Ethiopia Urbanization Review

Urban Institutions for a Middle-Income Ethiopia

WORLD BANK GROUP

Cities Alliance
Cities Without Slums

Abbreviations and Acronyms

BOFED	Bureau of Finance and Economic Development
Br	Ethiopian Birr
CSA	Central Statistical Agency of Ethiopia
DHS	Demographic and Health Survey
ERCA	Ethiopian Revenue and Customs Agency
ETB	Ethiopian Birr
GDP	Gross Domestic Product
GNI	Gross National Income
GVA	Gross Value Added
HICES	Household Income Consumption and Expenditure Survey
IHDP	Integrated Housing Development Program
LAS	Land Allocated to Streets
LFS	Labor Force Survey
LMMIS	Large and Medium Scale Manufacturing and Electrical Industries Survey
MSME	Micro, Small, and Medium Enterprise
MoFED	Ministry of Finance and Economic Development
MUDHCo	Ministry of Urban Development, Housing and Construction
OSR	Own Source Revenue
O&M	Operation and Maintenance
SNNP	Southern Nations, Nationalities and Peoples
UBEUS	Urban Bi-annual Employment Unemployment Survey
ULG	Urban Local Government
ULGDP	Urban Local Government Development Program
UN	United Nations
US	United States

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Preface

The *Ethiopia Urbanization Review* is part of a series of analytical studies under a global product, called the Urbanization Review, developed by the Urban, Rural & Social Development Global Practice at the World Bank.

The objective of this analytical program is to provide diagnostic tools to inform policy dialog and investment priorities on urbanization. It is based on the framework for urban policy developed in the *World Development Report 2009—Reshaping Economic Geography* and the World Bank's new Urban and Local Government Strategy, "System of Cities: Harnessing Urbanization for Growth and Poverty Reduction." To test the relevance and flexibility of the core diagnostic tools, prototype pilots have been initiated in several countries, including China, Colombia, India, Indonesia, Malaysia, Tunisia, Turkey, and Vietnam.

The Urbanization Reviews all share similar objectives, tailored to the specific conditions of each country. The primary purpose of this report is to present and analyze key trends across a range of issues in the urban sector, such as the pace and form of urbanization, opportunities for and key constraints against more efficient, inclusive, resilient, and sustainable urban areas, and priority government policy options. This report should not be interpreted as a strategic plan, implementation plan, or feasibility study. Further details such as sector-specific targets, cost estimates, and investment requirements fall outside the scope of Urbanization Reviews. Going forward, however, it would be possible to investigate more opportunities for engagement and collaboration between the Government of Ethiopia and the World Bank on the topic of urbanization, subject to available resources and management approval.

The *Ethiopia Urbanization Review* is a product of close collaboration between the World Bank and the Government of Ethiopia. A technical consultation workshop on the preliminary study draft was held in Addis Ababa in June 2014, followed by two video conferences with the technical team from the Ministry of Urban Development, Housing and Construction, led by the Minister, Mekuria Haile. The final draft was presented to the Government at two workshops held in Addis Ababa, first in January, 2015 and second in March 2015, in the presence of the Prime Minister of Ethiopia, Hailemariam Desalegn, Minister of Urban Development, Housing and Construction, Mekuria Haile, members of the Ethiopian Cabinet, other government agencies at the federal, regional and local levels, and Bereket Semeon, Research and Policy Advisor to the Prime Minister and Abay Tsehaye, Research and Policy Center Head and Advisor to the Prime Minister.

This report serves the critical and timely purpose of focusing attention on the challenges and opportunities of urbanization in Ethiopia. The study team hopes that the policy analysis and recommendations will be of particular service to the Government in leveraging the country's demographic dividend to promote economic growth, create jobs, and connect Ethiopians to prosperity.

Executive Summary

1.1 Urbanization needs proactive management if it is to work for people and the economy

The urban population in Ethiopia is increasing rapidly. Estimated at only 17.3 percent in 2012, Ethiopia's urban population share is one of the lowest in the world, well below the Sub-Saharan Africa average of 37 percent.[1] But this is set to change dramatically. According to official figures from the Ethiopian Central Statistics Agency, the urban population is projected to nearly triple from 15.2 million in 2012 to 42.3 million in 2037, growing at 3.8 percent a year. Analysis for this report indicates that the rate of urbanization will be even faster, at about 5.4 percent a year. That would mean a tripling of the urban population even earlier—by 2034, with 30 percent of the country's people in urban areas by 2028.

If managed proactively, urban population growth presents a huge opportunity to shift the structure and location of economic activity from rural agriculture to the larger and more diversified urban industrial and service sectors. In parallel with rapid urbanization, Ethiopia is going through a demographic transition. The labor force has doubled in the past 20 years and is projected to rise to 82 million by 2030, from 33 million in 2005. Creating job opportunities in urban areas will be essential if Ethiopia is to exploit its demographic dividend. Cities already play an important role in the economy, contributing to 38 percent of gross domestic product (GDP) though employing only 15 percent of the total workforce, due primarily to the high productivity associated with sectors located mostly in urban areas. The Ethiopian Government's vision is to reach middle-income status with an estimated gross national income per capita of US$1,560 by 2025.[2] If well managed, urbanization could be an important catalyst to promote economic growth, create jobs, and connect Ethiopians to prosperity.

If not managed proactively, rapid urban population growth may pose a demographic challenge as cities struggle to provide jobs, infrastructure and services, and housing. Infrastructure and service delivery are already undermined in many cities by growing urban extents and by stretched municipal budgets, while formal labor markets are failing to keep up with demand for jobs. Ethiopian cities run the risk of becoming less attractive places for people and economic activity. Moreover, constraints on rural–urban migration—including the loss of land rights for those who leave rural areas—reduce incentives to move to cities, which in the long run could slow agglomeration, reducing productivity and economic growth.

The central challenge for the Ethiopian Government is to make sure that cities are attractive places in which to work and live, while fostering "smart urbanization." Smart urbanization means putting in place the right policies, institutions, and investments now, when incomes and urbanization levels are fairly low. City systems have to be well-equipped

[1] Unless otherwise stated, population figures in this report are taken from the Ethiopian Central Statistics Agency. The Sub-Saharan average is from the World Bank, World Development Indicators (WDI). "Urban population" refers to people living in urban areas as defined by national statistical offices.
[2] World Bank, *Ethiopia Economic Update II* (2013).

to provide for growing populations, so that new residents can propel higher productivity and faster national growth.

Making urbanization a national priority will accelerate Ethiopia's progress towards reaching middle-income status. Ethiopia already benefits from high economic growth. Compared with other countries at similar levels of urbanization, however, Ethiopia has the lowest gross national income. Moreover, growth has been driven mainly by public investment and private consumption on the demand side, and by services and agriculture on the supply side, rather than sectors like manufacturing and industry that are associated with higher levels of productivity and employment, as well as structural transformation. Agriculture, while showing decline, remains a very large sector in the economy, while the shares of manufacturing and services employment, in relation to the urbanization rate, have been stagnant or declining. Of more concern is that urban industrial activity is primarily in micro and small firms, whereas in Ethiopia, sustained job growth takes place mostly in the medium and large firms. Jobs in the first group are unlikely to move into the second, given the current constraints to doing business, thus failing to contribute to net job creation. For Ethiopia to reach middle income status, an economically productive urban transformation will be necessary, but even that on its own will be insufficient.

Ethiopia has to get its urbanization "right," because decisions today will have far-reaching implications for its cities of tomorrow. Given that national and local resources are limited for urban development, the opportunity cost of each dollar spent is high. Policymakers must weigh the long-term costs and benefits when making decisions, as the policies, institutions, and investments put in place now will influence urban systems for years to come. Coordination between land use and infrastructure investment is especially key because these systems have long lifespans and shape economic and social geography in a fundamental and path-dependent way. All this speaks to the need for data-driven policy so government plans address the reality on the ground and avoid getting locked-in to growth trajectories that are environmentally, socially, or financially unsustainable. The Government has already taken steps to make evidence-based, informed decisions for well-managed urban growth, and this report aims to contribute to those efforts.

1.2 Three Big Gaps: Jobs, Infrastructure and Services, and Housing

Urbanization is failing to meet the demands of growing numbers of urban residents in three areas: access to jobs, infrastructure and services, and housing.

Formal job creation is not keeping pace with migration. Cities in Ethiopia offer migrants greater employment opportunities than rural economies. But most jobs in the city are in the informal or household sector, so waged job opportunities in urban centers are not commensurate with migration. Of all urban households, 15 percent report having an unemployed adult; in Addis Ababa this rises to 23.5 percent. Global evidence suggests that wage employment, rather than self-employment, leads to the emergence of a middle class in developing countries. In Ethiopia, wage employment is primarily formal, its rate increasing with city size. This is encouraging, but the growth of formal jobs continues to lag behind, evidenced by the high rates of self-employment and informal employment in cities. Moreover, even when small- to mid-size firms are moving to cities, they lack a corresponding increase in jobs. To exploit the country's demographic dividend, cities need to have the right

environment for industry, firms, and entrepreneurs to become competitive, grow, and sustain faster job growth.

Cities are struggling to provide adequate infrastructure and services. Despite progress over the last two decades in infrastructure and services across all urban sectors, there is still much to do, even at today's level of urbanization. Coverage for sanitation services is low, even by Sub-Saharan Africa standards, with a municipal sewerage system only in Addis Ababa, serving only 10 percent of the city's population. As in many towns and cities in the developing world, Ethiopian cities struggle to manage solid waste, which is often dumped into open areas, endangering public health. Road density is below the African average, although higher in urban areas than the national average. The infrastructure challenge is more pronounced in the water sector. Population growth in cites will require many-fold increase in access to meet projected demand over the next two decades, and be funded almost entirely by municipal own-source revenues. This is a problem because infrastructure and services are essential to building a strong business environment in cities, as well as making them attractive places to live and work. As is the case with employment opportunities, the challenge of providing infrastructure and services is not just to meet current levels of demand, but also that of the rapidly expanding urban populations that are set to triple over the next two decades.

Poor quality and often overcrowded living conditions are the major housing challenges experienced by urban households. In general, housing quality in Ethiopia is lower than in neighboring countries. An estimated 70–80 percent of the urban population lives in what might be considered slums, according to a commonly accepted international definition, because the units lack durability, adequate space, access to safe water and sanitation, or security of tenure.[3] This is one of the highest rates in Sub-Saharan Africa, and higher than in most Arab countries.[4] Around 80 percent of dwellings in urban areas are made from wood and mud (also known as *chika-bet* construction), while two-thirds of all urban housing units have only earthen floors, another indication of very low-quality housing.[5] The main drivers of the urban housing shortage are low incomes, insufficient supply of serviced land, and unrealistically high and costly standards.

1.3 Urban Institutions for a Middle-income Ethiopia: Land, Governance, and Finance

Underlying the three big gaps are deficiencies in at least three urban institutions: land management, governance, and municipal finance.

Land management practices, intended to maximize social welfare, indirectly and unintentionally contribute to the problems that cities face in providing sufficient serviced land for people, firms, and public uses and services. Unsatisfied demand is well illustrated by land auctions in cities, where the number of bidders at land auctions has been

[3] Ministry of Finance and Economic Development (MoFED), *Ethiopia: The Millennium Development Goals (MDGs) Needs Assessment Synthesis Report* (2005).
[4] David Sims, "The Arab Housing Paradox," *Cairo Review* (2010). For example in Greater Cairo, about 62 percent of the population lives in informal housing, but the quality of this housing is relatively good and it is not characterized as "slums."
[5] Based on the CSA Population and Housing Census, 2007.

12 to 24 times higher than the number of plots for residential land and 3 to 7 times higher than available plots for commercial land. In 2011, more than one-quarter of companies in Ethiopia reported that access to land represents a major or severe constraint to doing business. And Ethiopian cities like Addis Ababa lag on measures — such as land allocated to streets and intersection density — that are essential for mobility, productivity, quality of life, and social inclusion. At the same time, prevailing practices of land management lack incentives for high utilization of existing formal land supply and result in low-density, spatially fragmented development and limited mixed-use development. This type of urban expansion is much more expensive and proves difficult for urban local governments to provide services and foster economic growth.

The government acts as the sole supplier of urban land for formal development. This is not a trivial task, especially given the multiple systems of property rights, combined with a complex system of land-leasing. The government also faces an enormous financial burden in extending required basic services to those plots. Inability to satisfy demand for affordable land through formal channels, constrained by municipal governments' capacity and limited financial resources, drives informal development,[6] especially in peri-urban areas far from jobs. Regulations on minimum lot sizes, coupled with limits on land plot coverage and building heights, discourage high-density development that could accommodate all income groups in closer proximity to jobs and services.

Local governments below the regional level, despite their importance, have limited capacity and autonomy. Decentralization has increased the role of local governments, which are tasked with the provision of "state services," such as education, health, justice, and security—and "municipal services," such as roads, drainage, sanitation, and solid waste collection and disposal. But they often lack the capacity and the authority to fulfill their responsibilities. Important powers are mostly retained at the regional level, particularly in municipal finance, land management, personnel management, and city operating practices—all making it harder for cities to carry out their mandates. More generally, many cities simply lack the human and financial resources to govern and deliver services.

Municipal finances are inadequate to fund urban development. Intergovernmental transfers and own-source revenues cover local expenditures but are insufficient to fully fund urban services and infrastructure. State functions are financed through regional transfers, often barely enough to cover recurrent needs. Municipal functions—including water, sanitation, local roads, and solid waste management—are expected to be funded from own local revenues, both for recurrent and capital spending. But revenues rarely meet demand for services. While municipal revenue growth has been robust in nominal terms, in real terms it has grown slower than inflation, GDP growth, and overall public revenue growth. Moreover, many cities lack control over rate-setting, while larger cities rely heavily on unsustainable land-lease revenues. Combined with the limited authority and capacity of local governments, these financial constraints make it much harder for cities to finance the necessary infrastructure and services to provide for rapidly growing urban populations.

[6] Informal development in Ethiopia includes three components known internationally, which are not mutually exclusive and often can be found combined: (i) construction on plots for which no legal land rights exist; (ii) construction on legally held plots, but outside planned territories, and (iii) construction that is not in compliance with land use requirements and/or construction standards.

1.4 The Path to Prosperity: Where to go from here?

Urbanization in Ethiopia needs to be better managed so it can respond appropriately to growth. To promote better and better-managed urbanization and meet the growing demand for jobs, infrastructure, services, and housing, a robust institutional framework is necessary to support efficient and sustainable land management, urban governance, and municipal finance. Policies and investments that fail to address these underlying institutional issues are unlikely to achieve long-lasting results. In addition, targeted sector interventions should make sure that urbanization contributes to economic growth and that cities are attractive places in which to live and work. The roles for national, regional, and urban local governments will also need to evolve as they transition from urban planning, management, and implementation to enabling and coordinating action by a growing number of stakeholders, both public and private.

First, while maintaining the public ownership of land, reform the system of land management to ease administrative and fiscal burdens, free land for development, and promote efficient urban forms. There is much scope for land administration system reform while still maintaining ownership of land by all Ethiopians, as enshrined in the Ethiopian Constitution. To start, regulations for land use planning and development can be made more efficient irrespective of the land ownership regime. This would reduce the cost of land and housing to the benefit of all households, including lower-income groups. Lessons from Singapore and Turkey suggest that the government could gradually reposition itself as an *enabler* and regulator of the private sector, rather than a direct and leading *provider* of infrastructure and housing. This would ease the administrative burden—and associated costs—while addressing the backlog in affordable housing. The regulatory and administrative shift could be accompanied by better utilization of urban land values, allowing the government to claim its fair share and use it for the public benefit, such as funding infrastructure. Further, creating a comprehensive inventory and audit system of land in urban areas would help identify excess land that could be reclassified and released for development, particularly in prime locations. For instance, the city of Hawassa's experience with such land reallocations could be leveraged in other cities. Coordinating infrastructure investment and land use planning, allowing for higher density and thus a more efficient urban form could reduce the cost of service delivery, with further potential to finance infrastructure investments through the increased revenues from market-based land allocations.

Second, strengthen local government capacity and autonomy. In deepening the decentralization process, Ethiopia would benefit from strengthening the overall capacity of local governments and the legislative functions of city councils for greater fiscal autonomy and better service delivery. Since all municipal services must legally be financed through a city's own-source revenues, urban local governments must be able to raise enough revenues and manage them efficiently, including setting rates. Federal and regional government tiers, in addition to the existing focus on mobilization of state revenues, urgently need to focus their support on municipal finance mobilization at the local government level.

Third, reform national and regional institutions to increase investment in urban development and address the wide investment gaps. This would include building the evidence base for policy discussion through regular review of intergovernmental finance, improving the transparency and rigor of accounting and budgeting, and providing incentives for local revenue collection by giving local governments greater control over state revenues

in excess of budget thresholds. With a robust urban institutional framework in place, targeted sector interventions can address specific issues and close the gaps in jobs, infrastructure and services, and housing.

Beyond these moves, creating a competitive business environment nationally is crucial for economic growth and job creation. Private sector dynamism in Ethiopian cities is low and variable. Not enough companies survive and thrive, while many city economies are dominated by small and informal enterprises. Cities must identify and invest in the factors that allow firms to expand and create new jobs, and that encourage firms to graduate, through for instance, better regulated local business taxes and access to infrastructure. Ethiopia should identify and invest in growing the "missing middle" of companies and jobs across urban areas – in other words, mid-sized firms that have the ability to sustain large increases in employment. In the short run, this will require increasing urban local governmental capacity to properly design and implement incentives for firms, especially non-fiscal ones. For instance, tax and licensing fees affecting firm start-ups and growth could increase city competitiveness if local authorities had greater institutional capacity. In the medium run, cities need better access to the main determinants of private sector growth—power, transport, and finance to connect markets and consumers. In the long run, cities need smarter regulations for land markets to promote efficient allocation of land and resources.

Addressing the underlying issues in municipal finance and land management will provide more revenues for infrastructure investment, but there are other options for targeted interventions to close the infrastructure gap. First, increase the cost recovery in large infrastructure projects through subsidies and user fees. Second, reduce operating inefficiencies through governmental capacity building. Third, improve sector planning and utility reform by defining a clear financing strategy and delineating responsibilities among different government agencies. Fourth, improve capital budget execution in the infrastructure sector, which is estimated to result in losses of around US$63 million a year.[7]

The transformation from a predominantly rural to an urban society is not automatic. Nor should the potential benefits—for individuals and the economy—be taken for granted. To contribute fully to economic growth and transformation, urbanization will have to be managed smartly. This requires building the underlying institutional foundations and targeting interventions to provide jobs, infrastructure, and services. Under the strong vision of the Ministry of Urban Development, Housing and Construction, Ethiopia has already made much progress, and there are clear signs that the Government is willing to shape urban development. The evidence in this report aims to support the Government in this important task.

[7] Department for International Development, *Financing in the Water, Sanitation, and Hygiene (WaSH) Sector in Ethiopia: Evidence from Benishangul-Gumuz Regional State*, RiPPLE Series (2009).

1. The Demographic Dividend: Cities and Economic Growth

1.1 Introduction

1. **Ethiopia has one of the fastest growing urban populations in the world,** with the number of people living in cities expected to nearly triple in the next two decades. This demographic dividend presents a real opportunity to change the structure and location of economic activity from rural agriculture to more diversified and much larger urban industrial and service sectors. For urbanization to contribute fully to economic growth and transformation, it will have to be managed well. Ethiopia already benefits from high rates of economic growth, but among most other countries at similar levels of urbanization, it has the lowest gross national income (GNI). Moreover, growth has been driven mainly by public investment and agriculture, and rapid urbanization has not been accompanied by structural transformation of the economy.

1.2 The Demographic Dividend

2. **With an official population of 86.6 million,[8] Ethiopia ranks as the 14th most populous country in the world**. Yet, it is not highly urbanized. According to figures from Ethiopia's Central Statistical Agency (CSA), in 2012 the urban population was estimated at 17.4 percent, up from 16 percent in 2007.[9] In comparison, urbanization globally, in middle-income countries, and in Sub-Saharan African countries averages 52, 50, and 37 percent, respectively.[10] Similarly, as indicated in Figure 1, Ethiopia's urbanization rate is among the lowest in the cohort of similar income counties (in terms of GDP per capita, constant 2005 US$). Rural-to-urban migration is also low compared to other developing countries (see Box 1).

[8] Central Statistical Agency, *Inter-Censal Population Survey 2012* (2013).
[9] Central Statistical Agency, *Inter-Censal Population Survey 2012* (2013).
[10] World Bank, World Development Indicators (WDI). "Urban population" refers to people living in urban areas as defined by national statistical offices.

Box 1: Constraints on rural-urban migration in Ethiopia

In general, rural-urban migration has been shown to be associated with economic development and reduced poverty for migrants. Urban areas offer migrants from rural areas better infrastructure, increased access to services and more job opportunities. Migration, as one factor of urbanization, also contributes to the positive returns from agglomerations, scale economies, and improved labor productivity in cities.

In Ethiopia, pull factors may be a strong driver of migration. For example, migration to urban areas is positively correlated with labor market conditions at the destination. Cities with a high proportion of residents who migrated in the past year also have higher rates of employment in the labor force as a whole. Rural-urban migrants are more likely to be employed, and less likely to be self-employed, than non-migrants. Migrants in Ethiopia also tend to be more educated and to come from wealthier families, when compared to non-migrants. Finally, migration is associated with lower poverty rates. Among the 95 largest cities in Ethiopia, there is a strong negative relationship between the proportion of medium- and long-term migrants and the head count poverty rate. Data also shows large increases in consumption among migrants, compared to non-migrants of the same (origin) village.

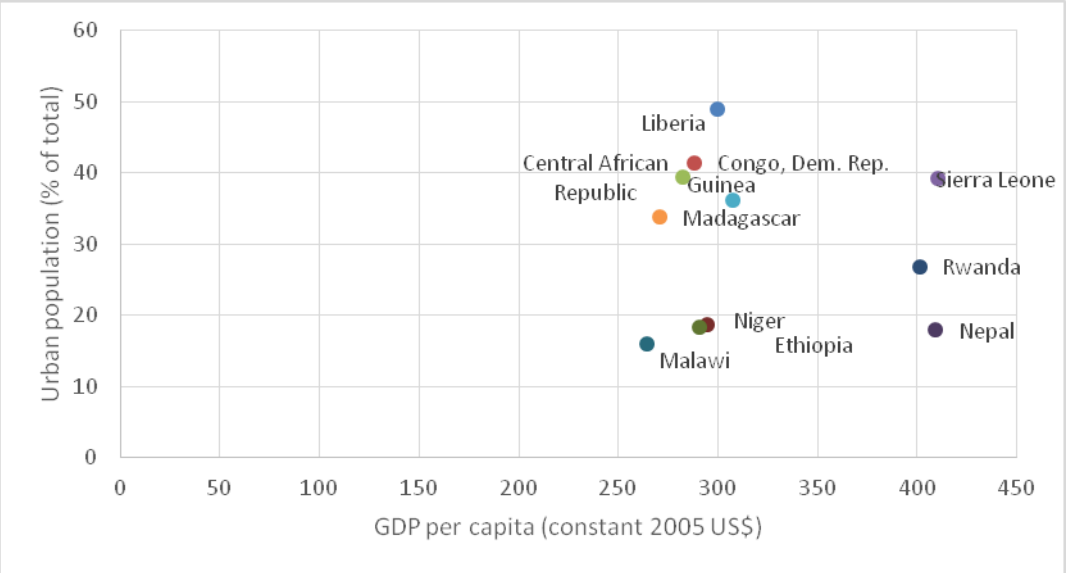
Despite these pull factors, rural-to-urban migration in Ethiopia remains low compared to other developing countries. Only about one in ten rural residents migrate, compared to one in five rural workers in China. When considering the whole population, migrants comprise 13.7 percent and 16.2 percent of the male and female populations of Ethiopia, respectively. By comparison, this figure is 30 percent in India, 22 percent in Vietnam (1992), and 25 percent in Uganda among those aged 25-49 years old (2001). Furthermore, only a small proportion of migrants in Ethiopia move from rural to urban areas. Rather, half of all migrants move from one rural area to another, according to the Ethiopian Rural Household Survey.

Restrictions on land rights may be one explanation for low migration rates from rural to urban areas. For example, land rights in rural areas are permitted to be transferred to family members, but transfers outside the family are rare. Certain regulations also result in the loss of land rights for those who leave rural areas. Finally, new migrants to urban areas must wait six months to register their new address, which limits access to basic services. These types of policies may act as a hindrance to rural-urban migration. Faced with insecure land tenure rights, households in rural areas of Ethiopia choose to remain in place and maintain the use right of their land allotment by continuing to farm. This is similar to China, where comparable restrictions on sales of land rights have acted as barriers to migration.

Such disincentives for rural–urban migration, which sometimes outweigh the pull factors of urban areas, could hinder economic development in both rural and urban areas. Constrained rural-urban migration can undermine productivity in the industrial sector by holding back agglomeration and scale economies in cities, and limit labor productivity in agriculture by inhibiting the incentive to invest.

Source: World Bank (2014). Ethiopia Poverty Assessment. Report No. AUS6744.

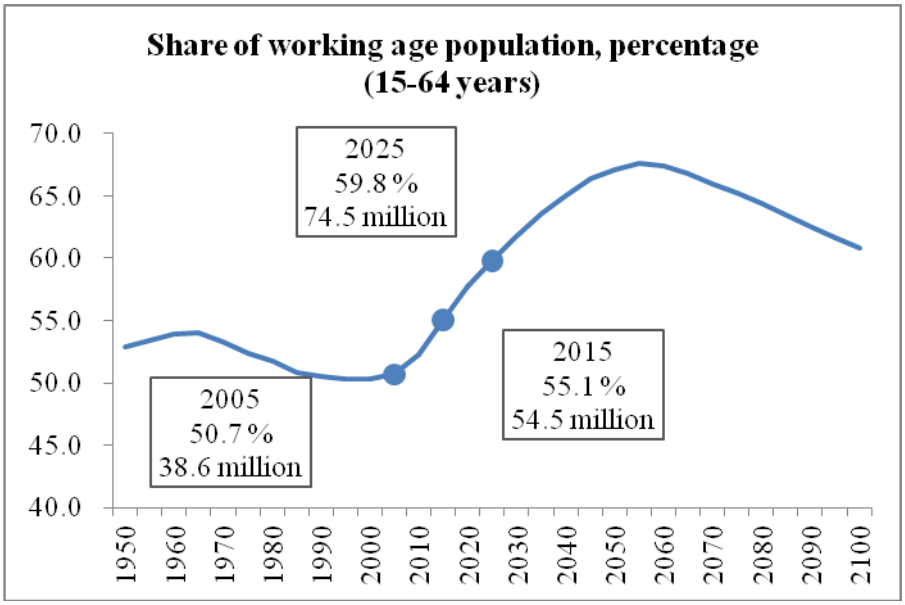
Figure 1: Ethiopia has one of the lowest urbanization levels for its level of income



3. **However, urbanization is rapidly increasing.** Ethiopia's urban population has more than doubled in the past 20 years, from 7.3 million in 1994 to an estimated 16.7 million in 2014.[11] The rates of population growth between the census periods of 1984–94 and 1994–2007 were 4.4 and 3.8 percent, respectively. Over the past 30 years, Ethiopia's annual urban population growth rate has been higher than the average in Sub-Saharan Africa (which itself is among the fastest urbanizing regions in the world).[12] The country's labor force doubled over the past two decades, and the country still has a very large youth bulge entering the labor market in the next 20 years (Figure 2). Many of these young people will be moving to cities for work. While Addis Ababa remains the largest urban area, other cities and towns have also grown rapidly.

[11] Central Statistical Agency, *Population and Housing Census* (2007) and *Population Projection of Ethiopia for All Regions at Woreda Level from 2014 – 2017* (2013).
[12] According to the WDI, Ethiopia's urban population has grown at an average rate of 4.54 percent a year between 1984 and 2013, when the average growth for Sub-Saharan African countries was 4.07 percent.

Figure 2: Ethiopia will see many young people entering the labor market over the next 20 years



Source: United Nations Population Projections (Medium Variant)

4. **According to CSA projections, the urban population is set to nearly triple between 2012 and 2037, to more than 42 million people**. The CSA figures are based on the Urban–Rural Growth Differential method, which measures the net impact of various drivers of population growth. In reality, however, urbanization in Ethiopia may be even higher as a result of several factors not adequately captured in CSA projections. These include:

i. Migration to new towns and urban centers around planned megaprojects, such as sugar plantations and irrigation projects and other intraregional rural-to-urban migration, which may not be adequately accounted for in the Urban–Rural Growth Differential method;

ii. Statistical growth of the population due to:

- Reclassification of rural villages as urban centers, based on criteria established by regional Bureaus of Urban Development and Construction. Rural villages are upgraded to towns when they meet the following requirements: over half of the population are engaged in non-farming activities such as petty trading, service provision and the like; most of the residents in the area are benefiting from urban-based facilities like electricity, piped-water supply, telephones, schools, and health services; total population living in that particular location is 2,000 and above; and the area is believed to have potential for economic growth and attraction of migrants to engage in nonfarm activities.

- Formal expansion of existing urban boundaries to incorporate nearby settlements, as a result of heavy demand for land for residential areas and establishment of manufacturing industries. The territorial expansion of large and medium towns from year to year is not negligible in Ethiopia.

5. **Based on the authors' own calculations of migration, natural population increase and statistical growth since 2007, Ethiopia's urbanization rate is expected to be higher**

than the official CSA figures. From these estimates, Ethiopia is expected to be 30 percent urban by 2028, while its urban population will exceed 42 million by 2032. [13] Over this period, the annual increase in the urban population will range from 800,000 to 1.9 million (although as the total urban population grows, the percent change for each year will decline from 5.9 percent to 4.5 percent). This analysis is based on the best available data from the CSA as well as other governmental sources. For more information on the projections and underlying assumptions, please refer to Annex 3: Detailed Methodology for Alternative Urbanization Projections.

i. Prior to 2018, natural increase is expected to be the largest contributor to urban population growth, contributing between 266,000 and 429,000 urban residents each year, approximately 40 percent of total annual urban population growth;

ii. Migration to existing urban centers and statistical reclassification of rural villages will also be significant, making up 33 percent and 24 percent of the total urban population growth in 2012, respectively. However, rural-to-urban migration is expected to outpace natural increase after 2018. Through 2032, rural-to-urban migration will contribute between 386,000 and 890,000 urban residents each year, and will account for 41 to 47 percent of the total annual urban population growth. Migration to new megaprojects—particularly irrigation projects—will also become more significant. On average, these projects are expected to result in 163,000 additional urban residents each year, and their share of the total annual urban population growth will range from 22 percent (2015) to 16 percent (2032).

iii. Finally, formal expansion of existing urban areas will consistently account for 2 to 4 percent of the total urban population growth each year, from 22,000 in 2012 to 67,000 in 2032.

