average share (percentage) of Nairobi's employment opportunities accessible within a given timeframe, by transport mode used and congestion status

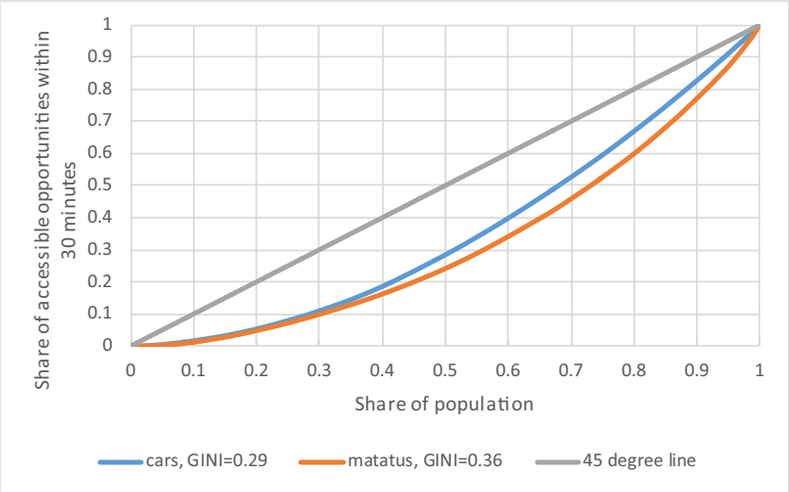
	Cars		*Matatu*s + walking	Walking only
	Uncongested	Congested	Congested	Uncongested/Congested
< 30 mins	57	31	4	3
< 45 mins	85	58	10	7
< 60 mins	96	77	20	11

Figure 4.18: Share of accessible employment opportunities within one hour of traveling for cars (left panel) and matatus (right panel)



Source: Columbia University CSUD (2005); University of Nairobi C4DLab (2014), MIT Civic Data Design Lab; 2012 population density from Bright, Rose, and Urban (2013); car travel times computed from OpenStreetMap road layers.

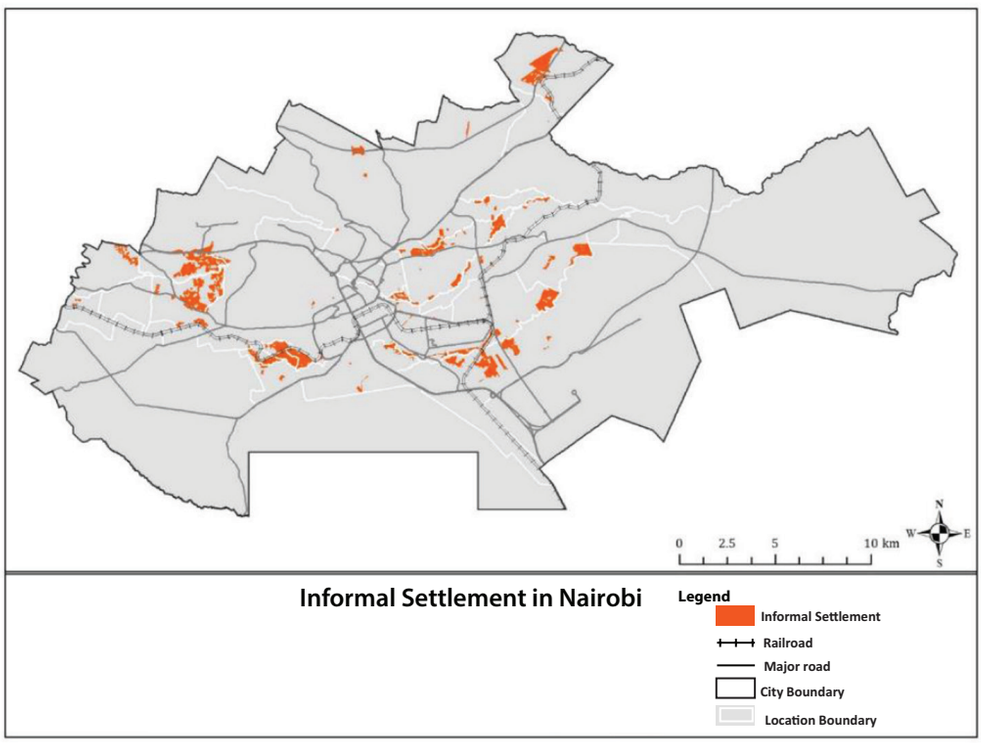
Figure 4.19: Lorenz curves showing spatial inequality in accessibility to employment opportunities in urban Nairobi City County



Source: Avner and Lall (Forthcoming).

33. Nairobi City County's rapid urban population growth has led to land acquisition and speculation, forcing poorer residents to settle in dense communities dispersed throughout the city. By 2008, there were 150 informal settlements in Nairobi, occupying just 5 percent of total residential land (Slum Dwellers International and Pamoja Trust 2009). These settlements had a combined population of more than 1.8 million or over 50 percent of Nairobi's population. Many informal settlements are near the central business district (Figure 4.20). Sixty-nine percent of Nairobians work in employment centers outside their neighborhoods, with those living in informal settlements more likely to walk and those residing in formal settlements more likely to use public transport services.

Figure 4.20: Informal settlements, Nairobi City County



Source: Columbia University CSUD (2005); World Bank (2014); Slum Dwellers International and Pamoja Trust (2009).

34. **Accessibility of public services and amenities is important for livability but is poor in Nairobi. Access to schools, hospitals, and parks improves the quality of life. Parks are farther than a 30-minute walk for 36 percent of Nairobi City County's populace (Table 4.3).** Schools have the greatest aggregate accessibility, but are still beyond the 30-minute threshold for 16 percent of the population (a high percentage when factoring in the age of many children walking to school). Hospitals, by the same measure, are inaccessible for 25 percent of Nairobians, which carries numerous implications for health (Figure 4.21). Even considering the added accessibility provided by a 30-minute *matatu* ride, 14 percent of households are still unable to reach hospitals, with almost 20 percent unable to access parks.

Toward Middle-income Status: Challenges and Opportunities

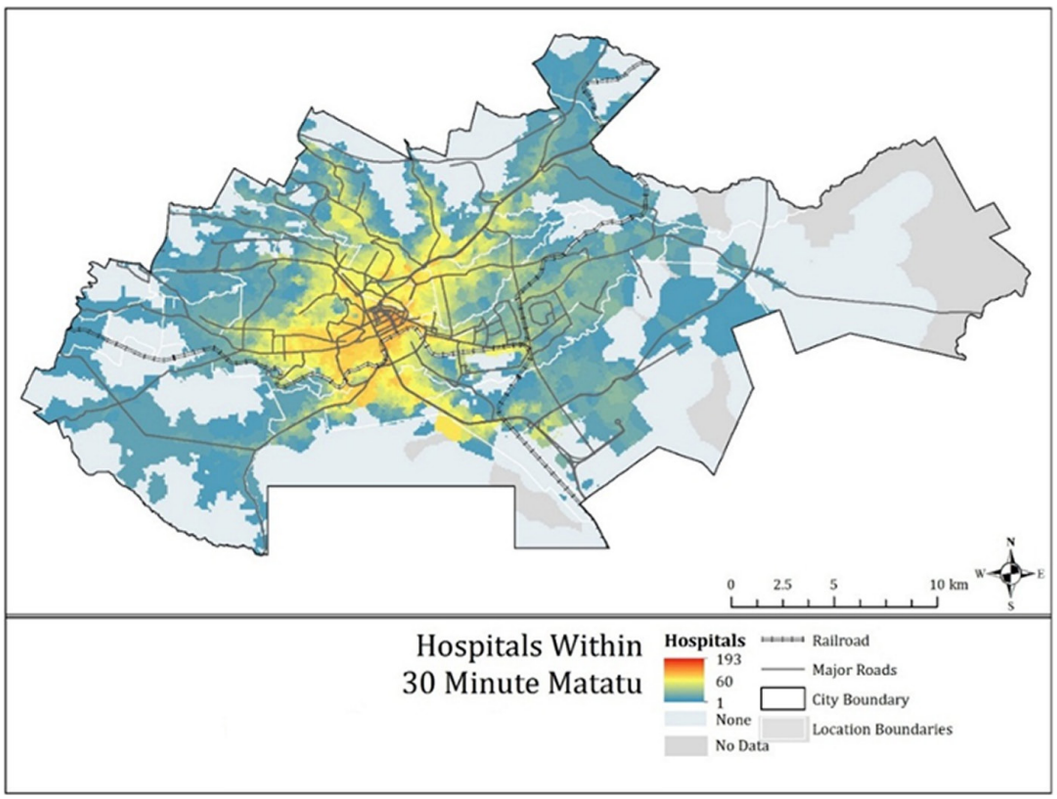
35. T**o promote livability and productivity as Kenya reaches middle-income status, Nairobi needs both to mitigate congestion and enhance access to jobs, public services, and amenities.** The ability of a public transport system based on *matatu*s to address these needs is limited. Synergies are to be gained by tackling both issues at the same time, with a clear vision and systemic approach that exploits the interplay between land use and transport. Sole reliance on one of these two components could even

Table 4.3: Number and share of Nairobi City County's population with access to public services within 30 minutes, walking or by matatu

Destination	30-minute walk		30 minutes by matatu	
	Population with access	Share (%)	Population with access	Share (%)
Hospitals	2,955,473	74.8	3,387,962	85.7
Schools	3,335,202	84.4	3,942,722	99.8
Existing park	2,528,747	64.0	3,193,028	80.8
Proposed park	3,528,392	89.3	3,743,169	94.7

Source: Hospital locations, Google Maps; park and school locations, Columbia University CSUD (2005); population density, WorldPop; 30-minute accessibility calculated by Conveyal.

Figure 4.21: Hospitals within a 30-minute matatu ride



Source: Google Maps; Conveyal; OpenStreetMap.

be detrimental. Construction of new roads is likely to temporarily relieve congestion, but unless this is followed up with careful planning and enforcement of land use regulations, it could backfire by incentivizing sprawl and decentralization, thus reducing accessibility of jobs and other economic opportunities while increasing motorization rates and vehicle-kilometers of travel. To have the greatest impact on the largest number of users, transport policies and investments should focus on shortening commutes for public transport riders rather than for traffic generally. Improvements that strengthen the mass transport network and ease congestion faced by public transport riders would have a larger economic impact than improvements to reduce travel times for personal vehicles.

36. **The spatial layout of Nairobi City County is the result of a complex self-organizing process.** Households seek to locate within reasonable distances of jobs and public amenities, maximizing accessibility within the constrained environment of suboptimal transport investments, land-use planning, and development control and enforcement. That said, this "self-organization" of spatial settlement patterns is far from optimal: major accessibility improvements can be achieved through a coordinated process of structured, accessibility-enhancement decision making. For example, a hypothetical reorganization of land uses could result in a doubling of accessible formal jobs within an hour's travel using *matatu*s even in the absence of additional investments in transportation networks or building stocks.[86] And as Nairobi grows and its economy restructures, accessibility limitations and difficulties in reorganizing land use are also expected to drive additional investments in transport infrastructure and modification of the building stock by increasing floor space close to opportunities and transport hubs. Both processes will require large investments.

37. **In a dynamic framework, as Kenya reaches middle-income status and households' incomes rise, so will their time sensitivity.** The current average travel time (regardless of congestion) for a trip in Nairobi is 47 minutes and 60 minutes for matatu and bus trips, respectively.[87] Given that most commuters travel by *matatu*, these figures indicate that the time sensitivity of an average Nairobian is quite low.[88] Households' sensitivity to time is a main determinant of commuting mode and times. For low time sensitivities, households are prepared to incur longer commutes to have access to opportunities (even though they try to minimize these through locational decisions). For high time sensitivities, the situation is reversed, and commuters value low transport times much more. The importance of time increases with income, and as economies develop higher time sensitivities traditionally follow.[89] Therefore, Nairobians' willingness to travel will tend to fall unless their increased time sensitivity is countered by higher travel speeds. There are two possibilities for achieving this. The first is the default: economic development accompanied by increasing motorization rates and some degree of suburbanization. This pattern is made easier, and sometimes caused by, investments in high-speed, high-capacity roads (Baum-Snow 2007). The second option entails investing in high-capacity, high-speed mass public transit networks.

38. **The investments made today and in the near future in the urban transport system will commit Nairobi to an urban form and its associated travel patterns for decades.** Cities are characterized by high inertia and path dependencies as vast amounts of sunk capital are invested in transport infrastructure and in residential or commercial building stock with expected lifetimes over 100 years (Hallegatte 2009; Lecocq and Shalizi 2014; Philibert and Pershing 2002). It is therefore important that the long-lasting consequences of these decisions are well understood to avoid unintended lock-in (Avner, Rentschler, and Hallegatte 2014). Investing heavily in radial road networks is likely to trigger urban sprawl and to lock Nairobi into a low-density spatial development pattern incompatible with the subsequent introduction of mass transit options such as bus rapid transit (Bertaud 2002). Given the relatively low yet fast-rising motorization rate in Nairobi City County, these investments will provide benefits mainly to the wealthiest. Conversely, investing early in public transit options can limit urban sprawl while providing most citizens with good access to opportunities. In facing this crossroad, decision makers should recognize that the decisions they take today will prove very difficult to reverse—that they are shaping the city for decades to come. A major priority for Nairobi should be to avoid a trade-off between access and sustainability that locks it into a highly land-consuming and car-dependent development pattern. Subsequent investment in radial roads and highways can provide complementary options and can decrowd the city.

Recommendations

1. Orient transport policy, initiatives, and energy to strengthening public transport and developing mass transport networks

Short term	Continue efforts to make the matatu system more responsive to user needs

*Matatu*s may not be the way that transport planners would choose to design a transport system, but they account for 26 percent of all trips in Nairobi City County, nearly one and a half times as many people as cars and (conventional) buses combined. As Nairobi's economic structure continues to transition from predominantly nontradable services toward more tradable services and manufacturing, demand for motorized mobility will increase, and with their flexibility and extreme demand responsiveness, *matatu*s will be on the front line to respond.

Traditionally, *matatu* operations are structured to reduce costs for the operator, but new information, communications, and social media applications are helping to make *matatu*s responsive to user needs as well. *Matatu* route networks have been mapped in recent years, and the public sharing of that information has improved driver adherence. Crowdsourced reporting on driver behavior has demonstrably improved safety. Further efforts by Nairobi City County to advance use of this kind of social technology should be encouraged.

The County should also work with relevant national authorities to craft concerted approaches to facilitate the renewal of the *matatu* vehicle fleet in the interests of road safety, passenger comfort, air quality, and limiting growth in energy consumption and greenhouse gas emissions. Models from elsewhere in Africa, such as a fleet renewal scheme in Dakar, should be considered.

Medium term	Continue and enhance efforts to roll out mass transport systems based on bus rapid transit

Even if *matatu*s will no doubt be the first point of response, their operational and capacity constraints require modes with greater throughput, and bus rapid transit is a critical mass transport mode that should be focused on for the medium term.

Bus rapid transit uses key arterials to service areas of existing high demand. Bus rapid transit can provide a structuring effect on land markets, sending strong signals about where accessibility is being permanently enhanced. Thus bus rapid transit can begin to structure patterns of transport demand through land-market mechanisms in a way that *matatu* services cannot. Bus rapid transit can begin to create the transport conditions that allow the long-term land-use sorting that is critical for the transition to a manufacturing and tradable services economic base.

But experience around the African continent suggests that bus rapid transit strategies are most successful when they are not seen uniquely as an infrastructure investment problem, but rather as an integrated solution requiring attention to a wide range of operational issues, including hierarchical integration of transport services, appropriate management of both bus rapid transit and non–bus rapid transit services, integrated services and operations planning, and appropriate fare-setting and subsidy policies. The move toward the creation of the Nairobi Metropolitan Transportation Authority is an important start.

Long term	Develop a multimodal, hierarchically integrated mass transport system

Over the long term, mass transport system should be developed to help structure future metropolitan development. This means acknowledging that urban growth rates in Nairobi (and probably elsewhere in Kenya) are likely to remain high, and using the mass transport system to prevent a precipitous decline in net residential densities as the population grows.

The rail network servicing the metropolitan region will need to expand substantially to facilitate passenger flows that are more commensurate with a region growing to 10 million than now (with daily flows in the hundreds of thousands, not thousands). There is already substantial underused capacity in existing rights of way, and these should be exploited where possible. The train station in the city center can become an important multimodal hub not only for the metropolitan region, but also for the nation as a whole, and not only helping to reinforce the role of the central business district while providing alternatives to road traffic congestion, but also helping to anchor central business district expansion and growth toward the southeast.

Beyond these anchoring effects, however, a well-conceived, hierarchically integrated transport system can also help lubricate the development of a manufacturing sector within the metropolitan area, helping to link labor at all skill levels in the market with job opportunities.

A key to the success of this "long-term" recommendation is to recognize that the "long term" is not that long after all. Urban growth rates in Kenya and Africa are among the fastest in the world, and urban development patterns, once formed, can lock urban residents into transport and consumption patterns with enormous implications for Kenya's resource flows. So while development of an effective and integrated mass transport network can take decades, there is already a race to ensure that new urban settlements are accessible (to the rest of the metropolis) and sustainable.

2. Support the alignment of urban transport with effective management of the urban transport network

Short term	Implement effective traffic management measures

The limited road network makes good traffic management particularly important, as the current transport infrastructure will only be successful in limiting congestion and enhancing accessibility if it is accompanied by effective traffic and demand management measures. This includes using the traffic signalization that has been implemented on major arterials in the last few years. Better signage and road structure would also help keep traffic flowing. By removing many of the ineffective T-junctions in the city and replacing them with acceleration and deceleration lanes, much of the congestion choking these intersections could be better mitigated. Such a solution requires land and resources—that is, commitment by political authorities.

Short term	Develop and use parking policies as a way of managing transport demand
Parking policy should be understood as a key tool for helping to manage transport demand. This means approaching parking neither as an infrastructure problem nor as a source of revenue for the city but rather as an economically scarce commodity that needs to be correctly priced. This also means taking an integrated approach to both off- and on-street parking, and not over-specifying supply needs based on an assumption of immutable demand.	

3. Using complementary approaches of adapting land uses and invest in public transport to enhance accessibility

Medium to long term	Develop and implement policies that direct growth toward select polycentric centers beyond the central business district
Development of a hierarchically integrated mass transport network will help strengthen the position of the central business district while providing alternatives to the hypercongestion that characterizes current accessibility to the central business district. The mass transport network can also contribute over time to the reduction in intensity and duration of hypercongestion by facilitating a more polycentric development pattern (such as new jobs to settle outside the central business district in selected subcenters). The network can help locate these subcenters by creating access premiums at those locations, provided that these benefits are accompanied by measures to harmonize public and private sector actions to create the infrastructure and conditions for those subcenters to flourish. Although this option falls short of promoting one global labor market in Nairobi, it has the potential to address some access inequalities and to avoid the trade-offs some households make (access to employment opportunities versus living conditions). Analysis suggests that reducing the commuting distance through polycentric growth may reduce the need for private motorized travel and increase job access for low-income Nairobians.	

Medium to long term	Effective planning and gradual reorganization of land uses can enhance access even without transport improvements
The analysis shows that even in the absence of major investment in the mass transport system, there is value to improved land-use planning and implementation through better development control in producing outcomes with enhanced access. The careful coordination of land uses, such as the location of residential neighborhoods and of formal economic opportunities, can promote access in Nairobi City County even in the absence of necessary yet costly transport and building retrofitting investments. But doing so requires strong planning capabilities and good governance structures to facilitate implementation and enforcement. While there are clearly limits to how much access improvement can be accomplished without investments in transport networks, the analysis of this chapter suggests that some improvement is possible even without transport investment.	

Long term	Promote more compact and transit-oriented development
The aim is for Nairobi City County to perform as one labor market where all employment opportunities can be reached within a given timeframe. A more compact development pattern organized around selected subcenters has the potential to reduce commuting distances and times, promoting access. This option implies building more floor space around selected subcenters with high opportunity levels and therefore extra investments in residential structures or changing the residential building stock by, for example, investing in more floor space close to job opportunities or to transit stations that can link households to work quite quickly.	

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Chapter 5

Land Management and Urban Planning Institutions, Before and Under Devolution

Key Messages

1. Since independence, Kenya's institutional structure for land management has tended to be centralized, technocratic, and nonparticipatory, reducing institutions' efficacy and neutering urban planning. The devolved structure touched on throughout this report (see Box 1.2) presents an opportunity to update these institutions. The National Land Policy of 2009 created a road map for institutional reform, and laws governing land tenure, titling, and registration have been rationalized. Counties have shown commitment to linking physical planning to their county-level integrated development plans.

2. T**he respective land management and planning roles of the National Land Commission and the Ministry of Land, Housing and Urban Development (MLHUD) need formal separation and clarification.** With devolution having begun only two years ago in 2013 with the establishment of the county governments, much unfinished governance reform remains to be done. The most immediate concern is to resolve the division of responsibilities and authority between these two entities, ending their duplication of effort.

3. Commitment to development control is the single most critical factor for effective planning. Poor development control was one of the planning system's central weaknesses before devolution, when much development proceeded without oversight and in contravention of prepared physical plans. But informal and illegal development is still prevalent. Planning institutions must strengthen development control to broaden their efficacy and reduce opportunities for politicization and graft.

4. More public participation in planning is needed. Stakeholders were—and are—too little involved in planning. The new institutional framework mandates public participation in devolved governance and requires county authorities to design and promote civic education. But actual public participation is still weak and risks being one-way listening with little impact on goal-setting and decision making.

5. Integrated, coherent metropolitan regions are vital to Kenya's economic expansion. Vision 2030 acknowledges the centrality of well-functioning cities and metropolitan regions to the country's economic future and has outlined a program of investment in six potential metropolitan regions to spur economic expansion, facilitate regional equity, conserve land and natural resources, and distribute population growth. Growth and development in the Nairobi metropolitan area remain uncoordinated and unplanned despite its economic importance. But some counties are starting to work together under an institutional framework for voluntary cooperative arrangements.

Before Devolution

6. For almost five decades, Kenya's land-management institutional structure was centralized, technocratic, not always organized, and with too many opportunities for corruption. Kenya, like most former colonial countries of Africa, saw its initial planning and land institutions established according to the legal traditions and doctrines of its colonizer, Great Britain. The colonial period saw the introduction of private property, the establishment of strong central administration over land in a government lands ministry, and the preparation of the country's first formal urban plans for cities intended for European—not African—settlement.

7. This period established a basic paradigm of urban planning with four key characteristics. First, planning was a spatial exercise with the primary purpose of designating land uses in specified zones with standards for infrastructure and buildings; plans were regulatory documents to which land owners were to conform. Second, planning powers were centralized in the Ministry of Lands with physical planners attached to the ministry—the main preparers of plans on behalf of local governments. Third, planners were specially trained professionals who saw plan preparation as a primarily technical exercise; community participation in plan preparation was generally minimal. And fourth, although plans were prepared centrally, plan implementation was the responsibility of a local authority—urban, municipal, and county councils.[90]

8. The efficacy of these institutions was poor and corruption was common, reflected in unplanned city growth and unauthorized development. At a macro scale,

urban planning has failed to create a spatial framework for the judicious use of the country's natural resources. High-quality agricultural land has been converted to urban uses, particularly in the northwestern part of greater Nairobi and in peri-urban Nakuru. Urban development—particularly formal sector high-income housing—has been indiscriminate in its harm to environmentally sensitive areas like steep slopes and wetlands.[91] Rampant urban growth has destroyed critical habitat, particularly forests and grasslands, and polluted common pool resources such as water and air.

9. **At local or municipal level, physical planning has failed to control land use or to ensure housing quality.** Requirements to adhere to permitting processes and ensure change of user and land subdivision proposals follow approved plans are often ignored with unapproved buildings erected haphazardly at high densities in locations with limited public access and services. Building codes are evaded and residential structures collapse and kill residents. Even in relation to government land—the type of land tenure over which government had the most undisputed control—planning failed to use land for important social uses like road reserves, public parks, and schools. This failure exacerbated social inequality and is perhaps most manifest in the continuous growth of slum housing developments on public and private land in the major cities. The reasons for the failure are many and include corruption at the central Ministry of Lands and local authority level. An additional reason is lack of capacity, particularly of trained technical personnel at local authority level who were needed to implement plans and scrutinize development proposals.

10. **As described in Chapter 1 (National Land Policy of 2009—an opportunity missed), the National Land Policy created a road map for institutional reform but did not foresee the advent of county government.** Two other initiatives created the foundation for institutional reform. First, the draft National Spatial Plan, a long-delayed flagship project of Vision 2030, identifies goals for the national land base. This plan's purpose is to guide the long-term spatial development of the country, including preparation of regional, county, and local spatial plans. As the guiding policy document on land, its principles and policies should be the basis of plan oversight and approvals conducted by the National Land Commission or the ministry. Second, the National Spatial Data Infrastructure is a critical planning tool under the National Land Policy—a planned repository of rationalized, integrated spatial data available to governmental bodies and sectoral agencies.

Under Devolution

11. **National institutions for land management have changed dramatically in a quest to enhance transparency and accountability. The 2010 constitution and subsequent implementing legislation have radically reworked the previous institutional and administrative framework for land management.**[92] Most important, legislation split national land management between two bodies: the National Land Commission and a national ministry with the land portfolio (now the MLHUD). This split in function is largely a reaction to the previous centralized framework—and the opportunities for corruption—at the Ministry of Lands. By establishing an independent commission of closely vetted professionals and localized bodies and processes for land allocation, as well as titling and registration, it was hoped that contentious and economically costly issues on land could be resolved.

12. **Legally, the National Land Commission is the lead public land management agency, with a wide array of responsibilities.** A constitutionally mandated nine-member independent body broadly charged with overseeing public land management, it has multiple functions identified in law (Constitution of Kenya 2010; National Land Commission Act 2012; Land Registration Act 2012).[93] Importantly for urban areas, it is responsible for public land allocation, titling, and registration functions as well as oversight of land use planning throughout the country.[94] It also has been tasked with developing and maintaining an effective land information system, facilitating property taxation, and addressing the historic land injustices arising from past corrupt land practices identified in the 2004 Ndung'u Report of the Commission of Inquiry into Illegal/Irregular Allocation of Land. Finally, it is charged with decentralizing land administration to county level by setting up county land management boards responsible for processing key land transactions: allocating public land, overseeing changes of users, and subdividing land. Because the land transactions processed by the county land management boards must follow physical planning and survey requirements, the National Land Commission is a key body under the new institutional framework.

13. The MLHUD is charged with, among other responsibilities, policy making and oversight The Kenyan Constitution does not delineate specific ministries and their mandate—it only identifies the minimum (14) and maximum (22) number of ministries that can be established by the executive branch (Article 152(1)(d)). The identified role of the land ministry in new constitutional order is best laid out in the 2009 National Land Policy. In Section 4.3.1, the ministry is given 10 specific functions. These include making policies on land and giving policy direction to the National Land Commission, mobilizing resources for the land sector, coordinating the National Spatial Data Infrastructure, monitoring and evaluating and sector performance with key stakeholders, and overseeing the statutory bodies that regulate land sector professions (such as the Kenya Institute of Planners, Architectural Association of Kenya, and Institution of Surveyors of Kenya).

14. Laws governing land tenure, titling and registration have been rationalized. The National Land Policy of 2009 called for the rationalization of laws regarding land titling and registration, and this recommendation was carried out in constitutional provisions (see *National Land Policy of 2009—an opportunity missed*). The goal was a streamlined, coherent land registration system to enhance tenure security, land market performance, and private investor confidence, all of which had been degraded by the Ministry of Lands.[95] The potential benefits of these rationalizations have not yet been realized.

15. Planning is a devolved function that is central to the financing and management of county governments. Both the Constitution and the County Governments Act of 2012 enumerate mandatory plans that must be prepared by county governments. As discussed elsewhere, the most important plan—the county integrated development plan (CIDP)—serves as a financial instrument: no funds can be appropriated outside the planning framework. In mandating planning, the drafters of devolved government were quite prescriptive about content and approach. The County Governments Act enumerates laudable principles for county planning (such as protection of marginalized groups, protection of natural resources, pursuit of equity in resource allocation) and identifies 10 objectives for county planning from the broad "facilitate the development of a well-balanced system of settlements" to the very specific "tree cover of at least 10 percent of the land area of Kenya."

16. Planning is mandatory with oversight at county and national level. The County Governments Act requires that counties set up technical planning units to prepare plans. These planning units should have a full complement of staff including a physical planning officer, an economic planner, and a county surveyor. The units are required to produce four distinct types of plans: the CIDP (five-year comprehensive plan); sectoral plans (subcomponents of CIDP for sectors such as housing and health); a county spatial plan (a geographic information system–based 10-year physical plan identifying desired patterns of land use as well as basic guidelines for a land use management system); and plans for cities and urban areas.

17. According to the County Governments Act, city or municipal plans will be the instrument for development facilitation and control within cities or municipalities. They are binding on all public entities and private citizens. Oversight of county planning is lodged in the county executive; the National Land Commission also has an oversight role for land use planning. Relative to urban areas, the county executive committee was given explicit powers relative to urban area or city planning (CGA, 2012, Section 37a-d). This same county executive committee is to monitor the process of planning, assist with formulation and adoption of the integrated development plan by a city or municipality, facilitate coordination of integrated urban development plans prepared by different cities or municipalities within the county, and resolve disputes.

18. Community participation in planning is mandated. Notable in the new framework is the mandate for public participation in devolved governance as well as a requirement for county authorities to design and promote civic education. Counties are required to provide unambiguous information on any planning matter under consideration. If taken seriously, this mandate could eliminate past weaknesses in Kenyan planning relating to stakeholder involvement in planning and broader community understanding of the objectives, methods, and legality of planning.[96] Counties must set up structures to make participation easier (such as cell phone–based alerts, meeting agendas, notice boards). The role of the county assembly is limited—it only approves county development planning.

Evaluation

19. **Contestation of land management and planning functions is impeding progress by devolved units.** Devolution is complex, ambitious, and transformational. It is also young—though a transition period started with a Constitutional referendum in August 2010, devolution did not begin until the national elections of March 2013. Since the National Land Commission was established under The National Land Commission Act, 2012, there has been uncertainty on the roles of the Ministry and the NLC in administering functions such as land registration and the renewal of leases. The institutional dispute is now in the courts after mediation appears to have failed. The most important priority is clarifying the division of functional responsibilities between the two entities particularly on the land registration function. [3]

Jurisdictional disputes between the National Land Commission and MLHUD undermine prospects for reform

20. The land registration function. The National Land Commission was put in place to address the over-centralization of power over public land in the central government and the presidency, which culminated in endemic corruption and poor land management at the then-Ministry of Lands. The creation and empowerment of the National Land Commission was not expected to be an easy task. The National Land Commission, notably, was only sworn into office following a High Court decision in February 2013 mandating President Kibaki to gazette the names of the nine-member commission, which had been approved by Parliament in August 2012. Since that time, the National Land Commission has faced considerable challenges, including being grossly underfunded (its 2013/14 budgetary allocation was only 6 percent of its request; 2014/15 allocation is even lower at 3 percent).[97] The MLHUD continues to administer functions like land registration and the renewal of leases that are not part of its constitutional role. The dispute is now in the court system, as internal mediation appears to have failed.

21. **CLack of clarity on the roles between these two land sector actors undermines the prospects for better and more equitable planning, urban land management, and fiscal performance under devolution.** While the land registry might appear tangential to planning, it is central. Planning requires accurate information on the land base including information on boundaries; parcel sizes; existing land uses and improvements; ownership status; and past land use-related approvals and permits. Clarity on parcel boundaries and ownership is particularly important for notification purposes and implementing a planning process informed by citizen participation. Likewise, insecurity about the state of leasehold tenures has a chilling effect on private investment in property; a lack of secure leases affects some 500,000 leaseholders in Nairobi City County alone.[98] Lack of access to records and registries is also a fiscal issue, as the inability to access this information prevents the updating of property tax rolls, collection of land rents, and levying of land rates.

22. Oversight of the planning function. Clarity is also needed over the two entities' roles in the oversight of urban planning. In the Constitution and the National Land Commission Act, the National Land Commission was assigned the function of overseeing land use planning throughout the country; implicit in this role is liaising with the national and county governments. To that end, the National Land Commission has recruited planning staff and established a directorate of land use planning.[99] The MLHUD, on the other hand, is charged with policy making for use of land resources.

23. The 2014 Physical Planning Bill, which has been drafted to replace the 1996 Physical Planning Act, muddies the waters on the devolution of planning functions. The Bill maintains the office of the Director of Physical Planning but now calls it the "Director-General of Physical Planning." While much of its work is identified as being at the national and regional level, the proposed legislation also enumerates powers over special area physical development plans, development control, and advising the National Land Commission and county governments. The draft legislation establishes a 12-member National Physical Planning Council, which claims oversight functions for physical, economic, and sectoral planning. The council's composition is weighted toward the national government. The bill also introduces a

[3] *Since this report was finalized, a Supreme Court ruling made on December 2, 2015 determined that issuance of title deeds was under the jurisdiction of the Ministry but that the two entities should work in consultation and cooperation in matters of land registration more broadly.*

"County Physical Development Plan," distinct from the County Spatial Plan mandated in the County Governments Act.[101]

Technical capacity begins to improve; planning quality and public participation need support

24. **Technical capacity for planning has begun to improve at the county level, but the need for additional trained planners is acute.** Most counties have a cohort of technical staff with appropriate credentials in place so the capacity constraint that plagued planning among local authorities is being addressed. While many of these county personnel are the same officers as under the old district model (leaving some lingering issues of trust), some county public service boards have hired new planners, and many have advertised their positions. Early concerns that planners—much like Ministry of Health medical personnel—would balk at working directly for county governments appear to be unfounded. But concerns remain about whether there are enough trained planners to meet the needs of the devolved government units as they each seek to assemble a full complement of staff. While university undergraduate and graduate education in planning has expanded in recent years with the addition of new planning degree programs and additional institutions with curricular offerings in planning, there is a shortage of professional planners countrywide. As of early 2015, there were only 208 registered planners in the country (Physical Planners Registration Board March 2015) and of these, 88 have practicing certificates that allow them to operate private firms. More optimistically, counties are committed to linking physical planning to their CIDPs and have requested technical assistance and training from the national government to do so. Counties are starting to invest in equipment such as computers, GIS systems, and vehicles that are necessary to functioning planning offices charged with countywide responsibilities

25. **Plan quality remains a concern. Some observers are unimpressed by the level of analysis that went into the initial set of CIDPs.** Plans have been described as wish lists that do not reflect critical evaluation of resources and the appropriateness of planned projects and interventions. Thus there are concerns about the quality of the plans prepared as well as how to address the backlog in plan preparation. While quality should improve in the next iteration of plans, the link between the plans and county budgeting is still likely to be problematic. Likewise, the other types of plans enumerated in the County Governments Act (county spatial plans, city and urban area plans) require significant spatial and population data, analytical approaches, technical skills, and financial resources. Given the percentage of expenditure that is absorbed by the county wage bill coupled with revenue constraints, it is questionable whether the full array of plans can be completed. Counties need to identify their most pressing urban challenges (whether by sector or geographic area) and prioritize their planning processes accordingly.

26. **Public participation—a critical element of social accountability—is still weak. Examinations of the public participation approaches in several counties raised concern about processes for community involvement and the extent to which community inputs were really considered and valued.** Some counties have embraced the Internet in a way that helps foster citizen inputs into government actions, including planning.

27. In its annual review of devolution, the Commission for the Implementation of the Constitution, an independent commission legally established in the Constitution as an oversight agency charged with tracking progress toward the implementation of the Constitution and devolved governance, notes that counties have faced substantial criticism on the relevance and depth of participation.[102] Some counties have passed acts structuring public participation.[103] But many are doing the minimum effort. According to the Commission, units for civic education have been established in only six counties; 17 counties have not developed any laws to conduct it. Perfunctory public meetings are held and notices are published—but notices are in national papers and meetings are held during daytime hours, when many potential stakeholders are unable to attend. Some planners interviewed insisted they couldn't hold evening meetings and felt that if members of the County Assembly were present then requirements for participation were met. Other reasons given for poor performance included costs of participation, lack of capacity in the local administration, and absence of national guidelines.[104] Participation is at risk of being reduced to listening sessions with little impact on goal setting and actual decision making.

28. A unique and troubling feature of devolution is

the manner in which it has categorized the country's cities and urban areas and effectively left most of them without directly elected representation at a subcounty (local) council level. The biggest concern in public participation in governance and potential weaknesses in social accountability relate to the treatment of the residents of cities and towns. Critical urban planning actions, namely formulating an integrated development plan, controlling land use and development, and making by-laws for that control, are the responsibility of county government or its appointed representatives. Of particular worry is that urban residents living in such places will not have their voices heard or needs met—both in planning processes and in general service delivery—by a body presumably oriented toward the majority rural constituency. Counties appear to be delaying implementing the extant Urban Areas and Cities Act provisions for the few urban localities that have the right to corporate boards (Nakuru, Eldoret, and Kisumu). In interviews county officials indicate that they are awaiting a revised act before doing so. A political assessment of the delay might suggest, however, that there is little benefit for elected and appointed county officials to constituting these boards.

Development control falls short

29. The legal framework around development control needs clarification and strengthening. While the primary conflicts in the new institutional arrangement are between actors at the national level, there is the potential for the emergence of jurisdictional conflict related to planning and development between counties and the national government. The most evident potential for conflict relates to the control of development—particularly ensuring adherence to building codes and standards by private sector contractors and developers. Legally, planning for and controlling development within a county's boundaries is the county's responsibility. According to the County Governments Act, city or municipal plans govern urban development. Development control within a city or municipality should be implemented by local government personnel in accordance with "the national housing and building code framework" (County Governments Act 2012, Section 111 3(c)).

30. The prevailing framework is not harmonious with devolution. The newest national building code was promulgated in 2009 (National Planning and Building Code 2009) following a multiyear, multistakeholder process prompted by the 1996 collapse of the Sunbeam Building in Nairobi.[105] As a pre-devolution document, the code refers to a nonexistent national authority (the National Planning and Building Authority). It does not refer to the National Construction Authority, an existing body active in this realm, nor does it acknowledge counties. The 637-page code has five volumes, including Volume 2-Physical Planning, Siting and Site Preparation; Volume 3-Structure and Materials; and Volume 4-Building Services. The document lays out in extensive detail the processes, requirements, and forms needed for obtaining building approvals and certificates of occupation. Section B lays out different types of plans; it indicates minimum dimensional and circulation requirements. The final sections lay out engineering requirements for buildings and foundations, among others. But counties' enforcement capabilities are limited, and analysts looking at the sector conclude that the efficacy of the building code is low (Kioleoglou 2015; Erastus and Wuchan 2014). This evaluation appears to be borne out by the continued collapse of structures in 2015 in Nairobi and Kisumu.[106]

31. The National Construction Authority is an additional dimension in this institutional framework. Established in 2011, it was created to provide a single body to provide regulatory oversight of the construction industry (National Construction Authority Act, No. 41 of 2011). Its primary role (as set forth in Part III of the act) is to vet and register foreign and domestic contractors. Other roles include promoting the industry, conducting research related to the industry, and encouraging the standardization and improvement of techniques and materials within the industry. While its enabling legislation also entitles the authority to "promote and ensure quality assurance in the construction industry," the act does not explicitly give the authority the power to issue permits, including final occupancy permits on buildings. The authority does have the power to investigate work sites and evaluate the work of individual contractors subsequent to a complaint. But since the collapse of an apartment building in Huruma Estate in Nairobi in January 2015, the National Construction Authority, under a presidential order, has been conducting inspections of completed buildings countrywide. While this action is being done to address a need—and serious quality defects in housing construction have been identified in

numerous localities—the inspectorate role legally appears to be at county level.

32. **Development control will remain a challenge, even unified under the counties.** Under the Physical Planning Act of 1996, local physical development plans were prepared for local governments by physical planners working for the Ministry of Lands and Settlement (name of ministry has gone through several iterations since 1996) but the implementation of plans through permitting processes and building inspections was the responsibility of local governments. For a variety of reasons—including insufficient cadres of technical personnel and political interference—development control was very ineffective, with much development proceeding without oversight and in contravention of prepared physical development plans. Planning, development decision making, and enforcement of permits and building codes are now in the same hands—a notable institutional improvement.

33. **However, county governments may be no more effective at controlling development than their local government predecessors.** Without transparent and depoliticized approval and enforcement procedures, corruption is possible. The role of members of the county assemblies is unclear, as well as whether they will complicate land planning and development control. An additional complicating factor is societal attitudes. There is widespread acceptance of informal and illegal development throughout the country. Citizens still lack an understanding of planning and county and national governments' role in private land use. The economic significance of land and the politicization of land access create further problems for county enforcement of development regulations. Nairobi City County, for instance, reported that when its development control officers attempted to enforce the law relative to road and riparian reserves they faced intimidation and violence by well-armed land grabbers.[107]

34. **Current development control efforts are about compliance, inspections, and law enforcement, which limits efficacy and provides opportunities for politicization and graft.** Effective development control needs actors in the development process—most importantly the government, the land owner or developer, and development professionals like architects, contractors, and surveyors—to understand and respect the process and comply with procedures and requirements. Developers must submit their architectural drawings and site and engineering plans for scrutiny and approval. Government must have enough personnel to advise land owners, provide timely approvals, and complete routine site and building inspections followed by final permitting. But plans, codes, and conditions themselves must be reasonable and related to a clear public objective. Contractors must adhere to material standards, provide safe working conditions, and follow other conditions placed upon the permit approval.

35. The potential for alternative tools for land use planning has been under-explored. One constraint facing the implementation of the delayed National Spatial Plan as well as land use planning in general is that the "toolbox" is limited. Planning is still primarily about legal coercion and forcing owners to comply. There is little to no use of incentives or market-based tools to influence land use outcomes. The potential of tools such as preferential taxation, infrastructure investment, co-investment through public–private partnerships, and transfer of development rights, to name a few, have not been explored.

36. Regulating freehold within the current context has not been easy. The 2010 constitution is clear on managing freehold land within urban areas as Chapter 5, 66 (1) states: "The State may regulate the use of any land, or any interest in or right over any land, in the interest of defense, public safety, public order, public morality, public health, or land use planning." Yet outside Nairobi City County, planners working at county level are very reluctant to regulate private property held as freehold (as opposed to leasehold). They see the rights in land as strong and find land owners unwilling to comply with zoning and other land control regulations. The hardest issue is ancestral lands where there are multiple family interests in the land.

37. **Inappropriate planning standards delineated in the MLHUD's Physical Planning Handbook (the technical handbook used by planners in the Ministry when preparing various statutorily defined plans) and incorporated into zoning by-laws undermine affordability in formal land and housing markets and contribute to social inequality.** The role that planning standards play in increasing the cost of urban land and formal housing is well documented.[108]

Among the problematic standards are large minimum parcel sizes, generous setback requirements, wide street and lane widths, high minimum parking requirements and extensive land set asides for public facilities like schools and parks. The Handbook, for instance, recommends an 18-meter (60 foot) road reserve for minor roads and 0.03 hectare lot sizes (3,230 square feet) for high density residential. Plot coverage can only run from 40 to 65 percent of the parcel; buildings categorized as low-cost housing must be set back from side lot lines by 1.5 meters (5 feet), front lot lines by 3 meters (9.8 feet) and rear lot lines by 4.5 meters (14.7 feet). These standards are violated in most residential construction today, which is largely informal.

38. The legal requirements and processes of planning in Kenya have been hard to ascertain even by planning professionals. Zoning by-laws are not readily available in printed or electronic form. Maps of existing zoning designations in the major cities are sometimes on display in county offices, but generally not available to the general public and required procedures for development approvals and permits can only be obtained by visits to government offices.[109] This may be a reason that land owners and developers do not comply, since the burden for information gathering is so heavy. Despite the country's strides and aspirations relative to internet communication technology, no county government has a functional website for its planning department that provides such needed information for land owners, local residents, and would-be business investors. Some counties have plans online, primarily to meet statutory requirements for public participation and community feedback.

The Need for Interjurisdictional Cooperation and Metropolitan Planning

39. **Integrated, coherent metropolitan regions are vital to economic expansion.** A potential threat posed by the new devolved system of government is parochialism—counties so focused on spurring economic development locally and serving their own small electorate that they threaten to undermine regional economic potential and competitiveness (for example, fighting over airports and boundaries). Such parochialism could cost economies of scale in service provision. Inward-looking planning could result in fragmented and inefficient land use patterns and uncoordinated infrastructure development. Rather than fighting with each other, counties need to recognize the benefits of a regional approach to development. The sum can be greater than its parts, and counties should be encouraged to work together to support planning for regional economic growth. Accordingly, Vision 2030 acknowledges the centrality of well-functioning cities and metropolitan regions to the country's economic future. It proposes investment in six potential metropolitan regions as a method for spurring economic expansion, facilitating regional equity, conserving land and natural resources, and distributing population growth.

40. **Nairobi's metropolitan growth is central to national development.** The need for interjurisdictional cooperation is most evident in the Nairobi metropolitan area, an urban agglomeration of roughly 5.6 million people spread across four counties and encompassing 11 urban areas formerly categorized as municipalities or towns.[110] According to estimates by JICA for the county's integrated urban development plan, Nairobi City County has an estimated 1,813,000 formal and informal jobs. These jobs are not all held by city residents—an estimated 187,000 persons commute into Nairobi City County every day, and some 41,000 city residents commute to outlying counties. The vast majority of commuting is by public service vehicles (that is, *matatus* and buses) or private cars. But planning for growth and development in the Nairobi metropolitan area is uncoordinated, with potential pitfalls that could arise in other metropolitan regions (see Chapter 4).

International approaches

41. **Internationally, there is a diversity of approaches to interjurisdictional cooperation and metropolitan planning.** Metropolitan bodies occur in many nation-states but most commonly in Western Europe and North America. Localities may have one or more metropolitan bodies,[111] with agencies often differentiated by a range of functional responsibilities (single or multisector entities); process of formation (voluntary associations or mandated bodies); and level of authority (binding or simply advisory powers).[112] Single-sector agencies focus on one area of need or service delivery (transit, ports); they plan for and provide services for a metropolitan region to ensure comprehensive service coverage while achieving economies of scale. Multisector agencies tend to have broad planning functions (such as transport, land use, economic development, or affordable

housing) as well as occasional responsibilities for managing regional facilities (such as conference centers, zoos, or recycling plants). Metropolitan agencies may be mandated by the central government, but more commonly they are voluntary—being formed by the constituent units through some form of legal agreement like a memorandum of understanding or charter. Representatives to such bodies are usually ex-officio members (like mayors) or appointees chosen by the local units, although a few bodies have directly elected legislative councils.[113] Finally, entities vary on whether their plans are binding or simply advisory for their lower units (cities, towns). Councils with binding authority generally review the planning documents of subunits for consistency with metropolitan plans and goals.

Kenyan approaches

42. Kenya's institutional framework expressly facilitates cooperation, including voluntary associations between counties. The Intergovernmental Relations Act of 2012, the most important law on this matter, establishes a framework for "consultation and cooperation" between the national and county governments as well as among county governments (Articles 6 and 189 of the Constitution). In relation to county-county cooperation, this legislation provides for establishment of a Council of County Governors and delineates its functions, including oversight of intercounty agreements on intercounty projects. The act allows either of the two constitutionally identified levels of government (national and county) to transfer or delegate power to another level of government, joint committees, authorities or entities; other decentralized units (that is, another county) and urban areas and cities if certain criteria are met (such as great competency in regional service provision, Section 28 (a-e)). Delegation of authority requires a written agreement that identifies the function or responsibility transferred and the reason for the transfer or delegation. It also requires that standards for measuring performance must be established.

43. **County officials are sensitized to the need for cooperation in service delivery and planning.** They acknowledge the potential benefits of the management of key sectors, particularly transport, water, and health, at the regional level. The leadership of Nairobi realizes that the city bears a high burden relative to infrastructure provision, and in the Eldoret metropolitan region health services were also seen as a potential area for regional cooperation, as patients were known to cross county boundaries in seeking health care. Other potential areas of metropolitan cooperation, like planning for housing, environmental protection, or waste management were not identified as priority items by the county officials consulted.

44. **Some counties are working together under these legal terms.** The most publicized example of county initiated cooperative arrangements is that of Jumuia ya Kaunti za Pwani (Coastal Counties Community). The leaders of these six counties have come together to pursue a shared regional economic development agenda. Institutionally, the partnership is structured through an intercounty agreement built upon shared "Jumuia ya Kaunti za Pwani" legislation passed by each county's assembly and a memorandum of understanding signed with area academic institutions regarding education, training and technical assistance. The counties are pursuing the establishment of a regional bank known as the Pwani (Coast) Development Bank with the Central Bank and the creation of their own tourism development board.[114] Intercounty cooperation is also being investigated by the counties of the Lake Victoria Basin in western Kenya.

45. **Current county-initiated, voluntary cooperation is a sensible approach.** These two cooperative examples match the approach that many analysts consider best practice for regionalism (Savitch and Vogel 2000; Stephens and Wikstrom 2000). Such voluntary, lateral associations—often referred to as a "governance" approach to cooperation—are more flexible and nimble than formally mandated, statutorily created "government" approaches. In governance arrangements, cooperative bodies are created out of existing governmental entities and work together under the terms delineated in agreements. These bodies thus can form and dissolve more fluidly in keeping with needs. Their terms of cooperation can be broadly or narrowly crafted or easily amended in accordance with adopted procedural rules (such as super majorities at annual general meetings). They are also more politically acceptable—they do not add another layer of government or a competing body to which other governments must cede powers or fiscal autonomy.

46. **The national government does not have a statutory role in defining county-county cooperative arrangements.** The current Medium Term Plan II (strategy to implement the Vision 2030), however, calls for the formulation of a metropolitan policy

and the passage of the draft Metropolitan Areas Bill, a bill that was introduced in 2011, building on work by the then Ministry of Nairobi Metropolitan Development. The bill establishes parameters for conferring metropolitan area status and organizing governance. It provides criteria for the establishment of metropolitan areas and defines their purpose. The bill also calls for metropolitan advisory councils with set functions; it assigns powers to the cabinet secretary and proposes several sectoral agencies at the metropolitan level.[115] If reintroduced, this draft legislation would complicate the institutional landscape by injecting significant national government presence into the metropolitan level. The bill's provisions would further exacerbate the existing problem facing devolution, namely a lack of clarity over roles and the split of functions between national and county governments.

47. T**here is an alternative direction. The national government can incentivize the formation of regional entities and the implementation of their agenda through its fiscal powers (awarding grants to regional entities; conditioning financial support on regional plans or approaches).** Given the strong indications that counties are already thinking and acting regionally it appears unnecessary—and unwise—for the national government to mandate cooperative bodies or stipulate how they are formed and for which purposes.

Recommendations

1. Improve counties' planning capacity and provide guidance for spatial planning

Short term	Support the full establishment of urban and rural planning offices at the county level
Urban counties (Uasin Gishu, Nakuru) should be encouraged to establish two planning offices. One office would have a distinct urban focus; the second would be a rural planning unit focused on smaller trading centers. In Nakuru County, for example, there would be one unit with responsibility for Nakuru and Naivasha towns plus one unit for unincorporated areas that would cover the planning of urbanizing places such as Mau Mahiu and Gilgil.	
Medium term	**Strengthen planners' and county executives' capacity in participatory planning through training**
Successful community participation is critical to the future performance of planning. Community members must understand the why of planning; they must have an opportunity to define the plan's vision and help define its goals and actions. Without such opportunities and understanding, it is unlikely there will be community support for implementation. Targeted assistance would be invaluable in training planners and county executives in community participation techniques, developing mobile phone–based interfaces, and supporting civic education materials in local languages.	
Medium term	**Develop model legislation for zoning by-laws and development controls and decision-making and approval processes**
There is a concern among professionals in the land sector, actors in the development community, and advocates for land reform that perhaps devolution might serve to decentralize corruption on land matters. Technical assistance could be provided to provide "model legislation" for by-laws on zoning and development review. On the codes themselves, devolution presents an opportunity for evaluating development standards like parcel sizes and road widths to make them appropriate and affordable. Kenya could investigate and test the adoption of a widespread approach to depoliticizing project approvals, namely citizen planning commissions. These citizen-led commissions, which are distinct from committees comprised of elected officials or committees comprised of technical officers, have been instituted in many political and legal contexts. They are charged with conducting development review in conjunction with professional planning staff and making recommendations to elected officials on land use actions (change of user, special permit approvals). Their deliberations are open to the public through meetings with televised coverage. Final approval of projects by elected officials is also in similarly open, broadcast public meetings. Devolution presents an opportunity to critically evaluate the planning standards in light of actual conditions on the ground. In some places, the volume of traffic has grown so much (central Nairobi; downtown Eldoret) that road and parking standards need to be revised in light of greater automobile ownership; in other places such as in many of the country's informal settlements standards need to be relaxed to accommodate housing development (and redevelopment) that is affordable and attainable by city dwellers. These ideas have informed informal settlement upgrading projects in cities across Kenya—they should be reflected in new planning by-laws drafted and adopted by county governments. The potential of tools such as preferential taxation, infrastructure investment, co-investment through public–private partnerships, and transfer of development rights, to name a few, should be investigated to see if they are legally, fiscally, and politically viable.	
Medium term	**Finalize, adopt, and distribute the National Spatial Plan**
This plan's purpose is to provide guidance for the long-term spatial development of the country. It identifies goals for the national land base that should guide preparation of regional, county, and local spatial plans. The plan thus should be completed, adopted, and disseminated as part of a coordinated program of support for land use planning from the national government.	
Medium term	**Complete development of the National Spatial Data Infrastructure**
The National Spatial Data Infrastructure is a critical tool for planning in the country; technical assistance to the ministry to finalize its development would be extremely beneficial for both national and devolved government units.	

2. Use information and communications technology to instill transparency and predictability into zoning and development approvals

Short term	Put zoning by-laws, maps, and building codes and standards on the Internet
The legal framework for planning and development in Kenya needs to be made transparent. A best practice globally is to place codes and maps on local government websites. Planning departments should have their own websites or distinct sections within county websites identifying chief planners and section heads. Likewise, adopted plans should be available for download. (This latter provision is taking place, particularly in the larger cities.) County and urban-area planning offices should have the ability to provide printed copies of codes and map summaries in Swahili and English for residents who do not have computer access or skills.	
Medium term	**Establish county-specific land information systems**
An accessible land information system that can be queried by planners, would-be investors, and the public will support development control as well as planning. In developing such a system, the county could hide ownership information from the public (assuming it is considered culturally unacceptable or too politically sensitive) but planners need topographical maps and existing land use maps for planning, while the public needs a system for neighborhood surveillance, including verifying that project approvals and permits have been issued. Both sides need a transparent system for knowing the contractors on projects and what they are supposed to be building. The move toward information and communications technology platforms for planning is starting in the country with Nairobi City County's recently launched E-construction permit application system.	

3. Create community understanding about the shared advantages and benefits of urban planning and

development control

Medium term	Develop and implement civic education about planning and development control on private land
Good civic education is critical to planning, particularly as cities continue to sprawl. Citizens need to understand their rights to participate in governance: preparation and dissemination of a citizens' guide on public participation would be very helpful. Community members also need to understand why planning is required and why they need to be engaged in it, including development control. Enhancing community understanding of planning objectives, processes, and legal obligations is an important supportive action. A civic education curriculum that includes information on planning, land tenure and property rights, and the legal obligations of land owners could be adopted, especially as the requirement to address civic education at county level is lagging. It is imperative to address the perceived issue of legal limitations on managing freehold land within urban areas. Both planners and land owners need to be clear that this mandate is a constitutional requirement.	
Medium term	**Support the formation and training of neighborhood associations**
Even in well-resourced cities, the ability of local government to monitor development activity on the ground on a day-to-day basis is limited. Land owners everywhere try to evade regulations and the permit fees and time delays associated with approval processes. A key actor in effective development control is the immediate neighbor or property ownership association. Cities need to place development decisions and parameters of projects online so that neighbors can track what is happening in their neighborhoods and determine whether development actions are adhering to permits. This will work best in higher income and relatively organized and empowered neighborhoods.	

4. Support county-initiated metropolitan area–level planning/interjurisdictional cooperation through model legal language and incentives

Short term	Facilitate interjurisdictional cooperation by county governments
Technical assistance should be provided to the Council of Governors of Kenya to draft county-level enabling legislation that would facilitate formation of regional or metropolitan bodies to address issues such as transport and environmental protection. Legal templates or model contracts could be drafted and disseminated to counties. The formation of metropolitan bodies should be incentivized in national government and donor policy, that is, government and donors should only provide funding in certain sectors if projects are planned and implemented at metropolitan level by a multijurisdictional body. Funds from the national budget for road development, for instance, could be disbursed only if there is a properly prepared metropolitan transport plan created for a coherent geographic or economic unit with adequate technical staff.	

5. Advance the policy and administrative reforms already started in the land sector

Short term	Clarify the policy role of MLHUD
The role and function of the National Land Commission has been the subject of explicit enabling legislation, and the transfer of functions out of the Ministry of Lands into the National Land Commission has been enumerated in the Constitution and the National Land Commission Act. The remaining role for the (now) MLHUD—routinely referred to as a "policy role"—has had scant attention. The MLHUD needs to undertake a strategic planning process through which it determines how to restructure its departments and redeploy its personnel. Plans created at county level could be submitted to it for review and approval to ensure they are consistent with the National Land Policy, the (still draft) National Spatial Plan, and other forthcoming policies (such as the National Urban Development Policy).	
Short term	**Clarify the role of the National Construction Authority relative to building inspection. Support skills development among county staff**
The role of the National Construction Authority in building inspection needs to be clarified. It could support training and technical assistance to county government personnel in permitting processes, inspections, and final approvals.	
Medium term	**Conduct a comprehensive review of land legislation and the National Land Policy of 2009**
Conduct a comprehensive review of land-related legislation to determine overlaps, discrepancies, and gaps and to ensure consistency across all legislation. This will include implementing the National Land Policy.	

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Chapter 6

Planning for County Competitiveness

Key Messages

1. **Urbanization can be an opportunity to put economic growth on a higher path.** Most countries grow richer as they urbanize, and urban areas may already contribute as much as 70 percent of global GDP despite containing only half the world's population. During the next 20 years, Kenya will experience a demographic dividend, with a large number of young entrants to the labor market, many of whom will be moving to cities in search of jobs. This is an opportunity to grow a productive, vibrant private sector.

2. **However, devolution may slow the country's growth engines—its cities.** Facing resource shortages, economic growth and competitiveness are low on counties' priorities. Urban counties in particular are grappling with fewer resources for development yet are faced with higher wage and service-delivery burdens. Even with differing priorities, counties are having a difficult time finding adequate resources.

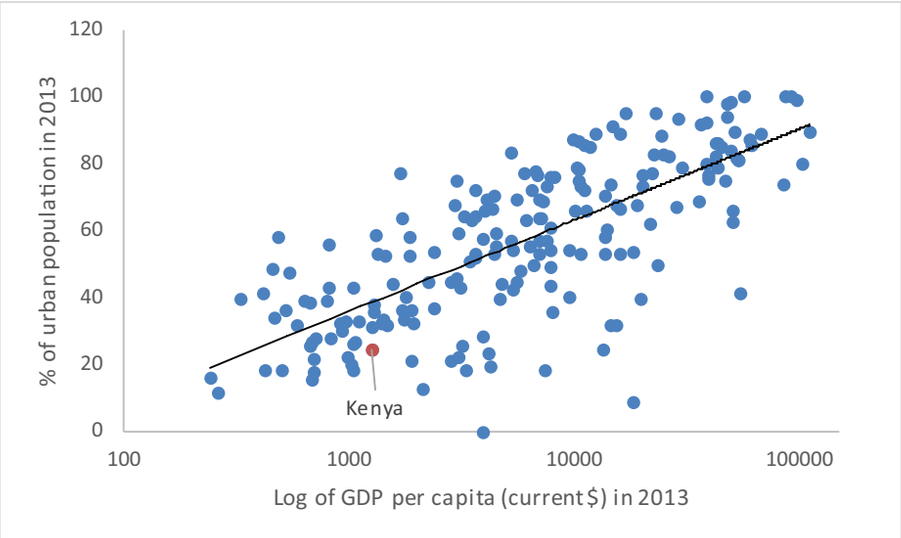
3. **Kenyan counties need to prioritize issues of economic growth and job creation.** Setting priorities will be doubly important, because urban areas without a growing and productive private sector will face youth unemployment. Thus counties must also focus on economic development, while central government provides greater support on the devolution front.

4. **County integrated development plans (CIDPs) could become a potent tool once properly developed.** All counties are required to develop CIDPs, intended to combine economic, spatial, and sectoral plans and inform county budgets for five years. CIDPs offer an opportunity for counties to organize their economic development efforts, but given the general lack of supporting analysis in many CIDPs—making them resemble wish lists—counties need to make these plans more realistic for their budgets.

Introduction

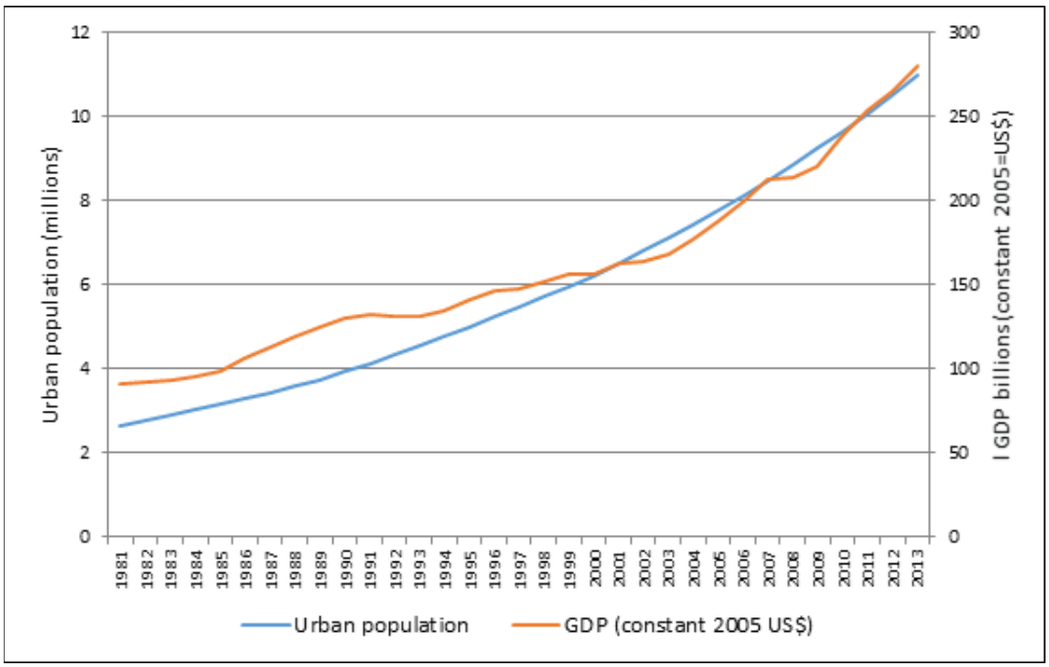
5. **Urbanization can propel economic growth.** No country has ever reached middle-income status without a significant population shift into cities, and most countries grow richer as they urbanize (Figure 6.1). Various estimates claim that urban areas already contribute as much as 70 percent of global GDP, with only half the world's population. In Kenya, national economic growth and expansion of the urban population have been closely linked over the last few decades (Figure 6.2 and Figure 6.3). Evidence also suggests that Kenya's urban areas provide economic opportunity with higher economic densities (the number of jobs and economic activity per unit of area) in urbanized counties than in rural ones. In the next 20 years, Kenya will experience a demographic dividend, with a large number of young entrants to the labor market, many of whom will be moving to cities in search of jobs. This is an opportunity to grow a productive, vibrant private sector.

Figure 6.1: Most countries grow richer as they urbanize



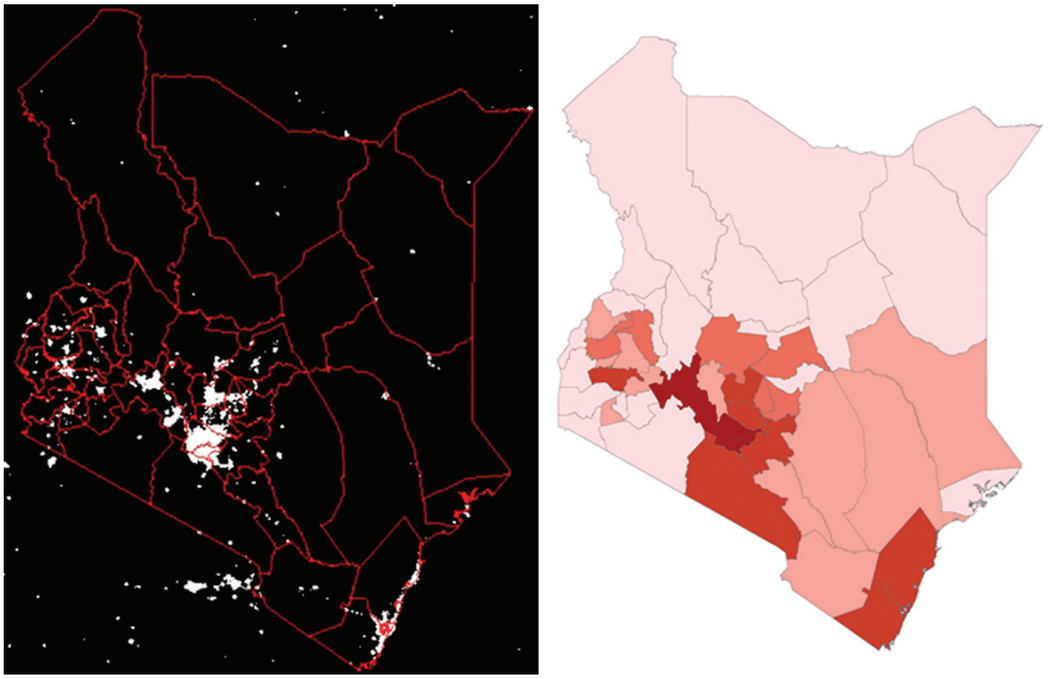
Source: World Development Indicators.

Figure 6.2: GDP growth and urbanization in Kenya seem to go hand in hand



Source: World Development Indicators.

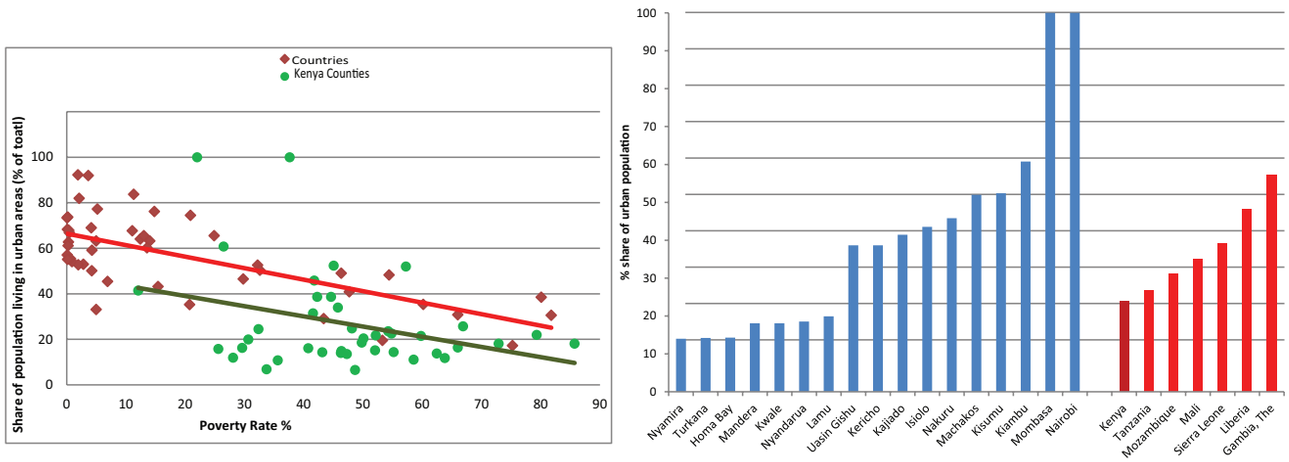
Figure 6.3: Economic density (left) tends to be higher where county population is higher (right)



Source: Kenya National Bureau of Statistics (2009).

6. **The ability of counties to exploit urbanization to drive employment and growth will be the cornerstone of Kenya's economic development.** Increasing urbanization is associated with falling levels of poverty, and this trend for counties in Kenya is similar in direction, if not magnitude, to countries worldwide (Figure 6.4, left panel). Kenyan urbanization levels are still low, yet more urbanized counties appear to be more prosperous (Figure 6.4, right panel), pointing to scope for further gains from urban growth.