1.3 Exploiting the Demographic Dividend

6. **Urban population growth presents a key opportunity to change the structure and location of economic activity from a basis in rural agriculture to more diversified and larger urban industrial and service sectors.** In parallel with rapid urbanization, Ethiopia is going through a demographic transition. The labor force—up from 4.7 million in 1984 to 26.5 million in 1994 and to 33 million in 2005—is projected to rise to 82 million by 2030. Ethiopian cities now employ 15 percent of the labor force and contribute 38 percent to gross domestic product (GDP)[14]. If well managed, urbanization could be one of the most important catalysts to promote economic growth, create jobs, and connect Ethiopians to prosperity.

[13] See Annex 3 for more detail on why the urbanization rate may be higher than CSA's estimate of 3.77 percent. Although this figure is the result of a more detailed analysis of urbanization, it should still be treated as an estimate. Barney Cohen (2003) has shown that urbanization projections for all regions of the world are subject to "considerable uncertainty," especially at the country or city level.

[14] "If Ethiopia can repeat its recent historical growth performance of 10.7 percent per year, it would classify as a middle income country by 2025", World Bank, *Ethiopia Economic Update II* (2013).

7. **Ethiopia is experiencing a demographic transition, with the total labor force more than doubling over the past two decades.**[15] According to data from the 2011 Urban Bi-annual Employment Unemployment Surveys (UBEUS), national unemployment for the urban population aged 10 years and above stood at 18 percent (11.4 percent male, 25.3 percent female).[16] The population of Ethiopia also remains predominantly rural (81 percent in 2014) and young (65 percent below the age of 25). The creation of productive employment opportunities for the youth bulge will be key to securing a demographic dividend. The industrial sector has much potential to create the many jobs that will be required in the coming years. But descriptive statistics suggest that many cities attract capital-intensive firms, and that there is scope to increase the contribution of labor-intensive manufacturing. Growing urbanization has the potential to help Ethiopia employ the millions of newcomers into the labor market. The challenge should be understood from the angle of agents of demand (firms that create and sustain employment) and agents of supply (workers). An understanding of how firms create and grow employment in cities will be important to identify the right policies for absorbing the increase in the country's labor force.

8. **Cities have an increasingly important role in the economy.** Analysis undertaken for this study indicates that cities account for over 38 percent of the country's GDP, while they employ—formally and informally—15 percent of the national workforce.[17] An important reason why cities contribute to economic growth above their employment share is the high productivity associated with predominantly urban sectors, such as services, which contribute strongly to national value-added growth. Between 2005 and 2011, manufacturing and industry together accounted, on average, for 12 percent of the growth in gross value added (GVA), while services accounted for 58 percent. Employment across these three sectors, which together made up 70 percent of value-added growth over that period, is heavily concentrated in cities. During the same period, predominantly urban activities such as financial and real estate services, transport and logistics, and wholesale/retail have grown both in value added and employment. In fact, the service sector added over 200,000 new jobs a year in urban areas, bringing the contribution of cities to over 71 percent to overall growth in the sector.[18] Of the nearly 2.8 million new jobs created in Ethiopia between 2005 and 2011, 60 percent were in urban and 40 percent in rural areas.[19] This shows the increasing importance of urban areas for job creation in the sectors generally associated with structural transformation.

9. **Evidence from around the world suggests that the level of urbanization rises with the level of development.** Seminal research by Williamson (1965) and Kuznets (1955) shows that industrialization during early stages of development leads to greater inequality in regional per capita incomes as a result of the shift of labor force from low-productivity agriculture to sectors of higher productivity. However, as countries develop, this shift slows

[15] WDI suggest that the age dependency ratio in Ethiopia increased slowly between 1960 and 1995, and then began to fall rapidly to its 1960 level (i.e. 85 percent). This suggests that not only is the labor force increasing in absolute terms, but that this is also leading to a transition.

[16] CSA, *Urban Employment Unemployment Survey* (2003).

[17] For details on the calculation of the contribution of urban areas to GDP, see the background paper *Contribution of Cities to National GDP in Ethiopia* by Onur Ozlu and Ana I. Aguilera de Llano.

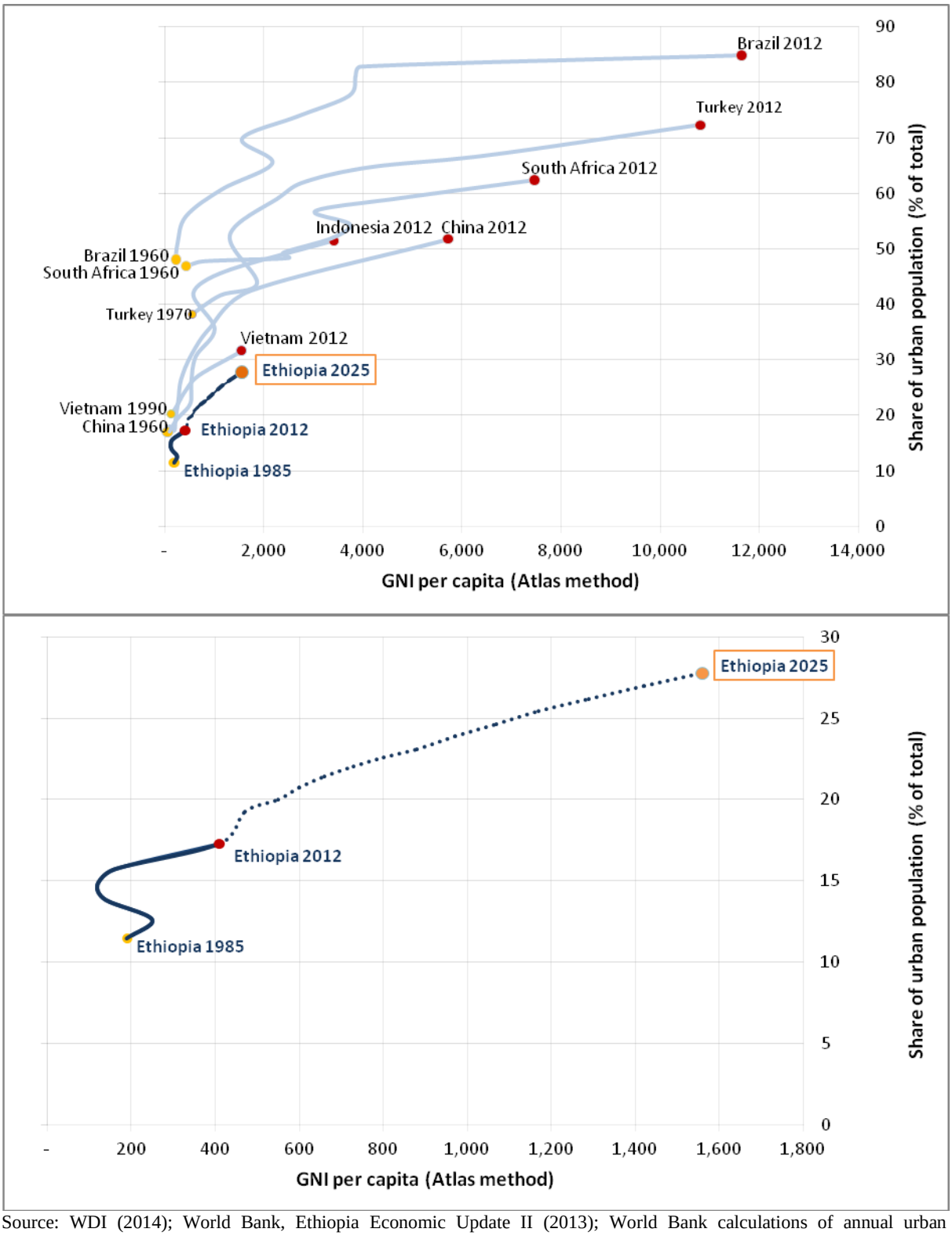
[18] We use a factor decomposition analysis to estimate the contribution of labor and capital across sectors in urban and rural areas. For methodology and details of this computation, see the background paper *Contribution of Cities to National GDP in Ethiopia* by Onur Ozlu and Ana I. Aguilera de Llano. Please note that employment figures include both formal and informal employment.

[19] See Table 4 below.

and follows a decreasing trend in the latter stages of development, as labor and capital movements equalize returns across sectors. International evidence shows that urbanization increases with development, although the relationship is not always linear (Figure 3). Urbanization rises rapidly during the transformation of countries from agrarian to industrial economies, which usually also coincides with development from low- to middle-income status. The figure also shows that urbanization is associated with faster rates of growth when countries are poorer and less urbanized, but that diminishing marginal returns set in at higher incomes. For instance, Bruhlart and Sbergami (2009) find that agglomeration seems to boost GDP growth up to US$10,000 per capita, and that the opportunity cost of low levels of agglomeration[20] are the highest in poorer countries. This suggests that policies that restrict the growth of urban agglomerations could have deleterious effects for GDP growth in Ethiopia.

[20] Results are based on cross-country regressions for 105 countries over 1960–2000. The authors equate agglomeration with urbanization, defined by three variables: a country's population share living in cities whose population exceeds 750,000 in 2000; a country's population share living in areas described as cities by national statistical agencies; and the share of urban population that lives in the largest city.

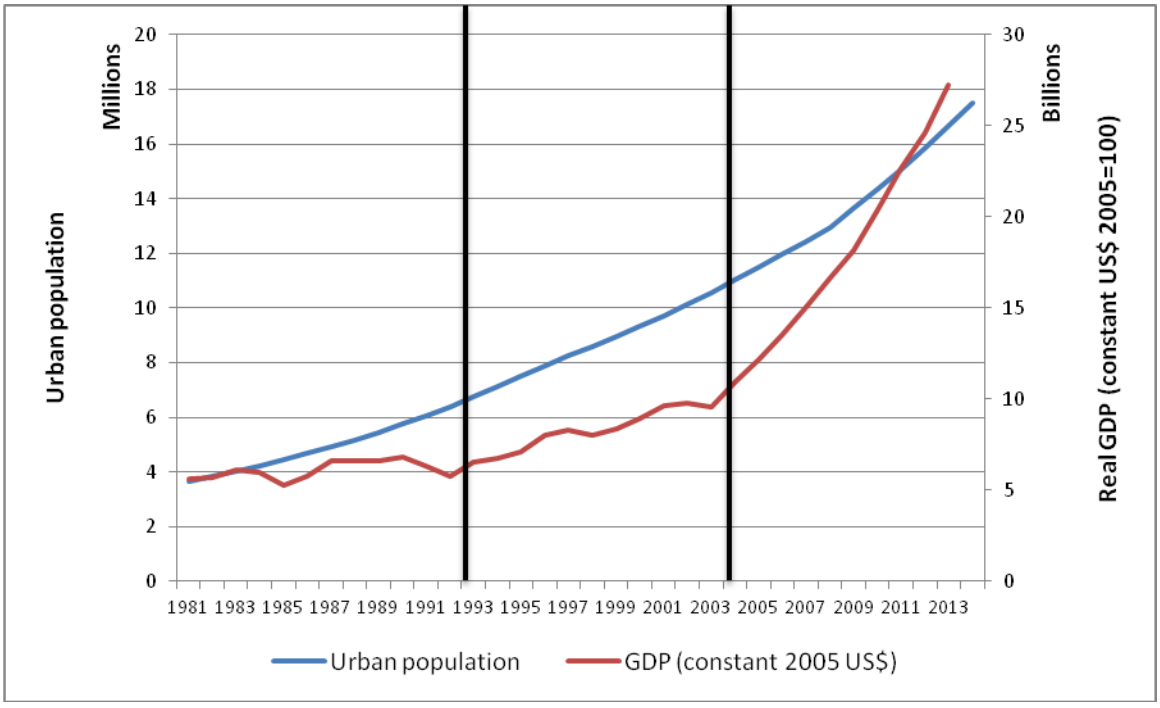
Figure 3: Urbanization increases with economic growth, but the positive correlation slows as countries develop



Source: WDI (2014); World Bank, Ethiopia Economic Update II (2013); World Bank calculations of annual urban population growth (see Annex 3).

10. **As in other countries, urbanization in Ethiopia is a significant predictor of economic growth.** As Ethiopia urbanizes, it is no surprise that this has been associated with increasing rates of economic growth, with this relationship becoming stronger after 2007-2008. Figure 4 depicts the relationship between economic growth and urbanization in Ethiopia over three development periods: (i) the eighties (1981-1992) characterized by yearly erratic low growth at an annual average rate of 0.24 percent for the decade; (ii) the nineties (1992-2003) with a steady average annual rate of 4.6 percent ; and (iii) contemporary growth (2003-2013) characterized by fast growth rates averaging 10.4 percent per year with urbanization and economic growth accelerating after 2007-2008[21]. However, while the recent growth is impressive, GNI in Ethiopia is the lowest among countries with similar levels of urbanization. Ethiopia is 18 percent urbanized, with US$470 GNI per capita, Atlas method. Countries with similar levels of urbanization (18–20 percent) include Nepal, South Sudan, and Sri Lanka with 18 percent urbanization and US$730; US$1,120; US$3,170 GNI per capita, respectively; and Cambodia at 20 percent urbanization with US$950 GNI per capita[22], [23].

Figure 4. Economic growth and urbanization in Ethiopia, 1981-2013



Source: WDI 2014.

[21] Urban population growth increases from 4.1% in 2007 to 5.1% in 2008, suggesting a change in the slope of urbanization as depicted in Figure 4. The change in slope is shown by the dotted line that joins the GDP line at around 2007. Note that GDP growth also accelerates after 2008.
[22] WDI (2014), GNI per capita Atlas method.
[23] Rates of GNI growth were regressed on rates of urbanization across 214 countries, spanning 52 years (1960–2012), controlling for country and year fixed effects. It was found that on average a 1 percent increase in the rate of urbanization is associated with a 0.134 percent increase in GDP. For Ethiopia, the regression results suggest a negative and statistically significant association between urbanization and GDP growth.

11. **Rates of growth enjoyed by Ethiopia over the past few years have been associated with an increase in value-addition in services, but scant structural changes in the labor force and little industrialization.**[24] The country's recent economic growth has been impressive in absolute terms, averaging 10 percent per annum. In line with this growth, real GVA increased from 184 billion birr in 1999 to 571 billion birr in 2013 – a 211 percent increase in 14 years (in constant prices, Table 1). The recent economic growth is based mostly on agricultural production and services on the supply side, and private consumption and public investment — Ethiopia's public investment rate is the third highest in the world[25] — on the demand side, rather than on strong structural change in the economy. In addition to this, mining has also grown rapidly at an average annual rate of 11.8 percent for 1999-2013, although from a low base.

Table 1: GVA

	GVA by sector (constant 2010/11 birr, million)			GVA by sector (% total GVA)			GVA by sector (annual growth, %)		
	1999	2005	2013	1999	2005	2013	1999-05	2005-13	1999-13
Agriculture	101,374	133,571	238,752	55.1	49.0	41.8	4.7	7.5	6.3
Mining	1,708	2,470	8,157	0.9	0.9	1.4	6.3	16.1	11.8
Manufacturing	7,988	11,048	24,798	4.3	4.1	4.3	5.6	10.6	8.4
Utilities	2,102	3,021	6,124	1.1	1.1	1.1	6.2	9.2	7.9
Construction	5,378	10,262	34,832	2.9	3.8	6.1	11.4	16.5	14.3
Commerce	26,867	39,108	110,158	14.6	14.4	19.3	6.5	13.8	10.6
Transport	5,828	11,264	25,792	3.2	4.1	4.5	11.6	10.9	11.2
Finance	2,657	5,443	13,559	1.4	2.0	2.4	12.7	12.1	12.3
Public services	15,167	25,788	45,563	8.2	9.5	8.0	9.2	7.4	8.2
Other services	14,875	30,533	63,585	8.1	11.2	11.1	12.7	9.6	10.9
TOTAL	183,944	272,508	571,320	100.0	100.0	100.0	6.8	9.7	8.4

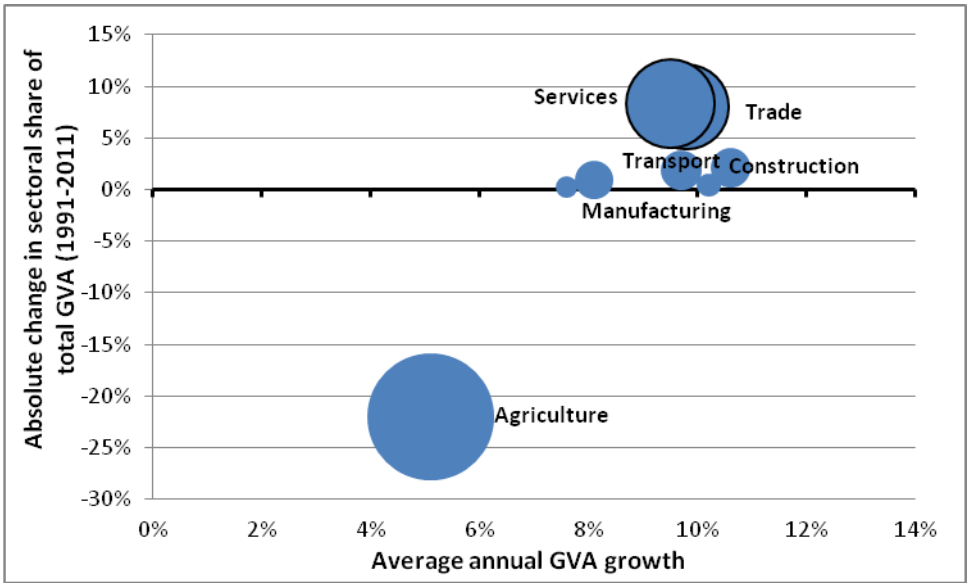
Source: Government of Ethiopia, Martins (2015)

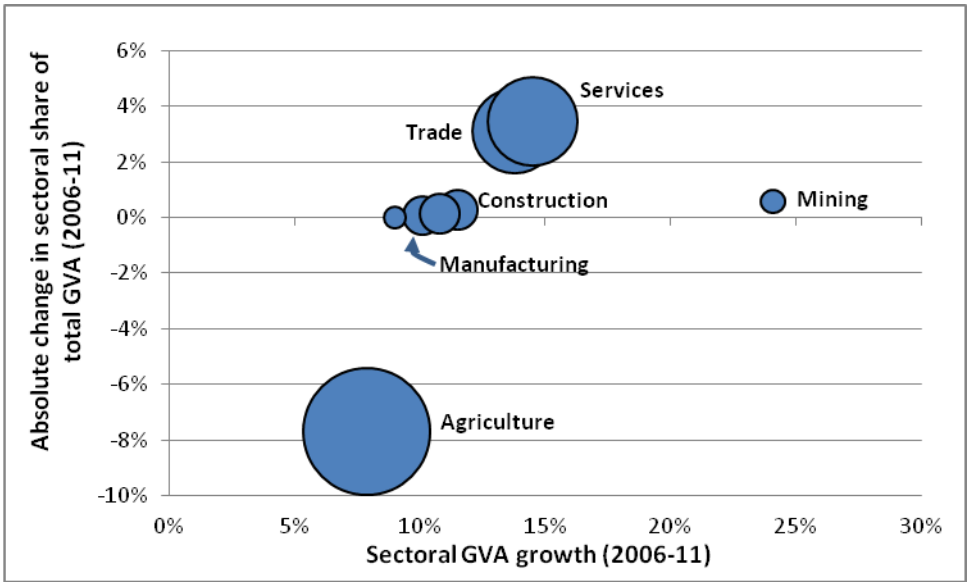
12. **Agriculture remains a very large sector and the services sector is beginning to play an increasing role in the Ethiopian economy.** While there is a steady decline in the growth rate of the agricultural sector, it remains very large in terms of total output, accounting for about 45 percent of GVA (Table 2). The service sector has expanded considerably (especially commerce and real estate activities); trade and other services each represent about 40 percent of GVA, with their relative shares nearly doubling since 1991. Yet industry's share of the GVA remains one of the lowest in Africa. As shown in Figure 5, labor-intensive activities such as services are beginning to play an increasingly important role in the economy as the country urbanizes and benefits from a pooled labor market. At the same time, the decline in agriculture continued during 2006-2011, its share of total value added contracted by 8 percent despite continuing to grow in real terms at the same rate. Importantly, manufacturing, a sector typically associated with structural transformation and productivity gains, is not only very small, at 4.3 percent of GVA in 2013 (especially compared with other countries in Sub-Saharan Africa) but has also recorded very little increase since 1991 (when it accounted for 3 percent of GVA). While manufacturing continued to grow at 10 percent, its share of total value added barely moved. The fact that smaller sectors like mining, manufacturing and construction continue to grow but their shares are almost unchanged is most likely related to the larger effect that services and trade have on

[24] World Bank, *Ethiopia Poverty Assessment*, Draft (2014).
[25] World Bank (2013) 'Ethiopia Economic Update II: Laying the Foundation for Achieving Middle Income Status', World Bank Report 78501.

the overall value added. A key factor in Ethiopia's structural change is that the considerable GVA growth has been mainly driven by within-sector labor productivity, although structural change – i.e. the reallocation of labor from lower-to higher-productivity sectors – is playing an increasingly important role. There is also growing evidence of a demographic dividend. However, more than three-quarters of workers – nearly 40 million – continue to rely on the agricultural sector to earn a living. When compared with other Sub-Saharan African countries, Ethiopia has the highest share of agriculture in GDP and the lowest shares of industry and manufacturing, suggesting that stronger efforts will be required to accelerate the pace of structural transformation and achieve sustainable economic development (Martins, 2015).

Figure 5: Sectoral size and growth (1991-2011 and 2006-2011)





Source: Government of Ethiopia; own calculations.

Table 2: Sector GVA Shares (%)

	1991	1996	1999	2005	2013
Agriculture	66.0	62.0	55.1	49.0	41.8
Mining and Quarrying	0.9	0.9	0.9	0.9	1.4
Manufacturing	3.0	4.0	4.3	4.1	4.3
Electricity and Water	1.0	1.0	1.1	1.1	1.1
Construction	2.0	2.0	2.9	3.8	6.1
Trade	11.0	13.0	14.6	14.4	19.3
Transport & Comms.	2.0	3.0	3.2	4.1	4.5
Finance	1.1	0.1	1.4	2.0	2.4
Other Services	13.0	14.0	16.3	20.7	19.1
Total	**100**	**100**	**100**	**100**	**100**

Source: Government of Ethiopia

	1991	1996	1999	2005	2013
Share of urban population	12.9	14.0	14	15.9	18.0

Source: WDI

13. **While the recent performance of the Ethiopian economy has been remarkable, with strong, broad-based economic growth and considerable poverty reduction, it has been driven primarily by public investment and private consumption on the demand side, and by services and agriculture on the supply side.** Sustaining this economic performance is likely to become increasingly difficult due to the challenge of maintaining high levels of public investments, and will only be achieved by accelerating the pace of structural transformation. The average urbanization rate of 3.7 percent a year between1996 and 2011 and the rate of shift out of agriculture (a key indicator of structural transformation) during the same period are similar.[26, 27] This indicates that the shift in people from rural to urban areas has been almost the same as the shift in people from agriculture to non-agriculture. While more research is needed to better understand the link between urbanization and the shift out of agriculture to more productive activities, Dorosh and Thurlow (2011)[28] find that "…accelerated urbanization would strengthen economic growth, improve rural welfare, and reduce the rural–urban divide". Additionally, bivariate analysis done for this study suggests a strong negative correlation[29] between agricultural activity and higher urbanization (pair-wise correlation of -0.8507), while preliminary analysis shows a positive

[26] Martins (2014) show that agriculture's share of total employment decreased 3 percentage points between 1996 and 2011, with the sector contributing 81.0 percent of overall jobs in 1996 and 78.0 percent of total in 2011.

[27] The average annual urban population growth rate is 3.77 percent according to CSA estimates and 4.4 percent based on WDI (2014) data. Regardless of the magnitude of this rate, the shift out of agriculture is similar.

[28] Dorosh, P. and J. Thurlow (2011) 'Urbanization and Economic Transformation: A CGE Analysis for Ethiopia', Ethiopia Strategy Support Programme II, Working Paper 14.

[29] The econometric exercise carries out a careful study of how different variables are associated with one another, but does not posit causality at this stage. Such an exercise would require controlling for endogenity (i.e. owing to simultaneity and omitted variables bias), requiring a much more sophisticated level of analysis.

correlation between industrial activities and services on the one hand and urbanization on the other (correlation coefficients of 0.6782 and 0.8879, respectively)[30].

14. **Changes in the composition of employment have not fully mirrored the shift in the composition of the GVA, and have lagged behind.** The share of agriculture in GVA declined by 20 percentage points between 1996 and 2013 (from 62% to 42%), while the share of services went up from 30 percent to 45 percent (see Table 2). For the same period, the share of agriculture in total employment decreased by only 4 percentage points (from 81% to 77%), i.e. agricultural employment remains very high. Total employment increased by 12.2 million between 1996 and 2013, with agriculture absorbing 72 percent of this increase, followed by trade (8%), manufacturing (8%), other services (7.4%) and construction (3%). It is notable that trade and other services accounted for 3.0 and 2.8 million jobs in 2013, respectively, nearly doubling their 1996 values. Jointly, these two sectors account for almost 15 percent of total employment. The pace of employment growth has slowed in recent years,[31] and growth in manufacturing employment went down from 5.5 percent per annum between 1999 and 2005 to 2.6 percent per annum between 2005 and 2013 (Table 3). Given the different data sources, however,[32] the results must be interpreted with utmost caution. Bearing this in mind, as most manufacturing employment is concentrated in urban areas in Ethiopia (Table 4), the country seems to be deindustrializing faster at lower rates of development.[33]

Table 3: Employment by Sector

	Employment (millions)				**Annual Average Growth (%)**			**% Total Employment**			
	1996	**1999**	**2005**	**2013**	**1999–2005**	**2005–13**	**1999–13**	**1996**	**1999**	**2005**	**2013**
Agriculture	18.3	19.9	25.2	30.8	4.0	2.5	3.2	81.0	79.8	80.2	77.3
Mining & Quarrying	0.1	0.0	0.1	0.1	31.8	11.5	19.8	0.3	0.1	0.3	0.5
Manufacturing	0.5	1.1	1.5	1.9	5.5	2.6	3.9	2.3	4.5	4.9	4.7
Electricity & Water	0.0	0.0	0.0	0.1	2.7	13.4	8.7	0.2	0.1	0.1	0.2
Construction	0.2	0.2	0.4	0.8	11.8	8.0	9.6	0.7	0.9	1.4	2.1
Trade	1.6	2.3	2.4	3.0	0.5	2.1	1.4	7.1	9.4	7.7	7.4
Transport & Comms	0.1	0.1	0.1	0.3	3.0	12.6	8.4	0.4	0.5	0.5	0.9
Other Services	1.5	1.2	1.6	2.8	5.0	9.4	6.9	6.5	4.8	5.0	6.7
Total	**22.3**	**24.8**	**31.3**	**39.8**	**4.0**	**3.0**	**3.4**	***98.5***	**100**	**100.0**	**100.0**

Source: Government of Ethiopia, Martins (2015)

[30] Sector shares (as percentage of national annual GVA) are based on the World Bank's Ethiopia Country Office calculations for 1981–2012. Urbanization levels (share of urban population as a percentage of the total) are publicly available (WDI) for the same period, on an annual basis. Correlation coefficients are statistically significant for a 5% confidence interval.

[31] Supported by evidence that the employment rate—i.e. the employment-to-population ratio—fell between 2005 and 2013. This can be partly explained by a large number of youth staying longer in education. See also Broussara and Tekleselassie (2012) who provide evidence on youth employment in Ethiopia. By delaying entry into the labor market, this increase in the student population (counted under the economically inactive) has an impact on several employment indicators.

[32] Data from two labor force surveys (LFS) and two household income consumption and expenditure surveys (HICES) are used: LFS 1999 and LFS 2005, and HICES 1995/96 and HICES 2010/11. HICES 1999/2000 and HICES 2004/05 are not included because LFS cover similar periods and provide more comprehensive information on employment issues, and because HICES 1999/2000 does not provide data on the employment sector, which is a crucial variable for the analysis on structural transformation. Also, the 2007 Census does not provide data on the employment sector, while the 1984 Census includes data for Eritrea. The 1994 Census is close to the first HICES and is not included to minimize the use of multiple data sources. The use of the HICES 2010/11 survey is especially important as it allows the study of recent sector employment dynamics, and thus structural change.

[33] Global quantitative research carried out on cities worldwide as part of the World Bank's Competitive Cities Knowledge Base Program shows that deindustrialization in cities tends to take place at $3,000–10,000 GDP per capita.

Table 4: Employment by Economic Activity, 2005–11

Industrial Aggregates (UN System of National Accounts)	Net Job Creation			Contribution to Growth in Employment, by Type of Industry	
	Total	**Rural**	**Urban**	**Rural**	**Urban**
Agriculture	1,506,829	1,364,441	142,388	0.91	0.09
Industry and Manufacturing	(472,982)	(786,365)	313,384	1.66	(0.66)
Services	1,779,950	509,364	1,270,587	0.29	0.71
Total	**2,813,798**	**1,087,439**	**1,726,359**		

Source: Central Statistical Agency (CSA), 2004/05 Labor Force Survey (LFS); 2010/11 Household Income Consumption and Expenditure Survey (HICES).

15. **Economic activity is growing faster in cities surrounding the capital region, but less rapidly in Addis Ababa**. By using nightlights as a rough measure of economic activity,[34] Figure 6 depicts changes in GDP per capita between 1994 and 2012 for more than 20 Ethiopian cities. Despite its primacy, Addis Ababa has experienced a relatively low growth in economic activity compared with other cities in the country[35]. Given the caveats of nightlights data as a proxy for GDP,[36] we interpret some of these findings with great caution, and try and supplement them with data on employment and other measures of activity. There is evidence of a decline in GDP per capita in the capital between 2007 and 2012.[37] Yet cities close to Addis Ababa, including Sebeta, Bishoftu (Debre Zeyit), and Mojo, have experienced very large increases in economic growth. In contrast, economic activity in other cities in the north of the country seems to be declining, even over 1994–2012.

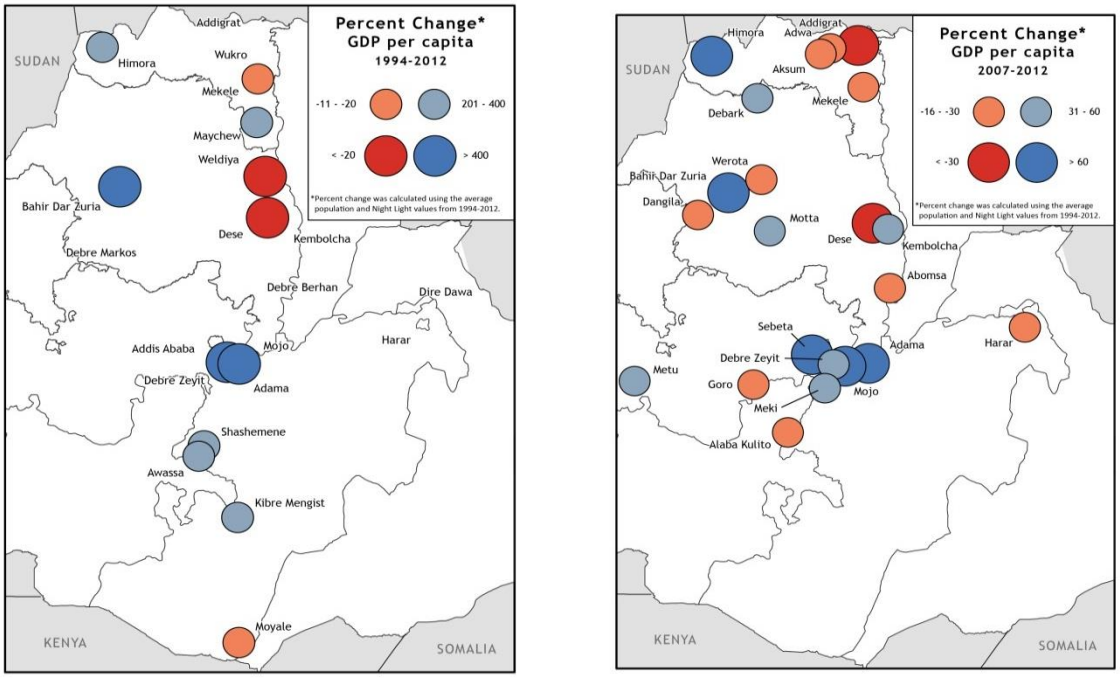
[34] See Annex 2, *GDP and Nightlights Data*, for more details.

[35] It is important to note that the electricity sector has been growing at a rapid pace in Ethiopia. In the five years leading up to 2011, more than 41 percent of towns and villages were connected to the grid, and the number of electricity consumers grew from 800,000 in 2006 to more than 2 million in 2011. Given that Addis has always been fairly well served with electricity, some of the increase in the activity in areas surrounding Addis might possibly be attributable to their increased access to electricity.

[36] Nightlights data are based on satellite images taken at night, and are more likely to represent economic activity that uses electricity, and can be biased upwards or downwards accordingly, although the direction or range of the bias is unclear in this case.

[37] The overall size of the economy in Addis Ababa is growing. Declining GDP per capita suggests that population growth has outpaced GDP growth.

Figure 6: Nightlights data showing GDP per capita change, 1994–2012 (left) and 2007–12 (right)



Source: World Bank calculations based on Defense Meteorological Satellite Program, NASA Earth Observatory and National Geophysical Data Center.[38]

16. **In summary, Ethiopia will need to do more if it is to reap the full benefits of rapid urbanization.** Our analysis indicates that Ethiopia could be 30 percent urban by as early as 2028, with a tripling of urban population to 42 million by 2032. Over the same period, the labor force is expected to increase to 82 million. Creating job opportunities in urban areas will be essential if Ethiopia is to exploit its demographic dividend. Cities already play an important role in the economy, contributing to 38 percent of GDP though employing only 15 percent of the total workforce. This is primarily due to the high productivity associated with urban sectors like services. Cities have also accommodated 60 percent of all new jobs created in Ethiopia between 2005 and 2011 despite a much smaller share of the population. However, while at over 10 percent, recent economic growth at the aggregate level has been impressive, per capita growth has lagged and GNI in Ethiopia is the lowest among countries with similar levels of urbanization, suggesting that urbanization has not been associated with commensurate increases in economic prosperity. Moreover, more than any other Sub-Saharan African country, growth in Ethiopia has been based primarily on agricultural production and public investment rather than sectors like manufacturing and industry that lead to structural transformation and tend to be associated with higher levels of productivity and employment. As we shall see in the following chapter, if cities fail to capitalize on the opportunities presented by the demographic dividend, rapid population growth could become a demographic problem, as urban areas would fail to provide adequate employment, infrastructure and services, and housing to expanding urban populations.

[38] See Annex 2, *GDP and Nightlights Data*, for more details.

2. The Demographic Challenge: Jobs, Infrastructure and Services, and Housing

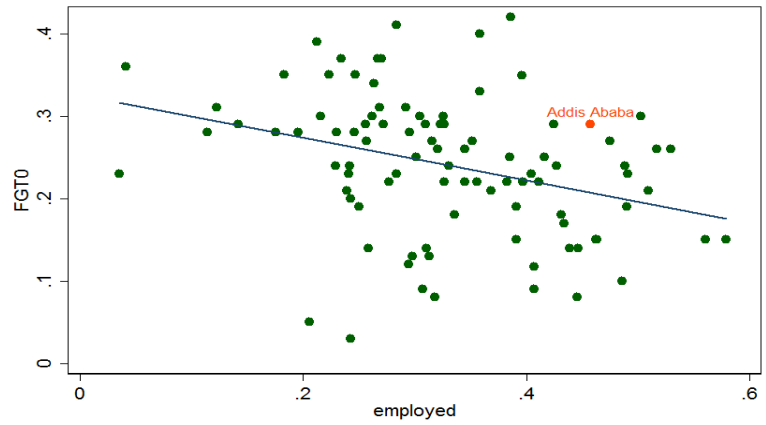
2.1 Introduction

17. **If not well managed, rapid urban growth could present less of a demographic dividend and more of a demographic problem as cities struggle to provide jobs, infrastructure and services, and housing to more people.** The central challenge for the Ethiopian Government is making sure that cities are attractive places to work and live, while fostering urbanization. Infrastructure and service delivery already are undermined by the growing urban extent and by stretched municipal budgets, while formal labor markets are failing to keep up with the demand for jobs. As a result, Ethiopian cities run the risk of becoming less attractive places for people and economic activity.

2.2 The Employment Gap

18. **Job creation is an essential part of creating socially sustainable cities.** Manufacturing growth was a driver of poverty reduction in urban areas from 2000 to 2011.[39] In Ethiopia, poverty rates are lower in cities that have a higher share of the population in wage employment than self-employment (Figure 7). Fresh entrants to the labor market were more likely to be employed in 2012 than graduates in 2003.[40] However, unemployment rates among recent graduates are very high, particularly in large urban centers.

Figure 7: Towns and cities with higher rates of wage (formal) employment are less poor



Fitted values of linear prediction do not include Addis Ababa.

Source: Hill, Mehta and Sohnesen, *Cities and Poverty in Ethiopia* (2014).

[39] This is because manufacturing employment is associated with lower levels of poverty, and because waged employment (often in the manufacturing sector) is associated with lower levels of poverty.
[40] World Bank, *Nature of Entrepreneurship in Ethiopia—Is The New Generation Different?* (draft)

19. **Unemployment in Ethiopia is an urban phenomenon, particularly in Addis Ababa.** In rural areas, fewer than five percent of all households have an unemployed adult. However, in urban areas, 15 percent of all households report an adult member—male or female—as unemployed. Unemployment increases in large cities as the size of formal labor markets increase. In particular, there are high unemployment rates in Addis Ababa; 23.5 percent of households report an unemployed adult, versus 11 percent of households in other urban areas.

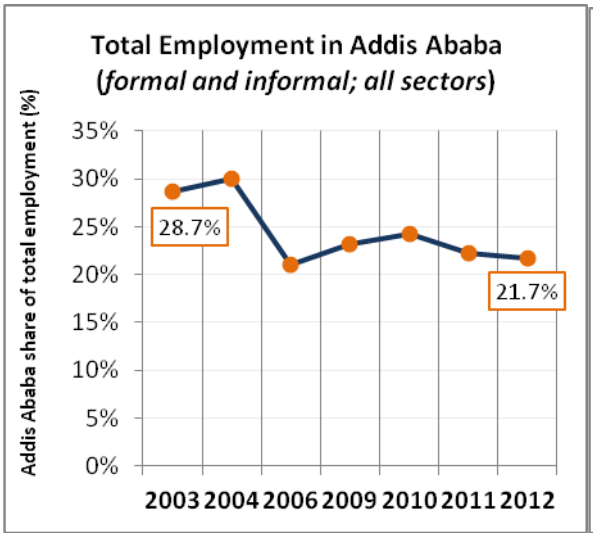
20. **Urbanization in Ethiopia can help bring about structural transformation if it is accompanied by sustained increases in nonfarm employment.** High unemployment rates in urban areas are worrisome, especially given the rapidly changing demographic profile of the population. The rest of this section studies the employment profile across cities, slicing the aggregate numbers by the types and sources of job creation. To understand the distribution of employment across cities, two separate sources of data were used. The distribution of total employment (i.e. formal and informal (waged and self-employed), and across sectors) was analyzed using the UBEUS. In addition, the distribution of formal industrial employment was analyzed using data from the Large and Medium Scale Manufacturing and Electrical Industries Survey (LMMIS).[41]

21. **Employment growth is faster in cities other than Addis Ababa**. Industrial concentration and growth take place more in the cities, although increasingly less so in Addis Ababa than in secondary cities. The federal government has taken several policy measures to support industrialization across the country,[42] and urban regions remain centers of economic activity and employment. Much more industrial activity, as measured by the LMMIS data, is concentrated in Addis Ababa. Over time, however, a number of cities have managed to expand their manufacturing base, notably Adwa, Sebeta, Bishoftu, Adama, Hawassa, and Mekele. Indeed, data from the UBEUS and LMMIS suggest that the primacy of Addis Ababa is declining for employment (Figure 8). Nevertheless, the absolute size of its economy is still growing, which indicates that it remains an attractive location for firms.

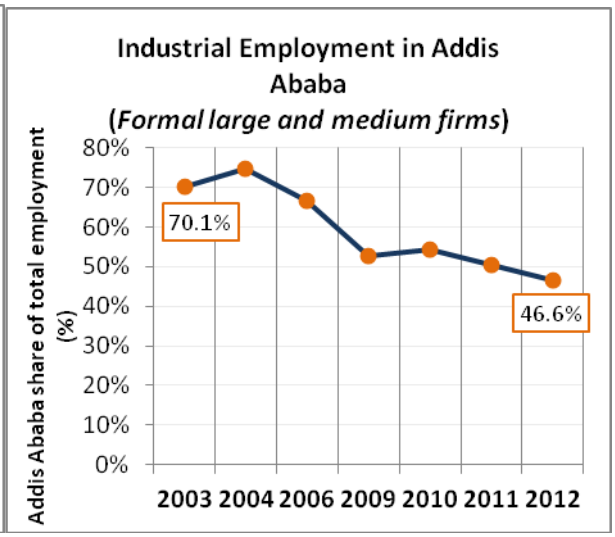
22. **Informal[43] employment in secondary cities is also more widespread than in Addis Ababa**. Although secondary cities are growing faster than the capital, they also tend to have a larger informal sector than Addis Ababa (Figure 9). These trends vary considerably across sectors. Industry and services in urban areas generally increased their share in formal employment between 2006 and 2012.

[41] The LMMIS data do not include services enterprises, informal enterprises, or enterprises with fewer than 10 employees. They include all manufacturing enterprises across the country employing 10 or more workers. Data from the UBEUS (2009, 2010, 2011, and 2012) were used to check these findings. There are similarities in employment distribution: the share of Addis Ababa remains dominant, with the city accounting for around half of medium and large firms, and half of total employment. Also, after 2010, employment share decreased in many other cities, indicating that either firms located in the capital were more resilient to global macroeconomic shocks, or that firms and people migrated to Addis Ababa.
[42] This included providing incentives for setting up industrial zones in and around cities in regions across Ethiopia.
[43] An informal entity is defined as person(s) or firms who engage in commercial activities without having a valid business license or paying taxes associated with their business activities, as required by law. Informal actors can be both manufacturers and service providers (Proclamation No. 686/2010).

Figure 8: The primacy of Addis Ababa is declining in terms of employment

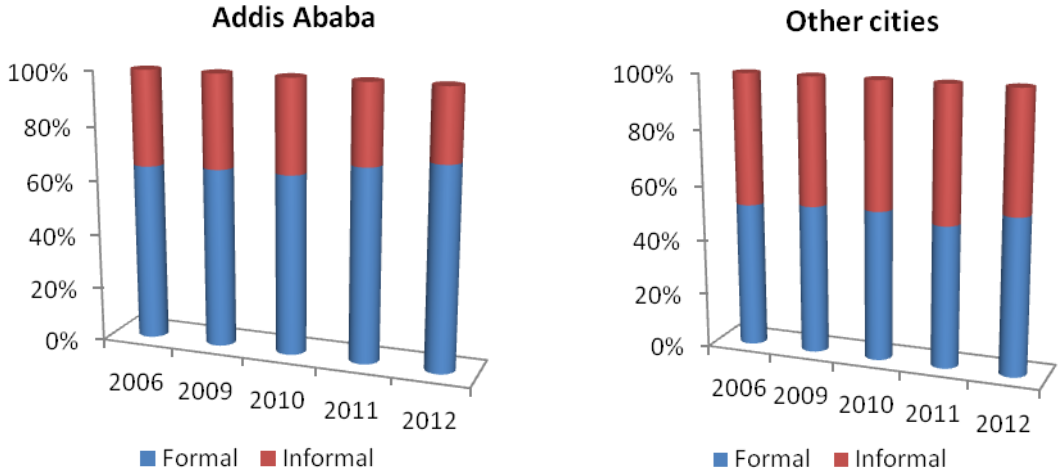


Source: CSA, UBEUS.



Source: CSA, LMMIS.

Figure 9: Informal employment is more widespread in cities other than Addis Ababa



Source: CSA, UBEUS.

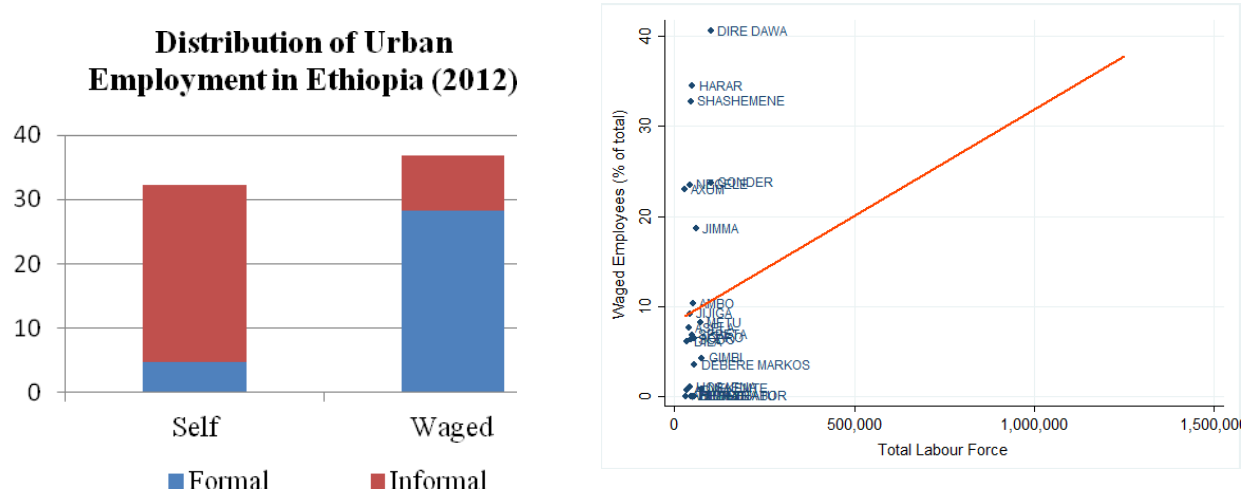
23. **Informality in Ethiopia is less widespread than elsewhere in Sub-Saharan Africa.** In 2011, 37 percent of those employed in Ethiopian cities were in the informal sector—this is low when compared to average rates of 60 percent or higher elsewhere.[44] The government has taken a two-pronged approach to dealing with informality. On the one hand, the Commercial Registration and Business Licensing Proclamation (passed in January 2011) lays out severe penalties for those engaging in unlawful (which may include informal) economic activities. At the same time, local urban governments have established policies to facilitate the transition of informal firms through skills training, provision of business premises, and

[44] African cities are characterized by high levels of slums and informal settlements, reaching proportions as much as 60–80 percent in some East, Central, and West African cities. See: African Centre for Cities. "A Framework for Working with Informality."

access to finance. For instance, in Addis Ababa, informal street vendors were relocated to sheds, and at the same time encouraged to join savings groups to accumulate adequate capital to formally register their business. However, informal employment trends are not equal across different groups—by gender and migration status. More women than men were likely to be working in informal jobs (48 percent against 28 percent). Many migrants to cities often find themselves working in the informal sector (which is expanding faster in secondary cities compared to Addis). The three largest sectors of employment for migrants are trade, domestic work, and hotels and restaurants; migrants in Addis are slightly less likely than non-migrants to be found in self-employment.[45] Research by the World Bank indicates higher employment rates for recent migrants than for non-migrants, although male migrants are more likely to find employment than female migrants.[46]

24. **Waged employment increases with city size and is primarily formal, while self-employment is primarily informal, limiting the potential of the demographic dividend.** Even while the scale of informal employment in Ethiopia is smaller than in many other Sub-Saharan African countries, most employers and associated waged employment are within the formal sector (Figure 10). Most of those who are self-employed work in the informal economy and most are young, aged 16 to 45 years old. This matters because international research suggests that waged employment, not self-employment, leads to the emergence of a middle class in developing countries.[47] Importantly in Ethiopia, there is a positive relationship between city size and the share of the labor force in waged employment. This is encouraging and suggests that as cities grow, their labor force is more likely to be in waged employment. And as waged employment is not only associated with higher and more stable incomes[48] but also lower levels of poverty,[49] it is good for growth and poverty reduction.

Figure 10: Waged employment is mostly formal and grows with city size



[45] See Chapter 4 in World Bank, *Urban Labor Markets in Ethiopia: Challenges and Prospects* (2007).
[46] Ibid.
[47] Abhijit V. Banerjee and Esther Duflo, 'What is Middle-Class about the Middle Classes around the World?," *Journal of Economic Policy*, Vol 22, No.2. (2008).
[48] Banerjee and Duflo (2008).
[49] Hill, R.V., Mehta, P. and Sohnesen, T.P. *Cities and Poverty in Ethiopia*, Background Paper prepared for the Ethiopia Poverty Assessment (World Bank, 2014).

Source: CSA, UBEUS.

25. **Waged employment growth is lagging in many fast-growing cities.** Firms in emerging cities such as Adwa, Sebeta, and Debre Zeyit (Bishoftu) are the most employment-intensive. Yet while fast-growing industrial towns such as Nazareth (Adama), Hawassa, and Mekele attract new firms, these new entrants do not create as many jobs as those in other cities. Thus, new economic activity in some cities has been associated with less than commensurate levels of job opportunities.

26. **Evidence from small-scale enterprise surveys suggests that the average firm has increased in size over time, although to various degrees across regions**. Data from the Survey of Small Scale Manufacturing Industries (2007–08 and 2010–11) indicates that the average firm in the survey is small, employing around two people—the smallest firms employ no additional labor, while the largest firms employ between 18 (2007–08) and 27 (2010–11) people.[50] There is some evidence that the average small-firm size has increased from 2007 to 2011, but the changes are not standard across regions; firms in Oromia and Harar were 10 percent larger in 2011, while those in Tigray and Bensha were much smaller.

27. **Wages grew, on average, by 15 percent across all micro, small, and medium enterprises (MSMEs) between 2007–08 and 2010–11, although consumer prices increased at an average 19.5 percent over the same period.**[51] The slow increase in wages seems commensurate with the increasing proportion of informal enterprises within MSMEs over the period. In 2007-08, 80 percent of MSMEs were informal (around 3.7 percent were formal, the balance semi-formal), and in 2010, 83 percent of MSMEs were informal, with only 1.8 percent formal.

28. **Micro and small enterprise (MSE) development is at the heart of the Ethiopian Government's urban development strategy for reducing unemployment and poverty**. One way the Government is supporting MSEs is through the Micro and Small Enterprise Development Agency. With a focus on youth and women, the agency provides a wide range of support including business development training, equipment, loans, and working premises for new businesses in clustered areas. The focus on MSE has had a visible impact. According to the Addis Ababa City Government, over 83,000 MSEs and 74,457 new jobs were created over 2004/05–2008/09 (AABOFED 2009).[52] More recent research, however, indicates that an uneven economic landscape has been generated, in which MSEs find it difficult to expand to medium size without further support from the government, partly because many are "necessity entrepreneurs" engaged in business due to lack of alternative employment opportunities. [53]

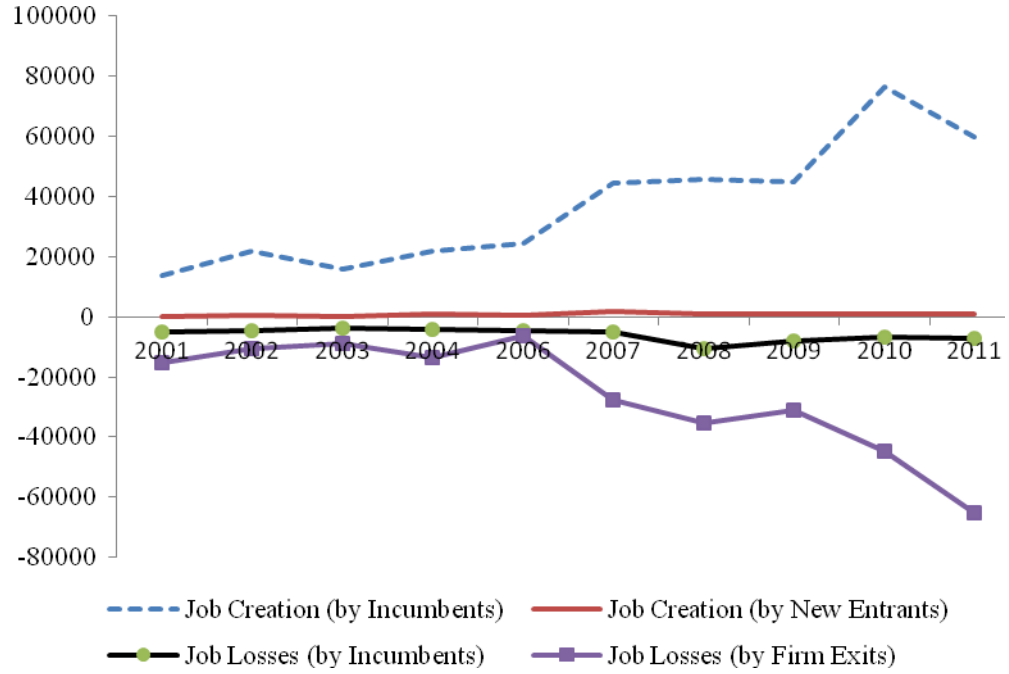
29. **These self-employed "necessity entrepreneurs" account for a sizable share of the urban poor.** Interventions that enable them to upgrade to wage employment or more productive forms of self-employment are essential to building socially sustainable cities. Simulation exercises suggest that encouraging wage employment by supporting opportunity

[50] We take the average number of employees (permanent and temporary) for the same months across the two survey years.
[51] However, in some regions average wage increases outpaced inflation, including Harar, Somali, and Addis Ababa.
[52] Ministry of Finance and Economic Development. Population, Gender and Development in Addis Ababa. 2005 E.C.
[53] Spatial Determinants of Growth in Addis Ababa, World Bank-GWU Capstone Program.

entrepreneurs (who hire others) or reducing inefficiencies in hiring and search costs can reduce poverty more than general policies that encourage self-employment.

30. **Most sustained job creation is coming from incumbents and not from new firms**. Most industrial waged jobs in urban areas in Ethiopia are created by existing firms (Figure 11). There is much spatial variation in job creation (Figure 12). Cities like Mekele and Adwa in the north create and sustain employment across different industry-types, including wearing apparel and nonmetallic minerals. Others, such as Dire Dawa and Harar, create jobs in certain industries but also destroy jobs in others, leading to net losses (in Dire Dawa) and net gains (in Harar). The technical annex paper provides an econometric study of the effect of factors specific to industries (such as intra-industry clustering), versus those common to all industries within a city (such as infrastructure) on the ability of cities to create and sustain employment.[54]

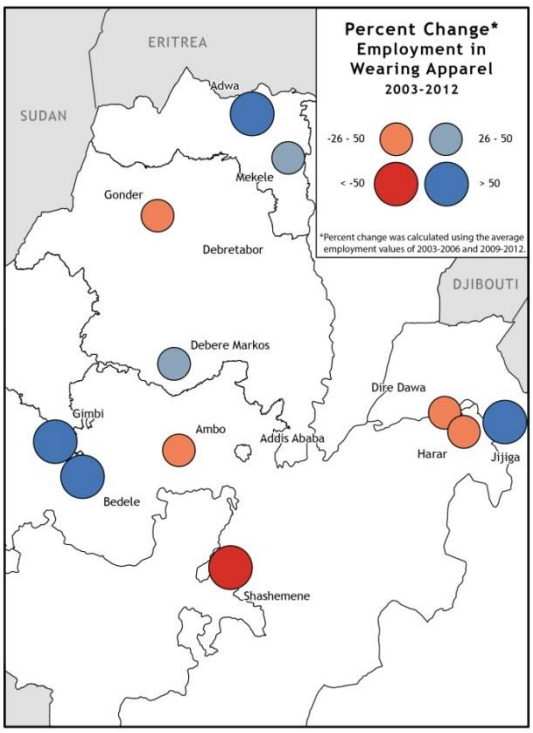
Figure 11: Sustained increase in employment comes from existing firms

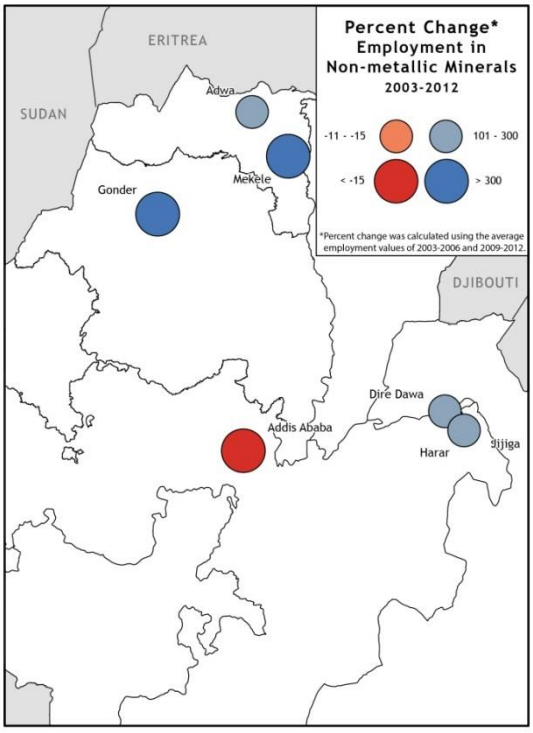


Source: CSA, LMMIS.

[54] See technical background paper: "Which Cities create Jobs? Evidence from Ethiopia."

Figure 12: Job creation and losses vary considerably across cities





Source: CSA, UBEUS.

31. **Firms in Ethiopia are less likely to graduate to larger status, possibly because of misaligned incentives and business environment concerns.** Large firms create and sustain jobs, yet Ethiopia exhibits significantly low rates of graduation from micro to small firm

status, and from medium to large firm status.[55] Econometric analysis[56] conducted as part of this report suggests that the ability of firms to "gazelle," or grow rapidly and contribute to sustained increases in employment, is affected positively by the level of industrial clustering,[57] particularly in smaller cities.[58] In addition, high licensing costs negatively impact growth, particularly for small and medium firms.[59] Ongoing qualitative research work in Ethiopia seems to illustrate that while entrepreneurs are often provided with multiple incentives, including access to land and business premises, those that are looking to expand do not enjoy any benefits.[60] This suggests misaligned incentives or a business environment that isn't conducive for firm growth and graduation.

32. **In summary, cities are becoming more attractive for people and economic activity—yet waged and productive job creation is not keeping up**. There are two main reasons for this trend. First, many jobs are being created either in the informal sector or in self-employment activities, which do not add productive value and tend to stay small. Second, even when small to mid-size firms are moving to cities, they fail to create commensurate increases in jobs. This is problematic since the overwhelming evidence shows that it is primarily waged and formal employment that is associated with the emergence of a middle-class. Moreover, this analysis has shown that firms are failing to graduate, and the net effect of low graduation is countries like India and Mexico has been associated with a 25 percent drop in total factor productivity.[61] At the same time, secondary cities are already getting good at attracting economic activity and seeing the formation of industrial clusters, which should be further encouraged. Moreover, as we shall see, there are ways the government can also seek to build a more competitive environment for firm graduation through clustering, access to infrastructure, and policy aimed at tackling fees and licenses. In addition, research shows that local governments, with increased administrative remit and commensurate capacity, can in fact achieve significant progress at the local level, indicating the importance of investments in urban local government capacity.

2.3 The Infrastructure and Services Gap

33. **Developing infrastructure is one of the key priorities guiding Ethiopia's development efforts, and progress has been made over the past two decades** in water,

[55] Of the total number of microenterprises (employing fewer than 20 employees) within the dataset, only 16 percent become small (employing 21–50). Fewer still, just 3.34 percent, become medium firms (employing 51–100), and only 1.51 percent become large (employing 101–1,000). None graduates to very large status (employing 1,001 or more).
[56] See the technical background paper: "Which Cities Create Jobs? Evidence from Ethiopia."
[57] Ali, et al., (2014) look at clustering in Ethiopia and find that it helps smaller firms to overcome obstacles to access finance and at lower rates, and to supply to larger firms.
[58] In other words, intra-industry clustering seems to have a positive effect on rapid firm growth, especially when such clustering takes place in smaller cities.
[59] Hsieh and Klenow (2011). Levy (2008) argues that payroll taxes in Mexico are more stringently enforced on large plants, discouraging plants from undertaking costly investments. The difficulty of contract enforcement might also make it costly to hire the skilled managers needed to grow beyond a certain size. Bloom et al. (2011) suggest that the most productive textile plants in India do not grow beyond 250 employees because they cannot find the necessary mid-level managers that would allow them to grow further.
[60] Spatial Determinants of Growth in Addis Ababa, World Bank-GWU Capstone Program.
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sanitation, solid waste management, roads, and access to electricity. Though figures vary, some data estimate that water supply coverage rose from 70 percent in 1990 to 89 percent in 2009. Official data on sanitation from the Ministry of Health show steep increases in coverage, in the form of septic tanks and pit latrines, from a baseline close to zero in 1990 to 39 percent in 2009 (30 percent in rural areas and 88 percent in urban areas). Access to electricity has been growing extremely fast—in the five years prior to 2011 more than 41 percent of towns and villages were connected to the grid, and the number of electricity consumers grew from 800,000 to more than 2 million.[62] Access in urban areas is very high at 86 percent, as compared to an African average of about 65 percent.[63]

34. **Despite progress, more must be done to satisfy present demand for urban infrastructure and services**. Coverage rates must be further improved for water and sanitation, especially access to safe water. Ethiopian cities struggle to manage solid waste, which is often dumped into open areas and endangers health. Ethiopia has one of the most underdeveloped power systems in Sub-Saharan Africa, though most of these needs are in rural areas. Ethiopia's road density is also below the African average but again, road density is far higher in urban areas than the national average.[64]

35. **Growth, urbanization, and industrialization are all infrastructure-intensive processes.** African countries lag behind countries in other regions in infrastructure stock and in its efficient use. Foster and Morella (2011) find that the recent infrastructure buildup in Ethiopia contributed 0.6 percentage points to annual per capita GDP growth. However, they also find large scope for infrastructure gains. Scaling up the level of infrastructure to that of a middle-income country would result in growth acceleration of 3 percentage points.