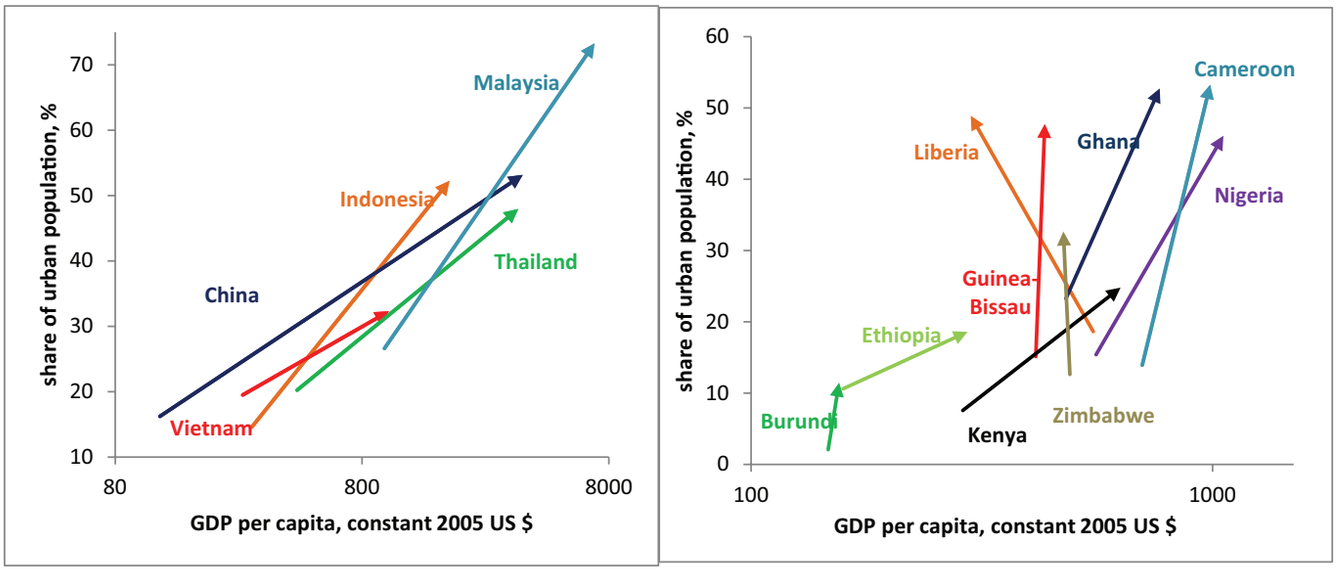
Figure 6.4: More urbanized countries and Kenyan counties are more prosperous



Source: World Development Indicators (poverty rate 2$/day, 2010), Kenya poverty rate (national definition).

7. Urbanization does not of course guarantee prosperity. Some countries (such as those in East Asia) have reaped the benefits of urbanization. Unfortunately, most cities are also locations for poverty and unemployment. The urban share of poverty in the developing world has jumped from 17 percent to 28 percent in the past 10 years (IFAD 2011 Rural Poverty Report). Not all cities are harnessing fully their economic potential, because firms and industries are not as competitive (that is, as productive) as they could be. In Kenya and other countries in Sub-Saharan Africa, faster urbanization is not always associated with economic prosperity, after control for population growth (Figure 6.5). Furthermore, the challenges associated with the devolution transition may adversely affect the growth engines of the Kenyan economy—its cities. Recent anecdotal evidence suggests that some of the potential pitfalls of Kenyan decentralization that were identified early in the process (World Bank 2012) have become reality. As counties face resource shortages, they place economic growth and competitiveness low on their priority lists.

Figure 6.5: Urbanization and economic prosperity (per capita) do not always go hand in hand



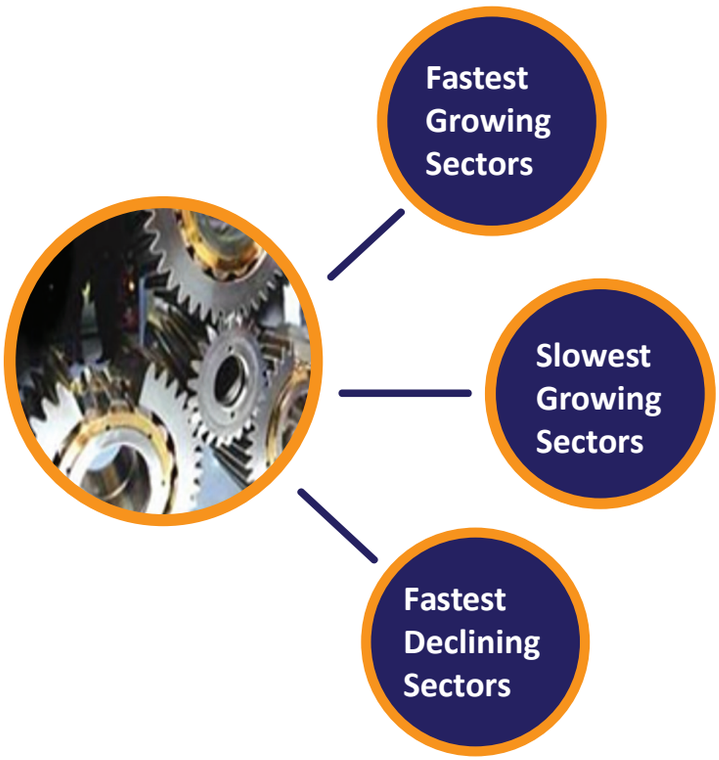
Economic Landscape of Counties

8. The economic landscape in Kenya is diverse and dynamic. The Kenya Economic Survey (2014) illustrates the changing fortunes of industries over the previous five years, with some growing at average annual rates of 10 percent to 20 percent (Figure 6.6). Two of the five fastest-growing

sectors are in higher value-added industries. The Kenya Census of Industrial Production (CIP 2010) also recorded the year firms were established, allowing us to distinguish between firms founded before 2004 ("existing firms") from those founded after 2004 ("emerging firms"). Analysis of these two groups reveals that sectors such as apparel, agro-business, food processing, and plastics tend to dominate among emerging firms. Emerging firms are, on average, half as large as existing firms and one-fourth as productive, but their performance on capital investment and capacity utilization is similar to that of their larger counterparts.

9. Nairobi dominates the economic landscape. Alone it commands a 50 percent average share in construction activities across the country and about 42 percent of all manufacturing activities (Figure 6.7). In the CIP, Nairobi accounts for almost half the firms in the sample; with the exception of Mombasa, most other counties in the list are physically close to the capital. While the share of exports of Nairobi City County firms' total sales averages a mere 10 percent, in 2010 Nairobi led, by an overwhelming margin, total exports from surveyed firms to the tune of roughly

Figure 6.6: Kenyan industry is dynamic.



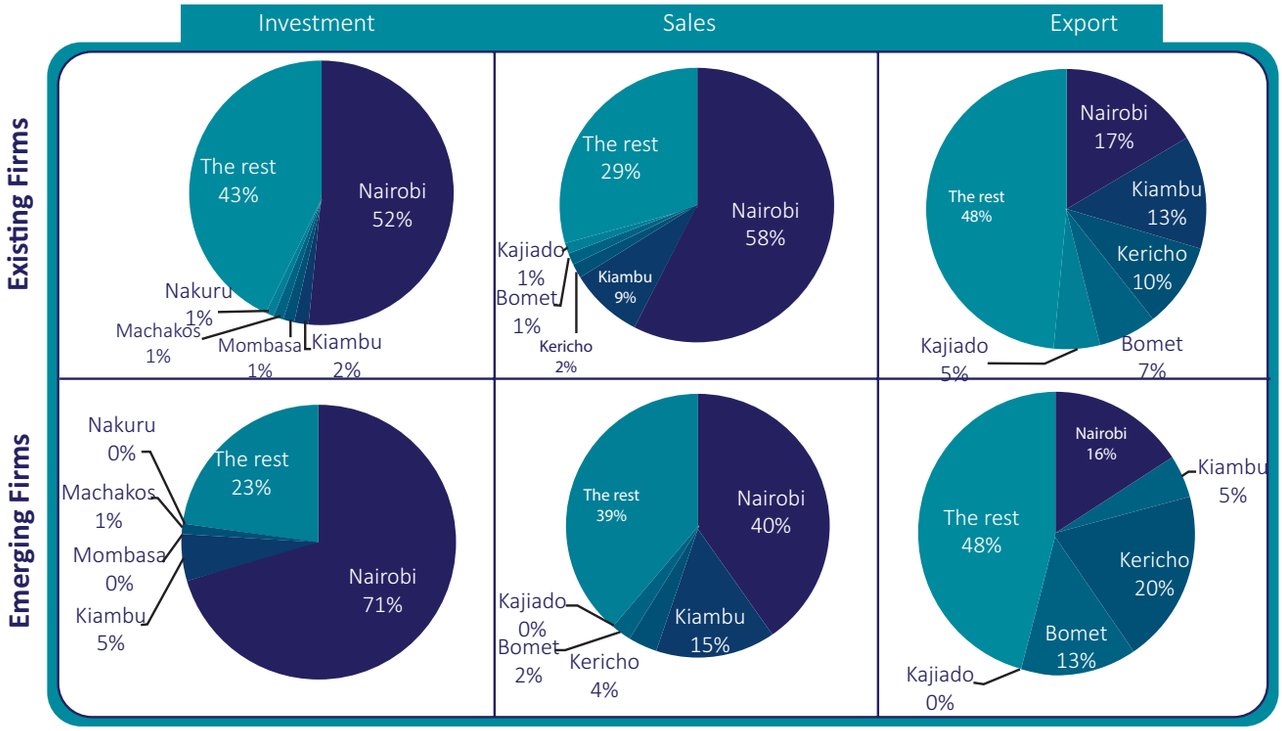
Dairy products (19%)
Pharmaceutical products (16%)
Fabricated metal products (13%)
Basic metals (10%)
Leather products (8%)

Grain mill products (6%)
Prepared and preserved fruit (5%)
Animal feed (5%)
Plastic products (4%)
Chemical products (4%)

Wood products (-0%)
Wearing apparel (-3%)
Processing and preserving of fish (-5%)
Machinery and equipment (-5%)
Refined petroleum products (-10%)

Source: Kenya National Bureau of Statistics (2014), Chapter 11

Figure 6.7: Changing dynamism across counties



Note: "Emerging firms" were established post-2004, and "existing firms" were established pre-2004.
Source: Kenya National Bureau of Statistics (2010).

KSh 56.8 billion (Kiambu County was a far second, with KSh 17.5 billion in exports).

10. Some counties are gaining in competitiveness. Emerging firms tend to account for a large proportion of jobs in counties like Machakos, Kiambu, and Kisumu—suggesting increasing job creation from the new generation of companies. On the other hand, existing firms in Mombasa, Nakuru, and Nairobi continue to account for the largest share of jobs. In some cases (such as investment) there is strong path dependence in outcomes, while in others (such as sales and exports) emerging firms in counties other than Nairobi are beginning to increase their contribution (see Figure 6.7). Many counties gaining in competitiveness are close to the capital.

Competition vs Collaboration under Devolution

11. Devolution in Kenya aims to equalize economic development across the country, pulling up lagging regions and counties. Research in Ethiopia (Chaurey and Mukim 2015) suggests that decentralization has the potential to narrow spatial inequalities. But unbalanced devolution may lead to divergence rather than convergence. Recent work in China (Zhu and Mukim 2015) demonstrates that increasing powers of subnational governments without commensurate increases in capacity can lead to adverse and unanticipated economic outcomes. Recent experience with implementation of devolution in Kenya shows that pitfalls can be plentiful and quick wins scarce. For example, transfer of functions to decentralized units has been held back by lack of clarity on the distribution of functions, difficulty of finding staff with technical skills, funding gaps, and tension between county and national government staff. Attempts to build the capacity of county governments have stumbled over issues such as rigidity and resistance to change, bloated wage bills and wide gaps in pay, lack of clarity on reporting and promotion, and poor and undersupplied offices (Commission for the Implementation of the Constitution 2014).

12. **In the transition to devolution, the economic growth agenda has been peripheral to the debate.** The potential for private sector–led growth and job creation has been hit twice. First, by lack of targeted initiatives and support at a local level; second, by increased fiscal burdens imposed by counties to overcome budget constraints. A significant source of worry is that within the fiscal constraints of the transition period counties might lose focus on issues that will affect growth and competitiveness in the medium

to the long term, which is especially disquieting as Kenya has a large youth bulge entering the labor market in the next 20 years. Many of these young people will be moving to cities in search of jobs, and urban regions will lack jobs without a growing and productive private sector.

13. **Allowing counties to develop their own growth strategies may enhance competition between them.** Intercounty competition could have positive outcomes if counties are competing to provide greater enabling conditions and rivalry becomes a driver of improvements in the business environment. For instance, Machakos County has collaborated with Makueni and Meru counties in investment promotion campaigns and supply chain development. But competition can also lead to negative effects in a race to the bottom when counties compete in offering tax cuts and other discounts to businesses rather than investing in overall business environment improvements. This results in net losses for public sector funding. Competition between states in the United States for attracting large employers has led to very large tax discounts to incoming investors who gain vast bargaining power by threatening to relocate (Table 6.1). A similar scenario in Kenya is unlikely as counties do not control taxation, but could unfold if counties start attracting investors by offering land at discounted rates.

14. **Negative competition can also lead to failure to capture the benefits of scale.** When neighboring jurisdictions duplicate similar initiatives, infrastructure investments, or development of the same supply chain, inefficient use of resources results. Examples can be found in Kenya itself, where the greatest investments needed are in primary health facilities,[116] but several counties are seeking to upgrade their health facilities to referral (secondary or tertiary) status instead of using existing referral facilities in neighboring counties.

Table 6.1: Tax discounts as a result of competition between U.S. states

RANK	COMPANY	SUBSIDY VALUE	STATE
1	Boeing(2013)	$8,700,000,000	WA
2	Alcoa(2007)	$5,600,000,000	NY
3	Boeing (2003)	$3,244,000,000	WA
4	Sempra Energy (2013)	$2,194,868,648	LA
5	Nike (2012)	$2,021,000,000	OR
6 tie	Intel (2004)	$2,000,000,000	NM

Source: Badger (2014).

The CIDPs

15. **Counties could improve their CIDPs to prioritize growth despite scarce resources and more immediate concerns.** Improvements in the current model will be needed, but CIDPs offer an opportunity for counties to organize their economic development efforts. As a part of devolution, all counties were required to develop a CIDP. The plans were meant to combine economic, spatial, and sectoral plans and inform county budgets over a five-year horizon. CIDPs were also expected to define priorities and provide lists of flagship investment projects for the county—but this largely has not been the case. But although it was imposed from above, the planning process has produced benefits: the exercise pushed counties to take a longer-term view of their development and in some cases led to the initiation of detailed county diagnostics. It offered counties the opportunity to target growth and job creation strategically. Such positive experiences could be more widespread across Kenya.

16. **But the conditions and incentives put in place by the devolution process has created problems.** Counties were pushed to submit the CIDPs within six months of their establishment. This required creating a new governance structure, hiring staff with the relevant skills, researching the state of the freshly defined administrative units with very little data, and coming up with coherent strategies with detailed implementation and funding guidelines—all too much to ask of new units. CIDPs were meant to inform central government grant allocations, and indeed counties cannot raise funds for projects not in CIDPs. But this incentivized counties to come up with lengthy lists of priority projects and to exaggerate their funding needs, leading to unrealistic plans. Furthermore, three different sets of guidelines for developing CIDPs were circulated by different national

government entities, which was confusing. Counties lacked capacity to develop the CIDPs, and little technical assistance was provided to them by the national government. CIDPs were not positioned as exercises in strategic vision and economic development planning. Nor is the legal status of CIDPs certain, and it is unclear whether counties can be held accountable for not implementing their plans.

17. Most of the CIDPs produced did not promise a structured push for growth and competitiveness. CIDPs for Nairobi, Mombasa, Nakuru, and Machakos counties were analyzed in detail by the research team. The content was compared with a checklist of characteristics of well-designed city strategies developed through extensive review of local economic development literature. This review found that success factors for strategies include a favorable institutional environment, clear leadership, and an inclusive strategy development process; a strong analytical foundation and clear links between evidence and priority interventions; an ambitious vision formulated through clear measurable targets; a focus on economic outcomes; and clarity on the sources of funding for the strategy. The analysis revealed that Kenyan counties struggled to avoid the pitfalls into which city strategies often fall (Sivaev 2015).[117] The four CIDPs were mainly descriptive, not analytical, and often lacked detail. Data were poor. The links between priority projects and analysis were not always clear. Some CIDPs had a weak focus on economic growth and job creation, particularly beyond the agricultural sector.

18. Interventions were not prioritized, nor were implementation strategies considered carefully. The CIDPs of these four counties lacked focus. Priority projects numbered in the hundreds, suggesting weak prioritization and dubious future implementation. Most CIDPs lacked targets and thorough monitoring and evaluation frameworks. The focus on implementation appeared insufficient, possibly owing to lack of resources, tight timelines, lack of capacity, and lack of support from the national government. The priority projects defined in most CIDPs were not linked to the budgeting process and in most cases did not present secure funding to back them. CIDPs thus appeared somewhat like wish lists rather than strategic plans to be used for implementation.

19. Anecdotal evidence suggests that the links between county sectoral plans, CIDPs, and annual plans are not well established in many counties. This points to complexities of the system and lack of capacity. Specific attention needs to be given to issues such as informality, which was not well covered in the CIDPs, and county capacity, which was covered in only some programs.

20. The reviewed CIDPs failed to present a clear picture of the extent of private sector participation. International experience suggests that successful implementation of an local economic development strategy relies on close engagement with the private sector throughout the design and the implementation phase. Even though the guidelines required counties to partner with local businesses in developing the CIDP, such collaboration was limited to consultations—sometimes due to weakness of local business communities, other times due to resource and time constraints of local governments. In addition, moves to address informality were not well reflected in these plans, though such activity permeates much of the private sector.

Recommendations

1. Build on and strengthen the CIDP process

Short term	Issue one unified set of guidelines for CIDPs, aligned to international best practice (national government)
The government should revisit the CIDP process and offer one set of guidelines, clarifying how CIDPs are factored into the process of grant allocation and aligning the incentives that counties are given when developing CIDPs with best practices for local economic development strategies. The guidelines should strictly require clear prioritization and clarity on funding strategies within the CIDPs. More scrutiny in costing exercises, and in monitoring and evaluation arrangements, is required. The government should also adjust incentives so that counties focus on implementable plans (require that at least 50 percent of priority projects have secured income streams or detailed fundraising plans, tighter requirements on costing of the prioritized initiatives, and so on).	

Short term	Emphasize that substantial attention to be paid to issues of economic development (national government)
The national guidelines should encourage CIDPs to pay substantial attention to issues of economic development. CIDPs by their nature are not limited to economic development and target a much broader array of issues, but it is important that, despite limitations, counties maintain focus on issues of economic growth and job creation. Given the changing demographic profile in Kenya, the analysis of economic growth opportunities should be given high priority, and the results of different analytical strands should be reconciled to identify a list of priority intervention areas, including cross-cutting initiatives and targeted development strategies that are fundamental for local development. These should aim to support specific aspects of the county development vision (grow certain industrial sectors, target some social issues, and so on).	

Medium term	Strengthen local government capacity-building through reviewing the strength of economic development teams and assisting them in building analytical capacity (national government)
The national government should engage more proactively in building county capacity to develop strong CIDPs. It can invest in collecting data across a wider range of economic indicators at sector and county level to inform better policy decisions. It can also facilitate creation of coalitions and knowledge-sharing networks of county governments.	

Medium term	Use the required annual update of CIDPs to strengthen current plans (county government)
CIDPs are subject to review on a yearly basis, so there will be opportunities to revisit the strategies and improve upon them. Given scarce resources, counties should focus on revising their CIDPs to be more targeted, realistic, and implementable. The CIDPs should put more emphasis on targeting economic growth and job creation opportunities; strengthen the analytical aspect of strategies; make sure that analysis follows the full cycle and that results are reflected in the prioritization framework for policy selection; limit the number of flagship initiatives; have detailed funding and implementation strategies for them; strengthen the link between priority initiatives and the budgeting process; and seek ways to engage the private sector more throughout the process. Priority interventions should be those with the highest payoff for jobs and growth, or highest urgency. The counties should also introduce regular revision of strategic priorities of economic development, based on a regular monitoring and evaluation framework.	

Short term	Develop a clear prioritization framework (county government)
The design and the practicality of CIDPs would be vastly improved if they used a clear prioritization framework. This should combine the developmental vision and aspirations of the county, analyze the key constraints associated with achieving the vision, and formulate ways to address the barriers. One possible approach is sector prioritization. This is not the only way to make CIDPs more focused and actionable, and this report does not recommend that all counties should adopt this approach in particular. But it offers a clear and structured way of addressing economic development challenges systematically within a strategic planning process.[118]	
Medium term	**Proactively engage with the private sector (county government)**
The counties should seek ways to engage the private sector more throughout the process to define the right level of private sector engagement. International experience suggests that successful implementation of a local enterprise development strategy relies on close engagement with the sector, throughout the design and the implementation phase. This engagement allows private actors to communicate key constraints to growth to the county governments, and to strengthen their voice in decision-making. Early engagement allows key private players to share the ownership of the strategy and responsibility for implementation.	

2. Address the immediate Issue of informality

Short term	Initiate discussion on the ways to support and upgrade informal enterprises at county level (national and county governments)

CIDPs do not explicitly discuss issues related to informal firms and employment. Since considerable data and analysis are usually based on surveys of formal businesses, it is unsurprising that counties have been unable to understand and target better the needs of their informal enterprises. But given the importance of the informal economy, especially to job creation, local governments should pay more attention to the constraints faced by informal firms and help target these firms' upgrading.

Creating employment opportunities in both the formal and informal sector will maximize the benefits of urbanization. Governments need to attract private enterprises that provide wage employment, but also need to focus on improving productivity in the traditional and informal sectors, as these will continue to absorb a majority of less-skilled labor market entrants. A balanced approach would help ensure that more Kenyans are connected to economic prosperity. Kenya can learn from approaches adopted elsewhere.

3. Take steps to avoid negative competition across counties

Medium term	Encourage further collaboration between counties to avoid negative competition (national and county government)

Some counties have already taken the initiative to develop cross-boundary collaboration that is essential for maximizing the scale benefits of interventions. This cross-boundary collaboration should be encouraged further either at national or county level.

At national level, nationwide coordination bodies can be an efficient way of avoiding a race to the bottom. A good example of such collaboration is the Scottish Cities Alliance in the United Kingdom—a body that coordinates economic development priorities of Scottish cities through recognizing their competitive advantages and helping them share assets to maximize growth potential. In fact, such collaborations in the United Kingdom have also been private sector–led (for example, local enterprise partnerships), shaped through negotiation between local authorities and business communities to reflect the natural economic geographies that cross administrative boundaries.

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Chapter 7

Financing Urban Services:

Challenges and Imperatives

Key Messages

1. **Urban financing is central to the success of Kenya's devolution, especially for the larger counties with major cities and fast-growing medium-sized towns—the country's growth hubs.** Adequate financing of urban services and infrastructure investment is essential to sustain growth and deliver living standards commensurate with Kenya's lower middle-income status. Without proper financing, there is a risk that urban services will be underfunded, leading to service delivery deterioration in the short term and deterioration of the asset base over time.

2. **Financing of livable, well-functioning cities is increasingly recognized as paramount for economic growth.** But Kenya's devolution framework lacks clarity on how urban areas will be managed and raises the risk that urban services will not be adequately financed. The framework for urban management needs to be clarified by developing a process for counties to formally delegate their functions and revenue sources to urban boards, and creating incentives for counties to adequately empower boards to perform their functions.

3. Recurrent financing of service delivery and maintenance of assets is a fiscal challenge in predominantly urban counties. The spatial redistribution of resources under the equitable share formula shifted resources away from heavily urban counties virtually overnight. They now have urban revenue deficits due to their large inherited costs. Urban counties' narrow own-source revenue bases mean that their scope to increase resources by mobilizing revenue is limited. Measures to increase county revenues and manage costs are urgently required. The former could include modernizing the legal and administrative framework for property tax rates, assigning additional tax bases to counties, or allowing counties to piggyback on national tax bases with counties.

4. The combination of low fiscal surpluses and fiscal conservatism in the emerging county borrowing framework could also lead to an urban investment deficit. The budgets of these counties can barely cover significant inherited recurrent expenditures and liabilities, and so infrastructure investment is not a priority for them. Yet predominantly urban counties have the largest infrastructure needs.

5. Other financing alternatives need to be explored and weighed for their impact on fiscal risk and their contribution to growth and social welfare. These include national government provision of conditional capital grants and on-lending from donors, borrowing by county corporations such as water service providers, and innovative municipal revenue sources such as betterment levies and development fees.

Introduction

6. Access to basic services is critical for livable cities and economic growth, and investment in urban infrastructure and services will be absolutely fundamental to national growth prospects and social outcomes. Urban infrastructure and services—primarily transport, water supply and sanitation, electricity and solid waste management—are the key to successful cities that attract and retain satisfied and productive residents. In Kenya, each US$1 spent on water and sanitation infrastructure can generate US$8 in saved time, increased productivity, and reduced health costs. Inadequate sanitation infrastructure costs the country roughly US$324 million annually—around 1.0 percent of GDP.[119] In many African countries, governments could save 12 percent of public health spending and drastically cut child deaths by achieving Millennium Development Goals targets on water and sanitation. Universal access to improved sanitation could reduce diarrhea-related morbidity by more than a third. Bulk supply and trunk infrastructure can meet the requirements of the poor as well as support urban economic growth.

7. Under devolution, urban functions are constitutionally assigned to county governments. The Urban Areas and Cities Act allows for the establishment of urban boards, but only county governments can empower urban boards to carry out these functions on the county government's behalf (see Chapter 1 for a description of urban governance arrangements). Nor are urban boards entitled to any revenue sources independent of the county government. Urban boards and committees would therefore depend on county governments both for function assignments and the funding to carry them out.

8. The mechanisms for empowering and resourcing urban boards are unclear and may undermine accountability for service delivery. The Urban Areas and Cities Act refers to counties delegating functions to urban boards but provides no clear procedure for doing so. Failing to specify who should delegate the functions or how it should be done raises the risk of urban functions "falling between the cracks" with neither county nor urban board taking responsibility for them. One interpretation of the law is that any formal delegation of powers to a body outside the county executive should be approved by the county assembly. Another possible model is that, since it is the executive that exercises these powers in practice, the county executive committee should be able to delegate them.

9. How these functions will be financed is also unclear. The Public Finance Management Act[120] suggests some approaches to the financing of urban areas.[121] Counties are encouraged to seek the advice of the Commission on Revenue Allocation[122] in developing an approach to financing urban areas. But counties are not obliged to follow this guidance. The Constitution makes clear that the equitable share is unconditional—national government cannot tell counties how much to spend on urban functions. As and when boards are established, it seems most likely that they will be financed by transfers (grants from the county to the urban body) rather than by assignment of revenue sources. It seems unlikely that county governments will choose to give away their own revenue sources to urban bodies, thus leaving the county government itself almost entirely dependent on transfers from national government.

10. For the immediate future, financing of urban functions likely will depend on decisions taken by county executives. Aside from the currently limited application of the Urban Areas and Cities Act described in Chapter 1,[123] the formation of urban boards is left up to county executives, and so far no county has established and empowered an urban board with powers and resources to manage an urban area independently. This urban governance deficit risks creating a corresponding urban revenue deficit. For now urban functions are being treated as a department of the county government, financed from the county budget in the same way as other services. Financing of urban infrastructure and service delivery will depend on decisions taken as part of a county budgeting process, in which the priorities of urban areas will be traded off against the wishes of rural residents, who may feel that towns have been unduly privileged in the past.

11. A widespread perception that urban areas have benefited in the past at the expense of rural areas may heighten the risk of an urban revenue deficit. Lack of transparency as to the cost of urban services may contribute to this problem. Although the laws implementing devolution mandated a costing of county functions (see Chapter 1 on Kenya's ambitious devolution), this has not been done. Just prior to devolution, the National Treasury attempted to estimate how much had been allocated to devolved functions in the past, based on national budget allocations to devolved functions across counties in the 2012/13 fiscal year. It did not fully calculate the cost of urban services, which were only partly funded from the national budget through transfers to local authorities. The urban costs that had been met from local authorities' own revenues were not included in the estimates. For the larger urban centers like Nairobi, Mombasa, and Kisumu, costs funded from their own revenues were substantial. Analysis from the United States suggests that the unit costs of delivering urban services rise as city size and density increases (Ladd 1992). While there is no data on this relationship for Kenya, this makes intuitive sense, as connective infrastructure such as roads, public transport, sewerage, and water become far more expensive in areas of higher population density. Kenya's urban areas also experience the demands of providing services and infrastructure to informal settlements.

12. Recurrent financing of service delivery and maintenance of assets raises very different issues from financing for capital investment. The first part of the chapter considers the sources of county recurrent revenues in the form of transfers and own-source revenues. The analysis concludes that urban areas are vulnerable to an urban revenue deficit arising from the radical redistribution of resources under the equitable share formula, which is biased in favor of geographically large counties with smaller, more dispersed populations. There are signs that urban counties have not addressed the need for fiscal adjustment, meaning the problem may get worse before it gets better. Solutions include making the fiscal needs of urban infrastructure more tangible, ring-fencing funding, and providing incentives for county governments to give urban service delivery a higher priority. Urban counties need to begin the difficult process of fiscal adjustment, but the tools available to them are few.

Counties have little scope to reduce their largest expense—the wage bill—and scant opportunity to increase revenues, because county revenue bases are narrow.

13. Issues of financing county infrastructure investment are considered in the second part of the chapter. Recurrent revenues are unlikely to be adequate to finance the connective and social infrastructure expansion required to support the coming influx of residents to Kenya's urban areas, but it is not clear where the capital to finance this expansion will come from. Because of the constitutional requirement for national government to guarantee county borrowing, the immediate focus is on regulating county borrowing to safeguard against threats to national macroeconomic stability. The perilous fiscal situation of most urban counties also means they are unlikely to be able to borrow in the short term because they have no fiscal surpluses with which to service debt, and are already compromised by high levels of inherited debt. This may be leading some counties to look for creative alternatives in the form of public–private partnerships, which come with their own risks. Given the infrastructure backlogs in urban areas, simply putting off the question of financing for capital development is not an option. Ultimately, a means must be found to finance the significant backlogs in economic and social infrastructure in Kenya's cities. In the short term, donors working through national government might provide a stop-gap.

Brief Overview of County Governments' Financing

14. The urban population is concentrated in a relatively small number of counties containing the largest cities. Nairobi City County accounts for 25 percent of the urban population with more than 3 million residents, and five counties (Nairobi, Kiambu, Mombasa, Nakuru, and Machakos) account for 51 percent of urban residents (roughly 6.4 million people) (Figure 7.1). In percentage terms, five counties have majority urban populations (Mombasa, Nairobi, Kiambu, Kisumu, and Machakos), and 13 counties have urban populations of at least 25 percent or more. Overall, urban residents account for around 27 percent of the population.

15. In their first full year of operation (2013/14), counties budgeted for around US$3.0 billion of expenditure and actually spent 65 percent of that amount, or around US$1.9 billion. There was particularly poor execution of the development budget, which was only 36 percent implemented. The average county government spent around US$41 million in 2013/14, with the largest county (Nairobi) spending US$203 million and the smallest county (Lamu) spending US$8 million (Table 7.1).

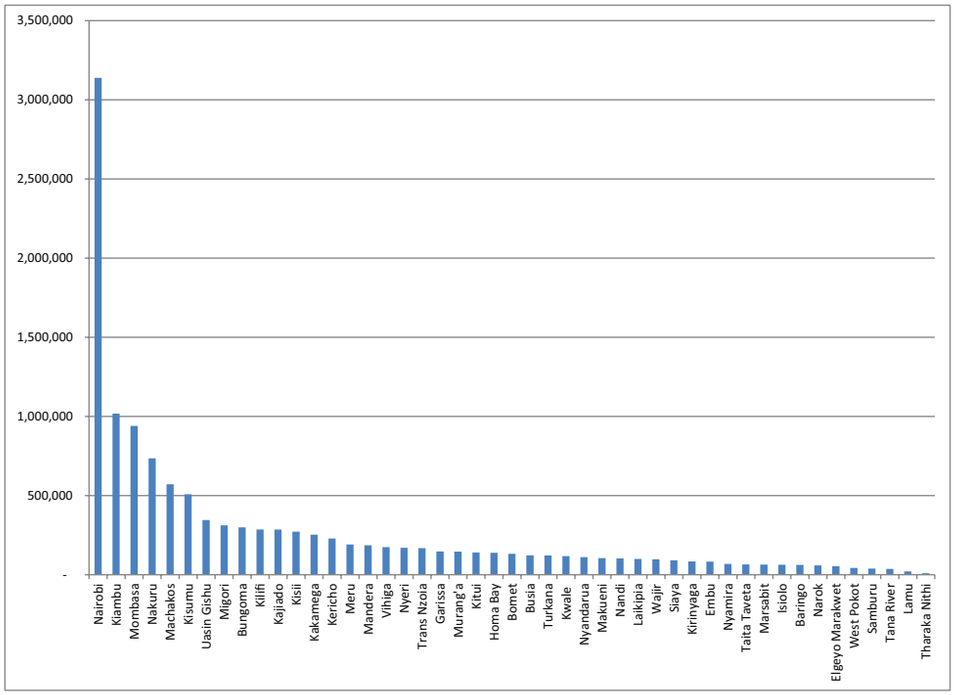
16. Counties spent the largest share of their budgets on wages and salaries in 2013/14 at 46 percent, followed by operations and maintenance (31 percent) and development (22 percent). The largest county (Nairobi) had large inherited service delivery costs and consequently spent above average on personnel emoluments (58 percent) and below average on development (11 percent). County wage bills averaged US$19 million in 2013/14, ranging from US$4 million in Lamu to US$117 million in Nairobi (Table 7.2).

County Revenues under Devolution

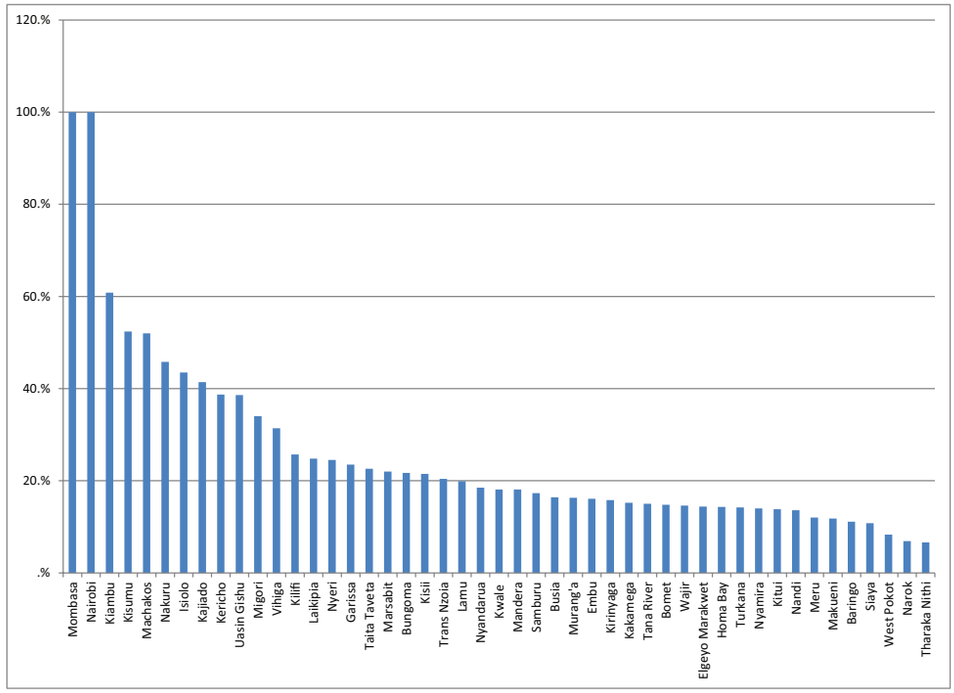
17. County governments are financed by three sources of revenue: a large unconditional equitable share transfer, a number of very small conditional grants, and own-source revenues collected locally. The most important single source of financing for county governments is the unconditional equitable share, which provided 88 percent of county revenue in 2013/14. An estimated 87 percent of county revenues came from national transfers and 13 percent from own-source revenues in 2014/15 (Table 7.3). Kenya's constitution prescribes a revenue-sharing process in which revenues collected nationally are divided annually between the county and national levels of government. The county equitable share must be at least 15 percent of national revenue, based on the last audited accounts that have been accepted by Parliament. Usually the base year is at least two years prior to the year to which the calculation applies. In practice, equitable share allocations have far exceeded the 15 percent constitutional minimum. In 2013/14 the equitable share was equivalent to 31 percent of audited base-year revenues, 43 percent in 2014/15, and 33 percent in 2015/16. The equitable share is allocated horizontally among the 47 counties by the equitable share formula.