36. **Most urban households (86 percent) have access to electricity and the sector is growing extremely fast, though quality of service is low with frequent outages.[65]** In the five years prior to 2011, the number of electricity consumers grew from 800,000 to over 2 million.[66] However, Ethiopia still has one of the most underdeveloped power systems in Sub-Saharan Africa, with an installed generation capacity of less than 10 megawatts per million population (less than half of the low-income country benchmark). Power consumption, at 33 kWh per person per year, is similarly about one-third of the low-income country benchmark. Power outages are frequent, and according to IFC's Business Enterprise Surveys, irregular electricity is reported as the third more important business obstacle by business owners.

37. **The infrastructure challenge is more pronounced in water supply and sanitation, even without population growth**. While some sources indicate high coverage, data also point to low levels of consumption and access to "safe" potable water. In 2012, for instance, water consumption in Addis Ababa was around 50 liters per person per day[67] and about 44

[62] World Bank, Ethiopia Electricity Network Reinforcement and Expansion Project (2012).
[63] Vivian Foster and Elvira Morella, *Ethiopia's Infrastructure: A Continental Perspective* (2011).
[64] Ibrahim Worku, *Road Sector Development and Economic Growth in Ethiopia* (2011).
[65] Foster and Morella (2012).
[66] World Bank (2012) Project Appraisal Document: Ethiopia Electricity Network Reinforcement and Expansion Project, Washington, DC: World Bank.
[67] Based on figures from the Addis Ababa Water and Sewerage Authority for 2012. Water supply was 374,000 m^3/day, divided by a population of 3 million inhabitants, adjusting for 35 percent system losses and 20 percent for other uses.

percent of the population had access to "safe" water supply.[68] In the city of Hawassa, the maximum supply of water is around 40 liters per person per day,[69] with coverage at 80 percent and access to "safe" water supply at 66 percent.[70] This level of consumption is low, even by Sub-Saharan African standards. To meet the present target[71] for full coverage of 100 liters per person per day would require a two - to threefold increase in current water supply. And, accounting for a tripling of the urban population by 2037, to achieve the same target would require an increase by many fold to the current level—funded almost entirely by municipal own-source revenues. The sanitation sector requires even more attention. Addis Ababa is the only city with a municipal sewerage system, and even this serves only 10 percent of the population. Systems that are already failing to meet present levels of demand are only going to be stressed further as the country continues urbanizing.

38. **Solid waste collection and disposal services are subpar in most cities in Ethiopia, with formal collection systems picking up just 45–82 percent of locally-generated waste**. These levels are fairly typical for low-income countries, though collection rates often vary by neighborhood. Higher-income areas sometimes resort to paying for private collection services to ensure material is removed regularly. The benefits of systematic collection are clear: uncollected solid waste left on the roadside creates a visual blight, odor, and vector problems, and it clogs drainage culverts, exacerbating local flooding. In many cities, cost recovery is a real problem, contributing to inadequate collection services, because low-income households may be unable to afford the collection fees.[72] Fee collection can also be problematic in neighborhoods with informal settlements.

39. **Although urban areas have better access to basic services than rural areas, urban areas have disparities of access between the poor and non-poor**. For sanitation services, for example, while the 35 percent of the poorest quintile has access to sanitation, the figure goes up to 57 percent for the wealthiest quintile. The "access" variable also does not capture differences in the quality of services (e.g. the number of people sharing a pit latrine). More information on the quality of services is needed to assess the real severity of this imbalance. Water expenditure represents a heavier burden for the urban poor, who spend a higher percentage of their income on water than the urban average (2 percent versus 1.4 percent), despite being heavily underserved. In some sectors, however, there is no significant difference in access between the poor and non-poor, including access to waste disposal vehicles, suggesting that inadequate waste management stems mainly from the failure of urban municipalities to deliver the service.

[68] Data collected by SuDCA Development Consultants for evaluation of municipal delivery services of cities participating in the ULGDP, for FY2011/2012.
[69] Discussion with the manager of Hawassa Water supply services, February 28, 2014
[70] Data collected by SuDCA Development Consultants for evaluation of municipal delivery services of cities participating in the ULGDP, for FY2011/2012. See also Wondimu Abeje and Pedro B. Ortiz, *Urban Planning & Spatial Development*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).
[71] Wondimu Abeje and Pedro B. Ortiz, *Urban Planning & Spatial Development*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).
[72] There are solutions, however. In Guayaquil, Ecuador, cost recovery for waste services is achieved by a 12 percent surcharge added to the user's monthly electricity bill. In Ningbo, China, the municipality is incentivizing communities to separate their waste into organics, recyclables, and residual waste containers. The municipality saves money by diverting organics and recyclables from the landfill, and provides a financial reward to each neighborhood residents' committee, based on quality and quantity of organics and recyclables separated at the source.

40. **User fees charged for infrastructure services are low and do not cover operational, capital, and debt-service costs.** Ensuring cost recovery through tariffs is important as it opens possibilities for financing that may otherwise be impossible. Without cost recovery, there may be no funds remaining for maintenance or new investments. By contrast, adequate cost recovery can open the door to private investment and take some burden off public finances. Estimates indicate that US$102 million could be captured each year for Ethiopia's infrastructure if its services were priced closer to cost recovery level.[73] However, there is also a need to be mindful of the distributional impacts and affordability of full cost pricing schemes.

41. **Ethiopia's infrastructure financing gap is considerable (though estimates vary considerably), with a substantial total spending requirement relative to the national economy**. Ignoring, for a moment, the fact that the existing level of urban infrastructure is already potentially unable to serve the city's population, what is the unmet need for urban infrastructure based solely on urban population growth? For example, in a city of 200,000 with a conservative population growth rate of 4 percent, urban infrastructure would be needed for 8,000 new residents each year. The cost for this infrastructure need is estimated to be US$400 per additional resident, so the total annual requirement would equal US$3.2 million a year—around US$15 per resident, or Br 270.[74] Crucially, this general approximation ignores the ongoing cost for delivering municipal services and for maintaining, rehabilitating and replacing existing urban infrastructure as needed. Given the wide range of municipal services that, in principle, fall under the category of urban development and urban services—ranging from construction and maintenance of roads, to abattoirs and markets, to the collection and disposal of solid and liquid waste, to urban water systems—average actual spending of Br 300 per urban resident (around US$17) would be required merely *to maintain the existing level of services for existing urban residents,* let alone meeting the needs of rapidly increasing urban populations.

42. **Subsidized tariffs undermine the financial health of the utilities or service providers, and hold back the expansion of services to poorer households, which often pay much higher prices for alternative services.** While subsidized tariffs can be justified on the grounds of affordability, electricity and piped-water services only reach higher-income groups in society who could typically afford to pay more for the cost of service. As discussed further in the Chapter 4, cost recovery can be increased by capturing larger amounts of finance through both user charges and, for some sectors, community or household contributions to capital costs (in cash or kind). Subsidies should be explicit rather than implicit, and a subsidy ceiling should be introduced across sectors to ensure that only basic levels of service are subsidized.

43. **Absent adequate cost recovery, neglect of maintenance remains a pervasive problem and imposes a heavy cost on users through the higher costs of the eventual asset rehabilitation**. For instance, Ethiopia's Road Fund—a dedicated fund for road maintenance and road safety activities—is financed principally by a fuel levy. While the levy

[73] Foster and Morella (2011).
[74] See Annex 2, *Infrastructure Cost per Urban Resident*, for more details.

is not high enough to cover all road maintenance costs,[75] the road fund's creation and the ring-fencing of funds for maintenance are promising.

2.4 The Housing Challenge

44. **In general, poor housing quality and often overcrowded living conditions are the major housing shortfalls experienced by Ethiopia's urban households.** An estimated 70–80 percent of the urban population lives in what might be considered slums, according to a commonly accepted international definition, because the units lack durability, adequate space, access to safe water and sanitation, or security of tenure (see Box).[76] This is one of the highest rates in Sub-Saharan Africa, and higher than in most Arab countries.[77] Around 80 percent of dwellings in urban areas are made from wood and mud (also known as *chika* construction), while two-thirds of all urban housing units have only earthen floors, another indication of very low-quality housing.[78] (See Table 5). The main drivers of the urban housing shortage are low incomes, insufficient supply of serviced land, and requirements that housing units meet unrealistically high and costly standards.

[75] The distribution of funds from the Road Fund is about 65 percent to federal road agencies, 25 percent to regional road agencies, and 10 percent to selected municipalities. Allocations are based on the respective percentage of the total road network—Addis Ababa, for instance, is allocated more than 50 percent of the municipal budget.
[76] Ministry of Finance and Economic Development (MoFED), *Ethiopia: The Millennium Development Goals (MDGs) Needs Assessment Synthesis Report* (2005).
[77] David Sims, "The Arab Housing Paradox," *Cairo Review* (2010). For example, in Greater Cairo, about 62 percent of the population lives in informal housing, but the quality of this housing is relatively good and is not characterized as "slums."
[78] Based on the CSA Population and Housing Census, 2007.

Box 2: Defining formal, informal and slum housing

Formal housing units are the product of coordinated activity between public and private sectors in land, construction, finance and regulation. Formal housing, whether for rent or ownership, includes infrastructure and utility connections and comports with local land use and building standards. In developed economies, housing formality and conformance with regulatory standards allows the property to be better evaluated for collateralization, insurance and taxation purposes.

By contrast, informal housing consists of dwellings that do not conform to the laws and regulations that govern land and buildings (UN-Habitat 2003). In Sub-Saharan Africa, informal housing constitutes approximately 75 percent of the entire housing stock (World Bank 2015). Across the region, informal housing refers to units that have one or more of the following characteristics:

- Peripheral urban location
- Designed and built by owner/occupant with local or adapted materials
- Incremental improvement of structure by the occupant over a period of time.
- Construction finance through personal savings, family contributions or loans from savings clubs or informal lenders
- Incomplete conformance with building and land use standards
- Lack of connection to network infrastructure and public services

Informality covers a continuum of shelter conditions and land tenure arrangements. For example, some housing units may be physically durable, though lack building permits or land title, while at the other end of the spectrum, housing can be made of scavenged or impermanent materials, and present a safety hazard to occupants.

In addition to housing challenges related to formality, some shelter solutions could be considered slums based on international standards. According to UN-HABITAT, housing is considered a slum if it lacks one or more of the following:

- Durable housing of a permanent nature that protects against extreme climate conditions
- Sufficient living space (not more than three people sharing one room)
- Easy access to safe water in sufficient amounts at an affordable price
- Access to adequate sanitation (a private or public toilet shared by a reasonable number of people)
- Security of tenure that prevents forced evictions

It is important to note that not all slums are the same, and not all households living in slums face the same degree of deprivations.

Though there may be some overlap between informal housing and slum housing, the two terms are not interchangeable. It is possible for housing to be informal but adequate by international standards. And in Ethiopia there is a unique situation wherein housing that was built informally was later formalized by the government, though it is still considered slums by international standards because of poor quality construction or lack of access to basic services.

UN-HABITAT, Slums: Some Definitions (2006).
http://ww2.unhabitat.org/mediacentre/documents/sowcr2006/SOWCR%205.pdf

Table 5: Selected indicators of quantitative and qualitative housing challenges in 2007

	Units	
Total urban housing stock	2,897,017	100%
Wood and mud construction (*chika*)	2,317,538	80%
Earth floors	1,912,140	66%
No access to improved sanitation	--	75%

Source: CSA, 2007 Census; United Nations, Millennium Development Goals Indicators
Note:Figures are not additive, since some households experience multiple deprivations

45. **Renting has been an especially important form of tenure in Ethiopia and nearly two-thirds of households rent.** Most units are rented from private owners. Though reliable price data is not widely available, a one room unit of about 15-20 square meters (m^2) built as an addition to a private house can rent for 150 Birr per month (see Figure 15 and Figure 16, below). In addition, some of the rental stock is comprised of "*kebele* housing"—informal construction that had been nationalized and now serves as government-managed rental housing. *Kebele* housing constituted 24 percent of housing in Addis Ababa in 2007 and slightly below 20 percent, on average, in all cities.[79] Although *kebele* housing was recognized as "formal" housing by the government in 1975, it is still often considered slum housing because of overcrowding and lack of key amenities such as drinking water, sanitation, cooking facilities, power supply, and waste disposal, and is thus included in the estimated figure of 70-80 percent of all housing units as slums.[80] *Kebele* housing rents are highly subsidized (typically Br 10 per month) and do not adequately cover the cost of operation and maintenance (O&M),[81] thus many units have become shacks. Major renovations by tenants are not allowed by the *kebele* councils, and tenants choose not to make other repairs for fear of increased rents.[82] In Addis Ababa, *kebele* housing remains the primary shelter option for poor households. Within the administrative boundary, average consumption levels of those renting *kebele* housing are 33 percent below those renting in the private market.[83] This indicates that the city's poorest are much more likely to benefit from government-supported rental housing than from the private rental options in the city.

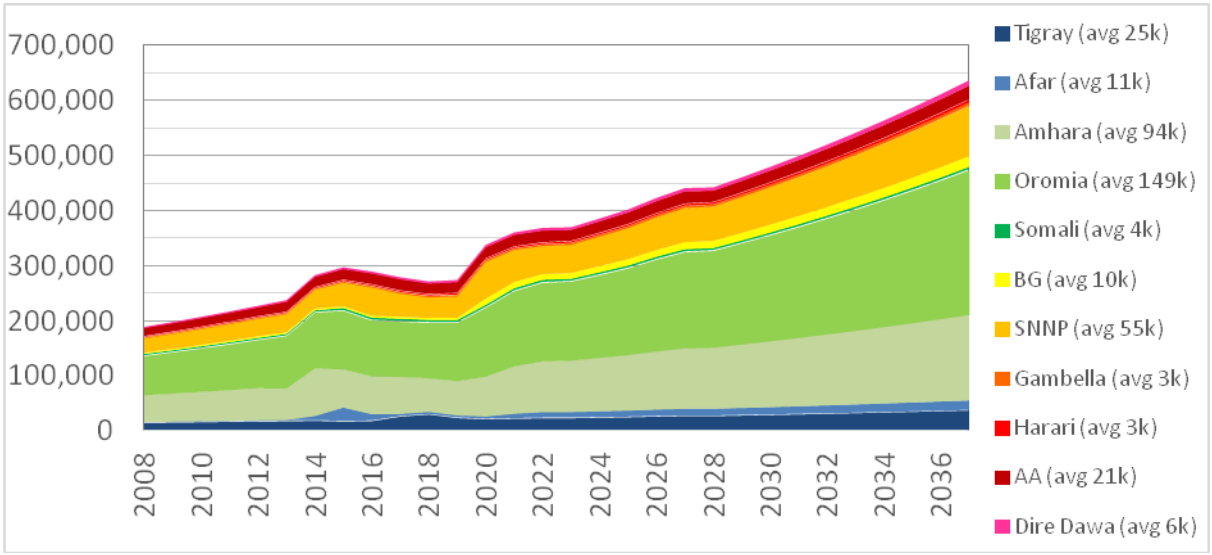
46. **Commercial investment in housing has remained limited for several reasons, including prevailing land management system.** While the high end of the housing market is served by the private development sector, strict development requirements and high construction standards make basic formal housing unaffordable for large parts of the urban population. For example, in one sample-based survey in Abraminch town, 42 percent of

[79]Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).
[80] Tesema Tolera, *The Conditions of Kebele Managed Rental Accommodations in Addis Ababa* (2003).
[81] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).
[82] Meheret Ayenew, with Richard Martin, *Access to Housing Finance in Africa: Exploring the* Issues, No. 9: Ethiopia, (FinMark Trust, 2009).
[83] CSA, HICE (2011)

homeowners could not afford a house built to the minimum design standards.[84] In another survey, 59 percent of residents in the informal settlement in Kolfe Keranio in Addis Ababa identified excessive cost of formal housing standards as the main reason they were squatting.[85] With the exception of Jijiga, which does not outlaw *chika* housing, in the cities included in this study, *chika* houses are not considered formal construction despite frequently being the only construction type affordable for households. In 2004, the Government initiated a program to leverage private developers in meeting the housing shortfall, by providing large amounts of free land. The initiative was canceled one year later citing a variety of issues, including slow construction, land speculation, and lack of infrastructure, thus serving as further evidence of the magnitude of problems that arise when land is provided at below its value, and especially when provided for free or below infrastructure cost recovery.[86]

47. **A key and urgent priority will be to improve the overall functioning of the housing market.** Rapid urban growth compounds the existing challenge in improving housing conditions, particularly outside Addis Ababa. With the urban population expected to triple by 2028, the number of urban households will also triple from about 3 million in 2007 to about 9 million in 2028[87], making the need for housing even more pronounced[88]. Growth in Addis Ababa will only account for 5 percent of new urban household formation through 2037 (Figure 13). Rather, urban areas with the most rapid rate of household formation will be in Oromia and Amhara. Priority in addressing the two key housing challenges of low quality and overcrowding, exacerbated by urban population increase, will be developing a sector-wide approach.

Figure 13: New urban household formation, by region and by year



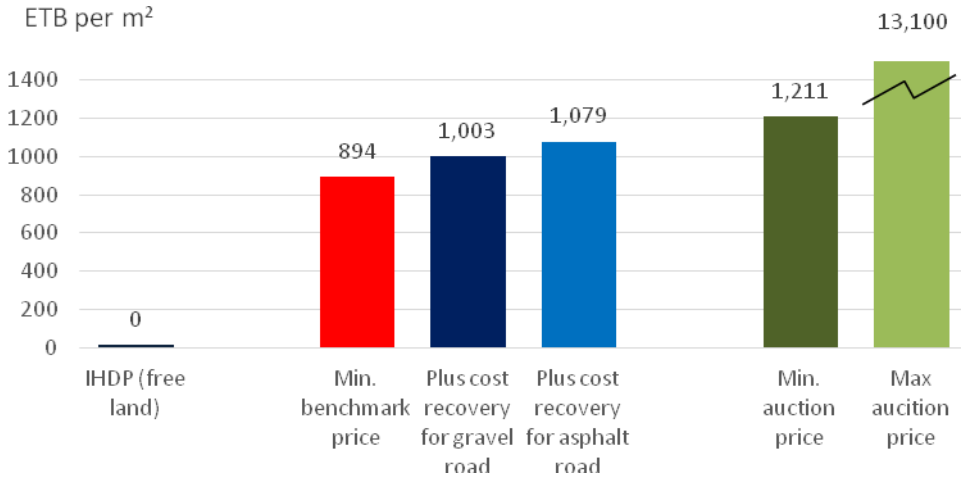
[84] Olga Kaganova with Sisay Zenebe, Land Management as a Factor of Urbanization, Ethiopia Urbanization Review Background Paper (World Bank, 2014).
[85] Minwuyelet Melesse, *City Expansion, Squatter Settlements and Policy Implications in Addis Ababa* (2005).
[86] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).
[87] Or more than triple as typically household size decrease with economic development.
[88] This could imply the need for 6 million quality housing units from 2007-2028 or about 290,000 units per year to keep up with urban growth.

Source: World Bank calculations. For more information, see Annex 3, Detailed Methodology for Alternative Urbanization Projections.

48. **Ethiopian standards for formal housing are unaffordable for large segments of the urban population. This affordability challenge needs to be addressed by taking a sector wide approach to housing.** In addition to the key affordability challenge for basic formal housing due to high standards, a related and secondary challenge of affordability is the government's focus on housing ownership, which needs modification to benefit the urban poor better. This is necessitated due to the upfront cost barriers of ownership that make it unaffordable for many households, particularly those in lower-income groups. These cost barriers take the form of upfront lease payments, condominium down payments, or cooperative income/savings requirements.[89]

49. **The government, as the sole supplier of formal urban land, faces an enormous financial burden in extending required basic services to those plots.** The current system of providing land below cost recovery for required infrastructure is financially unsustainable and cannot adequately address deficits in the housing sector. In the past several years the government has auctioned some land lots for individual homes, allocated land for condominiums at benchmark prices, allocated some land for cooperatives almost free of charge, and has directly supported the construction of government condominiums (see Figure 14). (For a detailed discussion of urban land management practices, refer to Section 3.2).

Figure 14: Benchmark prices for residential land in Addis Ababa (red) are less than cost recovery for even the most basic infrastructure (blue)



Source: Olga Kaganova with Sisay Zenebe, Land Management as a Factor of Urbanization, Ethiopia Urbanization Review Background Paper (World Bank, 2014).

[89] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking of the Housing Sector in Sub-Saharan Africa. Part 3: Ethiopia*, Forthcoming, Affordable Housing Institute (2014).

50. **The federal government, recognizing the significant need to improve housing conditions, is also implementing an ambitious condominium construction program in Addis Ababa.** The Integrated Housing Development Program (IHDP) began in 2005 and was revised in 2014. Units are allocated by a lottery and financed via mortgage loans with the government-owned Commercial Bank of Ethiopia (CBE). Loans carry an interest rate of 8.5 percent and terms range from 15 to 20 years. Households earning 1,200 Birr per month or less (equivalent to the bottom quintile) are eligible for the 10/90 loan, which requires 10 percent down payment and can only be used to purchase a studio. Low-to middle-income households earning more than 1,200 Birr per month are eligible for the 20/80 and 40/60 loans, requiring 20 percent and 40 percent down payments, respectively. See Table 6 for more details on unit types and mortgage loans**.** In Addis Ababa, condominiums are one of the main sources of supply for the rental market, and as many as 70 percent of beneficiary households rent their units out, sometimes illegally.[90] In the first phase of IHDP, 244,436 units were completed, 170,000 of which were in Addis Ababa. During the current phase of the program, the government plans to build 50,000 units per year in Addis Ababa., which is projected to be more than enough to meet new housing demand, currently estimated at 20,000 per year, leaving 30,000 units per year to replace poor quality existing housing. This program represents an exceptionally strong government commitment to improving housing conditions.

Table 6: IHDP unit types and mortgage loan types

Unit Type	Pct. of planned units	Size	Loan eligibility
Studio	20%	<20 m2	10/90, 20/80, 40/60
1-bedroom	40%	20-30 m2	20/80, 40/60
2-bedroom	20%	30-45 m2	20/80, 40/60
3-bedroom	20%	>45 m2	40/60

Source: Tipple & Alemayehu, *Stocktaking* (2014)

Loan type	Down payment	Term	Rate
10/90	10%	25 years	9.5%
20/80	20%	20 years	9.5%
40/60	40%	17 years	7.5%

Source: CAHF, *Yearbook* (2013)

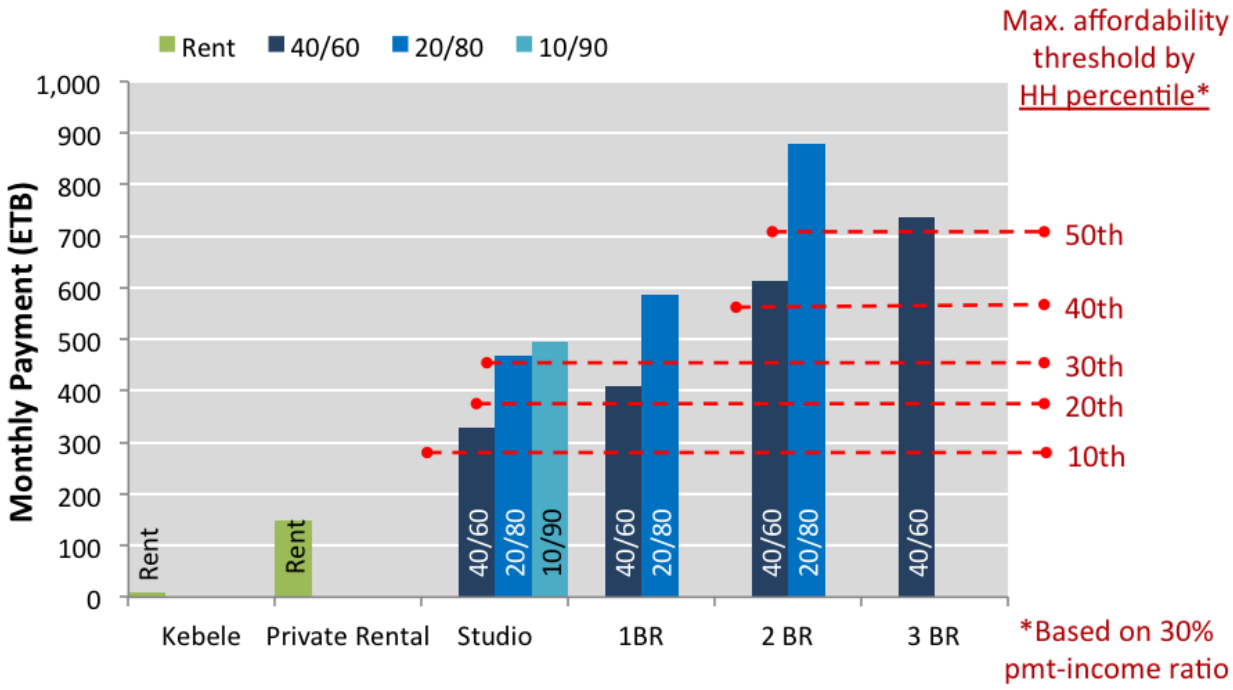
51. **The Integrated Housing Development Program, as currently designed, faces challenges reaching priority population groups.** After the first phase, the program was suspended in all cities except Addis Ababa due to high costs and slow take-up. Figure 13 shows that only 5 percent of new housing needs through 2037 (calculated as household formation) will be in Addis Ababa.

52. **Even in Addis Ababa, lower-income households may find even the smallest and most subsidized condominiums unaffordable.** Assuming that *total* housing costs should not exceed 30 percent of household income, even a studio with 40 percent down remains

[90] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).

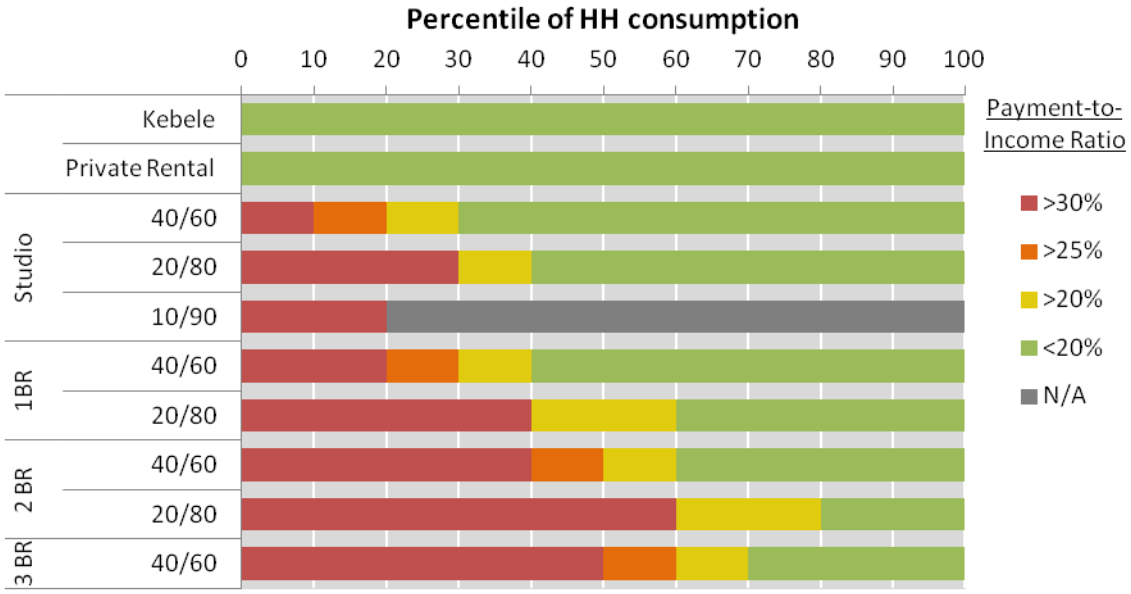
unaffordable to the bottom 10 percent of households.[91] This is not likely to be feasible, since the down payment would be more than ETB 25,000 for households whose total annual consumption is only ETB 11,628.[92] Figure 15 and Figure 16 demonstrate the affordability gap that persists in the IHDP. For example, the bottom two income deciles are eligible for the 10/90 program, but the monthly payment is more than 30 percent of household income.[93] For the bottom third of households, IHDP condominiums are only affordable if households select small units, take on high down payments and are able to support high-payment-to-income ratios. In fact, the 3-bedroom unit is unaffordable for even median households in Addis Ababa. Aside from high monthly payments, there are other reasons the current structure of the IHDP may not be a feasible housing solution. Notably, beneficiaries of the 10/90 loan may only purchase studios, even though lower-income households are not necessarily smaller. It is also important to note that these affordability calculations are based on unit sales prices, which do not include the cost of land, infrastructure, and other financing costs (see below).

Figure 15: Monthly payments of IHDP units and loan programs



[91] In practice, even 30% may be high for urban households in Ethiopia where more than half of expenditures go for food for households below the national poverty line (HICE 2011).
[92] CSA, HICE (2011). Consumption is used as a proxy for income in this survey as income data are poorly reported for households.
[93] CSA, HICE (2011).