Figure 7.1: Urban population distribution in Kenya

Urban population, absolute numbers



Urban population, %



Source: Kenya National Bureau of Statistics population census (2009).

Table 7.1: Size of county budgets and actual expenditures in 2013/14—average, largest, and smallest (US million)

	Average County			Nairobi City County			Lamu County		
	Budget	Actual	Execution %	Budget	Actual	Execution %	Budget	Actual	Execution %
Recurrent	39.0	32.2	83	200.6	181.3	90	12.5	6.9	55
Development	24.4	8.9	36	86.6	21.7	25	5.7	1.4	24
	63.3	41.1	65	287.3	202.9	71	18.2	8.3	46

Source: Kenya Office of the Controller of Budget.

Table 7.2: County spending in 2013/14 by economic classification—average, largest, and smallest

	Average County		Nairobi City County		Lamu County	
	US$ Million	%	US$ Million	%	US$ Million	%
Debt repayment and pending bills	0.9	2.2	30.8	15.2	-	0.0
Operations and maintenance	12.5	30.5	33.1	16.3	2.6	30.9
Development	8.9	21.6	21.7	10.7	1.4	16.4
Personnel emoluments	18.8	45.7	117.4	57.9	4.4	52.7
Total	41.1	100.0	202.9	100.0	8.3	100.0

Source: Kenya Office of the Controller of Budget.

Table 7.3: Counties are heavily reliant on transfers from national government to finance services

Fiscal year	Equitable share (KSh billion)	Conditional transfers (KSh billion)	Total county transfers (KSh billion)	Equitable share as % of audited revenues (base year in brackets)	Own-source revenue (KSh billion)	Transfers as % of total county revenues
2013/14	190.0	3.4	193.4	31 (2010/11)	26.3	88
2014/15	226.7	3.3	230.0	43 (2009/10)	33.6	87
2015/16	258.0	17.9	283.7	33 (2012/13)	n/a	n/a

** Division of Revenue Acts for respective years.*

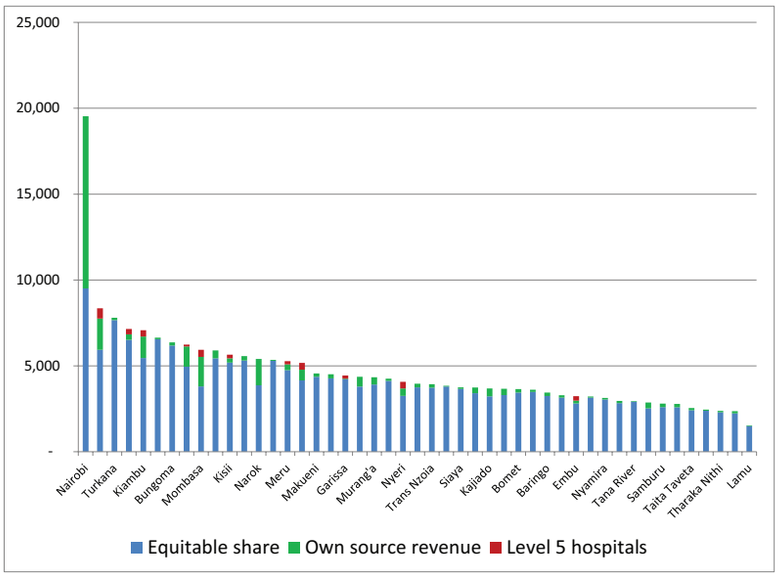
*** Conditional transfers shown were actually paid to county governments and managed by them, as allocated under the County Allocation of Revenue Act. The County Allocation of Revenue Act also included donor-financed conditional transfers that were managed by national government, which are not included.*

**** Own-source revenues are from Controller of Budget Annual County Budget Implementation Review Reports for 2013/14 and Q3 2014/15 (pro rata projection). A report for 2015/16 has not yet been released and no alternative source of data is available. Source: World Bank staff analysis.*

The equitable share formula

18. **The equitable share formula is highly redistributive. (See Chapter 1 on Kenya's ambitious devolution for details of the formula).** On a per capita basis the formula delivers considerably more to the counties considered marginalized before devolution. This results from the relatively high weight given to equal shares and land area: the formula favors counties with relatively smaller, poorer populations that have a large land area. By contrast, predominantly urban counties—with relatively wealthier and more densely concentrated populations—fare less well under the formula in per capita terms. As a result, some counties have four times as much funding as others in per capita terms: the resources available to counties from both transfers and own revenues varies from less than KSh 4,000 (US$46) per capita in Meru to more than KSh 16,000 (US$182) in Isiolo (Figure 7.2). This variation is not extreme by international standards (the richest state in Nigeria, Bayelsa, receives more than 10 times per capita than the poorest, Kano). Nor is it inappropriate; the equitable share transfer addresses both recurrent and capital service delivery needs, and the counties in on Kenya's periphery face significant infrastructure backlogs. But it does leave urban areas with insufficient funding to maintain inherited expenditure levels. The Commission on Revenue Allocation has proposed amendments to the formula to be decided on by the Senate and National Assembly, but these are unlikely to address the impact of redistribution on urban areas.[124]

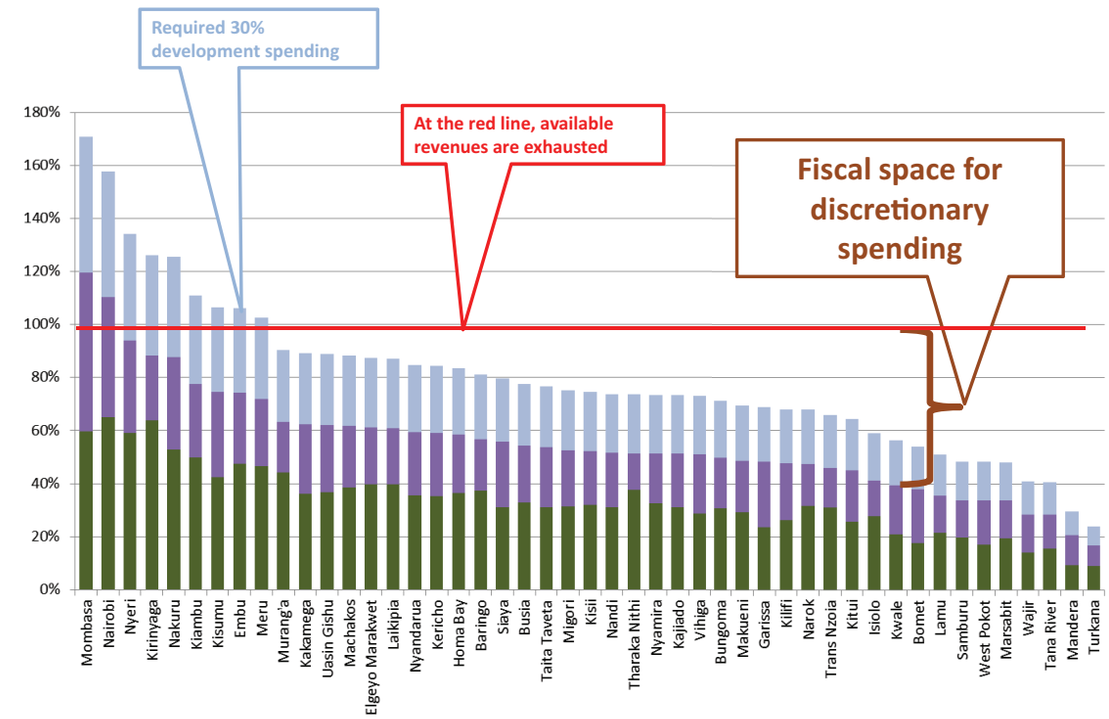
Figure 7.2: County revenues per capita, all sources, 2013/14



Source: Kenya Controller of Budget (2014).

19. The revenue redistribution formula has benefited the peripheral, less developed, and less urbanized[125] areas but fails to address the significant inherited costs of major cities. These cities have seen rapid population growth in recent years, and have been investing in service provision. Several factors contribute to the high inherited costs of the more urbanized counties, including arguably bloated staffing. Figure 7.3 shows the impact of these inherited costs on the fiscal capacity of county governments. At the far left end of the chart are Nairobi and Mombasa, whose resources are not sufficient even to meet the cost of service delivery and inherited staffing costs (as indicated by the red line). A further seven counties do not have sufficient resources to both meet these inherited costs and allocate to development expenditure over the medium term the 30 percent required by Section 15(2) of the Public Finance

Figure 7.3: Proportion of county resources absorbed by inherited costs and 30% development, 2013/14



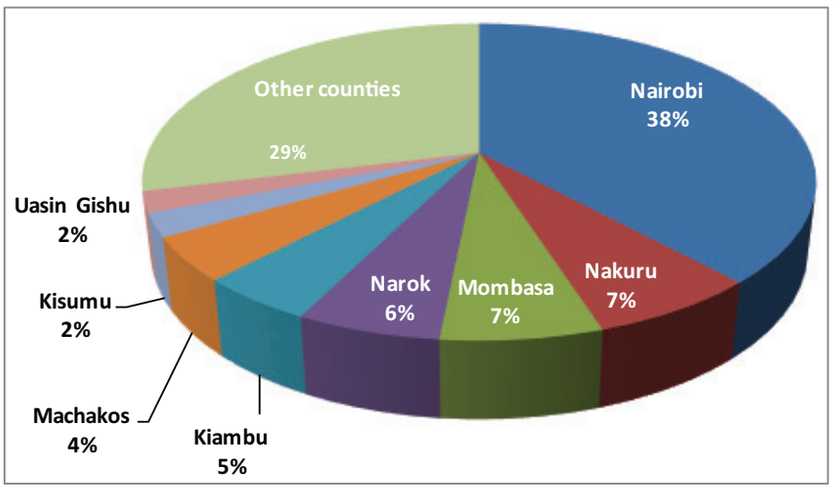
Source: World Bank staff calculations based on estimates of costs of former local authorities, devolved functions, and standard new position costs.

Management Act of 2012. The applicability of the 30 percent development rule and its potentially distorting effect on county budgeting behavior are discussed further below.

Own-source revenues

20. Own-source revenue collection is dominated by the counties with the largest urban areas—Nairobi, Mombasa, Nakuru, Kisumu, Uasin Gishu, Kiambu, and Machakos **(Figure 7.4)**.[126] The largest own-revenue sources for counties are property rates, followed by business licenses and parking fees. While no data are yet available that break down county revenue collections for 2013/14 by type of revenue, county governments are collecting very similar revenues to those collected by the former local authorities. Property rates accounted for 19 percent to 26 percent of total local authority revenues over nine years (2001/02—09/10), and single business permits for 15 percent to 20 percent. Parking fees were the next biggest source of revenue, increasing from 5 percent in 2001/02 to 14 percent in 2009/10. The reason why more revenues are collected in urban areas is that the revenue bases assigned to county governments under the Constitution are fairly narrow and revenue bases are located mainly in urban areas.

Figure 7.4: Distribution of own source revenues among the 47 counties, 2013/14



Source: Kenya Controller of Budget (2014).

21. **The Constitution assigns two tax bases to county governments—property and entertainment taxes—as well as revenues from license fees and charges for services.** The county revenue base is fairly narrow—only one of the tax bases (property rates) is of any significance. Box 7.1 sets out the relatively limited scope of existing county own-source revenue powers compared with those in other countries. Some of the smaller charges for services are likely inefficient, prone to leakage (especially if collected in cash), and regressive in that they hit poor people as hard, if not harder, than those who are wealthy. The National Parliament can assign additional revenue bases to county governments (see Box 7.2), but so far has not done so. Some counties are also pushing the envelope of their powers, raising revenue in ways that may not be supported by the constitutional assignment of revenue powers (Box 7.2). This places counties at risk of having revenues reduced overnight if a court rules they are not entitled to collect them.

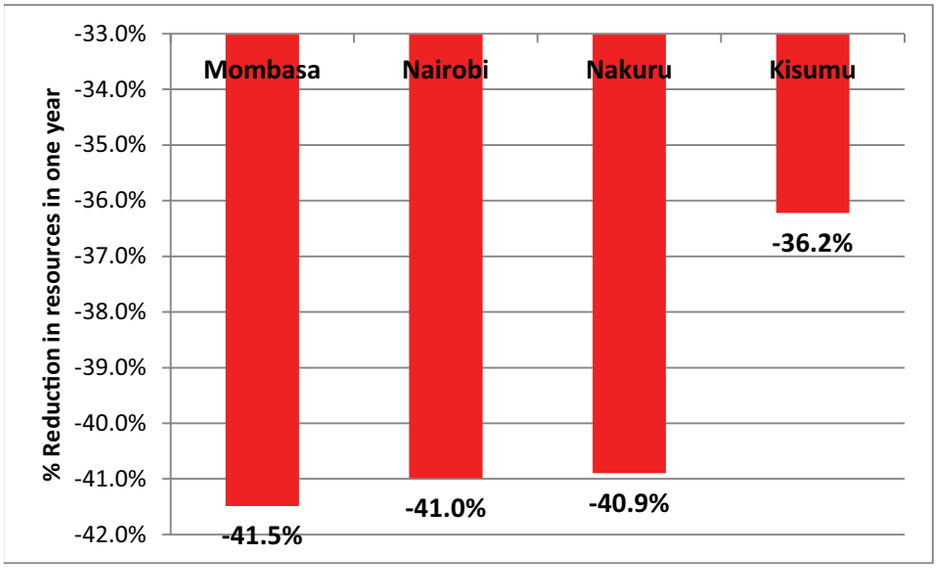
22. **To fill the gap, counties have imposed charges that have negative impact on economic activity.** The first year of devolution saw widespread objection to county finance laws that sought to increase many county taxes and charges, particularly those affecting small businesses and traders. The Kenya Chamber of Manufacturers raised specific concerns about revenue instruments placing an unfair burden on firms based in other counties.[127] Many counties levy an agricultural cess that effectively functions as a domestic customs duty—levying charges at border checkpoints as goods pass across county borders. These taxes can be imposed on goods that travel some distance to market, burdening producers. In some counties, charges are also applied to goods that enter the county to be consumed within the county. Article 209(5) of the Constitution prohibits county revenue-raising powers being exercised in a way that prejudices economic activities that cross county borders or the national mobility of goods and services, but the National Treasury has not yet found a way to enforce

it.[128] County taxes on trade, particularly if applied more than once to the same goods, reduce the profitability of economic activity.

The Fiscal Position of Urban Counties

23. **The spatial redistribution of resources across counties has subjected predominantly urban counties to fiscal shock.** Urban counties are now required to manage devolved functions with fewer resources than before devolution (Figure 7.5). The four largest urban counties now have to manage devolved functions with only some 60 percent of the resources allocated to them in 2012/13. Counties also now face large additional administrative costs, for example relating to the county assemblies and executives, which were not part of the old system. They are also required to meet significant mandatory costs associated with servicing the debt they inherited, which are not factored into these calculations.

Figure 7.5: Urban counties suffered an overnight reduction in available resources, 2012/13–2013/14



Source: World Bank staff calculations.[129]

24. The fiscal position of the three largest urban counties is worsened by their inherited debts and wage bills. Counties were assumed to have taken over the debt of the former local authorities and this was recently confirmed by the High Court (although only in a single-judge decision). Nairobi, Mombasa, and Kisumu inherited significant debt, although some of this could be offset by amounts they are owed, in particular by the national government. A process of reconciling assets and liabilities is underway but a final position is not yet available. Nevertheless, it seems clear that Nairobi has inherited debt close to US$500 million, which includes some commercial borrowing but mainly arrears. Mombasa's inherited debt is likely to be around KSh 4 billion–5 billion (US$44 million–55 million), and Kisumu's around KSh 1 billion (US$11 million).

Dealing with Fiscal Adjustment

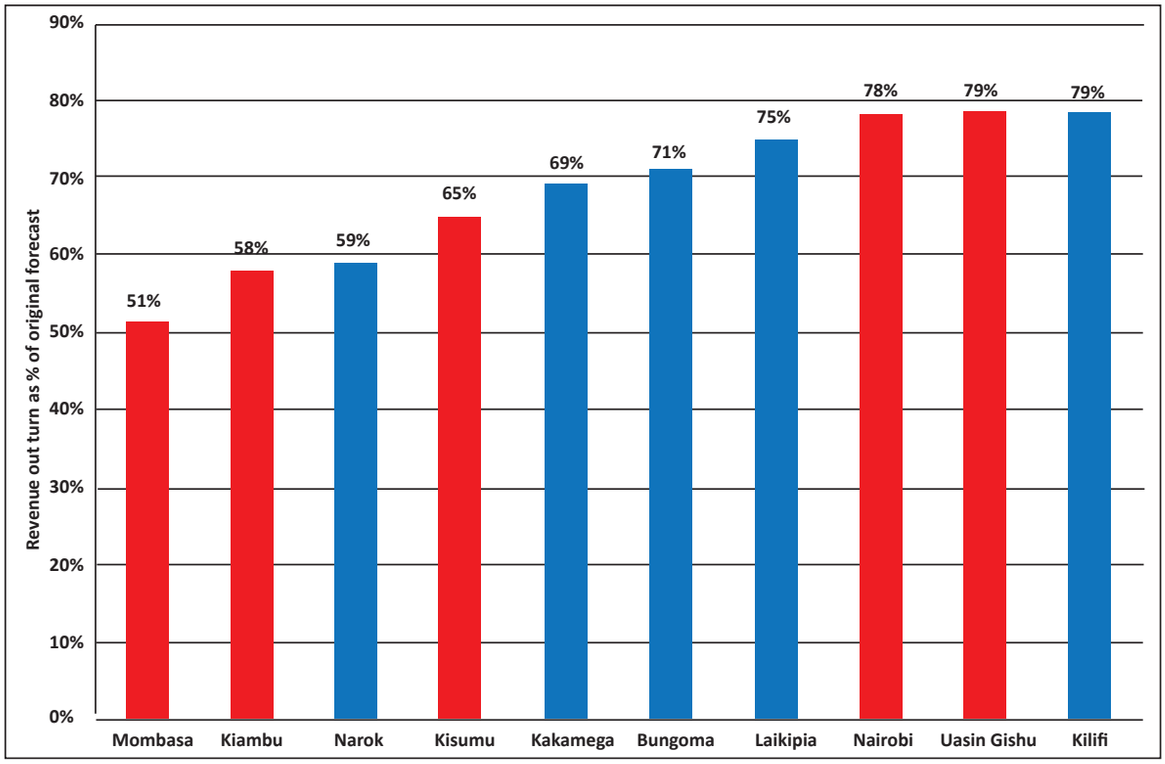
Early responses to fiscal shocks

25. In their first budget year, many counties made ambitious and optimistic estimations about how much revenue they would raise. Actual revenue collections for 2013/14 reported by the Controller of Budget show that 21 counties raised less than 92 percent[130] of the revenue they had forecast in their original budgets. This shortfall was particularly pronounced in the counties that faced the greatest challenge of fiscal adjustment following devolution—counties with large urban centers (highlighted in red in Figure 7.6). Although counties had a much more accurate idea of realistic revenues by the time they presented their 2014/15 budgets, many continued the same trend of unrealistic revenue forecasting. The Controller of Budget's first half-year report for 2014/15 indicates that although revenue collection is improving (compared with the same period last year) aggregate collections stood at

less than 21 percent of the budgeted figure halfway into the fiscal year.

26. **The political economy of capital spending may be driving counties to inflate revenues rather than make the necessary fiscal adjustments.** Popular discourse among Kenyan commentators has strongly emphasized capital spending, driven by a fiscal rule under the Public Finance Management Act (S.15(2)) that requires county governments to allocate at least 30 percent of their budgets to development expenditure over the medium term. Proposals have been made in the Senate to increase this share to 40 percent and recent reports indicate these amendments may soon be enacted.[131] Budgets are political instruments in any setting, but more so when the executive has to bargain with the legislature to get them passed—as with Kenya's counties, which have a "presidential" system with full separation of powers between legislature and executive. In this context, counties face a difficult choice between three options in the short term: (1) divert funds from service delivery to capital spending (but this creates more recurrent liabilities to operate and maintain the new infrastructure); (2) ignore the 30 percent rule (likely unacceptable to the county assembly); or (3) inflate revenue estimates so as to appear to be following the rule. As Figure 7.7 shows, it seems most have chosen the third option. Since the budget cannot be fully financed, an informal budgeting process must operate behind the scenes to control expenditure according to what revenues are realistic. This creates undesirable opportunities for rent-seeking.

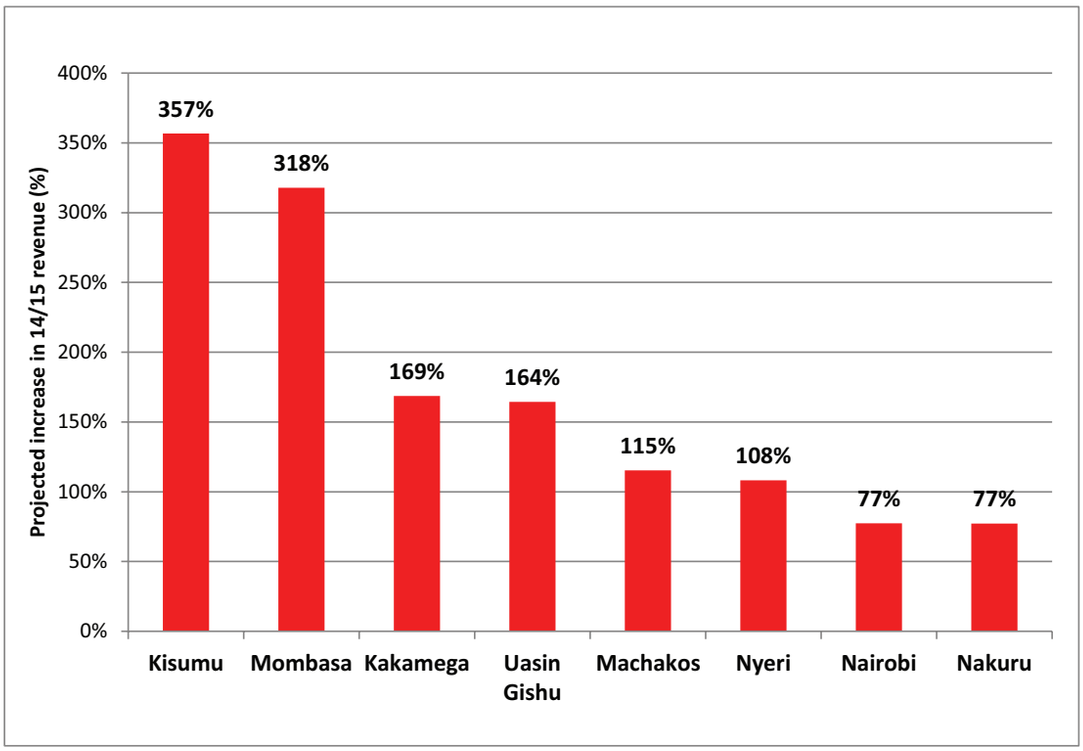
Figure 7.6: Urban counties were prone to overestimate the own revenue they would collect, 2013/14



Note: Urban counties shown in red.
Source: Kenya Controller of Budget (2014).

27. The 30 percent rule may not be appropriate for all counties, and counties under fiscal stress are currently unable to follow it. Kenyan accounting rules require development spending to be focused on the creation of new assets. Better developed counties may not need new assets as much as they need to maintain what they have (which entails recurrent spending). In addition, capital spending generates a future liability to increase recurrent spending for operations and maintenance.

Figure 7.7: Urban counties continue to budget for hidden deficits, 2014/15

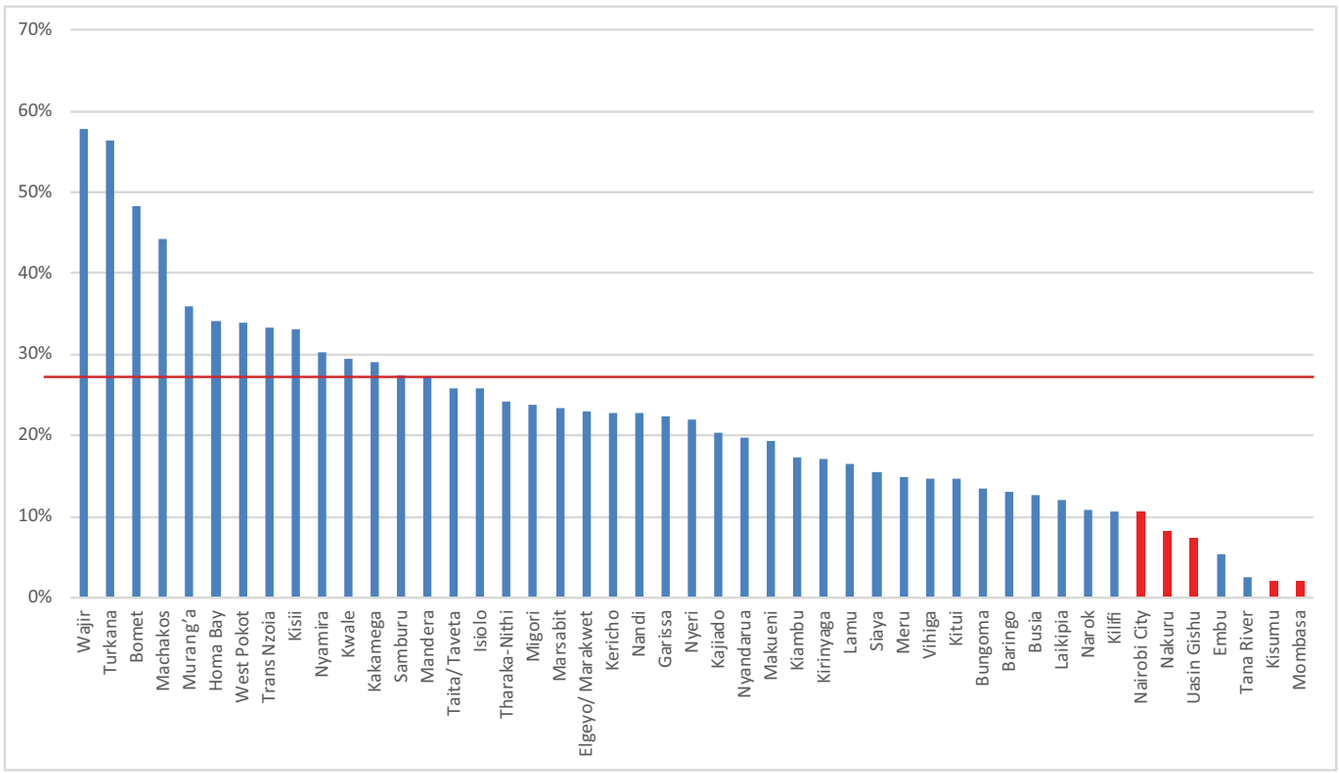


Source: Kenya Controller of Budget (2014).[132]

28. Urban counties are struggling to maintain and operationalize the assets they already have. The spatial redistribution brought about by the equitable share formula means that many counties cannot afford to budget 30 percent for development spending (Figure 7.8). Once inherited service delivery costs are taken into account, two counties (Mombasa and Nairobi) had already exhausted their revenues in 2013/14 and were running structural fiscal deficits. Seven other counties (Nyeri, Kirinyaga, Nakuru, Kiambu, Kisumu, Embu, and Meru) could not afford to meet both their inherited service delivery costs and the full 30 percent rule within their resources. Since most counties have chosen a strategy of inflating revenue estimates rather than undertaking more painful fiscal adjustment, it seems that the 30 percent rule is having the unintended consequence of undermining the quality of county budgets.

29. It is likely that fiscal adjustment is being made in less obvious, but potentially more damaging ways. Some counties may be postponing expenditures like pension contributions, remittance of income tax deducted from the salaries of employees, and paying contracted payments as they fall due, adding to their debt burdens. Some may be postponing capital spending. Most counties under-executed their capital budgets in 2013/14, with average development budget execution rates of 34 percent. Execution rates were worse in counties with revenue shortfalls. No firm conclusions can be drawn from these data yet, as many factors contributed to counties' slow start in capital spending, including delays in release of the equitable share transfer[133] and the need to set up complex procurement systems within the new county administrations. Nevertheless, it seems logical that counties dealing with a revenue shortfall will choose to postpone capital spending, as this is the choice least likely to have an immediate impact on service delivery.

Figure 7.8: County development spending as a share of total spending, 2013/14



Source: Kenya Controller of Budget (2014).

30. Postponing capital spending has long-term negative implications, including for renewing the urban asset base. The national government is continuing to spend in some urban areas that will bridge some of this gap. For example, although "county roads" were devolved under the Constitution, funding is continuing for the Kenya Urban Roads Authority to undertake major capital works in Nairobi and elsewhere. Funds from the World Bank and the African Development Bank are financing urban, transport, and water sector projects in urban centers. In some urban areas these projects may constitute the only substantial investment in the asset base.

Sustainable adjustment—reduce expenditure, increase revenue, or both

31. Urban county governments' reductions in expenditure will almost certainly require cuts to salary expenditure, which for many accounts for more than 50 percent of recurrent spending. Urban counties in particular inherited large wage bills as they absorbed large workforces from former local authorities and some national ministries that had large staff complements in districts. In addition, larger urban centers housed regional facilities (like provincial hospitals) whose staffs were transferred to those county governments in which they were located at devolution. It seems likely most have too many staff relative to their needs, while counties in more remote parts of the country have too few. But there is a limited amount that counties themselves can do to reduce their wage bills, as the staff they inherited come with civil service employment conditions. Attempts by counties to shed even casual workers have been overturned by the courts. A rationalization program began in January 2014 and a report on recommendations was being finalized in mid-2015, but as actual transfer of staff had not yet begun it is unlikely to deliver savings to county governments in the 2015/16 fiscal year.

32. **Increased revenue could be achieved through improved administration, but substantial gains will almost certainly require a focus on property tax.** The counties inherited an outdated valuation and rating system that has not been updated since the colonial period. It relies on individual valuations that can be subject to ratepayer objection before the roll is finalized. A number of the more urban counties have very outdated property rolls. In Mombasa, the property roll was last updated in 1992; in Nairobi, in 1981. This has two impacts on the structure and coverage of property rates. First, tax is being levied on the basis of very outdated values, which are a fraction of

the current market value of urban property. Second, many properties are either not on the valuation roll or are on the roll as they were when the roll was produced and do not reflect the increased value derived from subdivisions. Attempts at revaluation over the last decade have routinely stalled, largely because of court cases that sought to stop the process. Without fundamental change to the valuation system, automation of an up-to-date valuation database to facilitate billing, and an updated enforcement framework, it is unlikely that property rate revenues will increase to anywhere near their full potential.

33. **In Nairobi a new approach to valuation is needed to avoid a repeat of these legal challenges.** The core task is to reconstruct the fiscal cadaster (tax base) by building a new valuation roll. Options include using a calibrated area-based system, as is increasingly common in India, or to have valuations done on a self-assessment basis using a registered valuer, so the taxpayer has less motivation to object. In a self-assessment system the role of county valuation officials would be to audit and set aside valuations rather than to manage the valuation process. A third option is to use value bands, where the same amount of tax is applied to properties across a value band, rather than individual parcel valuations. Efficient administration of property rates depends on up-to-date records that accurately reflect changes in subdivisions and ownership. The valuation roll needs to be constantly updated and information should flow automatically between the division of the county responsible for subdivision and the national agency responsible for land titling. In Nairobi City County, an alarming proportion of subdivisions have not been legally approved, so tax is levied on an outdated understanding of the properties' boundaries.

34. **Considerable political commitment will be required to manage the politics of a reform process that may take several years, and affect the interests of powerful stakeholders.** The history of illegal dealings in land means that any reform that makes ownership more transparent will be politically fraught. The success of any reform process will likely depend on how effectively the governor can manage engagement with different stakeholders, including convincing the poor and powerful alike that they will all benefit from a fairer and more equitable distribution of tax, to support infrastructure investments to make the city more livable.

35. **Effective communications, clever stakeholder management, and political leadership will be needed.** Innovative approaches to reform could include applying the new tax regime to some areas of a city first, with a proportion of revenues allocated to visible projects that build trust and encourage taxpayer compliance, or capping the annual increase in tax liability of any individual property to minimize adverse reactions. The Constitution has empowered counties to undertake the reform of the valuation regime for themselves, which is relatively unusual in Africa. It would be undesirable if this results in a patchwork of inconsistent regimes; but on the other hand it does offer the benefit of allowing counties to experiment, which may be more likely to lead to a system that is suitable for Kenya.

36. **Given that fiscal adjustment will take time, counties may come under such severe fiscal stress in the meantime that they will need to be bailed out by the national government.** The upside is that this may provide the opportunity to leverage difficult reforms by making bail-outs conditional on reforms that address the structural weaknesses in the county fiscal framework and encourage a greater focus on a sustainable long-term approach. But it is also important that national government routinely monitor county fiscal health, allowing time to prepare for bailouts and avoid emergencies.

37. **Embedding sound asset management practices will be of fundamental importance, especially for predominantly urban counties. In many cases—for example in the water sector—it is not clear what assets the counties have inherited, as there was no clear asset inventory in the sector for water services boards to hand over to county governments.** It will therefore be important for counties to build asset inventories initially. This should be complemented by asset maintenance and renewal plans developed by county governments with support from the national government. These should be closely linked to CIDPs and budgets to ensure they are supported by resource allocations. They would identify both the life cycle and maintenance requirements of existing assets, as well as requirements for new infrastructure to accommodate city population growth.

Financing County Investment: Subnational Borrowing and Public–Private Partnerships

38. Capital for infrastructure investments, financed by borrowing, is a vital component of any financing regime for urban areas. Unless people are to be crowded into poorly serviced informal settlements, urbanization requires investment in large-scale infrastructure to absorb the growing urban population. Borrowing helps local governments capture the benefits of infrastructure immediately, rather than waiting until they have the savings to meet the cost from surplus recurrent revenues. It also helps spread the cost of infrastructure production more equitably across the future generations that will benefit from it (Canuto and Liu 2013). But subnational borrowing also comes with significant fiscal risks for macroeconomic stability, as Argentina and Brazil experienced in the 1990s. Their and other countries' experiences have generated a body of good international practice on how to regulate subnational borrowing to facilitate access to capital while limiting risks to subnational governments and macroeconomic health.

39. Good international practice suggests that markets are the most effective at pricing risk of lending to subnational governments, but this is unlikely to be effective for Kenya. The fundamental question that markets consider is the borrower's capacity to repay. For subnational governments, this depends on being able to generate enough fiscal surpluses, beyond the needs of recurrent expenditure, with which to service borrowing over time. In Kenya's context, markets are unlikely to price the risk of non-repayment accurately, because the Constitution provides for a mandatory sovereign guarantee of subnational borrowing.[134] This means that a strong rules-based regulatory framework for subnational borrowing will be essential.

40. Such frameworks have been introduced in many developing countries in the last 20 years, often in response to subnational fiscal stress and debt crises. The Russian Federation, Brazil, Mexico, Colombia, Peru, and India provide examples that could be useful for Kenya. Such frameworks should contain two complementary elements: forward looking ("ex ante") controls and regulations specifying the purpose, types, and procedures of borrowing; and measures to fix debt problems after they arise ("ex post")—for example, in case a subnational government cannot pay its debts, including subnational debt restructuring (often described as "insolvency mechanisms"). The two measures reinforce one another: insolvency mechanisms increase the pain of circumventing preventive regulations for lenders and subnational borrowers, thereby enhancing the effectiveness of ex ante rules (Liu 2008).

41. Ex ante borrowing rules have three, sometimes four, key elements (Liu and Waibel 2006). First, borrowing is allowed only for long-term public capital investment; second, frameworks set limits on key fiscal variables, including the fiscal deficit, the primary deficit, debt-service ratios, and ceilings on guarantees issued; and third, they include a requirement that subnational governments have a medium-term fiscal framework enabling them to respond better to shocks and contingencies and a transparent budgetary process, requiring such measures as debates by the executive and legislative branches on spending priorities, funding sources, and required fiscal adjustments. Fiscal transparency is also often part of these regulations, including independent audit of subnational government accounts, public disclosure of financial reports, and measures to address hidden or off-budget liabilities. Some countries have also introduced credit rating systems for subnational governments and measures to make borrowing by those that do not have ratings much more expensive.

42. Ex post mechanisms—or insolvency mechanisms—come into effect when a subnational government can no longer pay its debts. Insolvency may be triggered by imprudent borrowing or by unforeseen external shocks and does not necessarily imply fiscal mismanagement. While private companies that fail financially are allowed to go

Box 7.1: County revenue autonomy: Comparison with other countries

In developed countries, large urban centers like Madrid, Stockholm, Tokyo, and Toronto raise more than 70 percent of revenue themselves. Copenhagen raises almost 90 percent. The pattern in Kenya is not that different from other local governments in Sub-Saharan Africa, but the revenue autonomy of African state governments tends to be higher

The revenue bases assigned to Kenya's counties are relatively narrow against those in some African countries. In Nigeria, state and local governments collect personal income tax, vehicle license fees, radio and TV license fees, property rates, and a range of charges and levies. In Ethiopia, regional governments collect personal income tax of regional government employees and regional government enterprises; profit and sales tax from individual traders and regional government enterprises; taxes on income from inland water transport; and profit and income tax, royalties, and land rent from mining activities.

It is common in African countries for central governments to share centrally collected taxes with subnational governments on a derivation basis, returning taxes to where they were raised. In Gabon, 25 percent of personal income tax is shared with cities; in Senegal 59 percent of vehicle taxes, 50 percent of surplus value of real estate, 60 percent of the combined income tax/business tax/value-added tax, and 60 percent of court fines are returned to the cities and local governments where they were collected. Nigeria shares 20 percent of value-added tax and 13 percent of oil revenues with the producing regions.

Source: United Cities and Local Governments (2010)

Box 7.2: Scope of Kenyan counties' revenue powers

Constitutional basis for counties' own-revenue powers

Article 209 of the Constitution deals with county revenue powers. It assigns two taxes to county governments: property taxes and an entertainment tax. Parliament can assign further taxing powers to county governments, except for income tax, value-added tax, import and export duties, and excise tax.

Aside from taxes, county governments can impose charges for the services they provide and fees for licenses they issue. The Fourth Schedule of the Constitution refers to four specific licensing powers assigned to counties: trading, sale of food, dogs, and liquor outlets. But some other areas, including outdoor advertising, have traditionally been subject to charges that counties continue to impose.

Legal issues concerning some county revenue powers

Some counties seek to expand their revenue base in ways that may exceed those constitutional limits. These cases include Nairobi City County seeking to tax betting winnings, Kiambu's tax on milk sales, Kakamega's tax on slaughtering chickens, and Mombasa's hotel bed levy. Many counties charge agricultural cess, although the Agriculture Act authorizes local authorities to impose it, not county governments. No court decision has comprehensively distinguished a tax from a "charge for a service." Some increases in fees for physical planning approvals and public health permits may also be open to challenge, because these fees are regulated by national laws. But so far relatively little litigation has addressed these questions, and citizens are mainly challenging county revenue laws for failure to meet public participation requirements.

Source: World Bank Staff ananlysis..

bankrupt, governments must continue to provide essential services and cannot be allowed to go bankrupt. A public sector insolvency mechanism must therefore balance a number of objectives: maintaining essential services while subnational debt restructuring is undertaken; improving the subnational government's creditworthiness to enable it to re-enter the capital market; and protecting creditors' rights as a way of protecting emerging debt markets.

43. Kenya has made good initial progress toward developing a rules-based framework for subnational borrowing. Article 212 of the Constitution provides that borrowing by county governments may only be carried out with a national government guarantee as well as the approval of the county assembly. The Public Finance Management Act in turn sets out the process for issuance of national guarantees, primarily designed to minimize aggregate risk posed to county and nationwide fiscal sustainability (Box 7.3). A set of ex ante controls are specified, which the Cabinet Secretary for Finance must ensure are complied with: the loan is for a capital project; the borrower is capable of repaying the loan, and paying any interest or other amount payable in respect of it; and the financial position of the borrower over the medium term is likely to be "satisfactory."[135] The details of guarantees must be shared with Parliament and published.[136] A Public Debt Management Office has been established within the National Treasury to track all loans to "county governments and their entities."[137] That office must help county governments with debt management and borrowing and can require county governments to provide information on their borrowing.

Box 7.3: Fiscal Responsibility Principles, Section 107 of the Public Finance Management Act

107. County Treasury to enforce fiscal responsibility principles

(1) A County Treasury shall manage its public finances in accordance with the principles of fiscal responsibility set out in subsection (2), and shall not exceed the limits stated in the regulations.

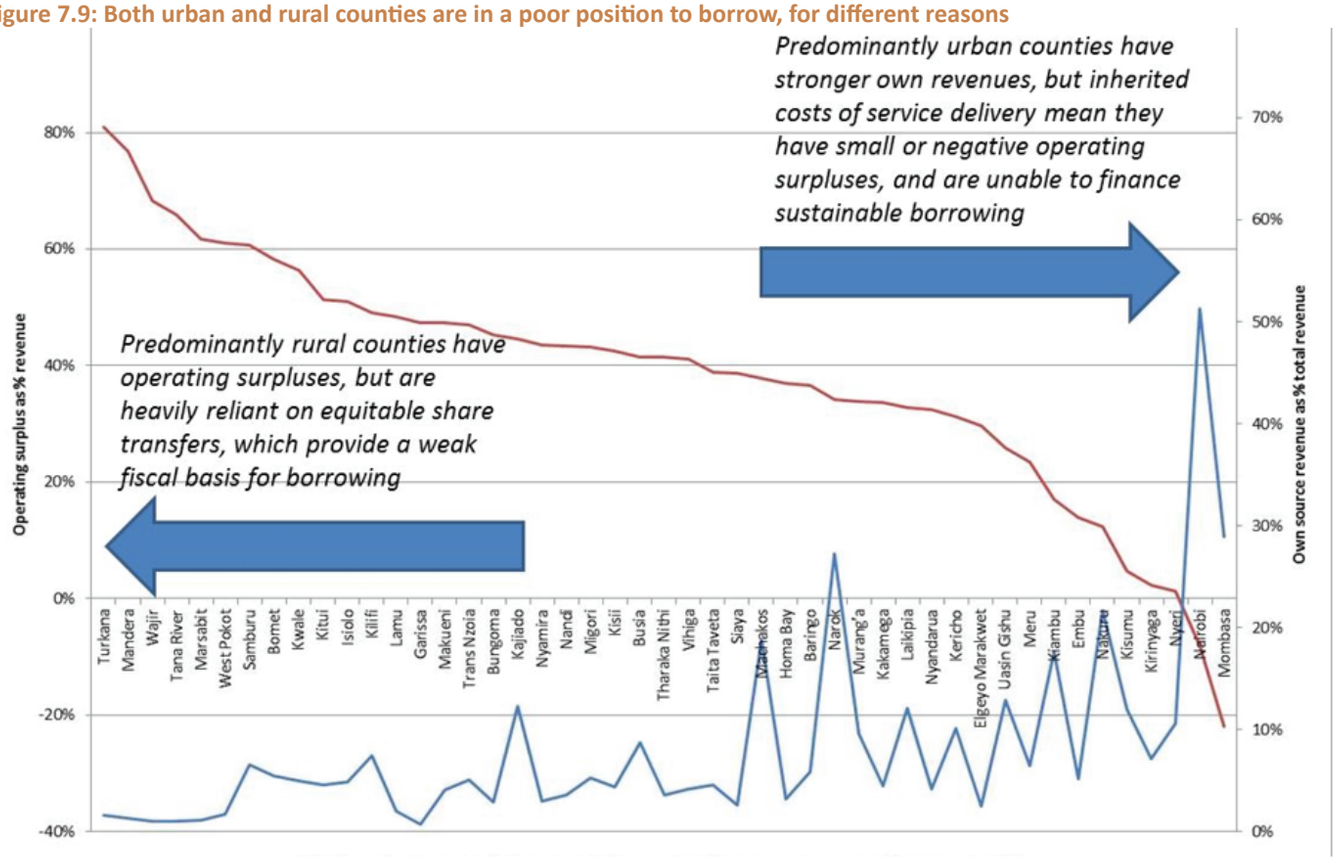
(2) In managing the county government's public finances, the County Treasury shall enforce the following fiscal responsibility principles-

a. the county government's recurrent expenditure shall not exceed the county government's total revenue;
b. over the medium term [*not defined*] a minimum of thirty percent of the county government's budget shall be allocated to the development expenditure;
c. the county government's expenditure on wages and benefits for its public officers shall not exceed a percentage of the county government's total revenue as prescribed by the County Executive member for finance in regulations and approved by the County Assembly [*the regulations go on to say the percentage cannot be more than 35 percent*];
d. over the medium term, the government's borrowings shall be used only for the purpose of financing development expenditure and not for recurrent expenditure [*suggesting counties can run recurrent fiscal deficits in the short term*];
a. the county debt shall be maintained at a sustainable level [*not defined*] as approved by county assembly;
b. the fiscal risks shall be managed prudently; and
c. a reasonable degree of predictability with respect to the level of tax rates and tax bases shall be maintained, taking into account any tax reforms that may be made in the future.

Note: Authors' observations contained in square brackets in italics.
Source: Public Finance Management Act, 2012.

44. The relatively slow development of the borrowing framework may not be a bad thing, as most counties are not yet in a position to borrow. Availability of operating surpluses to service a loan is one of the most important criteria for determining a subnational government's eligibility to borrow. In principle, counties responsible for the largest cities should have the greatest capacity to borrow for infrastructure development, as they have relatively strong domestic revenue bases (see Figure 7.2 and thus should be able to generate the operating surpluses required to service any loans they take out. But as discussed earlier, many of these counties face a severe urban revenue deficit and have structural deficits rather than operating surpluses—especially once they have earmarked 30 percent of their funding for development projects. As a result, counties that might have been the first and largest potential borrowers for infrastructure finance may need to go through a period of fiscal adjustment before they will be in a position to take on new debt (Figure 7.9).

Figure 7.9: Both urban and rural counties are in a poor position to borrow, for different reasons



County own source revenues and fiscal surpluses as % of 2013/14 revenues
Source: World Bank staff calculations.[138]

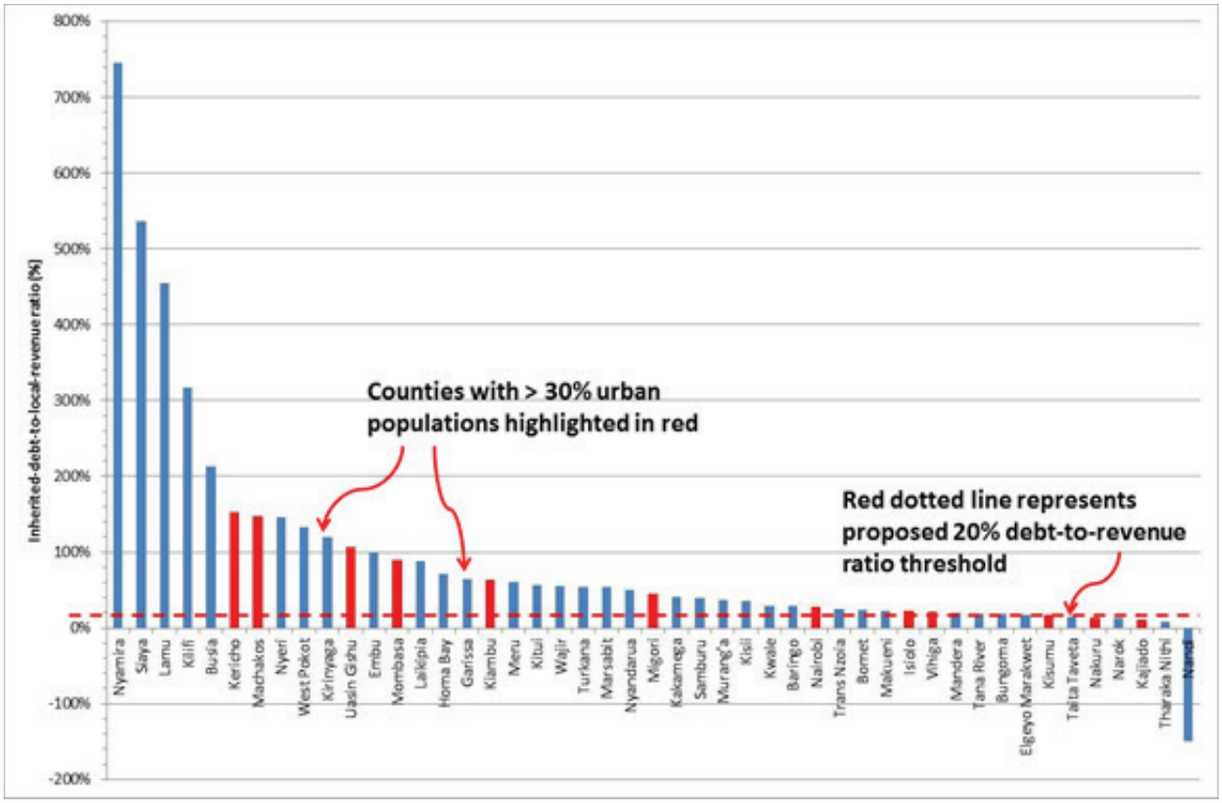
45. Three elements of the subnational borrowing framework are not yet fully developed: debt stock limits, county creditworthiness assessments, and the regime for managing counties under fiscal stress. Debt stock limits have two components: overall debt limits to manage aggregate fiscal risks for the country as a whole, and limits for individual counties, to protect their fiscal health. The National Treasury's Framework for Domestic and External Borrowing by County Government joins these two concerns. It proposes an aggregate county public debt threshold at 20 percent of the county government's most recent audited revenue,[139] which is in turn allocated among the 47 counties in 20 percent proportions to their own local revenues.

46. The proposed county debt ceiling is quite low by international standards, and may lead county governments to look for off-budget avenues to increase their access to finance. For example, subnational governments in Colombia are limited to 80 percent of their debt-stock-to-current-revenue ratios, while Brazil's Fiscal Responsibility Law initially set a limit of 200 percent of debt-to-net-current-revenue ratio for subnational governments.[140] Under the 20 percent threshold, Nairobi could afford to borrow up to KSh 2 billion in 2013/14 (US$23 million), which would be enough to construct around 16 kilometers of a 7-meter-wide, two-lane road. Kisumu would be entitled to borrow KSh 124 million or US$1.4 million, enough to construct 1 kilometer of such a road.[141] If limits are too low, and financing for infrastructure investment is not available from other sources, counties may look for off-budget vehicles that are likely to be more expensive and more difficult to regulate.

47. Once inherited debts are taken into account, the majority of counties are already in breach of the proposed borrowing threshold—only 10 counties would be eligible for new borrowing. The exact levels of debt inherited by county governments from local authorities and districts are still being determined. Information from local authorities' financial statements for 2011/12 suggests that the total value of inherited debt from local authorities at that time was around KSh 57 billion (US$653 million). Local authorities, anticipating their dissolution, may well have

accelerated the accumulation of debt in the run-up to the March 2013 elections. Even using these conservative estimates, a simple comparison with 2013/14 county local revenues suggests that 37 of the 47 counties are already in breach of the proposed 20 percent debt-to-local-revenue threshold (Figure 7.10). Only 10 counties would be eligible for new borrowing without first paying down old debts inherited from local authorities.

Figure 7.10: Only 10 counties have room to borrow within the proposed 20% threshold, once inherited debts are considered



Source: County revenues based on Kenya Controller of Budget (2014).

48. The emerging county borrowing framework could be structured to provide incentives for good fiscal management. Although debt stock limits are very low internationally, even borrowing within those limits may not be affordable if a county does not have fiscal surpluses. Some countries have successfully introduced an element of "self-selection" into the borrowing process, rewarding subnational governments demonstrating a track record of responsible fiscal management. Only those that have undertaken fiscal and governance reforms and received a market-based credit rating can access the market for borrowing. Market-based credit ratings could be used as the measure of whether a county is entitled to additional borrowing. While such market-based ratings are likely to be slow to develop initially, the national government could design an interim credit rating system to perform the same function (Liu and Pradelli 2012).

49. A formal regime for dealing with fiscal stress is needed to avoid the moral hazard associated with ad hoc discretionary bail outs. The rapid redistribution of resources across counties has left some in a position of fiscal stress. The practice of inflating revenues may be concealing the extent of their fiscal stress. If a county defaults on its debts, there is likely to be political pressure for a bail-out. Larger counties that underpin much of Kenya's GDP may be considered "too big to fail" because of the economic impact on the country as a whole. The present ex post control framework is based on intervening when counties are found to be in "serious material breach" of the Public Finance Management Act. The framework focuses on partially halting the flow of funds to failing counties rather than helping them out of trouble and may therefore be too blunt a tool to support county fiscal recovery. A more proactive approach would involve monitoring subnational fiscal stress, including the realism of county budgets (for example, comparing outturns against the original budget), accumulation of arrears, rehabilitation

and maintenance of assets (such as quality of county roads), and service delivery levels (frequency of pharmaceutical stock-outs), to help identify short-term risks, including fiscal distress and possible default.

50. Commercial borrowing is not the only avenue through which counties can create debt, and the combination of low borrowing thresholds and fiscal stress may cause predominantly urban counties to contract debt by other means. Unhealthy and informal debt may be accumulating in counties in the form of pending bills (unpaid invoices from suppliers) or unpaid statutory payments such as staff pensions. Counties may also be issuing guarantees that constitute a contingent liability on their own books. It is not clear whether the annual financial reporting arrangements are adequately capturing these contingent liabilities, or whether these forms of debt are being adequately monitored by the national government.

51. Policy on subnational borrowing should focus on how to finance much-needed investment, as well as on the fiscal risks of contingent liabilities. Prevailing political incentives are pushing for resource allocations to historically marginalized counties through the equitable share formula. While the emerging borrowing framework rightly allocates debt ceilings in accordance with capacity to raise own-source revenues, the focus on fiscal risk (and hence a very low overall limit) will constrain investment finance for urban counties. Consequently there are very few potential sources of finance for targeted investments in urban growth centers to prepare for the imminent demographic transition to a majority urban country: the current and emerging framework is very narrowly focused on formal borrowing.

52. Other alternatives to finance urban investments need to be weighed by their impact on fiscal risk as well as by their contribution to growth and social welfare. The most likely sources of such alternative finance may come from the national government in the form of conditional capital grants and on-lending from donors. For example, during the transition period, KURA has managed investment and maintenance of urban roads, financed through the road maintenance levy. But under the forthcoming Kenya Roads Bill (2015), many urban roads will become the responsibility of county governments. It seems likely that funding from the road maintenance levy will be made available to counties to finance this crucial urban roads maintenance, possibly in the form of a ring-fenced conditional grant from the national government. Counties may also be permitted to contract KURA to manage construction and maintenance of urban roads on their behalf, using such funds.

53. Another potential source of financing is through county corporations. Based on experience in the water sector, county corporations may not be subject to the same borrowing restrictions as county governments. Under Article 212 of the Constitution, the county legal borrowing framework applies to loans to be repaid by "public funds." But in the water sector, tariffs collected by water service providers do not fall under "public funds" because tariffs are collected under the contractual agreements between the regional WSBs and providers (Section 55(6) of the Act). To clarify to all parties that there is no obligation, either explicit or implicit, for county or national governments to bail out providers in the event of default, providers could sign an agreement or memorandum of understanding with county governments and the National Treasury at the time of the loan agreement. This model may be generalizable beyond the water sector to county corporations in other sectors, although this would need to be subject to a detailed legal review. As with county governments, providers would still need to run operating surpluses to finance borrowing. Water service providers are currently operating with low margins or deficits before factoring in capital investment costs, so that water tariffs in urban areas may need to be raised to finance the investments required to keep pace with urban growth rates.

54. The pros and cons of innovative new county financing sources could be weighed, such as betterment levies and development fees. Betterment levies are charged on property owners who have benefited from increases in their property's value because of nearby public infrastructure investment, such as transport infrastructure, water and sanitation, or street lighting. In Jordan for example, beneficiaries pay 50 percent of the cost of road development and pavement, in cash advance or installments. Land development fees are the most important local revenues in many countries. They require property developers to finance upgrades of trunk or water infrastructure when developing nearby properties. But such fees must be considered carefully: if set too high they can undermine private sector businesses and encourage illegal construction (Farvacque-Vitkovic and Kopanyi 2014).

55. Public–private partnerships are often hailed as a potential solution to county financing needs, but need to be treated with great caution. The development of public–private partnerships in Kenya is at a very early stage, and the outlook is unclear. The most useful model of public–private partnership for Kenya's counties would be one in which revenues generated cover the costs of the capital investment (and the various margins), and substantial returns on equity will need to be generated to attract investor interest. There will also be limits on consumers' willingness or ability to pay. This is likely to be a key constraint on public–private partnerships in Kenya, as it has in the toll road cases of Lekki (Lagos State in Nigeria) and Gauteng (in South Africa), both of which have become deeply problematic. Indeed, the only recent major transport public–private partnership in Kenya (Nairobi toll) has failed. But many counties appear to be forging ahead and entering into public–private partnerships or quasi-public–private partnership arrangements with private sector partners (Box 7.4), and this new reality should be supported and managed appropriately. Kenya's policy makers should take note: while public–private partnerships often appear highly attractive at first sight from both a political and fiscal perspective, they are inherently difficult instruments over the medium to long term. But given their widespread prevalence at county level, a pragmatic approach is needed that recognizes their use and helps counties to understand and manage the associated fiscal risks.

Box 7.4: Partial survey of county public–private partnerships and quasi-public–private partnership arrangements

A partial survey of newspaper articles over a period of around 16 months from late 2013 to 2014 reveals extensive use of public–private partnerships by county governments. Many do not meet the formal definition of a public–private partnership, as the counties in question appear to be acting as purchasers, but in all cases there appears to be some form of partnership, joint venture, or agreement between a private company and the county government.

Nearly half the counties (23) feature in this relatively selective dataset, suggesting that most or all counties are likely to be engaged in actively seeking partnerships with private sector firms for investment in social infrastructure or commercial enterprises. The subject matter of agreements ranges from small community social projects (water tanks in Bomet) to large scale commercial investment (film studios in Kiambu and a mining project in Tharaka Nithii). A number of public–private partnerships involve private provision of public goods like street lights, provision or renovation of public housing, waste management, or health services.

In most cases the goods being provided are county responsibilities, but in one case, where the county of Murang'a is proposing to provide university student accommodation, the subject of the public–private partnership arguably goes well beyond the county government's responsibility. In some cases, it seems likely that the county has contributed land (for a shopping mall in Nakuru, for example), while in other cases it seems the county may be a co-financier or has adopted revenue sharing, whereby the remuneration paid by the county is a proportion of the revenue raised on its behalf.

Recommendations

1. Increase focus on spending for urban functions

Short term	Develop a formal process for counties to delegate their functions to urban boards (national government)
To ensure clarity of accountability, it would be helpful to ensure that urban boards are empowered through a formal process of assignment or delegation. This could be included in a regulation under the County Government Act or the Urban Areas and Cities Act.	
Medium term	**Undertake benchmark costing of urban functions in selected counties (national and county governments)**
One way to mitigate the risk of unfunded urban mandates would be to benchmark what urban-specific functions would cost to deliver. This would require a realistic but normative assessment of these costs, something that has not been done to date under devolution. The costing exercise carried out by the National Treasury in 2012 only focused on historic expenditure on the functions that had been delivered by national ministries and did not consider whether these levels of funding were appropriate. Further, urban functions that had previously been the responsibility of local authorities were not covered, so there is presently no information even on what funding specific urban functions had historically received, let alone whether that level was appropriate.	
Long term	**Explore conditional grant instruments, with matching funds from counties, to help ensure urban functions are adequately funded (national and county governments)**
Underfunding of urban functions could in part be addressed through an urban conditional grant. This could be structured as transfers from national government to counties with large urban areas, including a component of matching funding (whereby national government matches what county allocates to urban functions) to encourage counties to spend more on urban functions, including maintenance of urban assets.	
Medium term	**Establish county asset inventories, and develop asset maintenance and renewal plans (county governments with support from national government)**
Counties need to build asset inventories as a starting point for better asset management, followed by asset maintenance and renewal plans. The plans would identify both the life cycle and maintenance requirements of existing assets, as well as requirements for new infrastructure to accommodate city population growth.	

2. Measures to address the urban revenue deficit

Short term	Modernize property rates legal and administrative framework (county governments with support from national government)
It is likely that greatest potential to increase county revenues will come from increasing the coverage of property tax rates. The current legal framework for property rates is cumbersome and outdated, having been inherited from the former British colonial government. Most counties do not have the resources to regularly update valuation rolls given what is required to maintain a single-parcel, land-only valuation approach. A simpler approach to valuation should be considered. A number of mass appraisal and nonvalue or hybrid approaches to assessing property for rating purposes are available and would be more suitable to the capacity of county governments. An important consideration for the future is how the national government will pay for the services to its properties located in counties. Even in some of the smaller subcounty headquarters as much as 50 percent of land belongs to national government. Since devolution the national government has not paid rates on any of that land. The pre-devolution practice of paying a cess in lieu of rates has been discontinued.	
Short term	**Assign hotel bed tax and agricultural cess-taxing powers to county governments (national government)**
County revenue bases could be expanded by delegation of additional taxing powers. A strategic approach would be to assign additional tax bases to counties. This will require legislation passed by the national Parliament. Two obvious taxes that could be assigned to county governments are hotel accommodation tax and agricultural cess (subject to addressing concerns about its potentially harmful economic impact). Some counties are already collecting both these taxes, although the legal basis for them to do so is far from certain.	
Short term	**Evaluate the impacts of county revenue raising (national and county governments)**
We know relatively little about the impact of county revenue collection. There is a need to undertake an evaluation of county revenue raising to better understand its impacts across the following dimensions: Is it efficient? Is it soundly based in law? What is the impact on the poor? What is the impact on economic activity? And is there an acceptable trade-off between increased taxes/charges and increased services? This analysis could then inform efforts to reform county revenue collection.	
Medium term	**Rebuild the fiscal cadaster at county level (county governments with support from national government)**
The fiscal cadaster is a land information system that collates and tracks up-to-date information on land parcels and informs the valuation and taxation of land. Modernizing the legal and administrative framework for property rates could make reconstructing valuation rolls simpler, reduce the incidence of objections, and increase the effectiveness of revenue collection. Basing valuation on land and buildings rather than land only is likely to reduce objections, because more comparative sales data are available and values can be more easily understood by property owners. Simplifying valuation methods would make the task of preparing a property roll less labor-intensive and technically complex. Introducing modern enforcement provisions and computerizing billing and collection would increase the percentage of billed tax actually collected. So far, county governments have mainly focused on introducing automated payment aggregation services that reduce cash-handling, but real efficiencies are likely to depend on more fundamental automation of information on tax bases, and of the process for generating bills and following up outstanding payments.	

Long term	Evaluate wider policy options to broaden county tax bases, for example through piggy-backing (national and county governments)

Payment of taxes generates a healthy relationship of accountability between citizens and county governments. Citizens are more likely to be on the lookout for waste and corruption if they know it is their own taxes being wasted. Ultimately, some structural adjustment to county revenue bases could be considered. The current revenue bases are narrow compared with other countries'. But introduction of new taxes will need to be carefully managed to ensure they are both constitutionally valid and economically sound.

Piggy-backing (or "tax-base sharing"), in which the central government allows subnational governments to benefit from revenue while determining its own tax rate, is one common approach that preserves local fiscal autonomy while minimizing the cost of local tax administration.

County governments are also grappling with the need to engage citizens in discussion about how new tax instruments will affect them, and how to negotiate a social contract that strikes an appropriate balance between increased taxes and improved services.

3. Helping fiscally stressed counties to adjust

Short term	Develop and implement a framework to monitor county fiscal stress (national government)

The government could consider a more proactive approach to monitoring subnational fiscal stress, including the realism of county budgets (comparing outturns against the original budget), accumulation of arrears, rehabilitation and maintenance of assets (quality of county roads), and service delivery levels (frequency of pharmaceutical stock outs), to help identify short-term risks, including fiscal distress and possible default.

Short term	Review and restructure inherited county debt (county governments with support from national government)

Fiscal adjustment for counties must involve management of inherited debts. Some of the debt in the form of arrears is now comprised mainly of interest, which is accumulating at a compound rate. Counties therefore urgently need to review and restructure their inherited debt as part of their debt management strategies (which are a requirement under the Public Finance Management Act) to create fiscal space for much needed service delivery.

Medium term	Develop a framework for counties to address the problem of unaffordable inherited wage bills (national and county governments)

Counties inherited large workforces from both former local authorities and some national ministries who had large staff complements in former districts. In the health sector for example, studies suggest that facilities in areas close to Nairobi may have too many staff, while those in remote areas have too few. But there is a limited amount that counties themselves can do to reduce their wage bills, as the staff they inherited come with civil service employment conditions. A rationalization program is underway, but is unlikely to deliver savings to county governments in the 2014/15 budget year.

Medium term	Take urban areas into account in the next generation equitable share formula (Commission on Revenue Allocation)

The next-generation equitable share formula should strike an appropriate balance between redressing historical marginalization and adopting a more forward-looking approach suitable to the imminent and inevitable arrival of a majority-urban Kenya. The current formula favors counties with small populations, large land areas, and high levels of poverty. Heavily urbanized counties—which also tend to be more populous—receive relatively low per capita allocations under the equitable share formula, despite having to manage high levels of inherited costs and large inherited debts. The result is a redistribution of resources that fails to take into account Kenya's urban future.

4. Unlocking urban finance

Short term	Revisit county borrowing limits to enable adequate county borrowing and reward fiscally responsible counties (national government)

The county borrowing limit—currently proposed at 20 percent of total county own revenues—is restrictive by international standards and should be revised upward. The national government could also investigate the feasibility of introducing a more "self-selecting" process that rewards counties demonstrating a track record of responsible fiscal management. Market-based credit ratings could be used to allocate additional borrowing. If such ratings are slow to develop, the national government could design an interim credit rating system.

Short term	Investigate different models for financing much needed urban investments (national government, county governments, county corporations, private finance institutions)

Fiscally stressed urban counties cannot afford to wait for painful and slow fiscal readjustments before being able to finance the required infrastructure investments. Other alternatives need to be explored and weighed in relation to their impact on fiscal risk and their contribution to growth and social welfare:

- National government provision of conditional capital grants and on-lending from donors.
- Borrowing by county corporations, which may not be subject to the same borrowing restrictions as county governments. Water tariffs in urban areas may need to be increased to finance the investments required.
- Betterment levies and development fees.
- Public–private partnerships, balancing the need to treat them with great caution with the fact that they are already in extensive use by counties.