Figure 16: Payment-to-income ratio of IHDP program, by percentile of household consumption in Addis Ababa



Sources: Consumption: CSA, *HICE* (2011), Costs: CAHF, *Yearbook* (2013) and Tipple & Alemayehu, *Stocktaking* (2014)

53. **The IHDP has benefitted a very narrow group of beneficiaries with deep subsidies.** First, due to large implicit subsidies, the costs of the IHDP units are much lower than those in the private sector. In 2014, the program's cost was estimated to be 3,142 Birr per square meter, only one-quarter of the cost of private development. These savings result, in large part, from not including costs of land, infrastructure, financing, etc., in the IHDP units' sales prices. Second, the program has injected a large number of new formal units into the housing stock, thus reducing the qualitative or quantitative housing shortage in urban areas. Out of the projected 50,000 units to be delivered per year, 20,000 would meet the rate of new household formation,[94] while the remainder would go towards addressing unmet demand from the current housing deficit, overcrowding, and dilapidated units in need of total replacement. Finally, it is important to note that IHDP, by increasing the total supply of housing stock in some cities, could potentially lead to lower rental rates, thus improving the affordability of rental options for some income groups. Because low-income households who are allocated condominium units often cannot afford the payments, households use them to generate income by renting them out to higher-income households at market rates.[95] In fact, in Addis Ababa, renters of condominiums are richer than the average resident.[96]

54. **High levels of implicit and explicit subsidies for condominiums, though they improve affordability, make the program unsustainable as such subsidies restrict the**

[94] This would assume that the effective demand among these new households would permit them to afford these new units. However, this is unlikely.
[95] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).
[96] CSA, HICE (2011)

ability to scale up and reach a large number of beneficiaries. Sale prices are based only on direct costs of construction (labor and materials), and do not include land (or its opportunity cost), infrastructure connections, and other costs including financing, which must be financed from other sources. The IHDP program was stopped in smaller cities and towns in 2010 as regional states were unable to repay construction loans. In Addis Ababa the unit cost of construction for such condominiums has been steadily rising, from Br 1,000 per square meter in 2005 to over Br 3,000 per square meter in 2014.[97] The financing of IHDP includes a complex finance structure that includes a loan from the Central Bank of Ethiopia, structured as a corporate bond.[98] Addis Ababa's corporate bond obligation as of June 2013 was ETB 10 billion/US$534 million. A more updated figure was not available, nor the exact proportion of financing for the housing program. However, analysis done using the NBE Quarterly Bulletins shows that in FY 2013-14, the Addis Ababa city government was allocated a bond for 6.0 billion Birr, or approximately US$275 million. This significant amount is equivalent to 30 percent of the municipality's projected own-source revenues.[99] The city's ability to finance and sustain such a large-scale and subsidy-intensive program remains questionable.

55. **As a result of the priority given to ownership by the two main government housing programs (land allocation and condominiums), a large but undefined share of the urban population across the country looks for housing solutions (usually informal) either in the private rental sector or by buying land informally from farmers in peri-urban areas.** Thus, promoting a diverse range of housing delivery mechanisms—public programs, private sector investment, including in small-scale affordable rental housing, and assistance for upgrading slums and regularizing informal settlements—will be key to meeting the large and growing housing gap in urban areas. These would provide additional options for upgrading and improving low quality units within informal settlements. The Addis Ababa Development Plan of 2002 suggested a diversified set of land and housing delivery instruments, including not only condominiums and self-help housing, but also land readjustment, design of realistic pro-poor housing standards, and construction of affordable rental housing. However, this plan required wide-ranging regulatory, institutional, and financial adjustments to engage the private sector, which were not enacted.[100]

56. **Given that the urban population is set to triple from 2007 to 2028, adequately addressing the housing quality gap in urban areas will be critical.** As with jobs, infrastructure and services, gaps in housing quality, availability and affordability will influence a city's attractiveness and productivity. It is also important to note the spatial mismatch between public investments in housing and the current and future housing needs, as well as the general lack of affordability for the poorer segments of the population. As such,

[97] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).

[98] The "corporate bond" mechanism of financing, entirely underwritten by the Commercial Bank of Ethiopia, is designed as an intermediate-term relay loan (which is converted to individual mortgage loans issued by CBE as housing units are delivered to the winners of the housing draw who meet down payment and the mortgage loan standards of CBE). The interest rate on the bonds, at 6%, is subsidized, and is therefore not priced for risk. The bonds are fully guaranteed by the federal government; as a result, CBE has no incentive to carry out any due diligence of the financial capacity of Addis Ababa or of the Saving Houses Development Enterprise (SHDE) to repay the bonds.

[99] The World Bank. "Ethiopia Local Government Revenue Study, Part I: Borrowing Position of Addis Ababa " Washington, DC, 2014.

[100] Graham Tipple and Elias Yitbarek Alemayehu, *Stocktaking in the Housing Sector in Sub-Saharan Africa: Ethiopia* (Affordable Housing Institute, 2014).

government programs are at odds with the needs of low-income families, particularly in terms of building standards and the emphasis on ownership over renting, and will need to be modified.

57. **To conclude, progress has been made in almost all infrastructure sectors, though from a low base.** More data is needed to better understand the extent of the infrastructure and services gap. Yet in many areas where information is available, Ethiopia is faring poorly compared to other countries in Sub-Saharan Africa. This is a problem because infrastructure and services are essential to building a strong business environment in cities, as well as making them attractive places to live and work. As is the case with employment opportunities, the challenge of providing infrastructure and services is not just to meet current levels of demand, but also anticipated demand from rapid and significant increases in the urban population over the coming two decades. In particular, the government will have to pay attention to the quality of services rather than just access, while also seeking to improve cost recovery. The following chapter examines how provision of housing, infrastructure and services can be improved by better management of urban institutions, particularly with respect to land management and municipal finance.

3. Urban Institutions for a Middle-income Ethiopia: Land, Governance, and Finance

3.1 Introduction

58. **Driving the gaps in jobs, in infrastructure and services, and in housing are deficiencies in the underlying urban institutions for land management, municipal governance, and municipal finance**. City systems have to be well equipped to provide for growing populations. Strengthening urban institutions now while urbanization levels are low will be essential for urbanization's success in Ethiopia.

59. **First, land management practices result in insufficiently-serviced land for people, businesses and public uses, shortages which will only be exacerbated by rapid urban growth.** Land supply mechanisms by the government which rely heavily on allocation have not been able to meet demand. Cities are expanding outward faster than the population is growing. This has the potential to further increase the cost of infrastructure and service delivery while also driving informal development, particularly on the urban fringe, further from jobs. Outward expansion of cities is driven by: (i) lack of market pricing for land; (ii) inadequate government supply of land to private (formal) developers; and (iii) in Addis the IHDP, which often replaces dense *chika* development with less dense and unaffordable condominiums, driving new informal settlements to the urban fringe. Moreover, allocation of land under market value and often below cost-recovery levels results in lost revenues that could otherwise be used to fund urban development. A complex and costly system of land management means lease payments fail to provide predictable revenue for local governments. Finally, land management practices have the potential to constrain rural–urban migration, which in the long run may harm both urban and agricultural productivity.

60. **Second, the limited authority and capacity of urban local governments (ULGs) hinders their ability to manage urbanization.** Local government institutions set the foundations for economic growth and city competitiveness. Not only do city leaders help implement national policies locally, their administrative capacity to do so well can change outcomes for poorly performing firms. In Ethiopia, city proclamations have endowed city governments with increasing powers, leading to economic convergence across cities and falling spatial inequalities. Cities tend to have used their new powers well, by favoring the growth of a broad base of businesses. Going forward, ULGs could spur job creation with the right interventions to target the business environment for firms' growth.

61. **Finally, the system of municipal finance influences the resources available to local governments as they attempt to provide infrastructure and services to rapidly growing urban populations.** Current financing arrangements rely heavily on municipal own-source revenues, which are insufficient to fill the gap in urban infrastructure and services. The majority of intergovernmental fiscal transfers fund salaries and other recurrent expenditures, leaving limited resources for capital expenditures.

3.2 Land Management

3.2.1 Introduction

62. **In Ethiopia, the Constitution stipulates that land is owned by the people, giving the government an important role in land management and administration.** In urban areas, the local governments act as the sole suppliers of land, currently through two means: direct allocation ('allotments') and auction. Until 2011, allocation through direct negotiations also existed. Despite the fact that that recent auctions in all cities clearly indicated high unmet effective demand for residential and commercial/industrial land, local governments continue using auctions only for a small fraction of the total land parcels allocated:

- 6.2% in Addis Ababa during 2011-2013
- 3.6% in Mekelle, 2012-2013
- 2.3% in Kombolcha , 2012-2013
- 2.9% in Bahir Dar in 2013 (though it was planned to auction 24% of the land slotted for allocation).

63. **Further, direct allocations take place at "benchmark" prices** (which since 2011 have to be set up at the cost recovery level). The benchmark prices continue to be substantially below market prices. Thus, in 2013, the benchmark prices in a number of cities (e.g. Bahir Dar, Dessie, Kombolcha) were dozens or even hundreds of times lower than auction prices, while in cities that already increased the benchmark prices (e.g. Addis, Mekelle, Hawassa, Sheshemene), the difference was 2 to 7 times lower than auction prices.[101] Currently, recipients of the allotment land include government agencies (often with very generous allocations), social services and infrastructure providers, non-governmental organizations (NGOs), and religious organizations, but also condominiums (30% of allotment land in Addis) and housing cooperatives, large and small industry, urban agriculture, and sometimes unmistakably commercial properties, such as shopping centers or hotels.

64. **While government plans call for compact development, this will be difficult to achieve if incentive structures built into institutions of land management are not aligned with that goal.** Several issues stand out that will be discussed in his section:

- Government inability to satisfy demand for land through formal channels (allocation and auction) drives informal development;
- In the formal sector, incentives for higher-density development are undermined by allocation of land below market value;
- Differences between urban and rural land-rights regimes tend to encourage informal development beyond the city boundary, further driving outward expansion; and
- Horizontal expansion of built-up land, along with low-density development, undermines the efficiency of urban areas in terms of infrastructure and service delivery and increases the cost of housing development.

[101] Olga Kaganova with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).

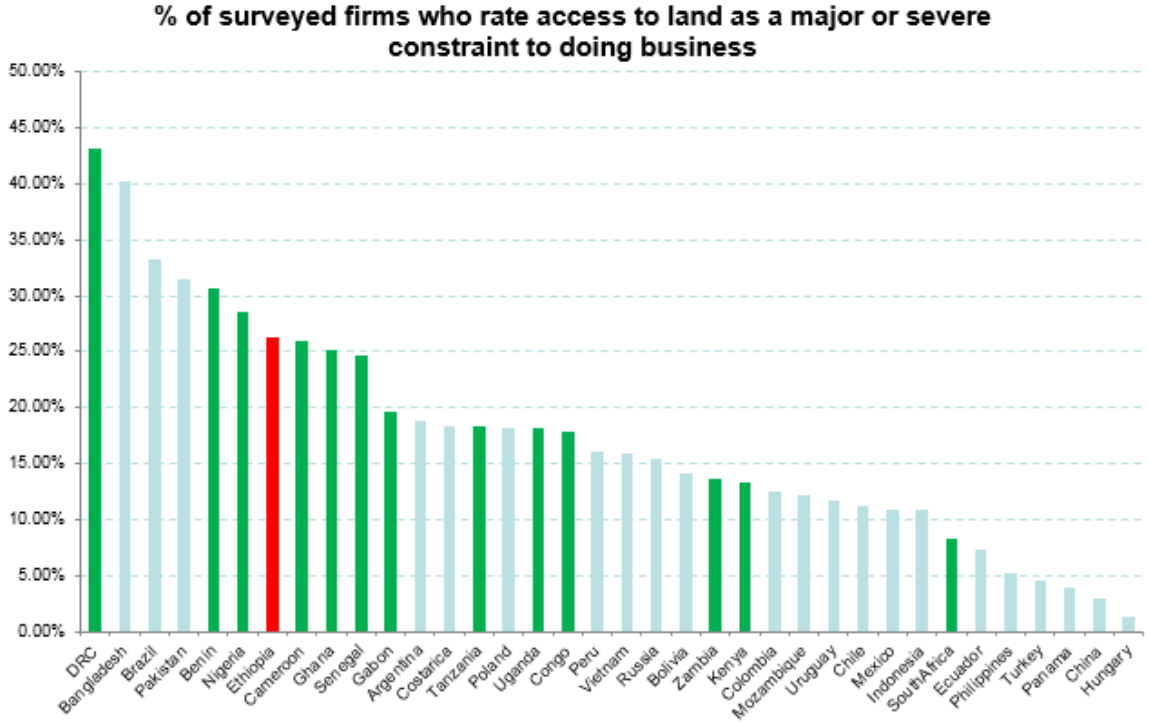
3.2.2 Land for people, businesses and public uses

65. **As sole supplier of land for formal development, the government has not provided enough urban land to meet demand for residential or business purposes.** Unsatisfied demand from even the wealthiest urban families and businesses is well illustrated by land auctions in cities, where the number of bidders has been 12–24 times higher than the number of plots for residential land and 3–7 times higher than available plots for commercial land.[102] Yet the total need for residential land is much higher than these numbers suggest, because lower-income people do not take part in these auctions. In its Urban Housing Provision Strategic Framework, the Ministry of Urban Development, Housing and Construction has called on cities to prepare large amounts of land with infrastructure, according to structural plans, and to make that land available to condominiums, cooperatives, enterprise housing, real estate investors, developers and private individuals. However, the financial and institutional capacity of local governments severely limits their ability to do this.

66. **Urban land constraints hamper economic development and investment**. In 2011, a substantial share of companies in Ethiopia – about 26 percent - reported that access to land represents a major or severe constraint to doing business (Figure 17). This is a significant improvement from the previous survey conducted in 2002, when 57 percent of firms recognized access to land as a major impediment. However, given that land is a critical factor of production, the current level of firms' dissatisfaction with access to land indicates that economic development and investment are hampered by this factor. Figure 17 also indicates that several neighboring countries (Tanzania, Uganda, and Kenya), along with other countries in the region (Zambia, Mozambique – which has a public land ownership regime, and South Africa) have better land access conditions for firms, which contributes in their competitiveness. Finally, countries such as China, Turkey and the Philippines have corresponding figures of less than 5 percent of firms, as a result of sustained efforts to address the access to land challenges they faced.

[102] Olga Kaganova with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).

Figure 17: Businesses' Access to Land in Ethiopia vs. Other Countries

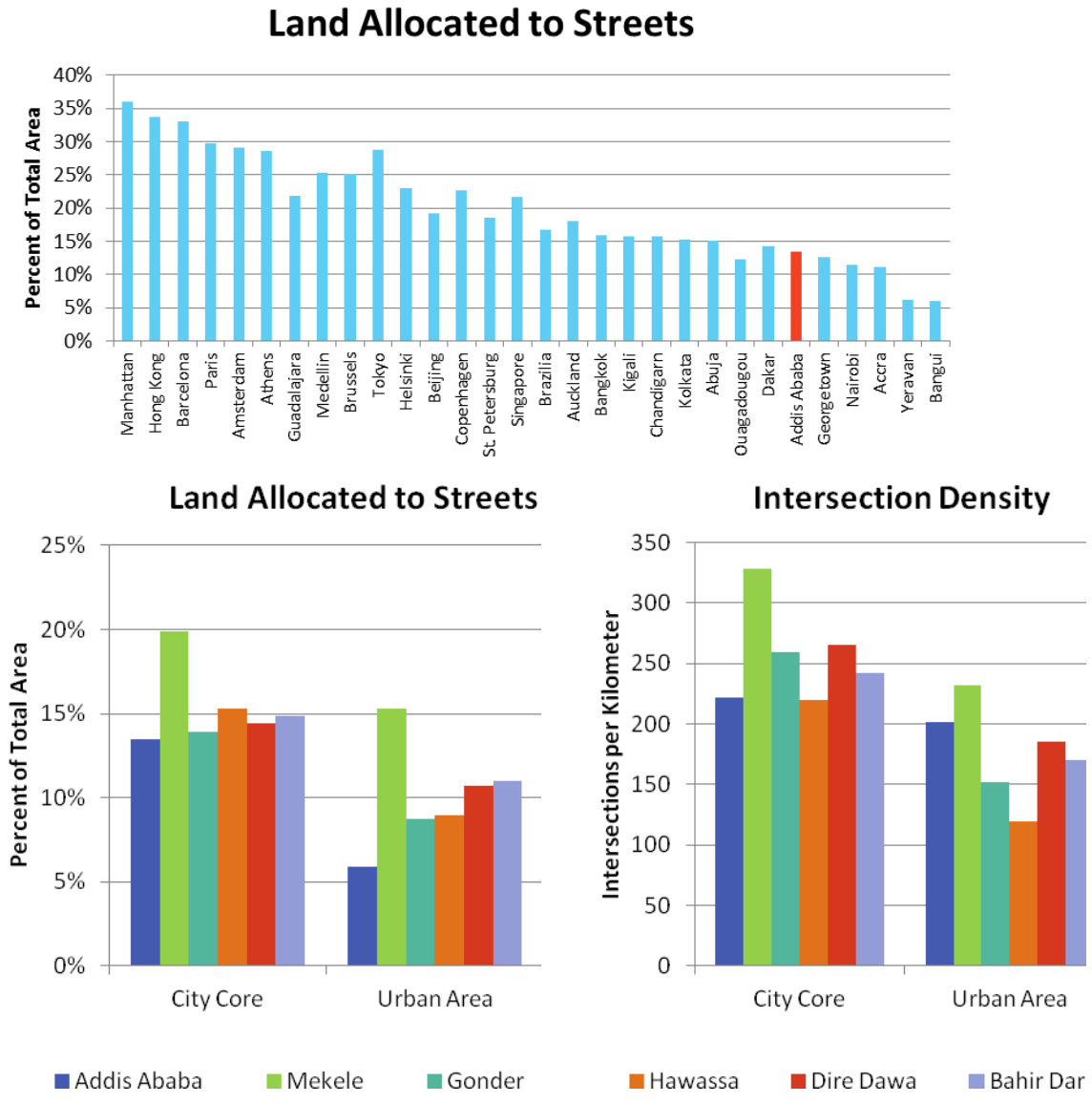


Source: World Bank Enterprise Surveys, various years 2006-2013.
Ethiopia survey, 2011. Manufacturing firms 22%, Services firms 34%.

67. **The current land management system is not delivering enough land for public uses, including roads and streets.** Streets are the lifeblood of cities, connecting people and places and allowing for the infill of vacant land for the emergence of multiple economic centers. Aside from mobility, streets are also essential for productivity, quality of life, and social inclusion. Yet in urban areas of Ethiopia, street coverage and land allocated for associated infrastructure is low compared to international cities (Figure 18). In central Addis Ababa, for example, the proportion of land allocated to streets (LAS) is only 13.4 percent. While this is comparable to some other African cities, it still falls short of the threshold recommended by UN-HABITAT, at least 20–25 percent.[103] Figure 18 also compares LAS and intersection density for several large cities in Ethiopia. When comparing the city center with the larger urban area, both measures decrease significantly. Among these cities, Mekele has the highest LAS and intersection density. Based on satellite imagery from Google Earth, the city features a dense and complete street grid, with clear distinctions between urban and rural areas. Addis Ababa's large urban area extends far along major transport routes, so LAS falls sharply from the city core to the larger urban area while intersection density remains high. In Hawassa, the street grid is prominent, though not as dense as that in Mekele. The urban–rural boundary is also clear; the lower LAS and intersection density are a result of industrial land use on the city edge.

[103] UN HABITAT, *The Relevance of Street Patterns and Public Space in Urban Areas* (2014). The study placed Addis Ababa with 11 other African cities that have low LAS (below 15 percent). Cities with "moderate" LAS (15–20 percent) include African cities such as Abuja, Cairo, Casablanca, Harare, and Johannesburg, as well as other developing-country cities like Chandigarh, Kolkota, Manila, and Mumbai. "Moderate to high" LAS is 20–25 percent, and "high" LAS is above 25 percent.

Figure 18: Land allocated to streets and intersection density fall below recommended thresholds in many large cities



Source: The World Bank, OpenStreetMap, Google Earth.[104]
Note: Adama was omitted because of lack of street data.

68. **There are ways to resolve poor coverage of streets and associated infrastructure.** First, the planning process should allocate enough land for streets, which must be extensive and cover all areas. Planning needs to be focused on people, particularly in the Ethiopian context where the majority of residents are pedestrians. Therefore, planning needs to take pedestrians into account, and not simply aim to widen roads for vehicles. Second, streets should ideally be designed to offer enough intersections to reduce both distance and travel

[104] See Annex 2, *Land Allocated to Streets, Street Density, and Intersection Density*, for more details.

times. As the chart shows, Addis lags on both land allocated to streets and intersection density.

3.2.3 Urban Morphology

69. **Prevailing practices of land management not only cause constrained land supply, but also lack incentives for high utilization of existing formal land supply resulting in low-density, spatially fragmented development and limited mixed use development.** This further increases the challenges of supplying infrastructure. Moreover, if the resulting character of the built environment results in areas without necessary densities, this may affect economic efficiency. There are three main ways in which incentives inherent in the prevailing system of land management produce unintended consequences for urban development, each of which will be addressed in turn in the sections below:

- Land management practices undermine government policy that seeks to promote compact and efficient urban form, while also contributing to the expansion of informal development;
- These practices are expensive for local governments; and
- Lack of rural land rights act as a constraint on rural–urban migration, which has the potential to slow economic growth.

70. **Urban areas can be defined and characterized by several means, including the extent and shape of continuous built-up areas, their compactness or fragmentation, density of physical structures or investments (such as roads), and the mix or intensity of land use.** Global evidence shows that urban areas rarely fall neatly within an administrative boundary.[105] However, it is important to note that urban character is strongly influenced by market forces, local planning practices and regulations, and investments in infrastructure, among other drivers. Perhaps the key drivers in determining the shape, size and character of an urban area are the prevailing land management practices. The following section outlines some specific land management practices in Ethiopia, and highlights their impacts on urban areas (particularly in Addis Ababa).

71. **The practice of allocating land below market prices removes incentives for higher-density planning and development, leading to economic underutilization of urban land.** Entities that have obtained land for free or at below-market prices do not have any stimulus to use land prudently and frugally. These entities include government agencies and enterprises, social services, infrastructure providers, non-governmental organizations, religious organizations, large and small industry, urban agriculture, and sometimes unmistakably commercial properties such as hotels. Condominiums in Addis Ababa have been major recipients of cheap land, which unsurprisingly boosted consumption of land per unit, from about 50 m^2 in 2003–04 to 110 m^2 on average, in 2005-2011. This has resulted in a

[105] For example, of the 81 agglomerations in China above 1 million, only 7 are "contained cities," i.e. cities where the entire urban extent falls within the relevant administrative boundary; of the 21 urban agglomerations in Indonesia with a population over 1 million, only 4 are contained within a single administrative boundary. Source: Chandan Deuskar, *Mapping a Decade of Urban Change: East Asia, 2000–2010* (2014).

great increase in the cost of housing production and/or off-budget subsidies provided by the Government in terms of the opportunity cost of land.[106]

72. **In the formal sector, inappropriate lot size regulations incentivize low-density development and affects the affordability of land and housing.** Large minimum lot sizes[107] for residential and commercial use, coupled with limitations on land plot coverage and building heights, discourage high-density formal multi-family inhabitation within any given formal plot, making formal land and housing unaffordable for many residents. This results in a trend of horizontal, low-density urban expansion.

73. **In addition, the fact that the government is the sole supplier of land has resulted in a number of unintended negative social, economic, and spatial consequences**. Land is an important input in housing production and constraints on land tenure rights and transfers increase the cost of housing. The inability to satisfy demand for affordable land through formal channels leads to a growing number of informal settlements in many if not most Ethiopian cities. Informal development in and of itself, is not necessarily bad. As highlighted previously in the housing section, in Ethiopia, informal settlements are broadly a response to high and costly standards, and limited access to formal land. It remains the only alternative for large portions of urban populations in the country. Informal development becomes a key challenge when structures lack access to basic services and when insecure tenure means households do not have incentives to improve top structures over time. Current land management practices in Ethiopia and the government being the sole supplier of urban land, further encourage informal housing development which exhibits these characteristics and exacerbates the associated challenges. It also presents a challenge for the government as it is more expensive to provide basic services to this type of development.

74. **Informal settlements, mostly with very limited access to basic services and poor living conditions, are growing, including on the periphery of Addis Ababa.** Specifically, mud construction (typically the most affordable housing option for low-income families, but commonly defined as slums based on overcrowding and infrastructure availability) makes up almost 80 percent of all housing stock in urban areas.[108] This is occurring even in cities that are actively trying to regularize informal settlements. The case of Dire Dawa illustrates this dynamic.[109] In 2011, the city had 10,040 informally constructed houses, and the city administration embarked on a program of pro-active regularization, resulting in 7,000 houses being regularized. However, by 2014, the city still had more than 10,000 informal houses, because new informal settlements continued to emerge.

75. **It is important to note that informal settlers in Ethiopia are not necessarily poor.** Many researchers point out that they also include middle class households relocating from congested dilapidated central areas of cities and building good-quality housing outside

[106] According to the data of the Integrated Housing Development Project Office of Addis Ababa.
[107] In Addis Ababa the minimum residential lot size for which a building permit can be issued is 150 m² for individual buildings, and 75–96 m² for attached buildings. The minimum lot size for a business is 250 m². In Hawassa, the minimum lot size for any residence is 200 m², and in Jimma three types of lot sizes are prepared for residential use: 140, 170, and 200 m².
[108] Based on the CSA Population and Housing Census, 2007.
[109] Kaganova Olga, with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review, Background Paper (World Bank, 2014).

cities.[110] On the demand side, this process is fueled by a shortage of land for formal development. There is strong unmet demand for land from people of all levels of income, the poor in particular, but also from businesses. The government, holding a monopoly on land supply, yet constrained by limited capacity and financial resources, has not been able to satisfy the demand for land supplied with the required basic services. Simply put, for many people, there is no place to turn to except to informal settlements due to limits on the circulation of land available for development, which drives up the cost to build and purchase housing.

76. **Moreover, because of the split between urban and rural land rights, incentives exist for informal development outside the city boundary.** As soon as previously rural territory is planned for urban expansion, its inhabitants become the subject of "default" expropriation, with compensation only in cases where they have legal rights to the land, and at prices that are many times lower than farmers can fetch on the informal market. This incentivizes many rural residents on the urban fringe to preempt such processes and subdivide and sell the land, helping to satisfy demand for land and housing not met through formal channels within the city and further encourages the expansion of informal settlements.

77. **Supply of land for informal settlements is provided mainly by farmers who have strong financial incentives to sell land informally.** Indeed, often the only other option farmers have is to wait until the government expropriates their land for official urban development, given that there is no policy and no legal mechanism to convert rural land holding rights into urban rights when land is slotted for development. However, available data indicates that prices on the informal market are substantially higher than compensation for expropriated land, strongly incentivizing informal sales (see Table 7).

Table 7: Land Pricing in Expropriation and on Informal Market

City	Typical compensation prices paid by local governments to farmers for expropriated land, birr/m2	Anecdotal data on a price range farmers can receive for land on the informal market, birr/m2
Addis Ababa	190	550 - 800
Mekelle	77	No informal settlement - demolished
Bahirdar	13	250 – 300
Kombolcha	16	150 - 300
Dessie	17	450 - 600
Jimma	20	350 - 550
Gambelle	26	No rural population or agricultural
Assosa	30 -50	300 - 600
Hawassa	31	550 -750
Sheshemenne	12-18	At least 3 times higher than the compensation
Dire Dawa	56	No data found

[110] Marie-Agnes Bertaud. URBAN LAND STUDY USING GOOGLE IMAGES AND GIS; BAHIR DAR - ETHIOPIA Case Study. Unpublished manuscript, October 2013.

Source: City Administration[111]

78. **It is important to recognize that using land for informal development and consequent sales is a much larger dynamic than farmers' land sales alone.** In fact, this is a complex and diverse industry, which includes, in addition to farmers, informal developers, squatters, and various secondary transactions with older informal plots (see Table 8).

Table 8: Sample Data on Origins of Informal Land

Forms of land acquisition	**Kolfe Keranyo Subcity, Addis Ababa, 2004 / 05**	**Adama, 2008**	**Yeka subcity, 2008**	**Jimma, 2008**	**Bahir Dar, 2008**
Bought from rural *kebele* administration		5%	2%		
Bought from farmers	52%	45%	26%		29%
Bought from informal sub dividers, speculators	28%	28%	45%	28%	16%
Bought from former informal settlers	13%				
Inherited from parents			24%		11%
Occupation by force		8%	2%	48%	44%
Gift from / granted by relatives		13%		23%	
Granted by peasant association, vendors, speculators	7%				
Total, parcels in a sample	**150**	**75**	**110**	**60**	**186**

Source: Extracted from Tendayi Gondo. 2009. Urban land and Informality: An evaluation of institutional response options to land informalization in Ethiopian cities.
http://www.earthsystemgovernance.org/ac2009/papers/AC2009-0306.pdf

79. **In sum, the land system and the government's inability to service that land with the required basic infrastructure (because benchmark prices fetched are below land delivery costs), and powerful forces of demand and supply, new development is being channeled into informal urbanization.** The longer the demand for formal urban land remains substantially unmet, the higher the cost for providing basic services, as informal settlements are known to be expensive to upgrade with proper roads and infrastructure. If China, with its strong commitment to public ownership of land, is any example, conversion of rural land into public urban land can follow a different approach. In the case of China, first, land rights of farmers were substantially improved and made similar to urban rights by the introduction of land lease rights for rural land. Second, China experiments intensively with allowing peri-urban villages to supply land for urban development.[112]

[111] Cited from Kaganova Olga, with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review, Background Paper (World Bank, 2014).

[112] Yu-Hung Hong. *Risks and Opportunities of Land-Based Financing in Urban China*. - Annual World Bank Conference on Land and Poverty, 2015; Wang Shouzhi. *Direction and Focus of China's Land Management System Reform.* - Annual World Bank Conference on Land and Poverty, 2015; Zhi Liu. Land Policy, *Municipal Finance, and Urban Housing Problems in*

80. **As a result of the unintended incentives for low-density formal development and the growing informal settlements which mostly lack basic services and infrastructure, total built-up areas are expanding in Addis Ababa as well as in secondary cities**. In Addis Ababa, the built-up area of the total urban agglomeration envelope is expanding horizontally such that the boundaries no longer reflect the true urban extent. Figure 19 shows land that was developed from 2007 to 2014 (in blue), much of which is on the fringe of the existing built-up area (in yellow) and just outside the administrative boundary. Figure 20 further classifies open and built-up land in the urban area. The core[113] of the urban agglomeration envelope (both built-up area and urbanized open space) now extends more than 50 kilometers across. From 2006 to 2013, this core grew by 59 percent, and captured open space[114] increased by 162 percent. Today, a more compact and less fragmented form of this urban core could fit in a circle with a radius of only 9 kilometers—well within the administrative boundary. Secondary cities are also experiencing rapid horizontal expansion Commonly, planned increases of designated urban areas are based on overly high land consumption practices for added territories and have resulted in planned increases for some cities of as much as 2.3–6.2 times the city's current territory,[115] often including more land than is needed to accommodate actual population growth. This boundary expansion is based on a common perception of a shortage of development land inside cities, although this is not necessarily the case, as satellite imagery reveals.