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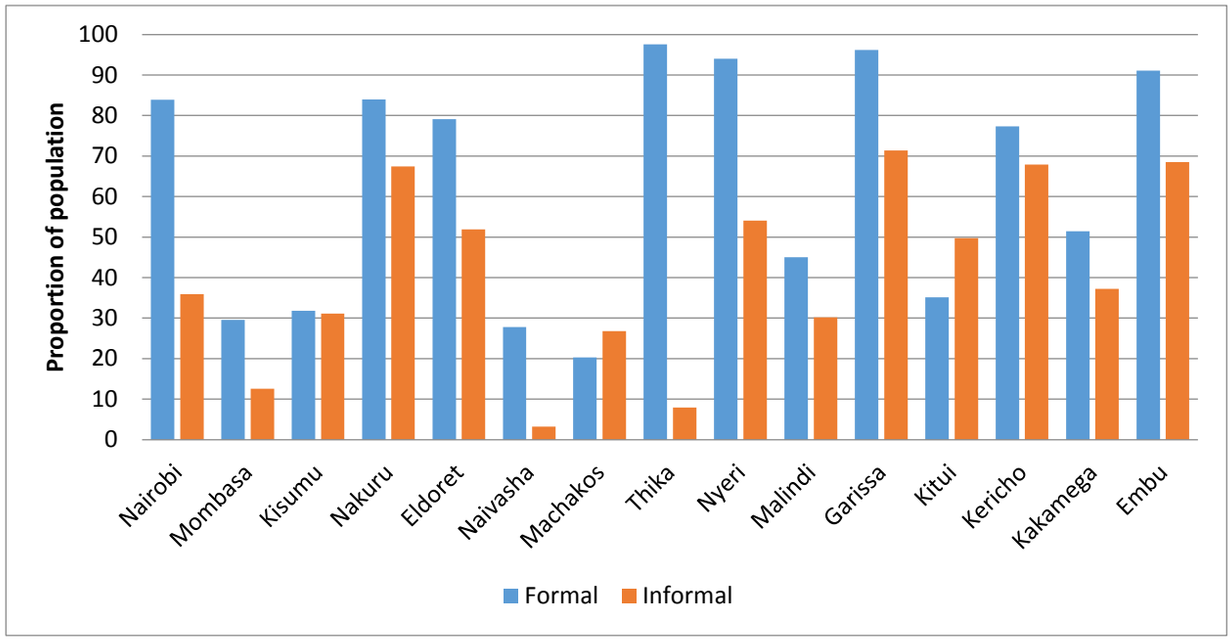
Annexes

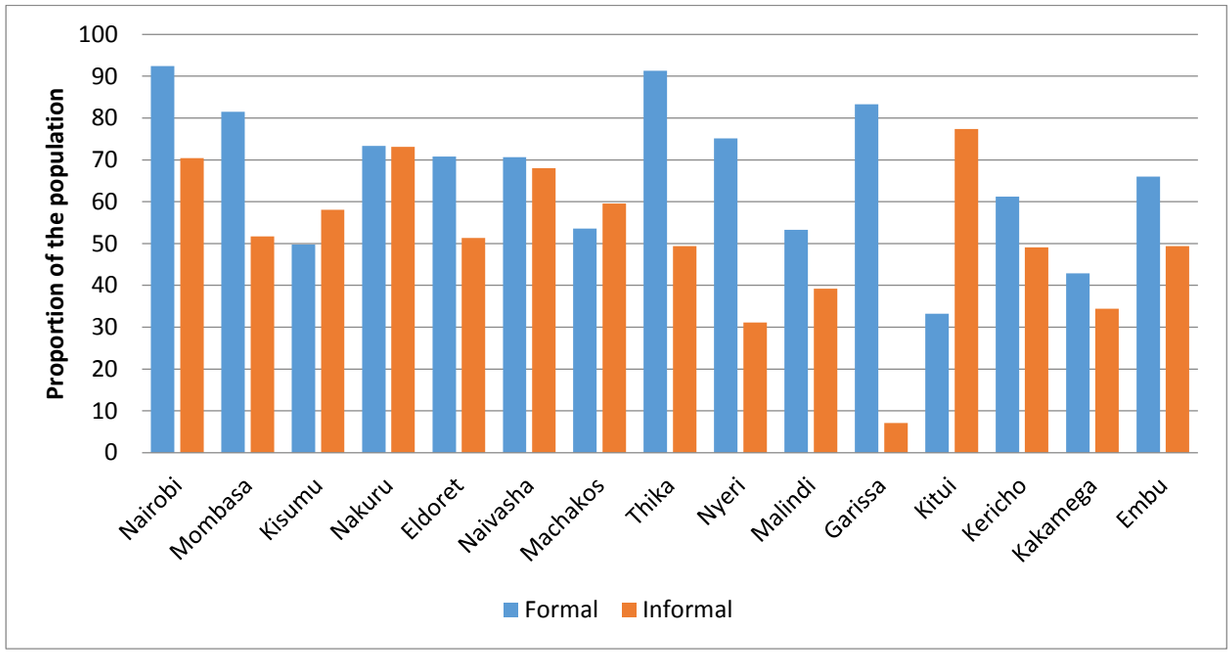
Annex 1: Access to Basic Services (based on data from the Kenya State of the Cities Baseline Survey)[142]

Access to basic services in 15 urban centers by formality of neighborhood of residence

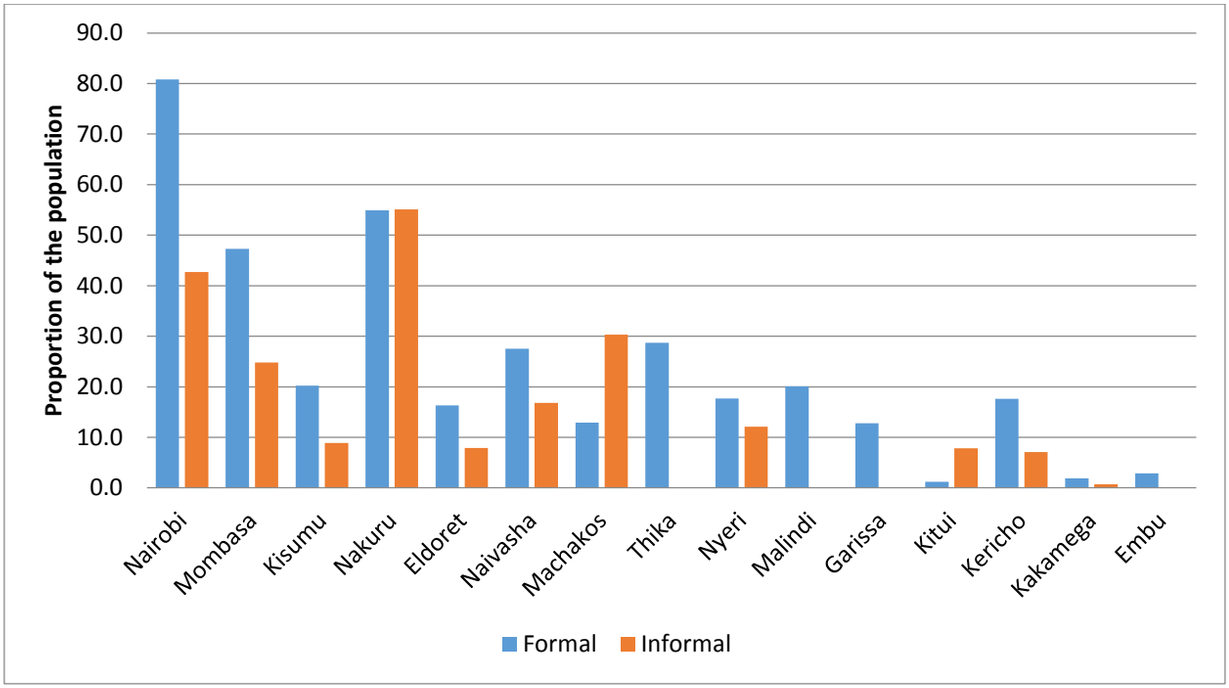
Annex Figure 1.1: Access to piped water in the compound or at the house by location of residence



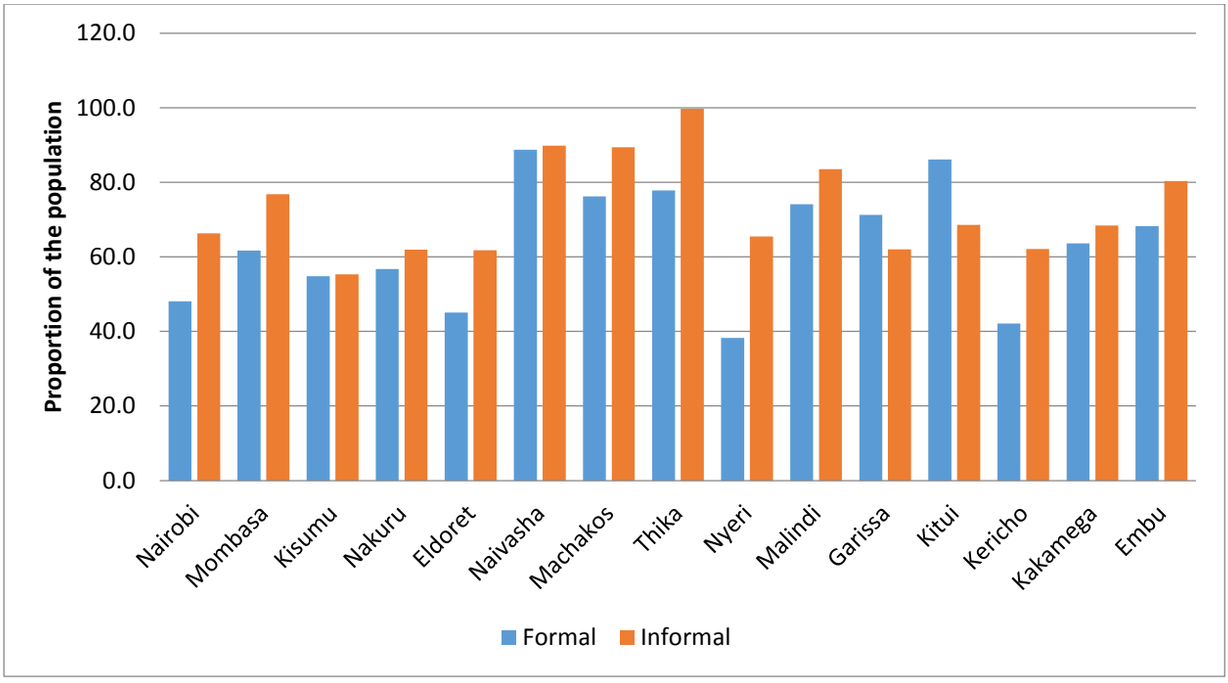
Annex Figure 1.2: Access to in-house electricity



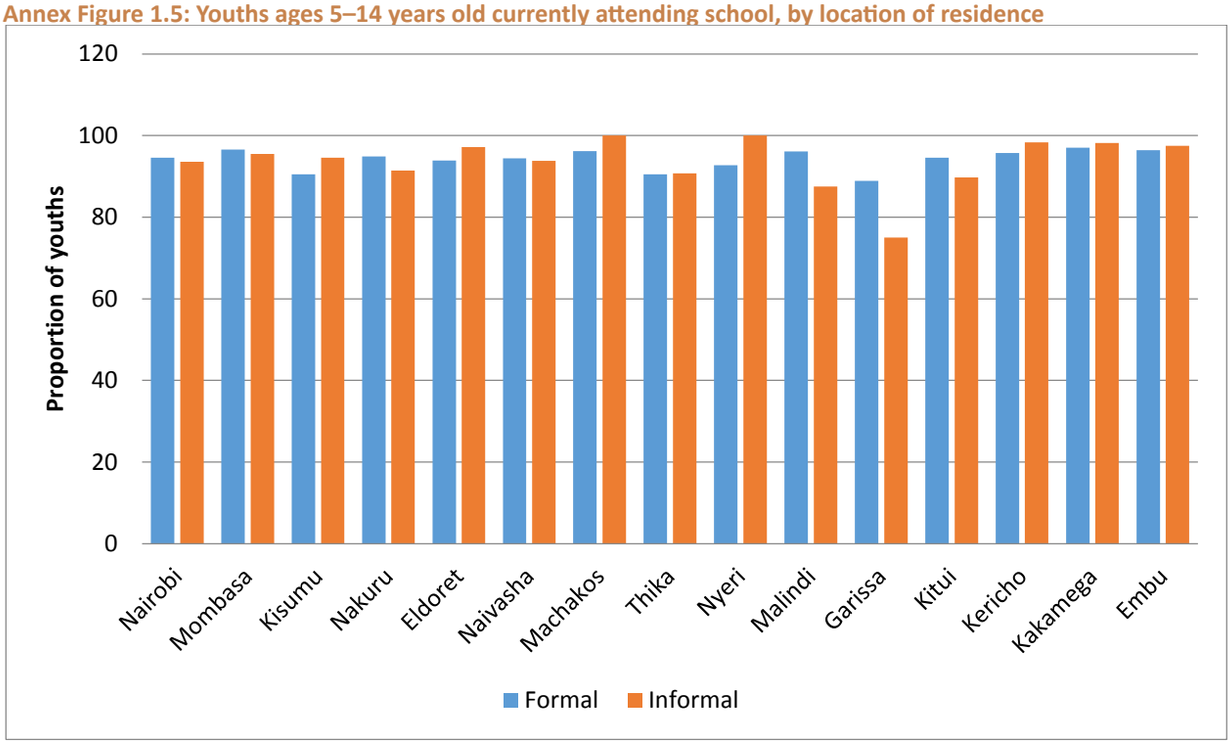
Annex Figure 1.3: Access to solid waste collection services



Annex Figure 1.4: Households whose internal access road is unpaved

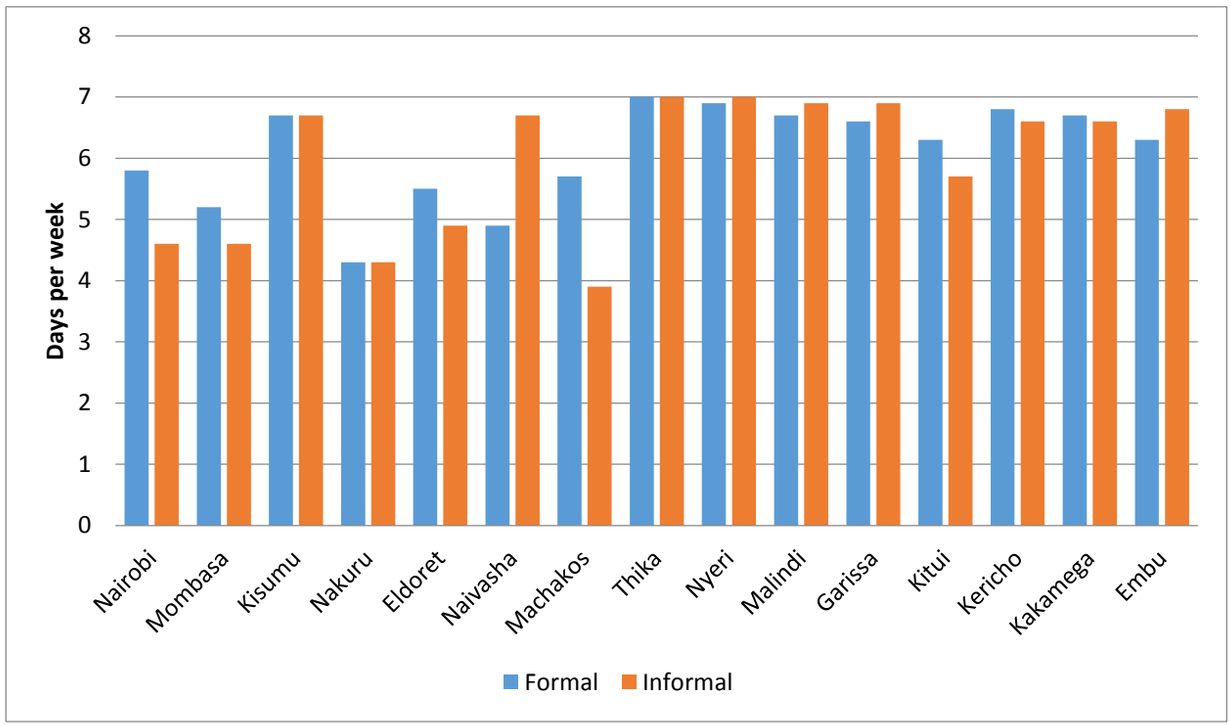


Annex Figure 1.5: Youths ages 5–14 years old currently attending school, by location of residence

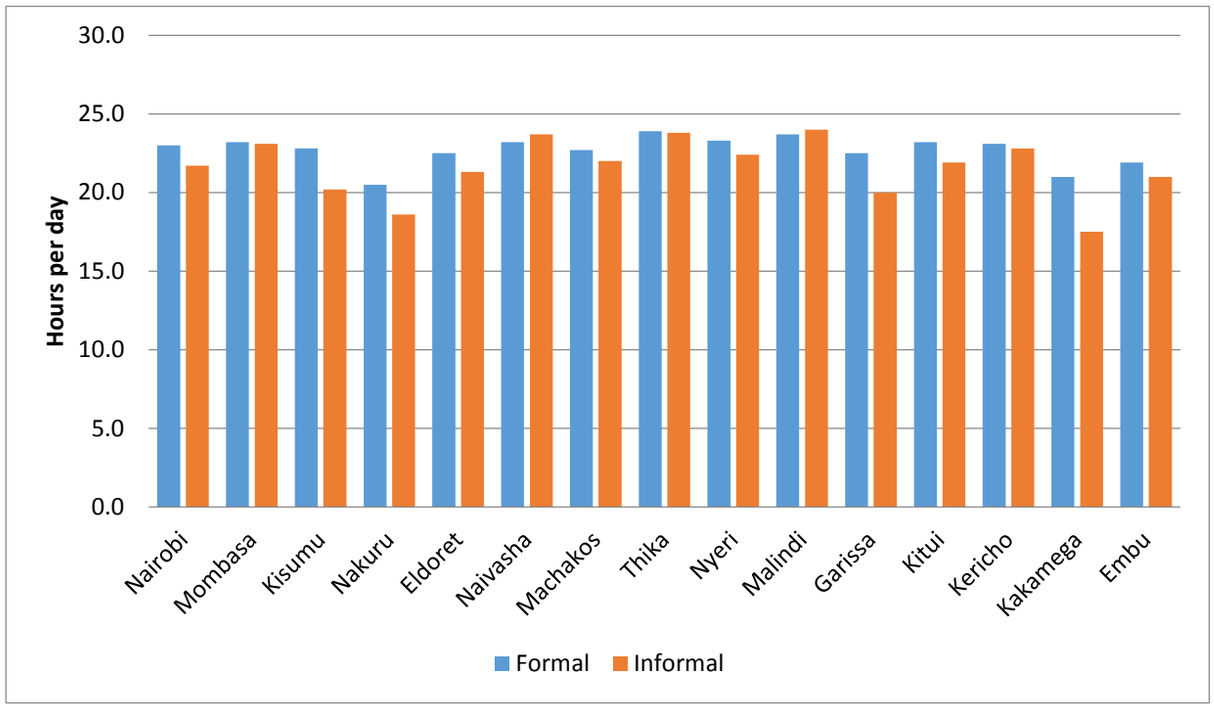


Quality of basic infrastructure services in 15 urban centers by formality of neighborhood of residence

Annex Figure 1.6: Water: Days per week of service for households with access to piped water in the house or compound

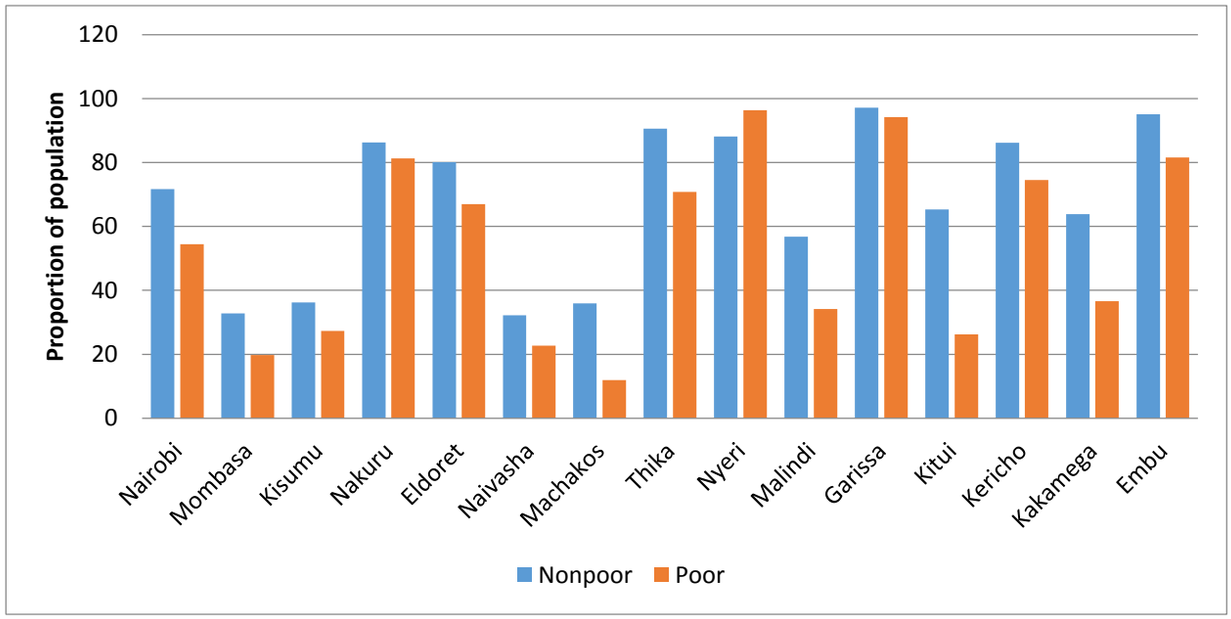


Annex Figure 1.7: Electricity: Hours per day of service

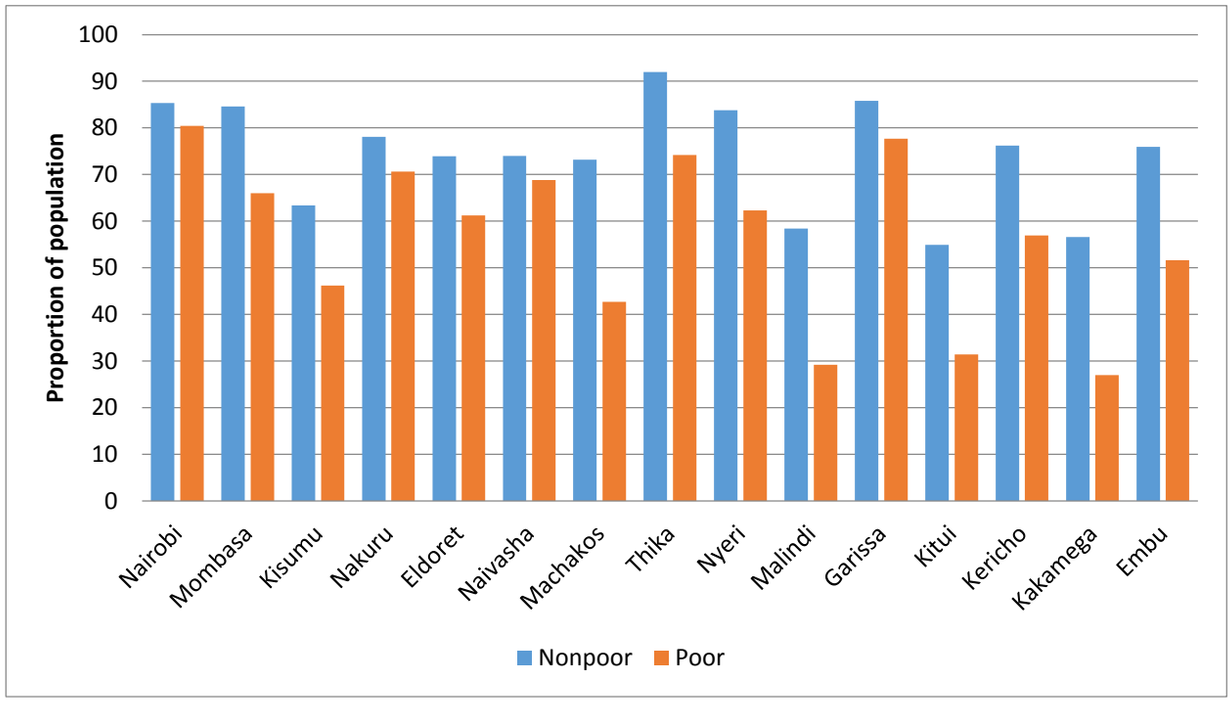


Access to basic services in 15 urban centers by poverty status

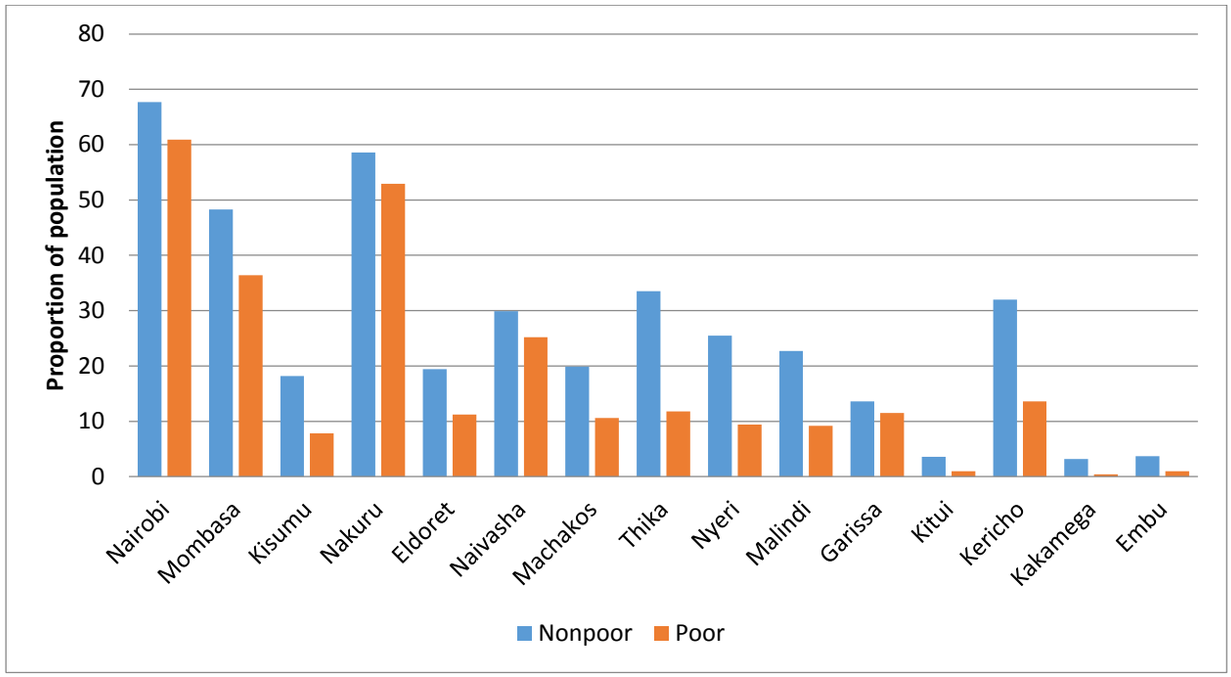
Annex Figure 1.8: Access to piped water in the compound or at the house



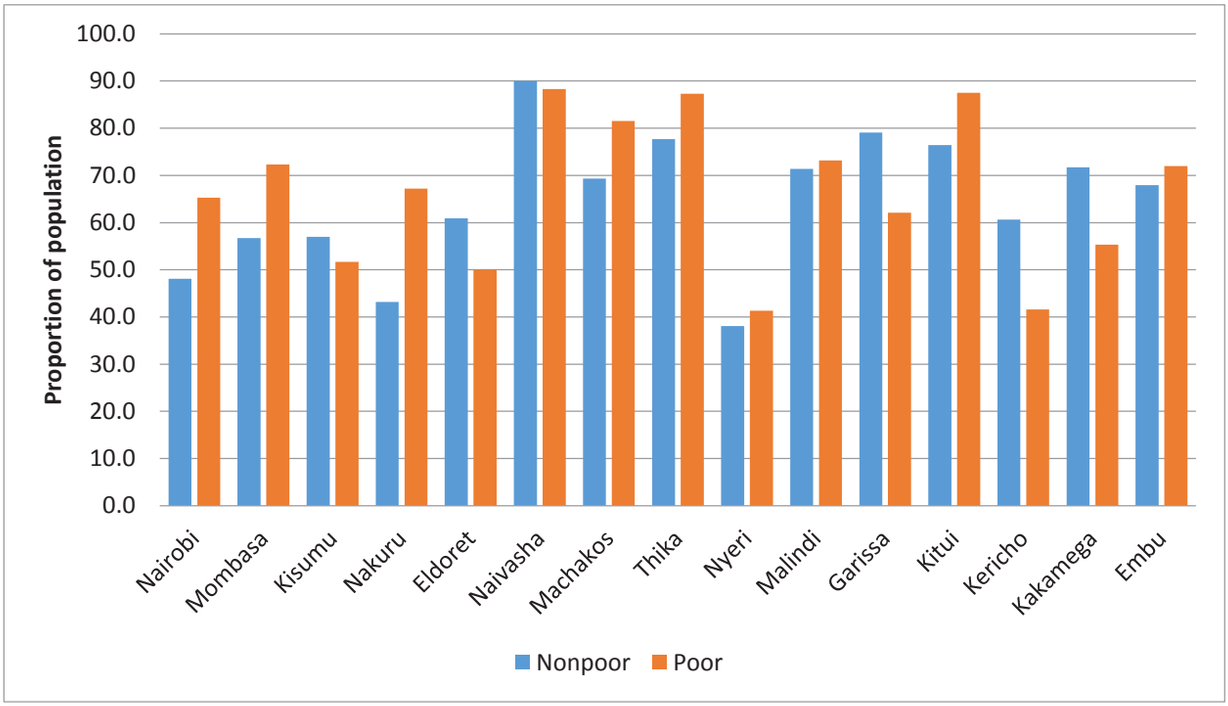
Annex Figure 1.9: Access to in-house electricity



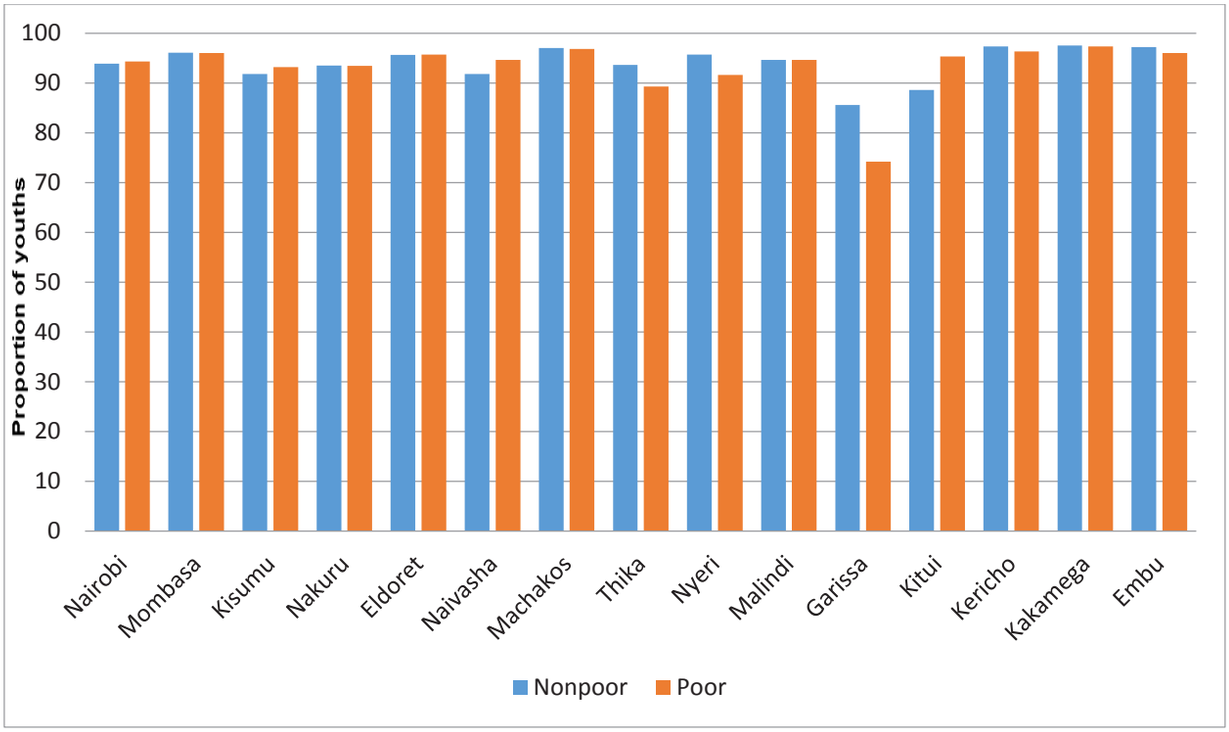
Annex Figure 1.10: Access to solid waste collection services



Annex Figure 1.11: Households whose internal access road is unpaved

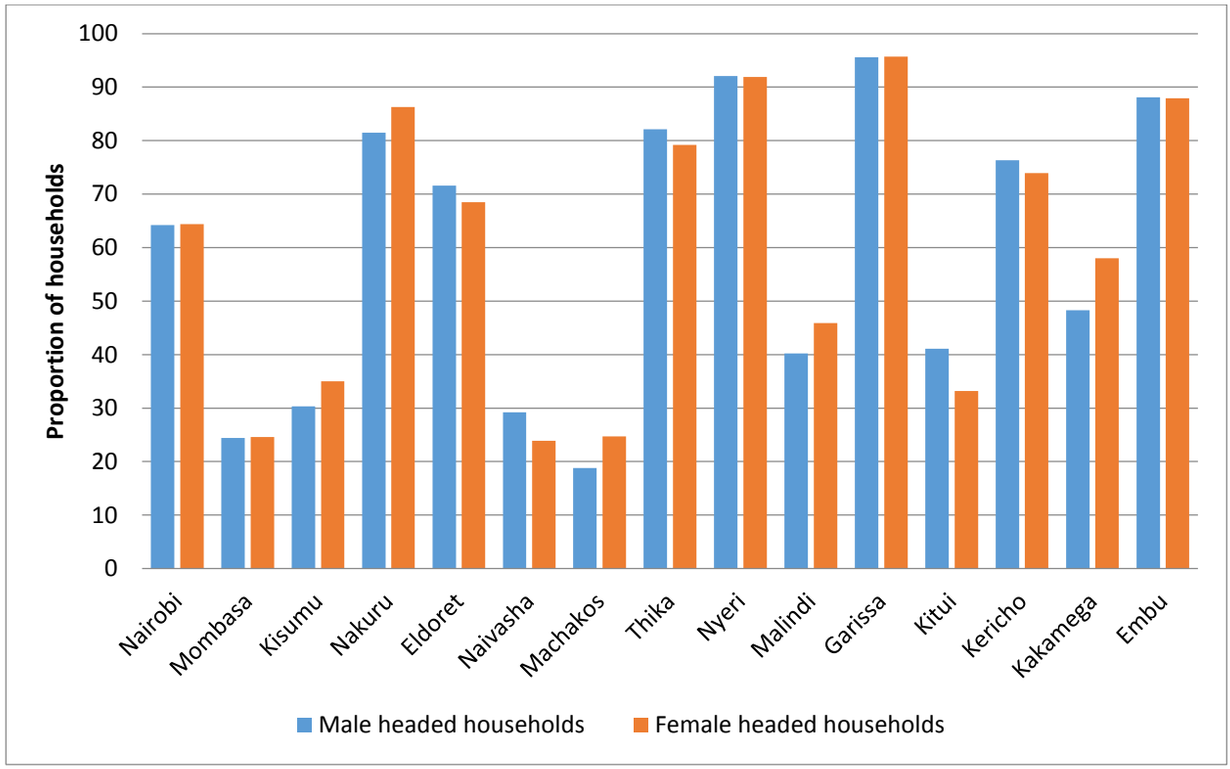


Annex Figure 1.12: Youths ages 5–14 years old currently attending school by household poverty status

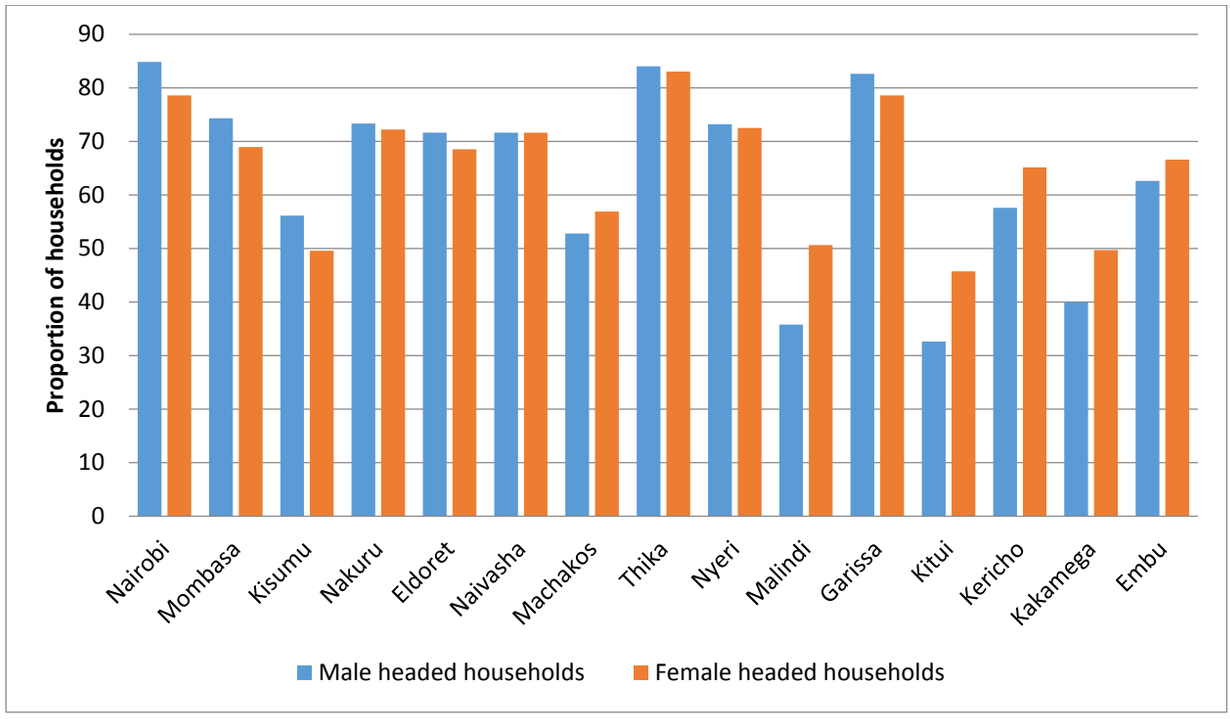


Access to basic infrastructure services in 15 urban centers by household head gender

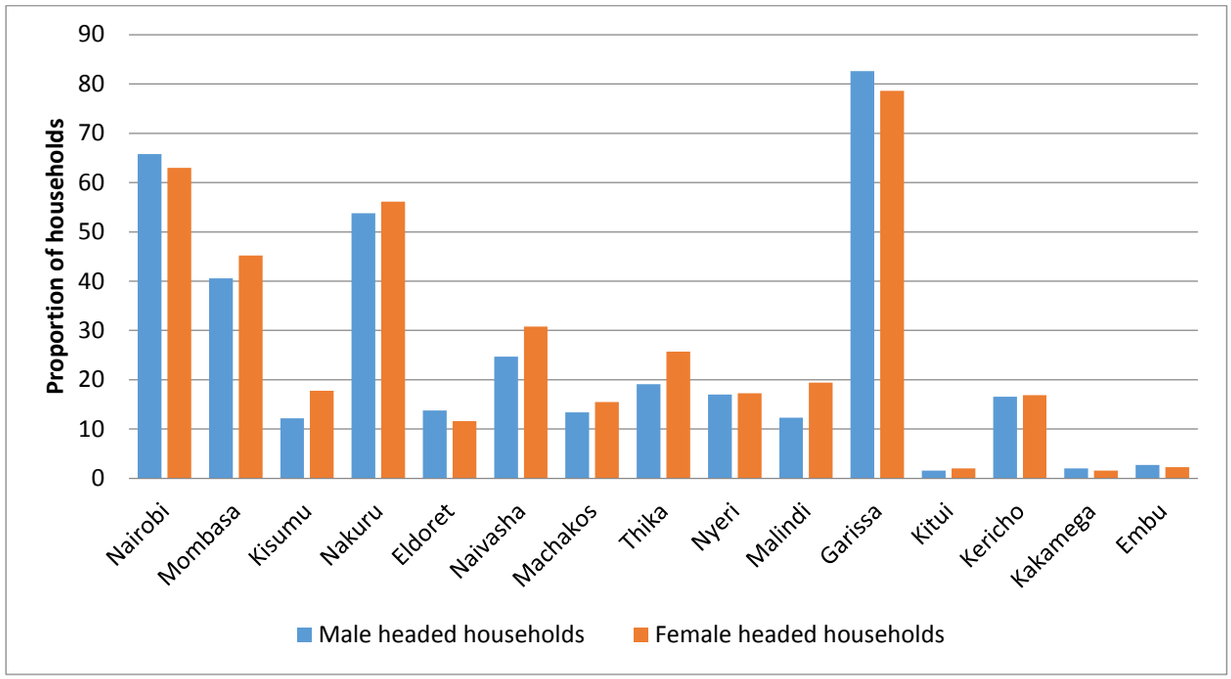
Annex Figure 1.13: Access to piped water in the compound or at the house



Annex Figure 1.14: Access to electricity at the house



Annex Figure 1.15: Access to solid waste collection services



Annex 2: Water and Solid Waste Management Legislation

Annex Table 2.1: Sector-specific and other legislation relevant to the water sector

County Government Act 2012	
Planning and budgeting	The Act requires county plans and budgeting to achieve the progressive realization of the rights guaranteed under the Constitution of Kenya 2010. County plans are to include an integrated development plan; sector plans for the provision of water, sanitation, and solid waste management services; a spatial plan; and urban plans in terms of the Urban Areas and Cities Act.
Tariffs	**The Act gives county governments the mandate to establish tariff policies for services delivered within the county. Section 120 of the County Government Act outlines specific guidelines for establishing tariffs, with a strong focus on equity and financial sustainability.**
Public–private partnerships	Section 6 enables counties to delegate the management and delivery of specific services to the private sector "*…in accordance with the provisions of any law relating to public or private partnerships for any work, service or function within its area of jurisdiction*."
Monitoring and reporting	Section 47 assigns responsibility for a performance management plan to the County Executive Committee to evaluate county public services and the implementation of county policies. The national government must provide support to county governments to enable them to perform their functions, including performance and capacity assessments. If assessments demonstrate an inability to perform functions, the cabinet secretary can call for national intervention, even performing the functions with approval of Parliament.
County public service	Section 56 and 57 of the County Government Act establish county public service units. The specific role and purpose of these units, however, is not clarified.
Decentralized urban services	Under Section 48 the functions and provisions of services within each county are decentralized to the urban areas and cities within the county established in accordance with the Urban Areas and Cities Act of 2011. County governments should therefore be aware of the specific duties and responsibilities on urban water supply and sanitation.
Intergovernmental coordination	Section 54 requires the establishment of a County Intergovernmental Forum that includes the heads of all national departments rendering services in the county. This forum provides a critical platform for coordination between county and national government.
Water Act of 2002	
Separating sector functions and responsibilities	The current Water Act remains in force until the bill is passed by Parliament. While the 2002 Act assigned significant responsibility on the Minister in charge of the water portfolio, it also separated key functions within the sector, widely acknowledged as a catalyst for increased funding and improvements in service delivery.
Establishing water companies	The post-2002 reforms encouraged formation of water companies, under the Companies Act, professionally managed, governed under a board of directors, regulated, and able to recover the costs of operations and contribute funding to capital costs.
Urban Areas and Cities Act of 2011	
Overview	**The Urban Areas and Cities Act of 2011 provides for the definition of and principles of governance and management for urban areas and cities in each county.**
City and municipal boards	The Urban Areas and Cities Act states that: "*The management of a city or a municipality shall be vested in the county government and administered on its behalf by a board with the mandate to develop and adopt policies, plans, strategies and programs, and may set targets for delivery of services. They serve as the agents responsible for urban water, sanitation, sewerage, and solid waste management services*."
Integrated development planning	**The Urban Areas and Cities Act of 2011 requires integrated development planning, including delivery of basic water and solid waste management services.**
Other	
Other legislation	**Other significant legislations that county governments should be familiar with include the Public Health, Environmental Management, and the Coastal Development Authority acts.**

Source: County Government Act 2012; Water Act 2002; Urban Areas and Cities Act 2011.

Annex Table 2.2: Summary policy, legal and regulatory framework for solid waste management

Policy/legislation/regulation	Provision/requirement	Institution
The Kenyan Constitution 2010	Confers the right to a healthy and clean environment to every Kenyan citizen (article 42); Assigns solid waste management as a function of the counties (Fourth Schedule).	Transition Authority
National Environmental Policy	**A guiding framework on the management of solid waste (Section 6.3)**	**National Environment Council**
Kenya Vision 2030	A blue print for development in Kenya for 2008–30.	Kenya Vision 2030
Environmental Management and Coordination Act	**A framework for management of the environment and provide for implementation of article 42 of the Kenyan Constitution, 2010**	**National Environment Management Authority (NEMA)**
Environmental Management and Coordination (Waste Management) Regulations 2006	Defines waste types; duties of a waste generator; licensing requirements for transport and disposal of waste nationally.	National Environment Management Authority (NEMA)
Urban Area and Cities Act 2011		**County governments**
Physical Planning Act 1996		County governments
Public Health Act		
County Governments Act 2012		County governments

Annex 3: Planning for County Competitiveness

Analysis of CIDPs for Nairobi, Mombasa, Nakuru, and Machakos

County integrated development plans (CIDPs) for Nairobi, Mombasa, Nakuru, and Machakos counties were analyzed in detail. These CIDPs struggled to address the key questions identified by the review of international best practice in local enterprise development (LED):

1. What analytical tools to use? *International experience suggests that good analytics for an LED strategy do not require use of specific techniques. Instead, it is far more important to follow the full cycle of analysis—data collection, data processing and analysis, data interpretation—and reflecting it in the prioritization of interventions.*

Analysis presented in the CIDPs was mostly descriptive and often lacking detail; data availability was poor and insufficient for in-depth analysis. The link between the priority projects and analytics was not always clear.

Nairobi City County's CIDP is an exception. The document offers detailed data-driven analysis of every major sector of urban development and uses a multi-criteria technique to identify projects of highest priority. This can be used as an example for CIDPs for other Kenyan counties.

2. Which interventions to prioritize and how to ensure their implementation? *Good strategies are defined by a balance between wide thematic coverage and clear focus on a limited number of interventions. While there are certain themes and issues that are addressed in most LED strategies, it is not the types of interventions selected that define the quality of the strategy but rather the extent to which they reflect the local context: for instance, challenges faced by the private sector, the capacity of the local government, and so on. Actionable strategies are defined by clearly defined priorities reflected in realistic yet ambitious targets.*

    - The CIDPs seemed to lack focus—priority projects number in the hundreds, suggesting weak prioritization frameworks and unlikely future implementation.

Nakuru County's CIDP contains 100 pages of lists of suggested projects; Mombasa County's CIDP lists 30 main targets for the county that it plans to achieve by implementing projects that are listed on 110 pages. Nairobi City County's CIDP offers a more systematic approach to prioritization, but a very large number of projects are listed as priorities.

    - Most CIDPs lack clear targets and thorough monitoring and evaluation frameworks. In general the focus on implementation appears insufficient.

Mombasa and Nakuru Counties' CIDPs include large chapters that list clear targets for all projects and identify the parties responsible for implementation. But even in the most thoroughly developed CIDPs the implementation framework appears very loose, costing techniques are not substantiated, and the level of accountability of the responsible parties is not clear.

    - Some CIDPs appear to have a relatively weak focus on economic growth and job creation, particularly beyond the agricultural sector.

Nakuru County's CIDP has over a 100 projects identified within various subsectors of the agricultural sector, and only six for tourism and seven for manufacturing.

    - The legal status of CIDPs is not clear. Can counties be held accountable for not implementing plans? Anecdotal evidence suggests that the links between county sectoral plans, CIDPs, and annual plans are not well established in many counties, which points at both complexities of the system and lack of capacity.

3. How to fund priority interventions defined within the LED strategy? *LED strategies differ drastically across countries and regions in terms of their sources of funding. In European countries EU funding plays an important role; in lower-income countries donors make an important contribution. Depending on the level of centralization of government functions and budgets the role of locally raised revenues or national grants varies. But what is important is not the source of funding, but the fact that the funding streams for priority projects should be secured and reflected in the budgeting process for the duration of the strategy implementation for at least a medium-term horizon.*

Unfortunately the priority projects defined in most CIDPs are not linked to the budgeting process and in most cases do not have secure funding to back them. CIDPs thus appear somewhat like wish lists rather than strategic plans that can be used for implementation.

Mombasa County's CIDP offers a detailed description of key projects, including evaluated costs and sources of funding. The CIDP also offers a framework for resource mobilization. But it is not clear to what extend the suggested sources of funding are secured. Nairobi City County's CIDP lists donor organizations as a source of funding in many instances, although the actual availability of these funds remains uncertain.

4. How to define the right level of private sector engagement? *International experience suggests that successful implementation of an LED strategy relies on close engagement with the private sector throughout the design and the implementation phase. Ensuring early engagement with the private sector allows key private sector players to share ownership of the strategy and responsibility for its implementation. There are examples in international practice when successful LED initiatives were driven exclusively by the private sector.*

   The CIDPs reviewed did not offer a clear picture of the extent of private sector participation. Even though the guidelines require counties to partner with local businesses in developing the CIDP, it appears that such collaboration is limited to consultations. In some cases this may be explained by weakness of local business communities; in others this reflects the resource and time constraints that local governments were facing when developing CIDPs. But it is important that when CIDPs are updated greater attention is given to private sector engagement, and the local business community should be involved in planning and implementation of the CIDPs.

Annex Table 3.1: What to ask when developing a good LED strategy?

Key decision	Potential pitfalls	Nairobi	Mombasa	Nakuru	Machakos
Which analytics to use?	Not following the full cycle	Relatively advanced	Predominantly descriptive, some industry level analysis	Analytics are predominantly descriptive, weak link to the initiatives	Descriptive + SWOT (strengths–weaknesses–opportunities–threats), very basic
Which interventions to choose?	Selected interventions need to reflect local conditions	Good prioritization framework, but still too many projects	Priorities are not clear 30 targets identified 110-page list of projects	100-page list of priority programs and projects.	50 pages of priority initiatives
How to define the right amount of private sector engagement?	Limiting private sector engagement	Extent of engagement is not clear	Extent of engagement is not clear	Private sector engagement appears to be extremely limited.	Extent of engagement is not clear.
How to go about funding the strategy?	Lack of secured funding	A lot of projects rely on donor funding	Offers revenue raising strategies, but no link between that and projects	High dependence on raising additional revenue	Nothing offered on the subject

Lessons from international best practice in LED should be used to improve the CIDP process. The CIDP process so far raises two main concerns: the way the CIDP process was designed at a national level, and the way the CIDPs were prepared and now are being implemented at a county level.

At the county level more attention should be given to making plans more realistic and implementable. Given scarce resources, counties should focus on identifying key bottlenecks in each sector, thus shortening the list of priority projects, with clear and detailed implementation strategies and funding streams. To strengthen the CIDPs, counties should:

- Put more emphasis on targeting economic growth and job creation opportunities.
- Strengthen the analytical aspect of strategies, and make sure that analysis follows the full cycle and that results are reflected in the prioritization framework for policy selection.
- Limit the number of flagship initiatives. And have detailed funding and implementation strategies for them.
- Strengthen the link between priority initiatives and budgeting process.
- Seek ways to engage private sector more throughout the process.

In order to strengthen the potential of CIDPs as a tool for economic development, the national government should also

adjust the requirements and the incentives counties are facing when developing CIDPs.

- Help counties build capacity needed to develop high quality CIDPs.
- Offer one clear set of guidelines.
- Clarify the way CIDPs are factored into grant allocation.
- Strictly require clear prioritization and clarity on funding strategies within the CIDPs.
- Require more scrutiny in costing exercises, and monitoring and evaluation arrangements.

CIDPs are subject to review on a yearly basis, so there will be opportunities to revisit the strategies and improve upon them. One way of improving the CIDPs would be by adopting a systematic framework for identifying economic development bottlenecks and prioritizing interventions that would support economic growth and competitiveness. In the next chapter we present a methodology that can be used to address this challenge.

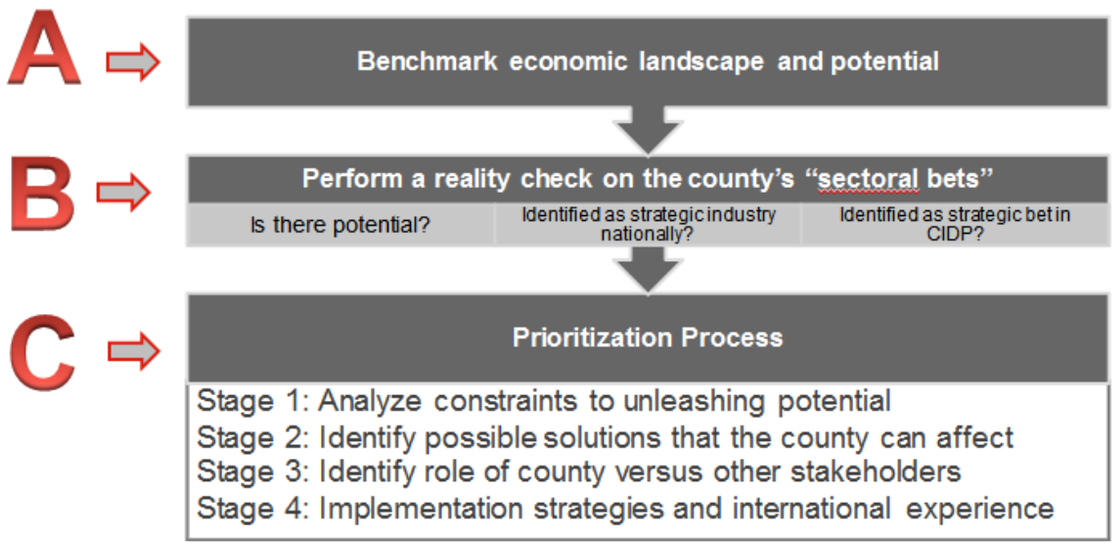
Prioritization for economic growth and job creation

The design and the practicality of CIDPs would be vastly improved if they used a clear prioritization framework. Such a framework should combine the developmental vision and aspirations of the county, analyze the key constraints associated with achieving the vision and formulate ways to address the barriers. One possible approach to this problem is sector prioritization. This is not the only way to make CIDPs more focused and actionable, and this report does not recommend that all counties should adopt this approach in particular. But the approach offers a clear and structured way of addressing economic development challenges systematically within a strategic planning process.

The approach to sector prioritization has pros and cons. The main strength of such an approach is the in-depth analysis of the constraints that a sector is facing in the local economy and the design of specific, actionable and targeted interventions to address them. The main challenge however is associated with the difficulty of selection of the priority industrial sectors. A number of techniques can be used to assist local government in sector prioritization, but no one exercise can give a precise answer. In addition, prioritizing one industry over others also carries its own risks. In this chapter priority sectors for case-study counties were selected by means of reviewing sectors that counties identified within their CIDPs as those with high potential and verification of the selection through consultations and (where possible) data analysis. More rigorous selection techniques can be applied if better data on the structure of output, employment, and export become available at the county level.

The prioritization process starts with general high level analysis of the state of the economy and then gradually zooms into specific sectors and issues. The process (described in Annex Figure 3.1) starts with mapping of the economic landscape of the county and identification of its competitive position within the national context. The next stage entails identification of possible sectoral bets and analysis of the competitive advantages that justify the sector's potential. The last stage focuses on identification of priority interventions, which requires in-depth analysis of constraints associated with a specific sector, understanding possible solutions and strategies to address the challenges, learning from international experience of implementing similar strategies and designing an implementation strategy on this basis.

Annex Figure 3.1: The stages of industry prioritization approach to economic planning.



A description of the national, sectoral, and county-specific economic landscape yields interesting insights. ***Nairobi City County*** continues to account for the largest share of GDP and employment in Kenya, and given the performance of nearby counties, it continues to be an engine of growth for the economy as a whole. At the same time, being the capital and an East African hub, and being accustomed to large outlays for recurrent and capital expenditures, it might be better suited to deal with devolution and its opportunities and challenges. ***Mombasa County*** enjoys terrific natural and economic advantages, owing to its location and infrastructure. Yet, its economic performance is lagging far behind its potential, and private sector firms describe facing increased challenges to doing business. ***Nakuru County*** is an interesting case because although it has a large potential for growth, it appears to be losing competitiveness. It has also had to deal with the pressures of sudden increases in population, which could hinder or help growth depending on the county's strategic priorities and implementation. And lastly, ***Machakos County*** has already received much attention in the press owing to its clear focus on growing its economy. At the same time, possibly owing to its proximity to Nairobi or its strategic guidance, it seems to be growing in competitiveness, outperforming its potential. In conversations with private sector and county officials elsewhere, it was repeatedly mentioned as a county whose experience others were keen to know more about.

The reality check consists of accounting for three main questions: (1) does the sector have potential, (2) has it been identified as strategic nationally, and (3) has it been identified as a strategic bet within the CIDP? In this case, we also took into account the availability of existing data sources on different industries, given the timelines for the study. We also chose diverse sectors, so as to illustrate the range of analysis that would support this exercise. In other words, the industries selected for each county meet the three reality checks, but also help demonstrate the process and the usability of the prioritization framework.

The following industries were selected for each county:

Nairobi—Financial services: This is one of the most productive high-end service sectors that Nairobi aims to focus on, and one that has high potential for growth owing to Nairobi's existing position as hosting an innovative banking sector in the East African region.

Mombasa—Tourism: Tourism accounts for a large part of Mombasa County's GDP and the sector has been struggling recently owing to security issues in the region. The CIDP emphasizes the county's natural assets for tourism developments and aims to revive and diversify the industry.

Nakuru—Textiles and apparel: Nakuru County has once been a powerhouse of the textiles sector. There remains an opportunity to exploit the benefits of an extension of the African Growth and Opportunity Act agreement, at the same time reviving the sector in ways that would have closer links to the local economy.

Machakos—*Agro-processing*: Machakos is a mostly rural county that has a potential to use its favorable location and transport links to neighboring Nairobi and the airport to stimulate agricultural development and speed-up industrialization.

The prioritization process involves four distinct stages. We provide below an extremely condensed flavor of our findings at each stage for different counties.

Stage 1: *Analyze constraints to unleashing potential*: We analyze data at the national, sector, and county-level to understand better the constraints to growth. For instance, Mombasa, being a seaside location was found to be well-placed to exploit the potential growth and employment opportunities for tourism. But tourism competitiveness in Kenya has been affected by a difficult security situation, poor quality of infrastructure and services, restrictive business environment and lack of skilled workers.[143] In particular, Mombasa seems to have established itself as a cheap, mass-market resort, leading to low in-country expenditures and low value-added. This seemed to be further exacerbated by poor access to electricity, high tax rates and poor access to finance (World Bank Enterprise Survey 2013).

Stage 2: *Identify possible solutions that the county can affect*: We look at the possible range of actions that could be taken to respond to the key obstacles that an industry is facing, and then identify solutions that could be implemented by counties. In the case of Nairobi's financial services sector, the city's potential as a financial hub for East Africa was clear. But the sector's growth potential relied largely on factors that were beyond city's control: political and macroeconomic stability, open trade and capital flows, contract and property rights enforcement. Looking more closely, there were some conditions that were well within the city's remit (and which mattered to the sector): availability of skilled workers, favorable living conditions, and affordable office space. The county could target these interventions in the medium-to-long term, thinking systematically through the link between its objectives, resources and sequencing of investments.

Stage 3: *Identify role of county versus other stakeholders*: At this stage we consider specific interventions that a county could initiate on its own or facilitate through partnerships with businesses, working with neighboring counties, or leveraging national initiatives. Nakuru County, for instance, could support its textile sector by marketing the opportunities to potential investors, developing quality assurance schemes to overcome distrust in supply chain, overcoming information barriers by linking apparel and textile producers and offering incentives to exporters who invest in building local supply chains. At the same time the county ought to help local businesses make the most of national initiatives that offer access to cheap credit, electricity network upgrades, and support for vocational technical training. And importantly, investments in local inputs for the textile supply chain ought to be coordinated with neighboring counties to maximize scale and spillovers.

Stage 4: *Implementation strategies and international experience*: We identify examples of interventions from cities around the world that tackled similar issues in similar conditions and identify lessons that may inform strategy design for the county. For Machakos County, that has potential to grow an agro-processing sector through combining productivity upgrades in agriculture with luring in manufacturers, we looked at the experience of a World Bank Group–funded project in Gambia. The initiative combined efforts to improve productivity in mango growing through introduction of better practices with bringing in a foreign juice manufacturer, which simultaneously secured future demand for farmers who invested into producing better mangos and reliable inputs stream for the incoming investor.

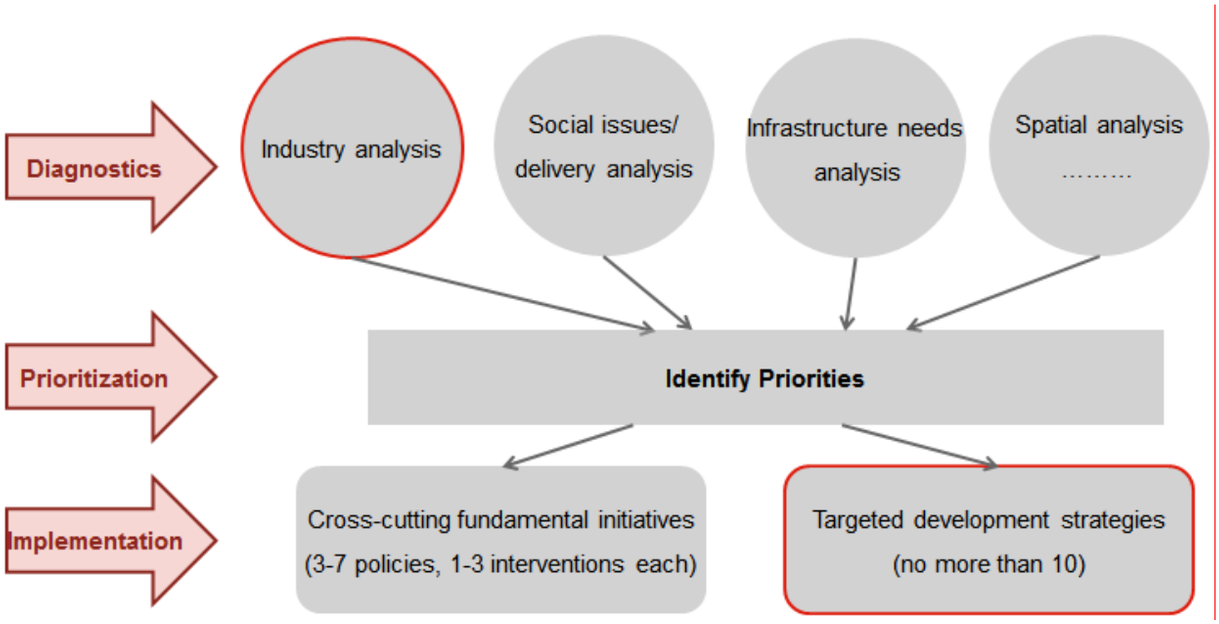
CDIPs could be a useful vehicle for prioritizing the economic development effort, and could be improved significantly to become potent instruments to encourage county competitiveness. In order to make CIDPs more actionable counties need to make them more focused and adopt prioritization frameworks that identify key growth opportunities and look for ways to maximize them. The Sector Prioritization framework offered in this report is one of the methodologies that could be used to achieve this goal.

CIDPs should have a strong competitiveness component and this should be reflected in the analytical and prioritization methodologies. CIDPs by their nature are not limited to economic development and target a much broader array of issues, but it is important that despite all limitations counties maintain a focus on issues of economic growth and job creation.

CIDP should similarly diagnose social issues, infrastructure needs and develop a coherent spatial framework. Two caveats should be kept in mind. Firstly, given the changing demographic profile in Kenya, the analysis of economic growth opportunities should be given high priority, and secondly, the results of different analytical strands should be reconciled to identify a list of priority intervention areas including cross-cutting initiatives that are fundamental for local development and targeted development strategies, that should aim to support achieving specific aspects of the county development

vision (grow specific industrial sectors, target specific social issue, and so on) (Annex Figure 3.2).

Annex Figure 3.2: Suggested prioritization process for CIDPs



Annex 4: Intracity Connectivity in Nairobi

Quantifying the cost of congestion

The overall cost of congestion quantifies the difference between the cost of travel under current conditions and the cost of travel under acceptable service conditions. We assume that congestion does not affect out of pocket costs but only travel times. As a consequence the cost of congestion can be measured as follows:

Cost of congestion = ((travel time * VOT) in congested conditions) - ((travel time * VOT) in desired/reasonably attainable conditions)

Acceptable service conditions are commonly understood in the practice as equivalent to Level of Service "C." The Texas Transportation Institute calculates the cost of congestion in its annual Urban Mobility Report in the United States by assuming that free flow speeds are the desired conditions, but this is likely unattainable in an East African context. As a result, the report chooses improvements to reasonably attainable travel speeds as a way to gauge congestion costs. It must be noted, however, that this estimate does not include the logistics (inventory) costs savings for freight transport or incremental vehicle operating costs associated with congestion (including the capital costs of additional vehicles required by public transport operators to maintain given service levels).

Modelling optimal land use coordination

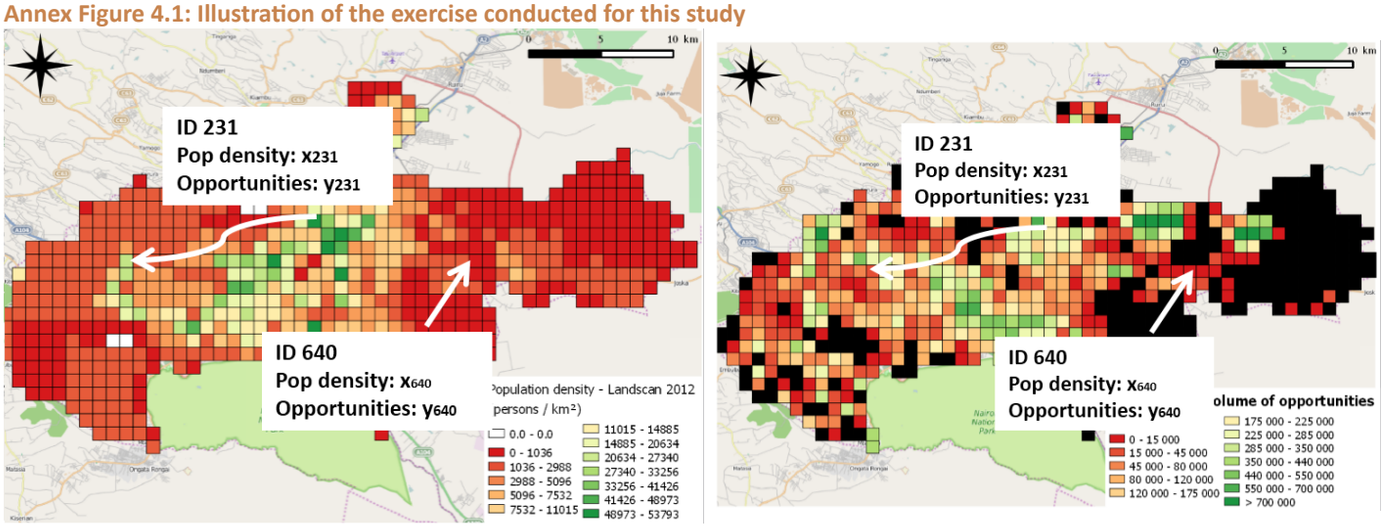
The indicators presented in figures 4.18 and 4.19 and table 4.2 give us some information about accessibilities using either cars or *matatus* for the current spatial layout of Nairobi. But they do not provide information about more or less desirable spatial distribution patterns of jobs and households.

To try to fill this gap and provide some information about the city's performance, we conducted a first series of tests. Keeping constant the transport network and the overall building stock, we randomly re-shuffled all opportunities and population throughout the urban area and re-computed for each outcome some indicators of how the city performs in connecting households with employment opportunities. Proceeding in this manner, 10,000 different spatial distributions are produced. The main objective here is not to define the most efficient spatial organization. Rather the aim is to propose a metric that can

help stakeholders evaluate the performance of their current urban organization against a vast number of different random potential outcomes keeping the main features of the city constant (transport network, building stock, population, number of jobs). The results of the simulations described above indicate that Nairobi in its current spatial layout performs better than any[144] of the 10,000 random counterfactual scenarios in providing overall access to opportunities to its residents. The conclusion that can be derived from this exercise is that businesses and households, when deciding where to locate within Nairobi, take into account the existing transport network and the location of opportunities. As a consequence, the current spatial layout of Nairobi, which is a result of millions of individual decisions, represents a best possible coping outcome for Nairobi and its population; given the constraints on capital investments in transport infrastructure and residential structures, and absent substantial coordinating planning controls, the current spatial arrangement optimizes accessibility, that is, it outperforms any random alternative spatial layout in providing accessibility to Nairobians. This result also shows that the current spatial layout of Nairobi is the outcome of an internal self-organization.

These results, however, beg the question: if a coordination mechanism could be devised to selectively modify land-uses even in the absence of more substantial transport infrastructure investment, could a better or even "optimal" spatial pattern in terms of accessibility be achieved? A second exercise described attempted to answer this question.

Annex Figure 4.1: Illustration of the exercise conducted for this study



Note: All pixels are characterized by a population density and a number of economic opportunities (commercial, educational, and industrial floor space). 10,000 random permutation of these grid cells were performed to evaluate whether accessibility can be enhanced through changing the land use patterns (the location of population and opportunities).

This second exercise aims to assess the most efficient spatial coordination of land uses, keeping, as previously, the transport network, population, number of jobs and building stock constant. The methodology relies on a hill-climbing optimization procedure which only switches grid cells 2-by-2 starting from the current spatial layout of Nairobi (instead of permuting all grid cells at once as in the previous exercise). When this permutation increases overall accessibility, the new spatial layout becomes the baseline and a new iteration is performed. If this permutation is not successful, the permutation is discarded and another one is tested. This process is repeated a number of times to try to converge to an optimum. Performing 100,000 iterations using this hill climbing procedure, it is shown that overall accessibility can increase substantially in Nairobi. Results indicate that alternative land use coordination patterns can increase overall accessibility by 15% for cars (from 77% to 92.5% of accessible opportunities) and can even double the share of economic opportunities which can be reached within an hour using *matatu*s (from 20% to 42%). These conclusions indicate that even if Nairobi's spatial layout performance is tolerable in connecting people to opportunities as demonstrated in the first exercise, there is still considerable room to increase accessibility through better land use coordination. Achieving such outcomes, however, will require very strong governance structures, enforcement policies and planning capabilities.

Modeling monocentric vs polycentric growth patterns

To examine the implications of monocentric vs polycentric different growth patterns, two scenarios of future development

were constructed, with accessibility measures being compared between them. Both scenarios assume a 20 percent increase in employment (from 1.7 million to 2.1 million jobs). The first scenario perpetuates Nairobi's current monocentric growth pattern, with the highest job growth rates occurring at the city center. The second scenario provides one possibility of what might transpire if the city implements policies that direct growth toward select polycentric centers, beyond the central business district.