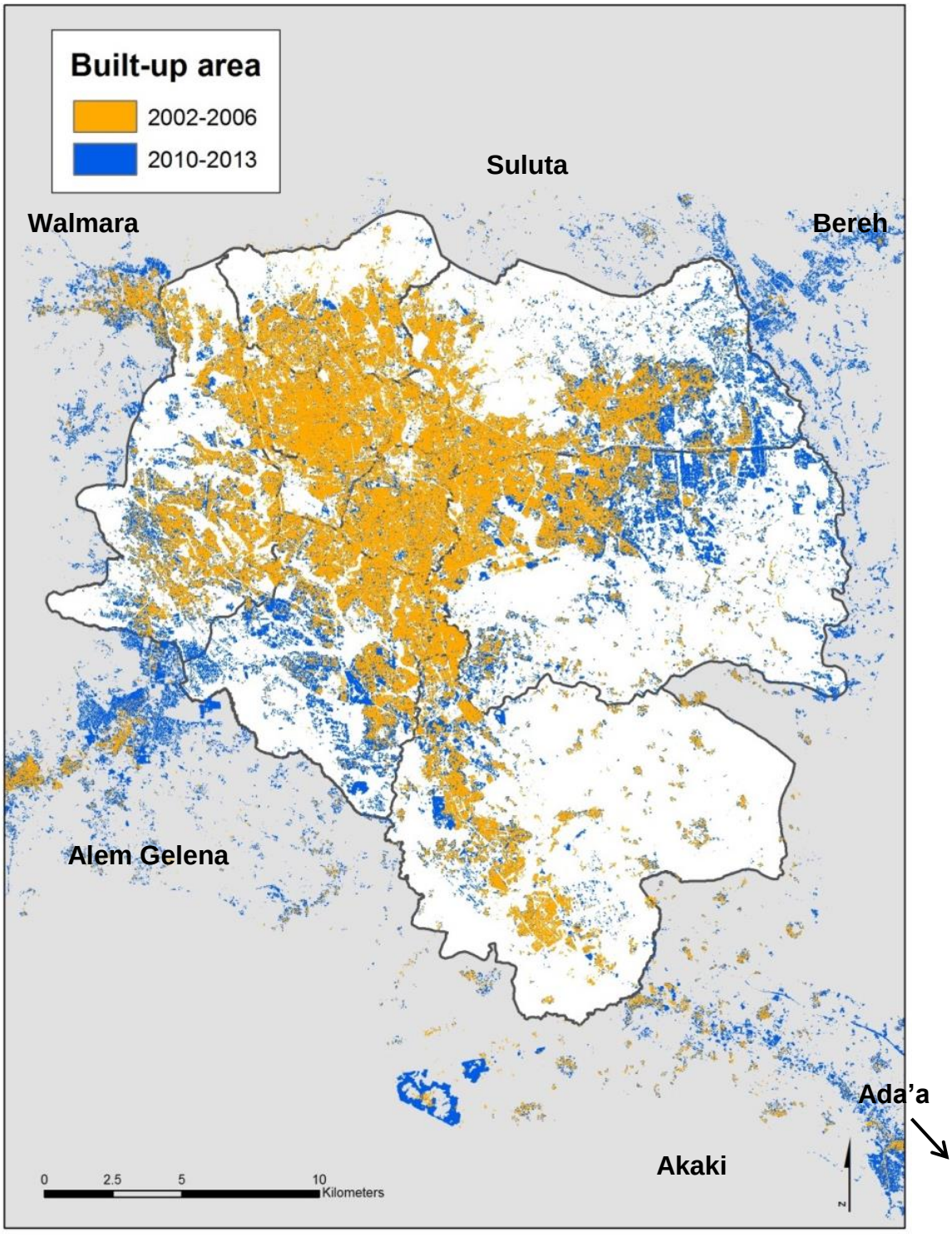
China. - Annual World Bank Conference on Land and Poverty, 2015 and Shouying Liu. New Economic Normal and Land Reform in China. - - Annual World Bank Conference on Land and Poverty, 2015

[113] "Core" refers to the areas of a city where at least half of all land is in a 586-meter radius (1 square kilometer) is built-up. It also includes large areas of open space that are completely surrounded, or "captured" by the core. For more information, see Shlomo Angel et al., "The Atlas of Urban Expansion," The Lincoln Institute, http://www.lincolninst.edu/subcenters/atlas-urban-expansion/Default.aspx.

[114] Large open space that is completely surrounded, or "captured" bydensely built-up urban areas. See above.

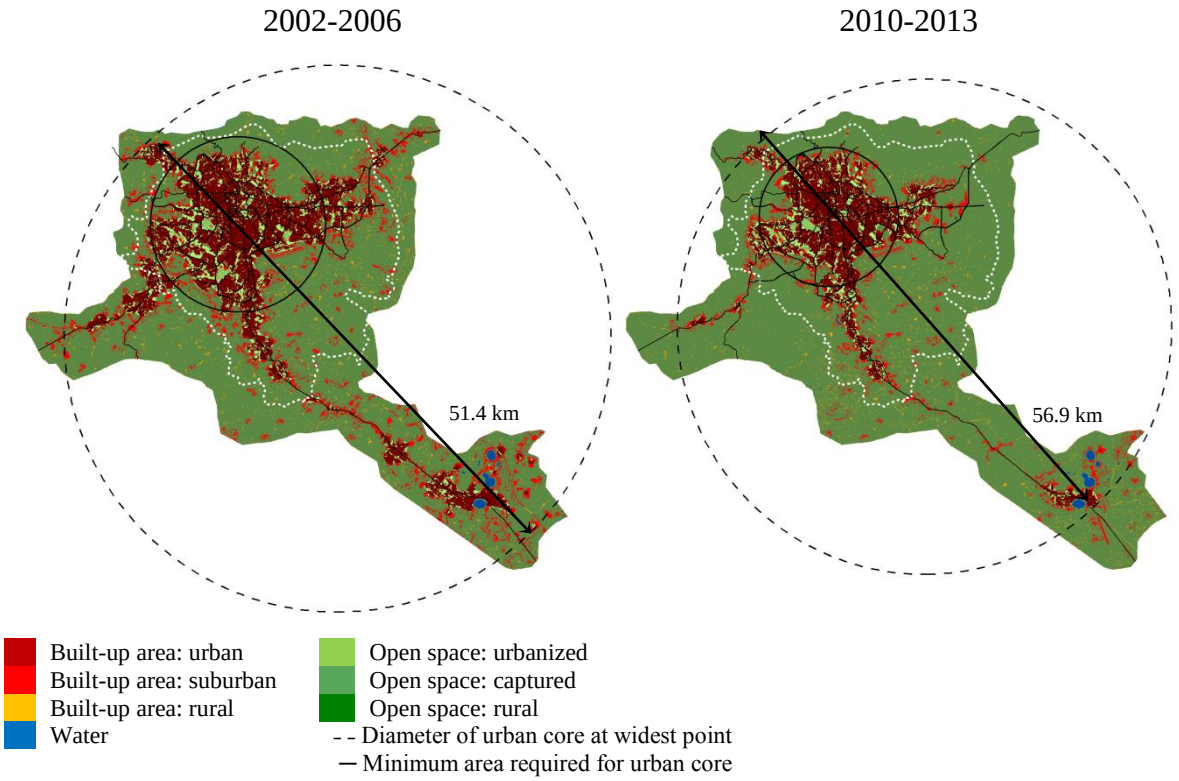
[115] Olga Kaganova with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).

Figure 19: The built-up area of Addis Ababa's urban agglomeration envelope is expanding beyond its administrative boundaries



Source: The World Bank, based on MODIS Imagery from NASA LP DAAC.

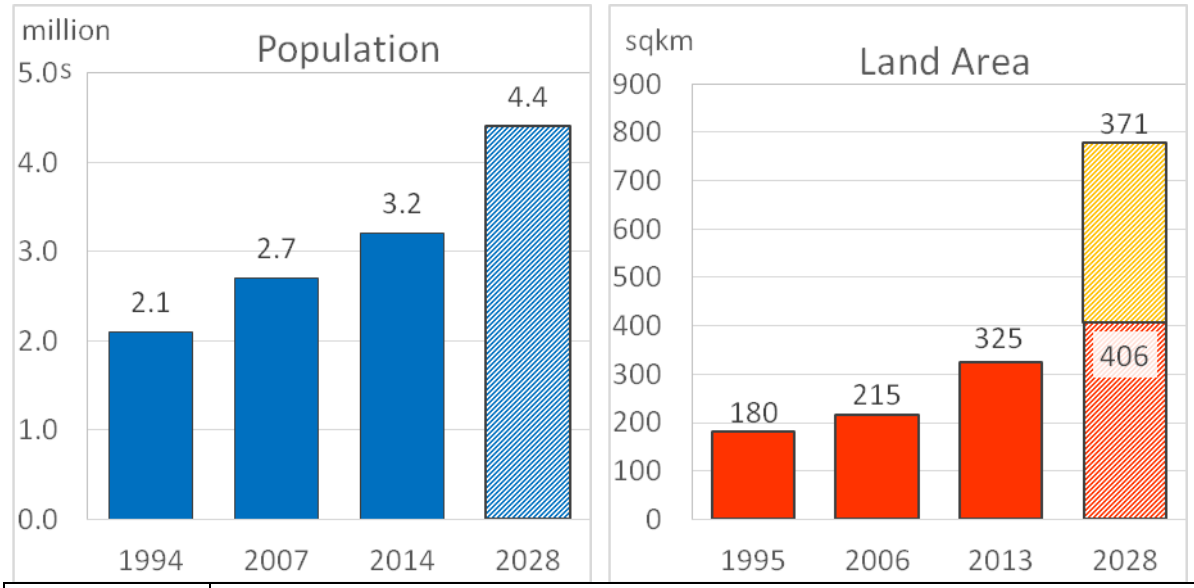
Figure 20: Urban core of Addis Ababa and surrounding woredas, including urbanized open space and captured open space.



Source: World Bank calculations based on MODIS Imagery from NASA LP DAAC. Based on methodology from Angel et al. (2010).

81. **Land consumption is growing faster than the urban population in Ethiopia, though this was not always the case.** From 1994 to 2007, the population of Addis Ababa grew by 30 percent. Over roughly the same period, the extent of Addis Ababa's total urban core, or "agglomeration envelope," increased just 19 percent. Put differently, for every 1 percent increase in population, the urban extent only increased 0.63 percent. However, from 2007 to 2014, the population of Addis Ababa increased 17 percent, while its urban extent increased 51 percent—nearly three times as fast. At the former rate of expansion, by 2028 the urban extent of Addis Ababa would increase only 25 percent, from 325 to 406 square kilometers, but at the latter rate it would more than double, to 777 square kilometers (the two scenarios are presented in Figure 21).While Ethiopia's land consumption can increase as the country develops, especially as incomes increase, the extent of this horizontal expansion and the character of the urban form can have important effects on the efficiency of the urban form in terms of infrastructure and service provision.

Figure 21: Land consumption scenarios for Addis Ababa and surrounding woredas



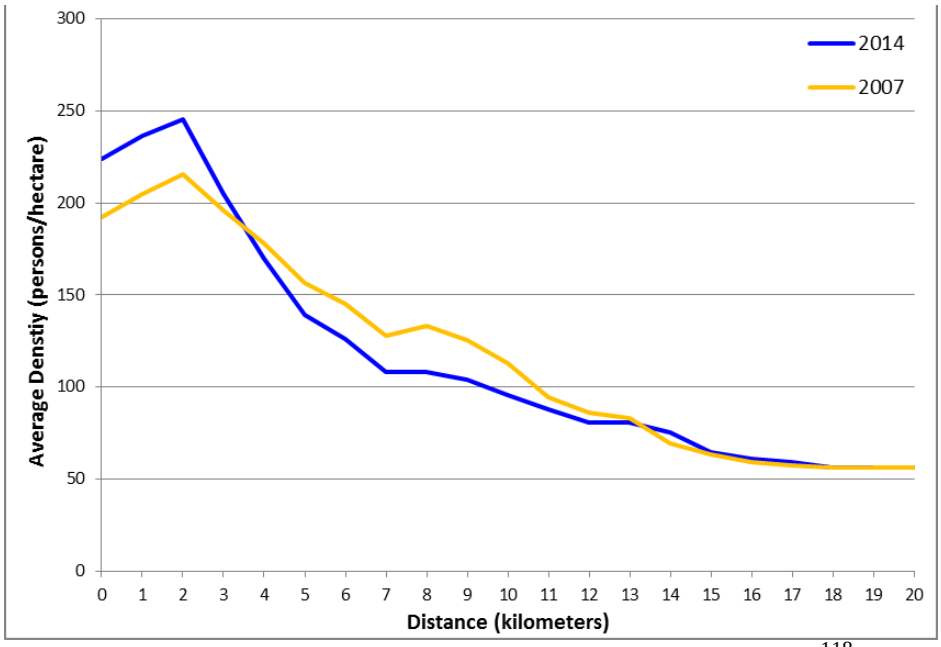
Period	Avg. Annual Population Growth Rate (%)	Avg. Annual Urban Envelope Growth Rate (%)	Ratio
1994–2007	2.19	1.49	0.68
2007–14	2.22	6.08	2.74
2014–27	2.35		
Scenario 1		1.60	0.68
Scenario 2		6.42	2.74

82. **As land consumption outpaces the rapid population growth, densities will decline with serious implications for service delivery, as recognized by the government's "Compact City" plans. In Addis Ababa, from 2007 to 2014, the average density of built-up areas of declined from 146 persons per hectare to 136.**[116] As shown in Figure 22, although density increased at the city center, it decreased in the built-up areas 4–14 kilometers from the center. In addition to the factors mentioned above, lower densities also arise from the replacement of *kebele* housing with new government-supported condominium development concentrated in more distant locations. In 2012, residential land use constituted one-quarter of all built-up area within the administrative boundaries, but more than half of land newly built-up since 2006. This type of overwhelmingly single-use, lower density development comes at the expense of other uses like infrastructure. It also has the potential to undermine the economic efficiency of the city, if jobs are primarily located in the urban core rather than the periphery, and the dominant commuting direction is toward the center, and if there is an absence of transport links between peripheral urban nodes.[117]

[116] By comparison, for instance, Barcelona and Moscow are both more dense (171 and 186 persons per hectare, respectively) while Seoul and Shanghai are more than twice as dense (322 and 286 persons per hectare). Source: Alain Bertaud, "The Spatial Distribution of Population in 48 World Cities" (2003).

[117] Note of Proposed World Bank Engagement on Urban and Metropolitan Transport and Land-use for Inclusive Green Growth in Addis Ababa.

Figure 22: Population density of built-up area in Addis Ababa, by distance from the city center (administrative boundaries only)



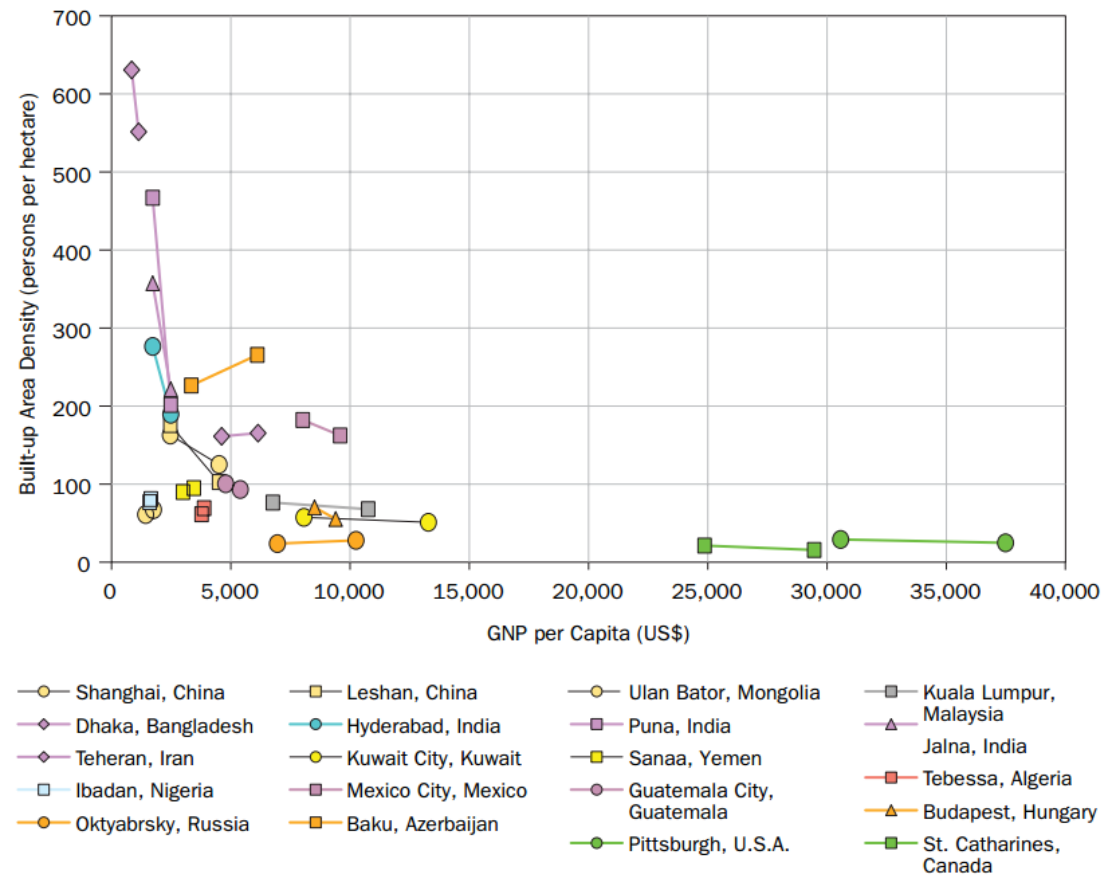
Source: World Bank calculations based on MODIS Imagery from NASA LP DAAC.[118]

[118] Based on satellite imagery classification and population data from the CSA (2007 Census and 2014 Projections). See Annex 2, *Population Density Gradients*, for more details.

Box 3: The relationship between income and land consumption per capita

As Ethiopia moves toward middle-income status, one would expect per capita land consumption to increase. Global evidence suggests that growing urban populations and rising incomes are likely to lead to an expansion in urban land consumption. Cities in countries with higher incomes tend to have lower densities, and a doubling of income per capita is associated with a 40 percent decline in average density.[2]

Density Change as a Function of Initial Density and Income Change in a Subsample of 20 Cities 1990–2000



Source: Angel et al. (2011).

This trend is already becoming apparent in Ethiopia: from 2007 to 2014 GNI per capita increased from US$220.0 to US$470.0, as the density of built-up land fell from 146 to 136 persons per hectare. However in some instances the trend has been reversed. In East Asia for example, despite rapid population growth from 2000 to 2010, urban areas became slightly denser on average (from 5,400 to 5,800 people per square kilometers). Except for China, 92 percent of urban areas in the region became more dense.[3] Global research has shown that land use regulations and the broader regulatory environment, more than income or population growth, have a profound influence on city form and economic efficiency.[4]

[1] Alain Bertaud and Stephen Malpezzi, *The Spatial Distribution of Population in 57 World Cities; The Role of Markets, Planning and Topography.* Draft (2014).
[2] Shlomo Angel, Jason Parent, Daniel L. Civco, and Alejandro M. Blei, *Making Room for a Planet of Cities*. Lincoln Institute of Land Policy (2011).
[3] World Bank, Australian Aid, "East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth, 2000–2010" (Draft).
[4] Alain Bertaud and Stephen Malpezzi. *The Spatial Distribution of Population in 48 World Cities: Implications for Economies in Transition*. (2003).

83. **Uncontrolled horizontal expansion of urban areas is not inevitable, especially with proactive government management**. Several factors influence the extent to which increasing urban populations lead to increasing land consumption. The way that land markets function will be critical in determining the future spatial form of urban areas. Targeted interventions to improve land management practices have the potential to better shape urban form such that provision of infrastructure and services for growing populations becomes a less expensive and daunting challenge.

84. **The challenges of rapid horizontal expansion at lower densities, combined with of a lack of mixed uses, have been recognized by the government in its master plan documents**.[119] As noted in Chapter 2, cities are already struggling to finance and maintain infrastructure and services, with systems of municipal finance and urban governance already stretched (Section 3.3 and 3.4). Expanding these services to cater for a threefold increase in the urban population, and the associated horizontal expansion of urban areas, will be hugely challenging. Data from California (Box 2) demonstrates the cost savings that can be realized from denser development. This is well understood by the Ethiopian government, which has already begun to incorporate a vision for "compact city" development in the new master plan for Addis Ababa. This will involve density targets for certain urban areas over 10 years, land use regulations to help meet these targets, and investment plans with phasing and prioritization.

85. **Many Ethiopian cities have vacant or underused land in prime locations, which could be leveraged for denser and more contiguous development in existing urban areas.** One outcome of a lack of market valuation of land, alongside government inefficiency in bringing land to market, is that undeveloped land often constitutes a high proportion of total city territory: about 46 percent in Addis Ababa and Mekele, 25 percent in Bahir Dar, 77 percent in Dessie, and 32 percent in Hawassa.[120] Figure 23 shows large amounts of vacant, buildable land within the administrative boundaries of Addis Ababa, which could be developed. Extrapolating from the current population densities of built-up areas in these 10 districts, the vacant, buildable land has a potential capacity of nearly 800,000 households. As shown, Addis Ababa has already developed a large proportion of its vacant land near the city center, but much land is still available within the administrative boundaries.

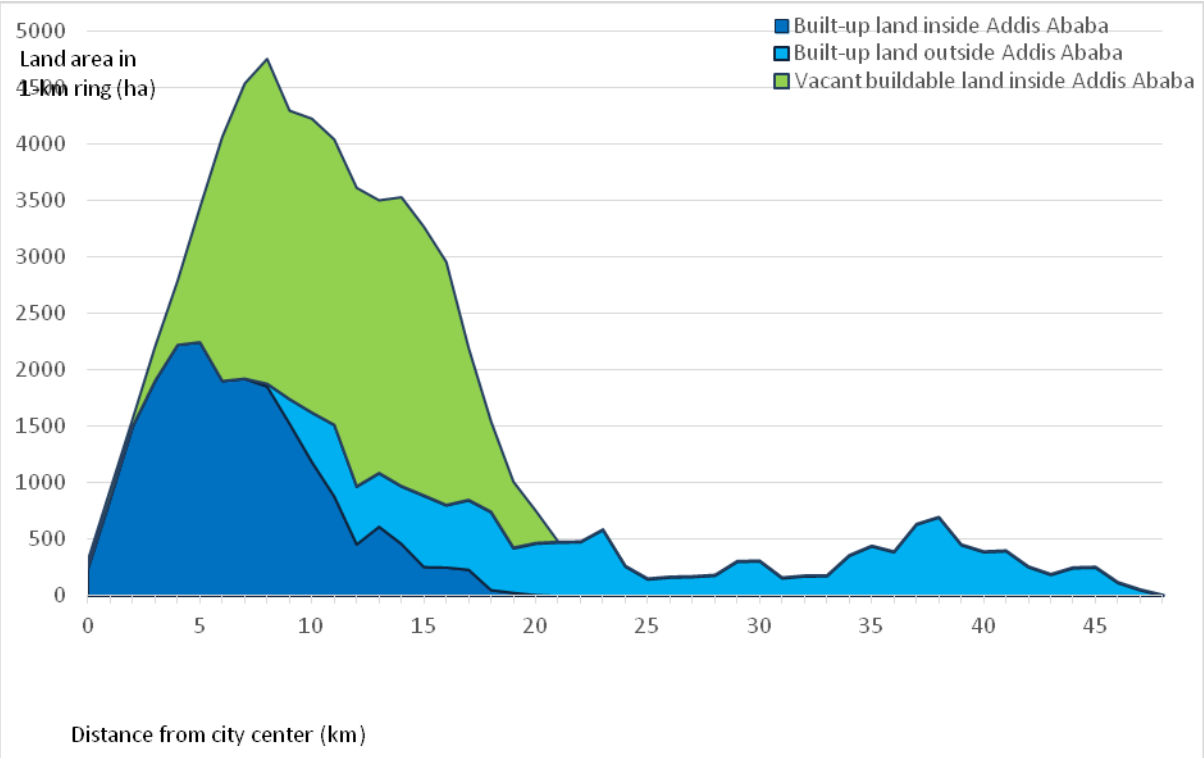
86. **Moreover, several cities report that government agencies hold excessive land.** In Dire Dawa for example, around 57 hectares are held by 18 government bodies. There is much potential for such vacant and underused land to be redeployed for development, and some cities are already taking steps in this direction. Hawassa, for instance, has identified and

[119] Addis Ababa and the Surrounding Oromia Special Zone Integrated Development Plan Project Office, *Integrated Development Plan for Ethiopian Renaissance*. The plan notes, in particular, the following: fragmented, unstructured city centers; no hierarchical polycentric arrangement of urban centers; concentration of activities in one location attracting one directional flow; radial orientation with no alternative route to the peripheral settlements; inefficient land use with low density; and leapfrog-type development in the north and southeast where the built-up area on the periphery is not entirely contiguous with the city core.

[120] This undeveloped land includes greenery/open space/protected areas, urban agriculture, forests, water bodies, and land labeled as having a "special function," which includes vacant land, military camps, and reservoirs. These data are from urban planning materials, not satellite imagery, and in reality some of these territories are most likely occupied by informal settlements. A further case study of Bahir Dar in 2013 demonstrated that in the central part of the city alone, 54 percent of the territory was vacant.

released underused government land for development, while the latest plans for Addis Ababa, Dessie, and Jijiga suggest a willingness to accommodate growth inside existing borders.[121]

Figure 23: Vacant, buildable land in Addis Ababa is an opportunity for dense, well-connected infill development



Source: World Bank calculations based on MODIS Imagery from NASA LP DAAC. See Annex 2 for more detail.

[121] With political support from the regional government, the city government of Hawassa negotiated release of about 120 hectares of the underused land in the city center, previously held by federal and regional government agencies such as the Hawassa Agricultural Development Enterprise, Hawassa University, Water Resources and Energy Bureau, Bureau of Agriculture, and a private company Bekele Mola Hotel. This land is now earmarked for development, including housing. Another 600 hectares were reallocated for an airport.

Box 2: Reducing infrastructure costs by promoting smart growth in California

By 2050, California is expected to grow from 38 million to nearly 60 million people, with 24 million jobs. Based on the calculations from the Rapid Fire (Calthorpe Associates) model—which estimated the different impacts of current low-rise single-use development ("Business as Usual" versus mixed use, denser, and transit-oriented development ("Smart Growth") in California in 2050—smart growth will lead to improvements in emission reductions, land consumption, infrastructure capital and maintenance costs, fuel use and costs, building energy and water use and costs, and tax revenues (see box table). "Growing smart," where the state would see an increased proportion of urban infill and compact growth, would lead to 3,750 square miles of land saved; US$32 billion saved (cumulative) in infrastructure capital costs; US$15 billion saved in O&M costs of infrastructure; and 200 MMT of CO_2e reduced emissions per year.[2]

	Business as Usual	**Smart Growth**
Future Growth	70% Standard 25% Compact 5% Urban	10% Standard 55% Compact 35% Urban
Greenhouse Gas Emissions Annual in 2050	395 MMT CO_2e	199 MMT CO_2e
Land Consumed for New Growth to 2050	5,600 square miles	1,850 square miles
Infrastructure Cost for New Growth—Capital Costs for New Growth to 2050	US$165.4 billion	US$133.34 billion
Infrastructure O&M Costs for New Growth—Engineering & Public Works Costs for New Growth to 2050	US$84.9 billion	US$69.9 billion
Revenues from New Growth—City Tax and Fee Revenue from New Growth to 2050	US$744.2 billion	US$864.5 billion
Building Energy—Cumulative to 2050	74 quadrillion BTU	58 quadrillion BTU
Residential Water Use—Cumulative to 2050	328 million acre feet	250 million acre feet
Vehicle Miles Traveled (VMT)—Miles Per Household in 2050	27,557 mi per HH	17,041 mi per HH
Auto Fuel Consumed—Cumulative to 2050	750 billion gallons	473 billion gallons
Annual Household Costs—Per Household Annual in 2050	US$21,000 per HH	US$11,500 per HH
Respiratory Health Costs Savings—Total Annual in 2035	None	US$1.66 billion

1 Calthorpe Associates. Vision California, Charting our Future—Statewide Report. Rev 06-26-2011.
2 Calthorpe Associates. Vision California: Urban Footprint—Next Generation Open Source Sketch Model & Data Ecosystem. July 2012.

87. **This section has shown how prevailing patterns of urban form—and their associated challenges—are intricately linked to the underlying practices of land management**. The government has been unable to satisfy demand for land, leading to informal development, particularly on the urban periphery. In Addis, allocation of land at below-market value, combined with large lot-size regulations, has led to a decline in density even as the urban population increases. The resulting horizontal expansion of urban areas, in Addis and secondary cities, exacerbates the challenges of providing infrastructure and services described in Chapter 2, with potential implications for economic efficiency. The good news is that proactive governmental management of land, as outlined in Chapter 4, may

help to mitigate some of these trends and thereby avoid locking into inefficient urban forms as cities continue to grow.

3.2.4 Costs to Government

88. **Beyond their spatial implications, land management practices also come with costs to government**. The land management system can prove expensive for local governments—already financially stretched and struggling to provide adequate services—as manifested primarily through:

- Forgone revenues due to allocating land below market value (or even just below cost recovery), which could otherwise be used to pay for further infrastructure development; and
- Administrative costs due to the complexity of the land leasing system.