Reducing the commuting distance through polycentric growth may reduce the need for private motorized travel and increase job accessibility for low-income Nairobians. While the central business district contains the largest concentration of jobs, the map of job accessibility by walking indicates other areas exist that possess sufficient access to employment. A resident who is able to get to 50,000 jobs in 30 minutes is defined as featuring a high level of accessibility. Table 0.1 below indicates the number of people in each income bracket who can walk to at least 50,000 jobs in 30 minutes. Currently, 16 percent of the population can walk to more than 50,000 jobs. Holding congestion constant, this percentage increases to 22 percent as more jobs are added through the monocentric growth model; alternatively, the potential polycentric growth approach grants high employment access to 31 percent of the population. In both models and the current scenario, workers in lower income brackets are more likely to be able to walk to employment centers than high income earners. Employees in higher income brackets are more likely to commute by personal automobile or *matatu*, making close proximity to jobs a less important factor in choosing housing location.

Annex Table 4.2: **Individual access to 50,000 jobs within a 30-minute walk (number, percent)**

Income bracket (2013 $US/month)	Current jobs		Monocentric growth		Polycentric growth	
< $58 US$	153,063	22%	202,815	29%	242,477	34%
$58 US$—$174 US$	123,816	19%	166,753	25%	230,874	35%
$175 US$—$348 US$	67,876	14%	105,970	21%	163,784	33%
> $348 US$	49,528	9%	83,207	15%	119,675	22%
Not reported	85,309	13%	118,795	18%	211,285	32%
Total population	479,592	16%	677,540	22%	968,095	31%

Source: Income and job location, JICA (2013). Population density, WorldPop (2013). 30-minute accessibility calculated by Conveyal.

Overview of Kenya's Transport System

Road Network

Nairobi's street infrastructure consists primarily of paved roads emanating radially from the center of the city into surrounding neighborhoods. Few roads link the radials outside of the central business district. The city also contains eight "principal arterial" (17,000–18,000 average daily traffic) and three "minor arterial" roads (10,000–12,000 average daily traffic). So while arterial links to the central business district are extensive, the arterial network (interdistrict connectivity) outside the central business district is thin.

Public and Mass Transport

Nairobi was founded as a railway town, and its rail infrastructure remains well connected to the city center. Rift Valley Railways offers twice-daily service on five commuter rail routes in the Nairobi metropolitan area, averaging 2,300 to 6,900 passengers per route. Future connections are expected to connect Nairobi Railway Station to Jomo Kenyatta International Airport (22 kilometers) and the eastern suburb of Kayole, as well as a connection between the Embakasi Station and the airport (6.5 kilometers) (Kenya Railways Corporation 2015). While commuter rail is an economical mode of public transport, at present it serves only a tiny fraction of the daily commuting needs of the Nairobi public. Nairobians' most commonly cited reasons for not using the system are concerns with safety and comfort, along with protracted travel times and difficult access to stations (Consulting Engineering Services (India) Private Limited 2010).

Nairobi's network of small, privately-owned, and privately operated buses and vans, known locally as *matatu*s, forms the backbone of public mass transport services in the Nairobi metropolitan region. The *matatu* system is not regulated

by the Kenyan or Nairobian governments, so, while it is successful in moving a large portion of the population around the city, routes based on passenger demand have not been coordinated to increase overall efficiency (Consulting Engineering Services (India) Private Limited 2010). *Matatus* are estimated to carry about 63 percent of daily urban commuter traffic, amounting to roughly three million passenger trips per day, although a 2012 study for the Transport Licensing Board only found about 1.1 million passenger trips per weekday carried by *matatu*. That study found that about 9,500 *matatus* provide service along 138 different routes (Envag Associates 2012), though subsequent work mapping *matatu* routes digitally systematized services into 97 separate routes in 17 route groupings (Digital Matatus 2015). On major corridors, *matatu*s can make up anywhere from 15 percent to 50 percent of the vehicles on the road. Frequency of *matatu* service is high when compared to bus service, but fare amounts change based on time of day and weather conditions.

Buses operate on roughly 67 routes and carry a smaller percentage of the population than *matatu*s (350,000–400,000 passengers per day). The ownership and operational model of buses in the metropolitan area has undergone considerable changes over the last 70 years, with bus franchising recently becoming the favored model of operation. Currently, 88 bus companies operate nearly 900 buses in Nairobi, with Kenya Bus Service Management Limited (KBS) as the largest operator. KBS buses are collectively estimated to run a total of 9.64 million kilometers per year. With competing companies, bus service is not provided in an efficient manner, maintenance suffers, and profitability margins are low. Contributing to the inefficiencies of the public transport system is the fact that many of these buses travel along the same routes as the *matatu*s, competing for limited space in the already congested central business district (Consulting Engineering Services (India) Private Limited 2010). Also complicating matters is that routes have been optimized to maximize efficiency for the operator and not coordinated to an efficient level in maximizing passenger comfort or convenience.

Non-Motorized Transport

Even though walking has the highest mode share (83 percent of trips contain some portion of walking) within the city, conditions for pedestrians are poor throughout Nairobi's urbanized areas. Pedestrians must deal with limited or non-existent pedestrian infrastructure, exposing them to dangerous traffic conditions and vehicle exhaust such as particulate matter. Often, walking is not a choice but a necessity due to lack of access to public transport or inability to afford public transport (World Bank 2013). In a United Nations Environmental Program study, 81 percent of pedestrians indicated that adequate facilities for walking do not exist along their respective routes, while 86 percent indicated an absence of safe crossings as the biggest problem for pedestrians (UNEP 2009).

Calculating average travel time

The average commuting time in the city is given by the following formula:

$$\overline{T} = \frac{1}{N}\sum_i n_i \sum_j t_{ij}\, p_{ij}$$

Where $\overline{T}$ is the average commuting time in the urban area, N represents the total population, n_i is the population residing in area i, t_{ij} is the transport time between area i and area j and p_{ij} is the probability of traveling to j when residing in i. The probability of traveling to j when residing in i can also be decomposed as follows:

$$p_{ij} = \frac{O_j e^{-\lambda t_{ij}}}{\sum_j O_j e^{-\lambda t_{ij}}}$$

Where O_j represents the number of opportunities in destination area j and λ is a parameter that can be calibrated and should be interpreted as time sensitivity—it measures how the attractiveness of a destination decreases when the travel time to that destination increases. It can be seen that the probability of traveling to destination area j increase with the number of opportunities in that area. But the probability of traveling to destination area j equally decreases with the travel time to reach this destination.

Annex Table 4.3: Impact of the time sensitivity parameter on the probability of commuting to a destination j when 20 minutes are added to the travel time and resulting average trip time using matatus

	Impact of a 20 minute increase in commuting time to reach j					
Value of λ	0.01	0.03	0.05	0.08	0.1	0.2
Probability of commuting to j	–18%	–45%	–63%	–80%	–86%	–98%
Average travel time by *matatu* (mins)	81	62	45	29	22	8

Annex 5: Governance changes at devolution

Annex Table 5.1: Constitutionally assigned urban functions of county governments

Functions transferred from local authorities to county governments	Functions transferred from national government to county governments
• Refuse removal, refuse dumps and solid waste disposal (Para 1) • Licensing and control of undertakings that sell food to the public (Para 2) • Control of outdoor advertising and public nuisances (Para 3) • Libraries, museums, cinemas, video shows and hiring, and sports and cultural facilities (Para 4) • County parks, beaches and recreation facilities (Para 4) • Street lighting, traffic and parking (Para 5) • Public road transport (Para 5) • Animal control and welfare including dog licensing (Para 6) • Regulation of markets (Para 7) • Trade licenses (Para 7) • Planning and development including land survey and mapping, boundaries and fencing (Para 8) • Housing (Para 8) • Electricity and gas reticulation and energy reticulation (Para 8) • Storm water management systems in built-up areas • Water and sanitation services • Fire fighting	• County health services, including county health facilities, pharmacies, ambulance services, provision of primary health care (Para 2) • Liquor licensing (Para 4) • Betting, casinos and other forms of gambling (Para 4) • County roads (Para 5) • Local tourism (Para 7) • Cooperative societies (Para 7) • Fair trading practices (Para 7) • County Planning and development including statistics, electricity and gas reticulation and energy regulation (Para 8) • Pre-primary education, village polytechnics, home craft centers and childcare facilities (Para 9) • County public works and services (Para 11)

Note: Paragraph numbers refer to the Fourth Schedule of the Constitution of Kenya.

Source: Constitution of Kenya, Fourth Schedule, Distribution of Functions between the National Government and the County Governments, Part 2: County Governments.

Annex Table 5.2: Differences in the governance and management of cities, municipalities, and towns under the Urban Areas and Cities Act

Classification	Population threshold	Establishment and governance	Powers and functions	Staffing	Finance
City	Over 500,000	Status conferred by President on resolution of Senate (7) Board of 11 part-time members appointed by county executive committee, 6 of whom appointed through competitive process, 5 nominated by stakeholder bodies (13) Chair and vice-chair elected by members (17)	Body corporate with power to sue and be sued, acquire property, enter into contracts, borrow money and make investments (12) Functions include developing integrated development plan, control and subdivision of land, monitor and regulate services provided by other service providers, facilitate and regulate public transport (20). Make by-laws (21) Other functions and executive powers delegated by county government, including collection of rates (20, 21) Deliver services including through partnerships, joint venture (31–35) Prepare integrated development plan and submit to county executive for approval (39-42)	Manager appointed by county public service board (28) Other staff determined by county public service (12)	Funds of a board consist of transfers from county assembly, money accruing the board in the exercise of its functions, grants, and donations. (43) Requirement to produce budget estimates to be approved by county assembly (45) Audited accounts to be submitted to county executive committee (46)
Municipality	Over 250,000	Status conferred by governor on resolution of county assembly (9) Board of 9 part-time members appointed by county executive committee, 5 of whom appointed through competitive process, 4 nominated by stakeholder bodies (13) Chair and vice-chair elected by members (17)			
Town	Over 10,000	Status conferred by governor in consultation with town committee (10)	Not a body corporate (31) Deliver services as for municipality 'with necessary modifications' (31–35) Prepare integrated development plan and submit to county executive for approval (39–42)	Administrator appointed in same way as city/municipal manager (31)	Requirement to produce budget estimates to be approved by county assembly (45) Audited accounts to be submitted to county executive committee (46)

Note: References in brackets are to section numbers in the Urban Areas and Cities Act.

Source: Urban Areas and Cities Act 2012 as amended.

Annex Table 5.3: Functions and powers of city and municipal boards

Functions:

- Oversee affairs of the city or municipality
- Formulate an integrated development plan
- Control land use and development, within framework of spatial plans as delegated by the county government
- Promote infrastructure development and services as delegated by county government
- Maintain an information system
- Monitor and regulate city and municipal services provided by service providers other than the city or municipal board
- Prepare budget for approval by county executive committee
- Collect rates, taxes, levies, fees and surcharges as delegated by county government
- Facilitate and regulate public transport
- Such other functions as may be delegated by the county government

Powers:

- Exercise executive authority as delegated by the county government
- Ensure provision of services to residents
- Impose fees and charges as authorized by the county government for provision of services
- Make bylaws
- Such other powers as are delegated by the county executive committee

Service Delivery:

- Deliver services on behalf of the county government, as specified in national or county laws
- Establish service delivery entities with the approval of the county executive committee to carry out its functions
- Enter into a partnership with a utility for the provision of social infrastructure services, in consultation with the governor and with the approval of the county assembly
- Contract a private entity to deliver a service with the approval of the county assembly.

Source: Sections 20, 21, 31-and 33 Urban Areas and Cities Act 2012.

Annex 6: Overview of Spatial/Land Use Plans in Kenya (statutory basis and role)

Name of Plan	Brief Description	Term of Plan*	Statutory Basis	Planning Actor	Approving Body
National Spatial Plan	Macro level plan to provide physical planning policies to guide regional, county and local spatial plans	Not evident	Physical Planning Act of 1996 (PPA); also Articles 10, 60, 66 of 2010 constitution are relevant; Flagship Project from Kenya Vision 2030	Physical Planning Department, Ministry of Lands, Housing and Urban Development (MLHUD)	Director Physical Planning
Regional Physical Development Plan	From 16(1): May be prepared by the Director with reference to any Government land, trust land or private land within the area of authority of a county council for the purpose of improving the land and providing for the proper physical development of such land, and securing suitable provision for transport, public purposes, utilities and services, commercial, industrial, residential and recreational areas, including parks, open spaces and reserves and also the making of suitable provision for the use of land for building or other purposes.	Varies from long to short term	PPA; Part IV-A(16-22) Content detailed in PPA First Schedule.	Physical Planning Department, Ministry of Lands, Housing and Urban Development (MLHUD)	Director Physical Planning
Special Planning Areas (appears a subset of the regional plan)	A plan induced by place characteristics. From the PPA: an area with unique development potential or problems as a special planning area for the purpose of preparation of a physical development plan irrespective of whether such an area lies within or outside the area of a local authority. Declaration puts a moratorium on development activity for a period of not more than 2 years.	Varies	PPA; Part IV-A(23) No content detailed in PPA schedules, however may be the type of plan used for renewal or redevelopment.	Department of Physical Planning; MLHUD	Director Physical Planning
Local Physical Development Plan	May be a long or short term plan; has the general purpose of guiding and coordinating development of infrastructural facilities and services for an area and for the specific control of the use and development of land or for the provision of any land in such area for public purposes.	Varies	PPA; Part IV-B(24-28) Content detailed in the Second Schedule	Department of Physical Planning; MLHUD	Director Physical Planning

Name of plan	Brief description	Term of plan*	Statutory basis	Planning actor	Approving body
Part Development Plan	Type of short-term plan. PDPs indicate precise sites for immediate implementation of specific projects or for alienation purposes *if for a public purpose*. Part development plans are prepared from the main development plan to accommodate a specific development project and forms the basis for land allocation. A part development plan may also be prepared to introduce minor changes to a development plan.	Immediate effect	Only found in the definition sections of the PPA, 1996, specifically part I preliminary. May be in one of the various repealed land acts. Anyone can do this type of plan, do not need to be registered planners (see Third Schedule, Section B)	Department of Physical Planning; district physical planning officers pre-devolution.	Director, Physical Planning
County Integrated Development Plan	Mandatory plan for all units; basis for budgeting and performance management (as are all plans). Serves as guiding document for county level development	5 year plan	County Governments Act, 2012; Section XI	County Planning Unit	County Assembly
County Sectoral Plans	Component parts of CIDP, program-based; common elements like housing, water, transport, environment, and so on. Must be reviewed every 5 years by county executive; county assembly approval; updated annually	10 year plan; updated annually	County Governments Act, 2012; Section XI	County Planning Unit	County Assembly
County Spatial Plan	Main task: to put into a spatial context the social and economic development programs of the county as articulated in the integrated county development plan; normative (desired spatial form, patterns of land use, infrastructure investment, and so on).	10 year plan	County Governments Act, 2012; Section XI	County Planning Unit	County Assembly
Cities and Urban Areas Plans	Plans focused on development facilitation and development control; binding on all public entities and private citizens; must align with other county plans	5 year plan	County Governments Act, 2012; Section XI Urban Areas and Cities Act, 2011, Part V, 36-42	County Planning Unit or subunit that may be established with the urban boards	Urban Board and County Assembly
Integrated Spatial Urban Development Plans	Kisumu: classic comprehensive plan—demographics, trends, land use, transport, housing, zoning recommendations, and so on. Used term special planning areas for slums and other areas.	Kisumu (unclear; projections out 15 years); Nairobi—2015 to 2030	No clear statutory basis that identifies plan with that exact name. But JICA interpreted to be a "Cities and Urban Areas Plan" under the Urban Areas and Cities Act, 2011.	Urban Development Department chief driver; plans prepared in the past and currently underway by private consultants	Urban Board and County Assembly

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End Notes

1 Bundervoet. Maiyo, and Sanghi (2015)
2 World Bank (2014).
3 Nairobi's network of small, privately owned, and artisanally operated buses and vans forms the backbone of public mass transport services in the Nairobi Metropolitan Region.
4 The analysis that formed the basis for this chart computed inherited costs using the following data sources: salary costs based on data collected by the transition authority during early 2014; operations and maintenance costs related to devolved national functions based on budgetary allocations under the 2012/13 budget, disaggregated through a costing exercise undertaken by the National Treasury and published in June 2013 as the "Indicative County Allocations' dataset"; and recurrent operations and maintenance costs relating to former local authority functions based on noncapital budget allocations by the former local authorities in 2009/10, the last year for which data are available.
5 Water and Sanitation Program, March 2012, http://www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Kenya-brochure.pdf.
6 The monthly household income range was converted into an hourly household wage rate (based on the assumption of 160 hours worked per month). Then, a percentage (15 percent for students, 30 percent for all others) was applied to each household income to determine the value of one hour of travel, based on the suggested approach of Gwilliam (1997) and Litman (2014). These values, multiplied by the time traveled to work or school, show the value of time lost through commuting.
7 A lower middle-income country is classified as having a GNI per capita of $1,045-$4,125 while an upper middle-income country is classified as having GNI per capita of $4,126-$12,736 (World Bank, 2015).
8 http://www.rug.nl/research/ggdc/data/pwt/?lang=en.
9 Sub-Saharan Africa is estimated to be 40 percent urbanized.
10 In the absence of spatially disaggregated GDP data, this section uses earnings as a proxy for economic activity. This review is based on earnings in 49 towns whose data is consistently provided in statistical publications. See Annex 1.
11 Annex 2 shows the spatial concentration of Kenyan cities and their contribution to earnings.
12 Comparing the equitable share as a proportion of revenue in the year to which it applies is different from the base year calculation specified in the Constitution. But it is a more meaningful basis for assessing the intention of government to respect the spirit of the revenue sharing provisions.
13 There is no reliable source of data on land ownership in Kenya.
14 Trust land is held by rural local authorities for residents of the area for customary land practices. Under current legislation, trust land is to be converted to community land, aimed to make clearer boundaries and provide clarity on legitimate claims on the land.
15 Land reserved for use by public bodies, or forests, national parks, game reserves, water bodies, mineral lands, and any land in respect of which no individual or community ownership can be established by any legal process.
16 The Ndung'u Report, the final report of the Commission of Inquiry into Illegal/Irregular Allocation of Land 2004, recommended that public and trust lands that have been illegally or irregularly allocated should be reclaimed. This has not happened.
17 Higher in fact than the observed inequality in consumption and earnings.
18 The share of households that owned land only is less than 1 percent and is therefore shown as 0 percent.
19 Adjudication was the process in the post-colonial period by which the Ministry of Lands went into the former rural reserves and tried to determined who owned what to issue individual titles. The need was great but the process was slow, and a fair amount of land still is held without adjudication and under community rules.
20 Questions, however, remain on what constitutes a community.
21 Repealed: The Indian Transfer of Property Act, 1882; The Government Lands Act, The Registration of Titles Act, The Land Titles Act, The Registered Lands Act, The Wayleaves Act, and The Land Acquisition Act.
22 Bundervoet. Maiyo, and Sanghi (2015).
23 Kenya Ministry of Environment, Water and Natural Resources. (2013).
24 Improved drinking water sources include: piped water into dwelling, plot or yard; public tap/standpipe; tube well/borehole; protected dug well; protected spring and rainwater collection.
25 Improved sanitation facilities include flush or pour-flush to-piped sewer system,-septic tank,-pit latrine; ventilated improved pit latrine; and pit latrine with slab and composting toilet.
26 Calculated from JMP figures. JMP does not include shared sanitation in its definition of improved sanitation, whereas shared sanitation is acceptable by Kenyan standards. In Kenya, shared sanitation accounted for 48 percent of urban and 19 percent of rural sanitation services.
27 Water and Sanitation Program 2003.
28 Kenya Power 2014.

29 Detailed findings are in Annex 1.
30 A formal area is defined by the National Bureau of Statistics as one for which a part development plan has been approved and which receives official services. Informal/formal status was defined at the enumeration area level by the Kenya National Bureau of Statistics during the 2009 Census.
31 For water and electricity services, this analysis measures quality by the number of hours of service.
32 This analysis does not attempt to assess the quality of the schools in the formal versus the informal areas.
33 https://www.wsp.org/sites/wsp.org/files/publications/WSP-Innovation-in-Scaling-up-Water-Sanitation-Services-Kenya.pdf.
34 Issues of devolution are discussed in greater detail in Chapter 5.
35 Table 2 in Annex 1 outlines key links and issues related to such harmonization.
36 Unpublished preliminary analysis by Ernst & Young/Atkins consortium for WSP analysis of environment for private sector financing of WSS.
37 http://open_jicareport.jica.go.jp/pdf/12005443.pdf.
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39 United Nations Department of Economic and Social Affairs, Population Division (2014).
40 This assumes an interest rate of 18 percent, a 20-year amortization period, and a debt-to-income ratio of 33 percent.
41 Data analysis by Talukdar, D., based on World Bank (2013).
42 This is based on a World Bank estimate of GNI per person per year, times an average family size of 4.4.
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47 The original target was 150,000, but was subsequently adjusted to 200,000. See file:///C:/Users/cdiguest/Downloads/Vision_202030_20progress_20report.pdf and http://espas.eu/orbis/sites/default/files/generated/document/en/KENYA2030.pdf.
48 http://espas.eu/orbis/sites/default/files/generated/document/en/KENYA2030.pdf.
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80 Acknowledgment: This chapter has been developed in large part on the basis of analytical and quantitative work undertaken by students in the City and Regional Planning Masters' Program at the University of North Carolina, United States, under the guidance of Professor Daniel Rodriguez, as part of a semester-long "capstone" course coordinated between Professor Rodriguez and the World Bank as part of this urbanization review. The students were: Nate Baker, Scott Boone, Jesse Cohn, Walker Freer, Steven Keith, Yijun Ma, Melanie Morgan, Nathan Page, and Shiyong Qiu. The Urbanization Review team thanks Professor Rodriguez and the students, who received school credit but no remuneration for this input, for their hard work. The datasets used in the analysis were compiled and harmonized by William High, another student at the University of North Carolina working with Professor Rodriguez, under a contract to the World Bank.

81 Nairobi's network of small, privately owned, and artisanally operated buses and vans forms the backbone of public mass transport services in the Nairobi Metropolitan Region.

82 Annex 3 presents a detailed description of the transport systems and characteristics.

83 The monthly household income range was converted into an hourly household wage rate (based on the assumption of 160 hours worked per month). Then, a percentage (15 percent for students, 30 percent for all others) was applied to each household income to determine the value of one hour of travel, based on the suggested approach of Gwilliam (1997) and Litman (2014). These values, multiplied by the time traveled to work or school, show the value of time lost through commuting.

84 Both of these values consider door-to-door trip times rather than just the in-vehicle portion of the trip, suggesting that actual in-vehicle travel speeds may be slightly higher for matatus than private vehicles.

85 To determine whether accessibilities levels in Nairobi are evenly distributed or whether on the contrary they are very unequally distributed spatially, Lorenz curves were produced and the attached Gini coefficient calculated. The resulting Gini coefficient associated with matatus is 0.36 and with cars 0.29, when congestion is accounted for. While this measure has mostly been used to characterize income distribution patterns, it can be of use to look at accessibility spatial disparities.

86 See Annex 4 for details on the simulations.

87 JICA (2013).

88 See Annex 4 for details on the assessment method for time sensitivities.

89 Time costs can be understood as opportunity costs, and relate to income.

90 As no new planning legislation has been passed, the Physical Planning Act of 1996 (Laws of Kenya, Chapter 286), which details the powers of the Director of Physical Planning, defines the various types of physical plans and their attributes, and establishes processes for the control of development, remains in force. Annex 6 provides an overview of the array of official plans by statutory basis.

91 A recent article (May 7, 2015) in The Standard (http://www.standardmedia.co.ke/lifestyle/article/2000161293/nairobi-s-wetlands-disappearing) notes that there are no official statistics on Nairobi's wetland; Mairura Omwenga, chairman of the Town and County Planners Association of Kenya, however, noted that encroachment of wetlands is widespread.

92 Ghai and Ghai (2011).

93 The Constitution identifies nine functions for the National Land Commission; the National Land Commission Act of 2012 identifies twelve functions; the Land Registration Act, 2012 identifies six functions. See National Land Commission, 2014—Final Progress Report.

94 The National Land Commission's enabling legislation requires that it complete the registration of all unregistered land in the country within 10 years of the commencement of the act.

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96 While the Physical Planning Act of 1996 did include requirements for community participation in planning these requirements were largely ignored or perfunctorily followed.

97 National Land Commission (2014: 44–45).

98 Wachira (2015).

99 The National Land Commission has prepared a bill called the Land Use Planning Bill of 2015 that delineates the role of the National Land Commission in planning oversight. It can be seen as a rival to the new Physical Planning Bill. Notably the National Land Commission bill keeps the role of the Cabinet Secretary and the land ministry strictly in the area of policy, professional oversight, and planning at the national level.

100 There are currently at least four competing versions of bills to replace the Physical Planning Act of 1996 in circulation amongst the Kenyan planning community (for example, Kenya Institute of Planners, Town and County Planners Association of Kenya). The version evaluated in this paper is the version available through the website of the Commission to Implement the Constitution (CIC). This bill is entitled the "Draft Physical Planning Bill, 2014" and was presented to the Attorney General. There is a bill circulating called the "Physical Planning Bill, 2015" which may or may not be an update of the CIC bill. (It appears different at the outset judging from the definitions section.) Finally there is a bill called the Spatial Planning Bill, 2014 (AKA "the Kisumu draft.") It is unclear at this point in time which bill is actually going to be in front of Parliament and if, and when, it will be debated. The existence of myriad bills is just another indicator of the reigning confusion in land institutions and administration at the present time.

101 The competition between these actors is reflected in confusion amongst ordinary Kenyans about the country's land reforms. A recent survey by the Land Development and Governance Institute showed that 68% of respondents did not know the mandate and functions of the National Land Commission and could not differentiate between the functions of the Ministry and the National Land Commission (Land Development and Governance Institute 2014).

102 Commission on Implementation of the Constitution 2014: 33. http://www.cickenya.org.

103 Seven counties websites yield these laws easily upon a Google search. The Kenya Law Reform Commission has formulated a model law for counties on the topic. But it is not available on their website.

104 Kenya School of Government (2015). Kenya Devolution Working Paper 1 "Building Public Participation in Kenya's Devolved Government: Overview of key challenges and opportunities for enhancing participation in newly devolved institutions and systems: A summary of the working paper series." Kenya School of Government, Working Paper Series, February 2015, Nairobi.

105 The 1968 (revised 1997) building code is also available on line. This code, however, was a regulation under the old Local Governments Act so it would appear to be invalid pursuant to the repeal of that act.

106 There is another draft code on-line called "National Building Regulations, 2014" issued by the "Building Authority of Kenya." The printer lists the old Ministry of Housing as the central government authority. The document looks very similar to the 2009 code, but a section-by-section comparison has not been conducted. This Authority does not exist.

107 See Daily Nation, October 25, 2014. http://www.nation.co.ke/news/The-deadly-business-of-gangs-at-centre-of-urban-land-grabbing-/-/1056/2499736/-/10h8esd/-/index.html.

108 Glasser 2014; Berrisford 2011; Bertaud 2004.

109 The city of Nairobi has only one publicly accessible but undated document entitled "A Guide of City Development Ordinances and Zones." Prepared while Tom Odongo was the Director of City Planning, the document provides tabular information regarding ground cover and plot coverage as well as types of development allowed. But the base map through which an owner might know where his or her parcel is situated in the codes is only accessible upon request. Similar documents for other counties or cities were not found.

110 Ministry of Nairobi Metropolitan Development (2008).

111 Picorelli et al. (2009).
112 Salet, Thornley and Kreukels, 2003; Seltzer and Carbonell, 2011. Some cities (such as Los Angeles) have formed neighborhood associations across the entire city; the associations are multifaceted, addressing not only development control but also crime and safety and maintenance of neighborhood assets like parks.
113 In the United States of America, for instance, agencies called metropolitan planning organizations must be formed to conduct mandated regional transportation planning. These are the bodies that receive transportation funding for their proposed capital projects from the U.S. federal government; funds are not remitted to individual cities and their departments of transportation. Additionally, some places in the USA have Councils of Government (COGs), which are voluntary organizations representing constituent units. COGs may be merely consultative or they may implement programs that fund actions like urban redevelopment. COGs may also act as metropolitan planning organizations—but not necessarily.
114 See their website for documentation of the initiative: http://jumuiayapwani.org/index.php.
115 Kenya Institute for Public Policy Research and Analysis (2014). "Leveraging on the Metropolitan Dividend in the Context of Devolved Government in Kenya." Draft Unpublished Report. KIPPRA, Nairobi.
116 Many counties have expanded the networks of primary health centers and dispensaries and tried to upgrade the hospital at county headquarters to a county referral hospital. But there were challenges with staffing and operationalizing these facilities. Limited effort was made to network and optimize existing hospital infrastructure, especially the existing eight provincial hospitals, which continue to have heavy workload and compensation from the national conditional grants. Recently some counties entered in to memorandums of understanding for the establishment of specialized facilities for cancer treatment (based on conversations with country and sector colleagues).
117 More details on the review of the CIDPS of the four counties are in Annex 3.
118 Annex 3 contains more on sector prioritization.
119 Water and Sanitation Programme, March 2012, http://www.wsp.org/sites/wsp.org/files/publications/WSP-ESI-Kenya-brochure.pdf.
120 The Public Finances Management Act sets out the framework of public finance for both levels of government (see Chapter 1).
121 Section 173 of the Public Finance (Management) Act 2012 proposes that counties should allocate funds to urban areas based on transparent criteria, including population, (geographic) area, poverty, revenue collection by the urban area, the differential cost of service delivery in urban areas, together with two other criteria—one a minimum amount to ensure delivery of essential services, and the other incentives to encourage prudent financial management.
122 The Commission on Revenue Allocation is an independent constitutional body responsible for advising on intergovernmental financing arrangements (see Chapter 1).
123 The population limits for formation of municipal boards mean that there will be one city board (Kisumu, which is deemed by the Act to be a city) and two municipal boards—Nakuru and Eldoret. Town committees can be formed for other urban areas over 10,000, but they are given less managerial autonomy than the municipal and city boards, and appear to serve a mainly advisory function.
124 The main difference between the two formulas is the addition of two new factors. The development factor is a composite index of illiteracy, children not at school, immunization coverage, access to sanitation, electricity and water, unpaved roads and total paved roads. If adopted, the new formula will deliver some additional resources for the larger urban counties with big wage bills. For Nairobi, for example, the equitable share transfer for 2014/15 would increase by 8.7% from KSh 11.34 billion (US$129 million) using the first generation formula to KSh 12.33 billion (US$141 million) using the second generation formula.
125 The level of urbanization refers to the proportion of the county population in urban areas.
126 Based on Controller of Budget report on counties for 2013/14. The exception is Narok, a rural county in Kenya's southwest, which raises most of its revenue in fees collected at the internationally renowned Masai Mara game park.
127 The issues raised by the Kenya Association of Manufacturers relate to the use of outdoor advertising regulation powers to charge trucks travelling through a county a "branding permit" for the signage on the truck, and the requirement for visiting salesmen from a firm based in another county to pay for a single business permit. The Local Government Act provided for a SBP issued by one local authority to be valid across the whole country, but this Act has now been repealed.
128 Section 161 of the Public Finance Management Act 2012 directs county governments to observe this provision, and to seek the advice of the Cabinet Secretary for Finance and the Commission on Revenue Allocation before imposing any revenue raising measures. It is believed this provision is not being adhered to, but it is also likely that both National Treasury and the Commission on Revenue Allocation lack the capacity to provide comprehensive advice on all county finance laws.
129 2012/13, based on National Treasury 'Indicative County Allocation' dataset, which includes actual data on salary expenditure, and estimated data for operations and maintenance and capital in respect of devolved national functions, and 2009/10 LATF reports for local authorities. 2013/14 based on Controller of Budget Annual County Budget Implementation Review Report 2013/14.
130 The figure of 92% is significant, because a revenue outturn of below 92% would score a "D," the lowest score possible, on the indicator PI-3 in the Public Expenditure and Financial Management Assessment framework.
131 Through the Public Financial Management (Amendment) Bill 2014 that originated in the Senate, proposals have been made for counties to increase the development:recurrent ratio to 40:60.
132 Based on Controller of Budget County Budget Implementation Review Reports: Q1 2013/14 report for original budgeted revenue for 2013/14, Annual 2013/14 Report for revenue budgeted and outturn revenue for 2013/14, and Q1 2014/15 report for 2014/15 for budgeted revenue for 2014/15. Note that successive 2013/14 Controller of Budget Reports show slightly different budgeted own source revenues for counties for the 2013/14 year. The Q1 report for 2013/14 reported total budgeted own source revenues as KSh 67.388 billion. In the half year report, total budgeted own source revenues was reported as KSh 67.831 billion and in the Q3 report as 60.948 billion. By the release of the Q4 (annual) report for 2013/14 the county own source revenues target had been reduced to 54.207 billion.
133 One-sixth of the national transfers were released on June 30, too late to be spent.
134 Article 212 of the Constitution states that: "A county government may borrow only— (a) if the national government guarantees the loan; and (b) with the approval of the county government's assembly."
135 Section 58, Public Finance (Management) Act 2012.
136 Section 59, Public Finance (Management) Act 2012.
137 Section 63, Public Finance (Management) Act 2012.
138 The analysis that formed the basis for this chart computed inherited costs using the following data sources: salary costs based on data

collected by the transition authority during early 2014; operations and maintenance costs related to devolved national functions based on budgetary allocations under the 2012/13 budget, disaggregated through a costing exercise undertaken by the National Treasury and published in June 2013 as the "Indicative County Allocations dataset"; and recurrent operations and maintenance costs relating to former local authority functions based on noncapital budget allocations by the former local authorities in 2009/10, the last year for which data are available.

139 The threshold is officially defined as 20% of the county government's most recent audited revenue or 2% percent of the national GDP, whichever is lower. In practice the revenue threshold is far lower: using unaudited 2013/14 county revenues of KSh 26 billion (US$300 million), 20% of the revenues is KSh 5 billion (US$60 million) equivalent to 0.1% of GDP.

140 Higher borrowing limits, however, create problems of their own. In Brazil some states and municipalities well below the threshold believed that they could borrow up to 200% without problems, taking the threshold as a floor rather than a ceiling (Liu and Pradelli 2012).

141 Assuming a unit cost of US$1.4 million per km.

142 World Bank (2014).

143 See http://www.wttc.org/%20-/media/files/reports/economic%20impact%20research/country%20reports/kenya2014.pdf; http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/08/000427087_20120608153022/Rendered/PDF/696870ESW0P1020e0Jewel0final0report.pdf; http://www.commerce.go.ke/downloads/National%20Tourism%20Srategy%202013_2018.pdf.

144 There is a very limited number of counterfactual spatial outcomes (5–10 out of 10,000 at most) that can yield equal or slightly higher overall accessibility figures depending on the simulation conducted. In any case the gain is extremely limited and tends to reinforce the conclusion that the current spatial layout of Nairobi is reasonably efficient given the capital constraints of the transport network and the residential, industrial, and commercial stock.