89. **Land has an inherent value**. The value of land in urban and peri-urban areas depends on many factors, primarily its location, availability of public and private amenities, and security of property rights.[122] Therefore, when people sell or rent their houses or condominiums in Ethiopian cities, the prices they fetch implicitly include the value of land; a condominium in a central location realizes a much higher price than a similar one on the periphery. However, as said, the Urban Land Development and Management Policy and Strategy virtually states that the market value should not be recognized either when land is allocated in urban areas or when compensation is provided for expropriation.[123]

90. **By allocating land below market value, the government systematically deprives itself of revenues that could be used for financing infrastructure.** Auctions accounted for only 2 to 6 percent of land allocations in 2013 in the cities studied,[124] even though recent auctions indicate high unmet effective demand for residential and commercial/industrial land.[125] Instead, governments continue to allocate land through non-competitive allotments at administratively established benchmark prices. Since 2011, according to the new land lease proclamation, benchmark prices should be at least at a cost-recovery basis, however, this requirement apparently is not universally followed.[126] In Addis Ababa in 2013 alone, forgone revenues from allocating land to condominiums at benchmark prices are estimated to be equivalent to at least 147 percent of the total city budget. The practice also provides large

[122] According to a universally accepted notion, the market value of real property is the most probable price that can be expected when the property rights are transferred in a voluntary typical transaction between a seller and a buyer, after the property is exposed in the open market for a sufficient time.
[123] Government of Ethiopia. *Urban Land Development and Management Policy and Strategy*. Second Edition, Addis Ababa: Urban Development and Construction Ministry, 2013.
[124] 6.2 percent in Addis Ababa (2011–13), 3.6 percent in Mekele (2012–13), 2.3 percent in Kombolcha (2012–13), 2.9 percent in Bahir Dar (2013, though there was a plan to auction 24 percent of the land earmarked for allocation).
[125] Kaganova Olga with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).
[126] Thus, in 2013, some cities were continuing to auction land with very low benchmark prices (17 – 31 birr/m2), which can hardly be at the cost-recovery level. Moreover, the latest policy and strategy documents, such as *Urban Land Development and Management Policy and Strategy* (Second Edition, 2013) and *Urban Housing Provision Strategic Framework* (First Edition, 2013), both by the Ministry of Urban Development, Housing and Construction, seem to conflict with the cost recovery idea, as they state that land for housing should be provided at low cost for massive programs such as government- and enterprise-supported housing, housing cooperatives and for housing for low-income households in general.

indirect subsidies to recipients of free or administratively priced land. However, allocating land below its market value has been the policy of the government.

91. **Moreover, lack of institutional capacity for financial management leads to inadequate cost recovery from land allocation and land leases.** No mechanism was created to monitor whether revenues from land allocations at benchmark prices recovered the costs of land acquisition, infrastructure provision, and land release. Since 2011, the federal government has required that the benchmark prices for land allocations be set to recover costs, and local governments in Addis Ababa, Hawassa, Mekele, and Shashemene have increased their benchmark prices quite steeply. However, even in 2013, Bahir Dar, Dessie, and Kombolcha continued to allocate land at low benchmark prices, apparently below cost recovery.[127]

92. **Cost recovery is also an issue with urban expansion through expropriation.** Since 2011, the law has required that expropriated land be equipped with the necessary infrastructure before it can be allocated for formal construction, but local governments have expressed concern that they do not possess the financial resources to do this. Estimates for Assosa, Bahir Dar, Hawassa, Kombolcha, Mekele, and Shashemene suggest that the expropriation cost of the land needed to accommodate population growth, with the cost of basic roads, would consume up to 260 percent of total city budgets.[128]

93. **In stark contrast to Ethiopia, rapid urbanization in China—despite well-known problems—has been largely paid for by government land revenues**. Governments in China auction urbanized land and use the market value to pay for all the costs of urbanization, leaving a substantial surplus for other public purposes (Box 3).

Box 3: A Fact Sheet: Chinese Experience with Urban Land Allocation and Cost Recovery

From 2001 to 2012, the share of government land allocated annually through competitive procedures (versus direct allocation) fluctuated but stayed high at 47–79 percent of the total allocation.

Income from competitive allocation of land, as a share of total income from allocation, grew from 57 percent in 2004 to 96 percent in 2012.

Income from land allocation always recovered the costs of land acquisition and produced a profit, though it declined from 44 percent in 2008 to 22 percent in 2012. The costs of land acquisition include compensation to farmers and their resettlement, subsidies to other dwellers on the expropriated land, the cost of land preparation (infrastructure and parcelization), and land administration costs.

Local governments use profits from land allocation for urban construction, subsidized housing, reserve funds, farmland development, and rural infrastructure, etc.

Source: The World Bank, *China's Urbanization and Land: A Framework for Reform* (2014).

[127] See Tables 10, 10a in the background paper, *Land Management as a Factor of Urbanization* by Olga Kaganova and Sisay Zenebe (2014).
[128] Kaganova Olga with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).

94. **Additional costs to local governments are imposed by the complexity of land management in Ethiopia**. Local governments have several sources of land and property-related revenues, of which land leases and payment for "rent" (land permits) tend to be the largest. However, the urban land leasing system is far more complex, in both legislation and practice, than most land-leasing systems elsewhere in the world. This is true of three features in particular: the structure of lease payments;[129] interest charged on the unpaid part of a lease;[130] and lack of standardized lease payment terms.[131] Managing this leasing system effectively is nearly impossible with the limited capacity of local governments.

95. **These issues are aggravated by the fact that the structure of lease revenues incentivizes upfront payments rather than annual payments over the life of the lease**. Cities are heading into a future where they will hold leases that do not generate revenues for 30–40 years.[132] Moreover, local governments often lack the capacity to properly track lease payments and, by extension, to budget for the future. For instance, while numbers of active land leases and land permit holders can be in the thousands or tens of thousands even in secondary cities,[133] unified fiscal cadasters are rare, which limits local governmental ability to improve revenue collection. In some cities, even payee lists do not exist, so basic indicators such as a collection or coverage rate cannot be monitored.

96. **In sum, there is significant potential for the government to finance urban development through land values (while maintaining the ownership of land by Ethiopian people) —yet proactive steps are needed.** In contrast to countries like China, Ethiopia is missing the opportunity to pay for infrastructure and service provision through land revenues. Not only are cities foregoing revenues by allocating land below real economic value (which, as mentioned above, has been the government policy), they are also failing to recover costs from allocation and expropriation, exacerbated further by the administrative costs of complex land lease systems. Options for moving towards a more sustainable model of urban land management are highlighted in Chapter 4.

3.2.5 Constraints on Rural–Urban Migration

97. **In addition to being costly and driving potentially inefficient urban forms, land management practices also impact rural-urban migration.** Rural–urban migration rates in

[129] Lease payments are defined by three parameters: the total lease value over its lifespan; an upfront payment at the start of the lease (which should not be less than 10 percent of the total lease value, according to the federal proclamation); and the number of years over which the remaining amount would be paid (in equal installments). Correspondingly, selection of lease auction winners is defined not by the highest price offered for the lease but rather by a weighted combination of two or three parameters. For example, in the Amhara Region and Addis Ababa, an 80 percent weight is assigned to the highest amount offered, and 20 percent to the amount of the upfront payment.

[130] The government has attempted to charge interest on the unpaid part of a lease since 2002, while other cities with high administrative capacity, such as Hong Kong SAR, China, have abandoned the practice due to its complexity.

[131] This is the case even within the same city and for the same land use (e.g. residential). For example, auctions in Hawassa in 2013 resulted in leases where the lease payment varied from 3 to 50 years for residential land, and from 15 to 50 years for commercial land.

[132] Kaganova Olga with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014) and Olga Kaganova. *Establishing More Efficient and Effective Land Management in the Amhara and Tigray Regions, Ethiopia* (Urban Institute, November 2005).

[133] For example, Hawassa has 14,070 land leases and 6,900 permit holders—see data in Table 1 in the background paper, *Land Management as a Factor of Urbanization* by Olga Kaganova and Sisay Zenebe (2014).

Ethiopia are lower than one might expect.[134] Migrants are attracted to cities given their better infrastructure, access to services, and job opportunities. However, Ethiopian society is still predominantly rural and migration rates are lower than in many other countries.[135] Given the positive returns to migration, this points to obstacles or constraints.[136]

98. **The system of land management is one such constraint.** Lacking secure land tenure rights, most households maintain the use right of their land allotment by continuing to farm, providing adequate care to the land, and remaining a resident in the *kebele.* There are only limited opportunities for transfer of land rights in rural areas. Recent policies have promoted household land security by permitting land transfers to family members, yet transfers outside the family are rare.[137] Regulations prohibiting the sale of land, loss of land rights for those who leave rural areas, and registration requirements for new migrants all combine to undermine the desirability of moving to the city.[138] This is similar to China, where comparable restrictions on sales of land rights have acted as barriers to migration.

99. **Constraints on rural–urban migration may well hinder economic development in both rural and urban areas.** Urbanization needs to be deftly managed: too quick and it can place a strain on local government capacity to provide jobs and services (already apparent in Ethiopia); too slow and it can undermine productivity in the industry sector by holding back agglomeration and scale economies in cities, while limiting labor productivity in agriculture by inhibiting the incentive to invest.[139] Finding the right balance will be a key challenge for Ethiopian policymakers.

100. **While facing various land issues during its urbanization process, Ethiopia is not alone.** Countries with similarly large land holdings by government have many land issues very similar to Ethiopia, as **Box 4** below illustrates. This also implies that Ethiopia can learn from approaches taken by these countries to tackle their land problems (Box 8).

[134] Dorosh, Paul and Schmidt, Emily (2010). 'The rural-urban transformation in Ethiopia', IFPRI Ethiopia Strategy Support program 2 Working Paper No. 13 and World Bank, *Ethiopia Poverty Assessment*, Chapter VII, Draft (2014).
[135] World Bank, *Ethiopia Poverty Assessment*, Chapter VII, Draft (2014).
[136] Dorosh, Paul and Schmidt, Emily (2010). Note that land management is not necessarily the only—or even the most pressing—constraint. Access to jobs, for instance, is another important determinant.
[137] Dorosh, Paul and Schmidt, Emily (2010).
[138] A migrant is required to live six months in the urban area before registering their new address, and requesting a new identification card that reflects his or her residence. Many public services are tied to this registration and identification.
[139] Klaus Deininger and Songqing Jin, "Tenure security and land-related investment: Evidence from Ethiopia," *European Economic Review* 50, Issue 5 (2006): 1245–1277.

Box 4: Other countries have land issues similar to Ethiopia

Massive informal housing

China has "urban villages" built informally by former farmers on the portion of their collective land that was zoned for dwellings. Such villages are built within newly urbanized areas and are a product of a dual rural-urban land tenure system. "Urban villages" are un-planned developments, have narrow driveways, not enough public spaces, and overcrowded buildings, but provide basic infrastructure such as water, electricity, phone lines, and natural gas. They are also often well-located close to employment centers. The "villages" emerged as a market response to demand for affordable rental housing for fast-growing urban populations which the government was nunable to satisfy with its monopoly on land supply for formal development. For example, in Shenzhen in 2000, about 2.15 million people lived in "urban villages," out of the total of about 9 million (Yan SONG, 2007); in Guangzhou, around 70 percent of migrants and 40 percent of the total urban population are living in "urban villages" (Urban China, 2014). The duality of rural and urban land rights has major efficiency and equity issues and is considered as "the most damaging structural flaw in China's entire housing and urban system" (Renaud, 2014).

Greater Cairo, Egypt. At least 63 percent of the Greater Cairo population lives in informal settlements, built without planning or permits, mainly on territories still zoned as agricultural land, but built up long ago, starting in the 1950s. Over time, while the housing remains informal, utility authorities provide basic services, such as metered electricity, potable water, and sometimes sewerage (Sims, 2010).

The Balkan countries. As of 2011, the share of informal housing in the Balkans was estimated to range from 25% of the total housing stock (Croatia) to 40% (Albania and Serbia) (NALAS, 2011). Informal construction was caused mainly by two factors: (i) effective absence of urban planning/construction permit systems that would respond to natural needs for new construction, caused mainly by the chaos after disintegration of former Yugoslavia and local wars in 1990s; and (ii) over-demanding land use and building norms, when the countries started to function again, which pushed a lot of new construction and building alterations into the informal sector as non-compliant with the new norms.

Allocating land at administrative prices that are below market value or even below the cost to government

Egypt has universally practiced land allocation at low administrative prices or for free. For example, in 2005, a price for serviced industrial land in two new towns was set up as LE 95 per square meter (m2), while the market value was LE 400-500 per m2, and the cost of infrastructure alone was LE 180 per m2 (Wahba et al., 2005). Similarly, the Tourism Development Agency's (TDA), which controls land along the Red Sea's coastline had been applying "one size fits all" approach by offering beach-front land for US$1/m2, regardless of the potential market value of these sites. No estimates of the market value of sites prior to this give away were required or conducted, and hence, it is not known how much potential income the state has forgone or the value of windfall profits to land developers or buyers of properties on these lands. Also typical in Egypt is that land, after being allocated, is held in long-term leases for extremely low payments. In particular, in Cairo, social organizations (e.g. clubs) have held large sites in prime locations for symbolic payments.

Inefficient use of valuable urban land by government entities

Mumbai Port Trust, India. The Mumbai Port Trust holds 808.92 hectares of land in an economically prime location. Only 423.91 hectares (52% of the total) are used for port operations, and the rest is either vacant or abandoned or leased out on an ad hoc basis, often at rental rates that are outdated and dramatically below current market levels. The Trust's land operations are not transparent. According to Peterson and Thawakar (2013), if only 200 hectares of the Trust's land could be managed for its economic value, this land would have a value of roughly US$25 billion and could produce revenues that would help finance important parts of Mumbai's needed infrastructure.

Low-density urban sprawl resulting in limited infrastructure

Ulaanbaatar, Mongolia. About 69 percent of the entire built up area of Ulaanbaatar is low-density *ger* area development, with plots for individual housing (on average, 580 m2 of land) allocated often without reserving enough spaces for public uses (streets, schools) and without infrastructure. The cost of providing modern infrastructure to such large, low-density areas or retrofitting them is prohibitively high, especially given that the land was allocated for free and is essentially untaxed (Brhane at al., 2015).

Sources:

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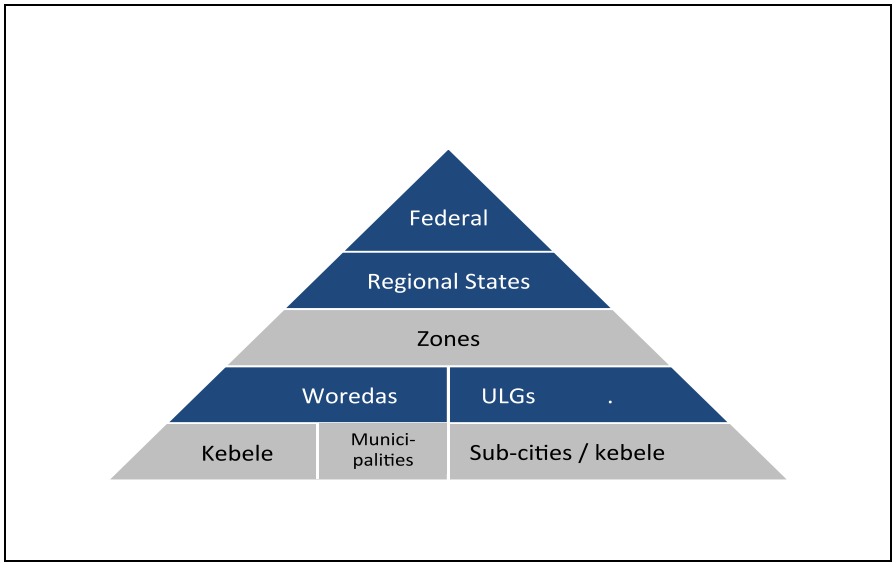
3.3 Limited Capacity and Authority of Local Governments

3.3.1 Introduction

101. **The Ethiopian governance structure has three main tiers—federal, regional, and local**. The Constitution, adopted in 1994 and formally promulgated in 1995, recognizes and assigns powers, functions, and revenues between the first two tiers: the federal government and the nine "regional states[140]." In addition, two cities -Addis Ababa and Dire Dawa- are each chartered by federal proclamations (laws) and are treated similarly to state-level governments in some respects. Regional states have their own constitutions and are typically subdivided into administrative zones, which is a de-concentrated territorial level.

102. **Local governments, as the third tier, are established by regions according to their own Constitutions and governance structures**. Notwithstanding minor variations, the most prevalent local government structures are *woreda*s (in rural areas), and urban local governments (ULGs) – also referred to as City Administrations (Figure 24). While the Constitution falls short of recognizing the local government level, or providing constitutional rights or protections to ULGs, each regional government has adopted city proclamations that specify the cities' powers and responsibilities.

Figure 24: Institutional structure of Ethiopia's public sector



Source: The World Bank, Local Government Revenue Study Part II (2014).
Note: Blue indicates government jurisdictions with their own budget source; grey indicates de-concentrated units. However, in some regions (such as SNNP state), the zonal level is more relevant than in other regional states. In SNNP, the zones have elected councils, just as Amhara regional state has some special ethnic zones with councils.

103. **City administrations/ULGs and *woredas* (or rural local governments) are semi-autonomous local government entities**, with legal status as corporate bodies with their own political leadership (council) and their own budget. ULGs and *woredas* are overseen by their

[140] Tigray; Afar; Amhara; Oromia; Somalia; Benishangul Gumuz; Southern Nations, Nationalities and Peoples (SNNP); Gambela and Harar.

respective councils, whose members are directly elected to represent each *kebele* (ward) within their jurisdiction. ULGs have the right to collect municipal taxes and revenues and the mandate to undertake an extensive list of municipal and state functions, the latter under delegation from their regional governments.

104. **Besides ULGs, most *woredas* have at least one, occasionally multiple, urban areas designated as municipalities**. These entities[141] usually collect municipal revenue and undertake some municipal functions, although much more limited than ULGs. Municipalities within *woredas* plan for various development activities. Differently than ULGs, however, their budgets have to be approved by the wider *woreda* council. Of the 1,525 urban settlements in Ethiopia, 140 have been granted status as ULGs by Regional City Proclamations as of March 2015. The remaining 1,385 municipalities/towns —small settlements with populations mostly below 20,000 people — do not have the ULG status and function under the authority of *woredas.*[142]

105. **ULGs are central to the country's governance system.** ULGs are responsible for an extensive list of public service delivery functions, including those which they are responsible for executing on behalf of their regions (see Box 57). Yet, although Ethiopia's intergovernmental system has features that resemble those in many other federal policies, it has unique features in its public sector suggesting that ULGs are less autonomous than those in federal systems in more industrialized countries. The rest of this section presents some of these features as they relate to urbanization.

[141] Legislation in the nine regions each define urban areas within *woredas* with varying terminology, which includes "lead municipality", "sub-municipality", "metropolitan town" or "emerging/developing town" (generally a rural area that is in transition to being formed as a municipality). There are no specific written criteria for these (and some other) definitions of urban areas within *woredas* – or in the case of some regional governments, even ULGs/city administrations. Recognizing the need for providing guidance to regions for a more consistent approach to classification of urban administrations, the Ministry of Urban Development, Housing and Construction Operation and Maintenance (MUDHCo) launched an exercise called "Good Urban Governance Institutionalization, January 23, 2015."

[142] Source: MUDHCo note of March 2015, based on data from regional governments.

Box 5: Ethiopian Local Governance Framework

State constitutions and proclamations define regional-local relationships. Although the federal constitution only formally establishes two government levels, in practice, Ethiopia is a federal state with three main government levels: federal, regional and local. In accordance with the Constitution, each regional state has adopted a proclamation establishing its local government structure.

In this report, local entities below the regional level will generally be referred to as local governments. The terms urban local governments (ULGs) or city administrations - used interchangeably in Ethiopia - will be used to refer to the main urban jurisdictions, which are typically recognized as district-level local governments. ULGs are centers of economic and social activity, and play a special role in the economic and social development and transformation of the country.

ULG dual responsibility	
State functions (executed by ULGs)	**Municipal functions of ULGs**
Functions which are prescribed by federal law to regional governments as their core responsibility and are assigned by regions to ULGs (and to *woredas*, in rural areas) for execution. The key functions of this type are: • Expansion and management of primary and secondary schools; • Expansion and management of primary health care and services; • Management of police and courts; • Support to micro and small enterprises. Regions retain decision-making power and administrative control over these functions. Budgetary approval of expenditures is required by city council, but otherwise there is a chain of management and reporting that proceeds from separate line offices within the city administration to regional authorities.	Functions which are assigned to ULGs by regions through city proclamations include, among others: • Housing supply; • Land servicing and supply; • Supply and quality of water, electricity and telephone services; • Road construction; • Road lights; • Drainage and sewerages; • Solid waste disposal systems; • Poverty reduction; • Maintaining vital statistics; • Marriage, birth and death certificates; • Abattoirs; • Bus terminals and market places; • Combatting soil erosion, landslide disasters and environmental pollution.

History of ULG dual responsibility. Under the previous regime (and under the imperial rule which preceded it), municipalities were semi-autonomous local governments, which were legally separate from the deconcentrated local offices of the state at the local level. Under this system, deconcentrated structures provided state functions, while municipalities delivered only municipal-type services (i.e. solid waste, urban roads…etc). As part of the decentralization reforms (2000 to 2003), these two separate organizations at the local level were integrated, providing both state and municipal functions. As a subsequent step, in 2010, municipal budgets and deconcentrated local state budgets were further integrated, by combining all local finances at the local level under a single financial management system.

3.3.2 Limited Local Authority and its Implications

106. **State government and ULG roles in the execution of state and municipal functions are not necessarily clear.** Legislation for functional assignments is open for interpretation and a number of regional governments and ULGs are actively seeking to reorganize the division of labor. In Adama, for instance, land management and building permit issuance became state government functions in 2013, while these used to be municipal functions. In Bahir Dar, the city is considering restructuring a number of assignment to make them state functions. At times, the division of labor between regional government and ULGs poses challenges. In Adama, for instance, the city manager was asked to use municipal revenues to cover the construction costs of micro enterprise clusters, which had been initiated by the state department of trade without adequate advance consultations with the city. Such examples are seen in many other ULGs. There is therefore a need to clearly indicate the roles and responsibilities of ULGs and regional governments in the execution of own functions, as well as the agent functions which the ULGs execute on behalf of the regional governments.

107. **Despite their importance in delivering most public services, local governments below the regional level have limited de facto autonomy.** ULGs have key responsibilities (see Box 5) yet do not have the full power to execute them. Basic regional legislation, such as city proclamations of each regional state, generally provides some measure of autonomy to cities, for instance, to deliver services, establish their budget, raise revenues, determine their organizational structure, perform a full range of personnel activities, expropriate land, enter into contracts, and incur (domestic) debt. In reality, however, these proclamations tend to be very broad and are often undermined by more detailed guidance and directives. For instance, ULGs are typically granted authority through regional proclamations to determine local taxes and rates, while in reality regional governments tend to issue some form of city tariff regulations that in most cases nullify or greatly curtail ULGs' ability to adopt or update local tax rates. This weakens ULG ability to raise own-source revenue. Mekele city, for example, still uses tariff regulations from 1997/98 as it is not allowed by the regional government to update its tariffs. As a result, the city cannot fulfill its revenue collection potential, as the existing tariffs are severely outdated. Similarly, while proclamations allow ULGs to decide on their respective personnel requirements and skills-mix needs, in reality, the human resource structures of ULGs are determined mostly by regional bureaus of urban development and civil service. In Amhara region, for example, the regional bureau of urban development established an organizational structure including staffing requirements for Bahir Dar city and its nine sub-cities. There are also signs of political-economy limitations—the legal provision in Oromia was amended in 2006 to allow the regional president to appoint the mayor. Although this is only in one region, if other regions follow, the shift may indicate a possible trend toward recentralization of authority with regional governments.

108. **Limited local authority in these areas hinders fulfilment of municipal services**—a challenge compounded by rapidly expanding urban populations that are expected to nearly triple by 2037. In at least four crucial areas, regional governments retain important powers while most local governments lack the autonomy and capacity to execute:

- **Human resources and personnel management**. The authority to establish staffing needs, set wage rates, add or eliminate positions, and to change the classification of a position tends to be held by regional governments through their proclamations on personnel management or civil service regulations. Regions' practice of setting

standard staffing composition for local governments in their jurisdiction not only erodes local government autonomy, but also creates uniformity which reduces the efficiency of service delivery in different cities. The inability to set wages, in particular, makes it hard for local governments to attract qualified staff, especially in departments related to construction, finance, and land management. For instance in Hawassa, the highest allowable career structure is Professional Level 8, which commands a monthly salary of Br 3,817 (around US$200). Beyond staff shortages, the capacity of staff is low, made still worse by high turnover (attributed to poor remuneration).

- **Land management**. Regional and/or federal governments tend to control city grades and classification, parameters of land leases and land payments, and land use categories.
- **Operating practices and organizational structure**. Cities have limited authority to restructure their organization or develop innovative mechanisms to capitalize on their staff skills. There is often widespread duplication and artificial separation of duties and functions in local administrations, yet the authority to introduce changes remains at the regional level.
- **Municipal finance and revenue**. Financial regulations, tariff regulations, revenue rates, new revenue sources, and the urban grading limit are often determined at the regional level.

3.3.3 Limited Local Capacity and its Implications

109. **Studies conducted by the government and development partners[143] that have measured capacity at the ULG level make three observations.** First, larger ULGs have higher capacity than smaller cities to execute basic municipal functions, such as participatory planning, procurement, and financial management. Second, existing capacity has emerged primarily from capacity-building efforts financed by individual interventions. Third, ULG capacity, particularly in own-source revenue mobilization or enhancement, asset management and land management, has remained low despite a focus on these two areas.

110. **The first two observations – the greater capacity of larger ULGs and better access to capacity-building support - are interrelated.** The studies show, for instance, that 86 percent of core staffing positions as recommended by civil service guidelines were filled in the 18 biggest ULGs in the country[144]—i.e. those participating in the World Bank–financed Urban Local Government Development Program (ULGDP)—while the 26 smaller, non-ULGDP cities studied have 77 percent core positions filled. Similarly, the education level of ULG staff shows variations: 44 percent of staff in Hawassa—one of the biggest cities—have a BA/Bsc or higher degree, but only 3 percent in Motta, a smaller city. The spread is partly due to the key subnational capacity-building programs targeting either the regional government (the Public Sector Capacity Building Program) or larger ULGs (the

[143] These include (i) World Bank, *Ethiopia Local Government Revenue Study Part II—A Situational Analysis of Urban Local Governments in Ethiopia: The Institutional, Governance and Fiscal Context of Local Governments*, report no: AUS5340, 2014; (ii) GTZ, *Woreda and City Benchmarking Study*, 2013; and (iii) World Bank, *Ethiopia Second Urban Local Government Development Program (ULGDP II) PforR Operation Technical, Fiduciary, Social and Environmental Systems Management Assessments*.

[144] Data for Addis Ababa are unavailable for this metric.

ULGDP/GIZ UI). A key reason for under-staffing at the ULG level is insufficient local government budgets.

111. **Further, despite federal government priority given to ULGs to enhance their own revenue sources, and asset and land management practices, municipal capacity particularly in these three key areas is generally weak**. Experience in ULGDP implementation between 2008 and 2014 shows that most ULGs do not have, and lack the capacity to develop, comprehensive land (and other) asset registries, despite the importance of land-related revenue. Additionally, although most ULGs prepare revenue-enhancement plans, the plans are usually prepared by external consultants to fulfill the ULGDP requirements to receive funds, and there are limited links between these plans and actual enhancement practices. And only a few ULGs are meaningfully computerized for revenue collection or land registry. Furthermore, although the collection of state revenues at the ULG level attracts substantial guidance, backstopping and oversight from the regional government, the supervision and backstopping provided is much weaker when it comes to municipal revenues.

112. **These ULG institutional capacity limitations have an important bearing on the creation of jobs and delivery of basic infrastructure and services.** The intergovernmental fiscal architecture assigns ULG own-source revenues the role of key financier of urban infrastructure and services. Such a role requires mobilization of fiscal revenues at the local level. Increasing tax receipts, through broadening the tax base at the ULG level, would create much needed fiscal space to support ambitious public expenditure plans for urbanization. Improving ULG institutional capacity to determine the most optimal policy to maximize revenue (including fiscal) potential therefore becomes a key priority.

113. **The importance of enhancing the institutional capacity of ULGs for fiscal and revenue management is reinforced by the roles that ULGs are already playing in accelerating economic growth and reducing spatial disparities**. Recent research suggests that greater autonomy along with capacity building for cities in Ethiopia seems to have improved economic outcomes at the city level, lowering regional spatial inequalities.[145] Notably, decentralization has led to convergence across city-level outcomes (including employment and number of firms), suggesting that poorly-performing cities started to catch up with their better-performing counterparts in tandem with decentralization. Importantly, the analysis finds that national policies, such as the introduction of value-added tax, are better implemented in cities with greater administrative powers and capacity, benefiting the business community directly.

114. **ULG institutional capacity for fiscal management, including licensing, directly affects the ability of firms to grow quickly.** Research for this report found that increases in tax rates and licensing rates adversely affect rapid firm growth, especially in secondary cities.[146] While tax rates are outside city policy remits, the role of ULGs is important, given their ability to apply and implement licensing. Recent qualitative work conducted across subcities in Addis Ababa found that differences in capacity strongly affected the ability of firms to pay taxes and renew licenses. In addition, interviews with small and medium enterprises indicated

[145] World Bank, *Decentralization in Ethiopia—Who benefits?* Competitive Cities Knowledge Base Paper, 2014.
[146] Background paper on 'Which Cities Create Jobs?" A 1 percentage point increase in licensing rates reduces the probability of doubling employment (and thus, potentially graduating to large firm status) by 9.3 percent.

that business incentives (especially those relating to land) were targeted at encouraging new entrepreneurs, leading to higher burdens on incumbents looking to expand business operations.[147] Local, regional, and national governments might want to use different instruments to address job creation, given their comparative advantage and their existing sector and firm-size distribution.

115. **In summary, while ULGs are central to the success of urbanization, they often lack capacity and *de-facto* authority for good urban management and local governance.** In many cases, regional proclamations limit the power that ULGs exercise in practice, with a negative impact on the provision of municipal services. Combined with limited capacity for land management and municipal finance, these trends increase the challenges outlined in Chapter 2: creating jobs, providing infrastructure and services, and supplying adequate housing. While there is much that could be done to improve local authority and capacity, this will need to be accompanied by changes to the fiscal framework in which cities operate so that there are sufficient finances available for urban development, which will be discussed in the following section.

3.4 Inadequate Municipal Finances for Urban Development[148]

3.4.1 Introduction

116. **Despite their long list of mandates and importance for Ethiopia's growth, ULGs have limited financial resources to meet their expenditure needs**. Urban expenditure needs are largely met through municipal own-source revenues[149] and to a smaller extent, from federal and state level resources and international sources (Table 9).[150]

[147] See "Spatial Determinants of Growth in Addis Ababa," draft memo by George Washington and World Bank Capstone Project (2014).

[148] See Annex 2 of the report for challenges associated with analyzing local government finances in Ethiopia and the study methodology adopted.

[149] Municipal own-source revenues (OSR) are collocated by ULGs and municipalities within woredas and clearly defined in the Government chart of accounts (codes 1700-1799). In this report, all tables indicating municipal OSR include the municipal OSR from both ULGs and the municipalities within woredas, unless otherwise indicated.

[150] Two important caveats should be noted in interpreting the data in Table 9. First, while data on flows from the federal government to the regions are reported diligently, those for funds from the regions to ULGs are not uniformly reported. This creates barriers to any attempt at systematic analysis of regional–ULG fiscal transfers. Still, the use of the "urban development spending" category under the "economic activities" budget line item in the chart of accounts was used to create Table 9. Second is the assumption, based on interviews with federal, regional and local government officials, that all municipal own-source revenues (OSR) collected are spent on urban services and other urban development activities. This data cannot be verified from accounting systems due to inconsistencies in categorizing and/or coding the underlying budget data, and because consolidated budget accounts in Ethiopia only report on spending by treasury (federal/state revenues and block grants) and external sources (international grants and loans), but exclude local expenditures funded from municipal own-source revenues.

Table 9: Urban Development Spending from Different Government Revenues, 2011 (EFY 2004)

	Urban Development (Br million)	Total Public Spending (Br million)	Urban Dev. (% of Total)	% of Total Urban Dev.
Federal	232.7	52,893.8	0.4	4.5
Federal/Regional External Capital	223.7	15,532.2	1.4	4.4
Regional (Bureau)	869.6	28,534.2	3.0	17.0
Woreda Level	658.3	27,456.5	2.4	12.8
Municipal OSR	3,148.1	3,148.1	100.0	61.3
Total	**5,132.3**	**127,564.8**	**3.7**	**100.0**

Note: "Urban development" is total urban expenditure (capital and recurrent), tagged as "urban development spending" in IBEX
Note: EFY = Ethiopian fiscal year, which runs July 7–July 6; it is seven years behind the Gregorian calendar
Source: IBEX/MoFED[151]

117. **Bearing in mind the caveats above,[152] data in Table 9 suggest that most urban development spending (over 90 percent) is at subnational levels, with the majority of funding coming from ULGs**. State-level urban development spending takes one of several forms (beyond the recurrent costs of urban development bureaus): Regions co-fund the Urban Local Government Development Program (ULGDP)[153] spending at the local level, some regions provide direct state-level spending on urban development projects and some regions provide ULGDP-inspired incentive grants to municipalities/ULGs for urban development expenditure. Yet, the majority, i.e. over 60 percent, of urban development spending is funded from municipal own-source revenues.

118. **The largest source of urban expenditure funding – municipal own-source revenue – is insufficient.** The most recent data (Table 10) shows that only three percent of all revenues collected in Ethiopia is municipal revenue. The Constitution defines the division of main revenue sources between federal and regional state levels, with most high-yielding sources assigned to the federal level or jointly to the two levels. The federal government collects 81 percent of all revenues, while regional governments collect 16 percent. This significant vertical fiscal imbalance is offset through fiscal transfer from the federal to the regional governments.

[151] IBEX data presented in Table 9 does not fully include ULGDP resources. Once ULGDP (and other flows) are fully integrated and tracked through IBEX, a more accurate analysis will be possible. Given the quantum of ULGDP resources (approximately ETB 780,000 total in EFY2004), additional data would not change the fact that the majority of expenditure on urban development is incurred by local governments.

[152] See Footnote 151

[153] ULGDP is a performance-based fiscal transfer that disburses to a number of ULGs in direct proportion to their performance, measured independently, against a set of institutional and capital investment results. The Program is explained in further detail in the section below.

Table 10: Revenue Profile for Ethiopia (actual revenue collections), 2011 (EFY 2004)

	Br (million)	**%**
Consolidated (Federal/Regional) Revenue	102,863.7	97.0
o/w Federally Collected Revenues	85,879.7	81.0
o/w Regionally Collected Revenues	16,983.9	16.0
o/w Collected at Bureau Level	*3,910.2*	*3.7*
o/w Collected at Woreda Level	*13,073.7*	*12.3*
Municipal Revenue	3,148.1	3.0
Total Public Revenues (excluding grants)	**106,011.7**	**100.0**

Source: MoFED/Integrated Budget and Expenditure System (IBEX), supplemented with Oromia State municipal revenue reported by Oromia, BOFED.[154]

Note: EFY = Ethiopian fiscal year, which runs July 7–July 6; it is seven years behind the Gregorian calendar.

119. **The existing fiscal arrangements for meeting urban expenditure needs, which rely heavily on municipal revenues, are too small to fill the gap in urban infrastructure and services.** Given the rapid population growth of urban areas in Ethiopia, unmet urban infrastructure needs are significant. And although municipal revenue—which finances the majority of urban investments—has grown in nominal terms, in real terms between 2006 and 2011, its annual growth was lower than growth in public revenue or GDP.[155] Reasons for this include the limited ULG capacity, fiscal autonomy, and financial resource capacity (highlighted above). Most important, however, is the difference in indexation used for municipal, as opposed to federal and regional revenues. Municipal revenues (especially fees and charges) tend to erode with inflation as they are typically specified in nominal terms (and any adjustment to these must be approved by regional governments), while federal and regional revenue sources, such as value-added tax or taxes on personal and business income, are generally specified in percentage terms.

3.4.2 Intergovernmental Fiscal Transfers

120. **Intergovernmental fiscal transfers form a critical component of sub-national finances in Ethiopia.** Regions receive the majority of their financial resources through fiscal transfers from the federal government, and in turn, provide intergovernmental fiscal transfers to the local level. The main federal to regional transfer is in the form of non-earmarked block grants.[156] These transfers comprised 66 percent of all state revenues in FY2010/11 (Table 11) and they have been increasing, from Br 9.9 billion in 2006/07 to Br 26 billion in 2010/11 and

[154] Data limitations should be taken into account in interpreting these figures. The IBEX data provided by MoFED did not have municipal revenue for Oromia Regional State. To provide a more complete fiscal picture, data on Oromia municipal revenue collections were requested from Oromia BOFED/Revenue Bureau and were added to the calculations.

[155] World Bank. *Ethiopia Local Government Revenue Study, Part II* (2014).The figures on municipal revenue growth, inflation, and GDP are based on data from the Ministry of Finance and Economic Development (MoFED) Integrated Budget and Expenditure System (IBEX) and the International Monetary Fund.

[156] In addition, other types of funding from various development institutions have occasionally been referred to as "special purpose grants" including the ULGDP and the MDG fund. However none of these have (yet) been assigned an account code in the government account system within fiscal transfers series (IBEX code 1600) and cannot be tracked in national or state government accounts.

to Br 41 billion in 2012/13. Although resources flowing through the block grant system are increasing, on average 80 percent of these resources are used to fund salaries and other recurrent expenditures, while resources for capital expenditures are limited.[157]

Table 11: Revenue Sources of Regional States: State Revenues, Subsidies (Grants), and External Funding (EFY 2003)

	ETB million	US$ million	ETB per capita	Percent of total
State-Collected Revenues	12,999.1	698.9	150.1	33.1
Grants from Federal Government	25,967.8	1,396.1	299.8	66.1
External Assistance / Loans	311.5	16.7	3.6	0.8
Total	39,278.4	2,111.7	453.5	100.0

Source: MOFED/IBEX.

121. **In addition to these fiscal flows, in 2008 the Government of Ethiopia established the Urban Local Government Development Program (ULGDP)** which is a performance-based fiscal transfer program that disburses to a number of ULGs[158] in direct proportion to their performance - measured independently - against a set of institutional and capital investment results. Based on the success of the first phase (2008-2014) of the World Bank-supported ULGDP, a second phase was launched in 2014, where participating ULGs and their respective regions provide different levels of co-financing to the grant. While technically the ULGDP should be tracked in the public financial management system and be reported as a transfer, it is not – thus, does not appear on the table above, which indicates data from IBEX. The key reason for this is that when the ULGDP was launched in 2008, IBEX was not fully operational in most ULGs, who used a mix of accounting systems to monitor ULGDP funds. Government has expressed its intension to fully integrate ULGDP transfers in IBEX in the coming years. Nevertheless, analysis of ULGDP disbursements (Table 12) indicate that while in aggregate terms, the program's median disbursement of approximately US$43 million per annum is not a significant sum when situated within the larger grant funding from the federal government, at the ULG level, funds from the program comprised a significant amount of funding, averaging around 70 percent of ULG total urban capital expenditure.

Table 12: ULGDP Disbursement, 2009-2014

Year	Amount in US$
2009	16,556,495.00
2010	47,686,397.53
2011	47,730,325.57
2012	38,933,656.31
2013	75,964,636.54
2014	30,779,532.63
Total	**257,651,043.58**

[157] World Bank, *A Review and Assessment of the Ethiopian Approach to Public Sector Reform*, April 2013.
[158] In 2008, 18 ULGs and Addis Ababa. The geographic scope was widened to 44 ULGs in 2014, and Addis Ababa was taken out, due to its specific and large institutional and investment needs.

122. **Despite the Constitution's decentralization of revenue resources to the regional level, with the exception of Addis, regions in Ethiopia are not able to cover their expenditure needs from their own-revenue sources.** This is due to the fact that regions have been given extensive *de jure* responsibility for service delivery but an insufficient economic base and regional inequality in resource mobilization (most of which is *de facto* delegated down to local governments). The mismatch between expenditure responsibilities and revenue assignments is financed through transfers from the federal government. The main justification for the central government to give unconditional grants to states is, first, to correct vertical fiscal imbalances (to ensure adequate sub-national funding for provision of a minimum or reasonable level of public services), and second, to achieve horizontal fiscal balance (that is, to equalize fiscal capacities of different states). Thus the formula for sharing the block grant among the states is based on a quite sophisticated assessment of (i) revenue potential and (ii) specific expenditure needs of each state. Administration of the formula is managed through the House of Federation. The House of Federation compiles data for regional collections and (proxy) tax bases for seven main revenue sources in each regional state: payroll tax, agricultural income tax, land use fee, livestock tax, profit tax, turnover tax, and the value added tax, as well as data on expenditure needs. Similarly, the formula determines the level of each region's expenditure needs by taking into account previous years' expenditure share of each sector as a weighting mechanism for determination of the expenditure requirement of a sector. Expenditure needs are then determined for each functional grant window based on a sectoral formula which includes: general administration (28%); primary and secondary education (33%); public health (11%); agriculture and rural development (11%); drinking water development (5%); and urban development (4%). Remaining functions attract 8 percent of the allocation formula. These block grants account for the vast majority of all regional states (except Addis). Table 13 below presents the funding sources of regional state budgets for EFY 2003 (most recently available EFY for this data), broken down between state revenues, grants (subsidy revenue), and external funding. The data show that close to two-thirds of regional state resources come from intergovernmental fiscal transfers from the federal level. Close to 2.1 billion US$ (Br 41.6 billion) was transferred from the federal level of government to the states in FY2012/13.

Table 13: Regional government revenue compositions (actual revenue collections), FY2012/13 (EFY 2005), Br (million)

	State-Collected Revenues	Transfers from Federal Government	External Assistance/ Loans	Total Revenue	Transfers from Federal Gov't, as % of total state government revenue
Tigray	2,386	3,706	11	6,103	61%
Afar	317	2,159	0	2,476	87%
Amhara	3,668	12,248	0	15,916	77%
Oromia	5,373	7,322	0	12,695	58%
Somali	859	2,909	0	3,768	77%
Benishangul	270	1,091	42	1,402	78%
SNNPR	2,889	10,677	0	13,566	79%
Gambela	149	530	0	680	78%
Harari	25	531	0	556	95%
Dire Dawa	234	417	0	651	64%
Addis Ababa	11,530	46	403	11,980	0%
TOTAL	**27,700**	**41,637**	**456**	**69,794**	60%

Source: MOFED/IBEX.
Note: Addis Ababa receives no GPG/block grants.

123. **While Addis Ababa has regional government status, unlike the nine regional governments and Dire Dawa, it does not receive block grant transfers from the federal government from the treasury sources**. Instead, it receives a small amount of transfer for the road fund (ETB 41.6 million in 2010/11, most recently ETB 50 million in 2013/14) and ad hoc, project specific capital transfers which have been borrowed by the federal government from international sources for key infrastructure investments in the city (Table 14). These financiers include the World Bank (IDA), China EXIM Bank and L'Agence Française de Développement through the Caisse Franchise de Développement. The majority of the investments are in the water sector. As of May 2015, 11 infrastructure projects such as the Akaki Liquid Waste Treatment Plant, Third Water Supply Project, Legedadi Water Supply Expansion and the Biogas Project, are financed through such mechanisms. These transfers, which are all in the form of grants to Addis, have grown considerably over time (Table 15), from ETB 70 million (US$3.4 million) in EFY 2004 (FY2011) to ETB 280 million (US$13.6 million) in EFY 2007 (FY2014), with a peak of ETB 1.6 billion (US$78 million) in EFY 2006 (FY2013). The share of these externally borrowed funds which are on-granted to Addis have been growing. They reached eight percent of Addis' total revenues and financed 13.6 percent of the city's capital expenditure, in EFY 2006 (FY 2013/14).

Table 14: Addis Ababa Revenues and Expenditures, Br (million) [159]

Revenues	**EFY 2004**	**EFY 2005**	**EFY 2006**
State Revenue	8,371,456,347	11,530,518,057	15,756,336,221
Federal grants/Subsidy Revenue road fund (code 1604)	38,039,076	46,993,155	50,528,681
Municipal Revenue	1,242,899,236	1,245,775,128	1,502,732,624
External Assistance[160]	25,463,174	49,329,777	213,793,646
External Financing borrowed by the Fed Gov't	70,669,856	353,183,790	1,571,925,281
World Bank (IDA)	*70,669,856*	*353,183,790*	*134,742,378*
China		*0*	*1,437,182,903*
Total revenue	**9,748,527,689**	**13,225,799,906**	**19,095,316,452**
Federally borrowed external loans, as share of total revenue	0.72%	2.67%	8.23%
Road fund as share of total revenue	0.39%	0.36%	0.26%
Expenditures			
Recurrent expenditure	3,575,639,341	4,678,800,611	6,439,752,800
Capital expenditure	4,748,241,496	7,856,585,222	11,573,604,602
Total expenditure	**8,323,880,838**	**12,535,385,832**	**18,013,357,402**
Capital share of total expenditure	57.0%	62.7%	64.3%
Federally borrowed external loans, as share of capital expenditure	1.5%	4.5%	13.6%

Source: IBEX Accounts data received March 2015 from Addis

Table 15: Breakdown of External Financing Borrowed by the Federal Government, Transferred to Addis as Grants

EFY	**Source**	**ETB**	**Sector**
2004	World Bank (IDA)	70,669,856.00	Water
2005	World Bank (IDA)	353,183,789.94	Water
2006	World Bank (IDA)	134,742,377.77	Water
	Export Import Bank of China (Exim Bank)	1,287,217,984.45	Water
	Export Import Bank of China (Exim Bank)	149,964,918.32	Road
2007	World Bank (IDA)	139,986,421.50	Water
	World Bank (IDA)	43,029,959.69	Water
	L'Agence Française de Développement via the Caisse Franchise de Développement	97,000,000.00	Road

Source: IBEX Accounts data received March 2015 from Addis Ababa

[159] It is important to note that Addis has been creating an operating surplus, as also highlighted in previous analyses including the 2014 "Ethiopia Local Government Revenue Study, Part I: Ethiopia Local Government Revenue Study Part I – Borrowing Position of Addis Ababa "by the World Bank.

[160] These are funds obtained from various grant based projects, rather than loans/credits borrowed by the federal government. Sources of these in EFY 2006 include the World Bank, UNICEF, UNDP, UNFPA and WFP.

124. **In addition to the on-granting of externally borrowed financing by the federal government, Addis borrows, through MOFED guarantee, directly to meet some of its financing needs.**[161] In the past, Addis borrowed from the Commercial Bank of Ethiopia (CBE) to finance the rolling stock for the city bus enterprise (fully repaid) and more recently for housing construction, in the form of the "corporate bonds". The federal government authorizes Addis to borrow and provides a guarantee to the CBE. Addis' corporate bonds can be considered as private placement bonds; in essence they are a form of medium-term relay loans (with issuance of coupons), which, in the case of Addis, are then converted by the CBE from Addis debt to individual mortgage loans to the final beneficiaries of the housing program. In other words, when housing construction is finalized and the properties are transferred to beneficiaries, bonds are converted to mortgage loans issued by the CBE to the individual beneficiaries. Project finance for housing projects accounts for the largest share of outstanding debt of Addis. The amount of Addis' outstanding bonds of reached ETB 10.1 billion (US$534 million) by the end of June 2013. As of 2015, the total outstanding bonds of Addis reached ETB 18.375 billion (US$875 million). These bonds are registered under the Addis Ababa Housing Development Agency (AAHDA). This total amount of outstanding bonds corresponds approximately to the city's total expenditure in EFY2006. Although a thorough discussion of subnational borrowing, including by Addis exceeds the scope of this study, it is worth mentioning that the practice of subnational borrowing as briefly described above has the following key flaws and challenges:

i. There is a potential risk of contingent liabilities from indirect guarantees and the lack of what seems to be a proper regulation of guarantees, which Addis and other regional governments may offer to their entities, authorities or enterprises;
ii. The current framework for subnational borrowing does not address the remedies should Addis, a regional or ULG borrower, default or reach a position of insolvency;
iii. There is no common debt reporting framework and the federal government has not defined any debt management ratios (e.g. restricting subnational entities against borrowing more than a certain percentage of their operating revenues);
iv. The full guarantee of the federal government can lead to a moral hazard risk, whereby the CBE has little to no incentive to carry out any municipal credit evaluation, as it can rely exclusively on the sovereign guarantee.
v. Finally, concentration of high amounts of subnational debt relative to the CBE's capital base could potentially risk the stability of the country's largest bank.

125. **Transfers from the regional governments to local governments are difficult to analyze systematically, as the budget reporting system provides inadequate information on regional-local block grants**. In principle, the distribution of the regional to local transfers is determined by the regional council through a set of formulae in each region. These formulae are often modified from year to year. Fieldwork interviews conducted for this and previous similar studies indicate that the formulae used by regional governments follow

[161] The conditions under which Addis Ababa and other Ethiopian sub-national governments may borrow directly are determined by the legal framework and practices. Ethiopia's subnational borrowing framework can be characterized as a "direct control" policy framework, which includes the following elements: (i) requirement for federal government approval of all loans contracted by regions and Addis Ababa (borrowing by urban local governments is subject to the approval of their respective regions); (ii) domestic borrowing by regions and Addis is (currently) authorized only from approved state-owned commercial bank; (iii) all loans to/ bonds issued by the regions and Addis are guaranteed by the federal government; and (iv) loans are extended at subsidized interest rates, which do not price risk.

broadly the same parameters as the federal one. The share of the block grant for each woreda and ULG is indicated in the annual budget proclamation of each regional government, and is approved by the regional council. The allocations are then published in the Negarit Gazet. The ULGs receive these published amounts as a budget ceiling for their state expenditures and record the ceiling in their budget proclamations as a block grant.

126. **However, in practice, allocations differ significantly from these proclaimed amounts**. The proclaimed amounts are not reflected in the actual regional government or ULG accounts. Part of the amount comes out of the state revenue collected by the ULG on behalf of the region, rather than through a direct transfer from the regional account. ULG revenue offices collect state revenues as an agent of their region, with the rationale that the collected revenues should be used for state functions across all woreda and ULGs within the particular state in an equitable and need-based manner. Thus, part of the collected amounts are retained by ULGs in lieu of a transfer from the region of their share of the block grant allocation and the rest is transferred to the regional government accounts. Yet, regional governments do not prepare state-level budget reports that transparently reveal funding flows from the regional state level to the local level, and vice-versa. Therefore, it is very challenging to accurately analyze the exact amount of financial flows from the regional governments to ULGs using the existing IBEX system.

127. **Of the state revenues collected by selected ULGs in this study, there is a net transfer of funds from ULGs to their regional governments**. Hawassa has a special status, as it has been formally granted the right to retain all its state revenue. All other ULGs analyzed make net transfer of fiscal resources to their respective regional governments (Table 16). For the most recent year (EFY2006) Bahir Dar and Adama effectively transferred close to 70 percent of the state revenue collected to the regional governments, and Mekelle transferred approximately 40 percent of the amount.

Table 16: State Revenue and Expenditures for selected ULGs – EFY 2006 (FY 2013/14)

	Bahir Dar	Hawassa	Mekelle	Adama
State revenue collected by ULGs	429,956,720	465,821,682	652,295,471	270,410,000
State expenditure by ULGs	136,109,406	430,420,327	377,432,066	80,760,958
State revenue returned to regional government by ULGs	293,847,314	35,401,355	274,863,405	189,649,042
State expenditure as % of state revenue collected by ULGs	32%	92%	58%	30%
% of state revenue returned to regional government by ULGs	68%	8%	42%	70%

128. **For selected ULGs in this study, all municipal capital expenditure was funded either by ULGDP financing or own-source revenue.** Moreover, formal fiscal transfers - including block grants for recurrent and capital expenditure and the road fund - vary significantly across ULGs. Although the annual regional budget proclamations indicate the amount and types of transfer from the Region to the ULGs, the budget reporting system (IBEX) provides inadequate information on region-to-ULG block grants, making it nearly impossible to engage in a systematic analysis of regional-local fiscal transfers. Table 17

illustrates that in Adama, the ULG accounts did not include any of the formal transfers, while in Mekelle, Bahir Dar and Hawassa, these transfers helped finance 6, 15 and 16 percent of all ULG expenditures, respectively.

Table 17: Fiscal transfers in selected ULGs – as recorded in ULG IBEX (FY 2013/14)

	Bahir Dar	Hawassa	Mekelle	Adama
Total state revenue collected on behalf of the State	429,956,720	465,821,682	652,295,567	270,410,000
Recurrent block grant	68,410,062	867,308	30,000,000	no data
Block grant for capital expenditure	0	117,800,000	0	no data
Road Fund	0	0	0	no data
Retained state revenue	67,699,344	311,753,019	347,432,067	no data
ULG Municipal OSR	155,418,760	108,103,228	144,474,629	157,408,420
Total revenue registered in IBEX	291,528,166	538,523,555	521,906,696	238,169,378
Actual ULGDP allocation incl regional funding	37,221,565	42,232,308	53,635,551	44,127,110
Total ULG revenue incl ULGDP	328,749,731	580,755,863	575,542,247	282,296,488
OSR as share of total revenue	47%	19%	25%	56%
ULGDP share of total revenue	11%	7%	9%	16%
Formally registred transfers as share of total revenue	21%	20%	5%	0%
Other state revenues as share of total revenue	21%	54%	60%	29%
Total	100%	100%	100%	100%
ULGDP (net) roll over funds	112,117,618	97,016,715	27,998,741	87,317,374
Other Funds carried over net from last year	163,932,444	187,338,558		4,345,116
Other Funds net carried forward this year			60,118,978	
Total revenues, including roll overs	**604,799,793**	**865,111,136**	**543,422,010**	**373,958,978**
State expenditure	136,109,406	430,420,327	377,432,067	80,760,958
Capital expenditure	7%	43%	23%	8%
Salaries	69%	38%	40%	83%
Other recurrent	24%	19%	37%	9%
Municipal expenditure	319,351,204	295,441,786	84,355,651	161,753,536
Capital	67%	89%	76%	45%
Recurrent	33%	11%	24%	55%
Total expenditure in ULG IBEX	455,460,610	725,862,113	461,787,718	242,514,494
Total capital expenditure in IBEX	223,909,862	446,771,397	151,165,026	78,786,187
Municipal capital expenditure in IBEX	214,382,204	261,690,656	64,355,651	72,325,310
ULGDP expenditures less ULG co-funding	149,339,183	139,249,023	81,634,292	131,444,484
Total expenditures including ULGDP	**604,799,793**	**865,111,136**	**543,422,010**	**373,958,978**
Total capital expenditure incl ULGDP	373,249,045	586,020,420	232,799,318	210,230,671
Total municipal capital expenditure incl ULGDP	363,721,387	400,939,679	145,989,943	203,769,794
ULGDP exp as share of total municipal capital	41%	35%	56%	65%
Total municipal capital funded by OSR	59%	65%	44%	35%

Source: ULG IBEX Accounts as received March 2015, and ULGDP transfer and expenditure data (from ULGs separate report)

129. **The key feature of Ethiopia's intergovernmental fiscal architecture, as it pertains to urbanization, is that it does not support urban expenditure**. Block transfers to regional and local governments increase accountability in service delivery by bringing decision-making closer to citizens—consistent with Ethiopia's decentralization strategy. However, given Ethiopia's urbanization rate, it is not properly aligned with the growing urban investment needs. The federal-to-regional level transfer formula assigns only four percent to urban investment needs in determining the amount of transfers to regions. The country's largest urban agglomeration, Addis Ababa, though given extensive powers to raise its own revenue, does not receive any block grants. The federal grant funding it receives is for specific infrastructure projects, and is insufficient for its overall infrastructure and institutional funding needs. ULGs return significant amount of state revenues in excess of their state function expenditures, and the recurrent and capital block grants they receive are not robust enough to make a significant contribution to their expenditure needs. Other weaknesses of the system include:

i. **Salaries are set at the regional level and often absorb a large portion of block grants**, leaving few funds for other purposes (Table 18). The funding for services delivered by regional and local governments is also difficult to predict, making planning unmanageable. On average 80 percent[162] of block grants are used to fund salary costs, while resources for capital expenditures are limited.

ii. **Operation and maintenance (O&M) needs are often neglected for capital expenditures**. Because municipalities can appropriate funds intended for operating revenues to finance capital expenditure, adequate O&M for infrastructure is unlikely. For instance, the country's 19 largest ULGs in the ULGDP are required to plan and use annual O&M budgets, but between 2008 and August 2014 only 13 reached the target of using 75 percent annual O&M budgets in their capital investment plans.

Table 18: Public Sector Expenditures in Ethiopia, EFY 2004

ETB millions	**Recurrent**	**Capital**	**Total**
Federal spending	18,679.5	34,214.4	52,893.8
Federal/Regional (external) capital spending	0.0	15,532.2	15,532.2
Regional (bureau level) spending	9,145.6	19,388.6	28,534.2
Woreda level spending	23,620.4	3,836.2	27,456.5
Municipal spending (OSR)	787.0	2,361.0	3,148.1
Total	**52,232.5**	**75,332.3**	**127,564.8**
In millions of US$	**Recurrent**	**Capital**	**Total**
Federal spending	1,004.3	1,839.5	2,843.8
Federal/Regional (external) capital spending	0.0	835.1	835.1
Regional (bureau level) spending	491.7	1,042.4	1,534.1
Woreda level spending	1,269.9	206.2	1,476.2
Municipal spending (OSR)	42.3	126.9	169.3
Total	**2,808.2**	**4,050.1**	**6,858.3**

[162] World Bank, *A Review and Assessment of the Ethiopian Approach to Public Sector Reform*, April 2013.

As % of total public spending	Recurrent	Capital	Total
Federal spending	14.6	26.8	41.5
Federal/Regional (external) capital spending	0.0	12.2	12.2
Regional (bureau level) spending	7.2	15.2	22.4
Woreda level spending	18.5	3.0	21.5
Municipal spending (OSR)	0.6	1.9	2.5
Total	**40.9**	**59.1**	**100.0**

Source: Computed by authors based on data from consolidated government accounts (IBEX/MOFED). Note that in these report, externally-funded capital expenditures are not specifically assigned to any government level: they are reported here as "Federal and Regional Government (External) Capital Expenditures."

3.4.3 Municipal Revenues

130. **While municipal revenues are the main source of funding for urban expenditure, they are much smaller than state revenues.** Besides collecting their municipal revenues, ULGs also collect regional state revenues on behalf of their regional governments. States show considerable variation in the (nominal and relative) levels and composition of local revenue collections (Table 19). Of revenue collected at the ULG level, 16 percent is municipal and 84 percent is state/regional.

Table 19: State and municipal revenue collections by regional state, 2011 (EFY 2004) Br million

	State Revenue	Municipal Revenue	Total Revenue	ULG Muni (% of ULG total)	ULG Muni. (% of muni total)
Addis Ababa	7,864.7	1,200.7	9,065.4	13.2	38.1
Afar	196.6	1.0	197.6	0.5	0.0
Amhara	2,409.1	223.1	2,632.2	8.5	7.1
Benishangul	191.7	1.1	192.8	0.6	0.0
Dire Dawa	162.2	57.4	219.6	26.2	1.8
Gambella	109.3	4.4	113.7	3.9	0.1
Harar	76.7	0.7	77.4	0.9	0.0
Oromia	3,297.5	975.3	4,272.8	22.8	31.0
SNNP	1,844.9	216.6	2,061.5	10.5	6.9
Somali	353.1	44.0	397.1	11.1	1.4
Tigray	1,453.5	423.5	1,877.0	22.6	13.5
Total	**16,983.9**	**3,148.1**	**20,132.0**	**15.6**	**100.0**

Source: MoFED/IBEX; Oromia municipal revenue reported by BOFED/Oromia.

131. **Given Ethiopia's federal structure, municipal revenue is regulated by state legislation and regulations and thus, municipal revenue assignments vary from state to state**. The role of federal and regional governments is to assist ULGs enhance their municipal revenues. To this end, the federal government (mainly MUDHCo, in concert with MOFED) prepares prototype proclamations or regulations on municipal finance issues for consideration by regional authorities. One such proclamation is the "Model to Provide for City Government Finance Administration" prepared by the Ministry of Urban Development, Housing and Construction (MUDHCo) and transmitted to the regions in 2005 (and gradually adopted by

different regional states from 2006-10). This prototype regulation suggests that municipal revenues might include fifteen specific municipal revenue sources.[163]

132. **Key challenges exist in federal government guidance and support to municipal revenue enhancement**. The federal government is, in theory, responsible for supporting regional revenue authorities and Bureaus of Finance and Economic Development (BOFEDs). These entities then support ULG revenue-enhancement efforts. In practice, however, there are challenges associated with this chain. At the federal level, MUDHCo was charged with providing support and guidance for revenue enhancement to regional governments until 2008. In 2008, this responsibility was given to the Ministry of Finance and Economic Development, which subsequently delegated the function to the Ethiopian Revenue and Customs Agency (ERCA). ERCA is now technically responsible for providing support and guidance to regional government revenue entities through its decentralized structure. However, the founding proclamation of ERCA gives it legal responsibility only for state revenues and customs, and not municipal revenues, which is why ERCA's focus is exclusively on regional/state revenues. This creates a wide gap and leads to lack of systematic federal support and guidance on municipal revenues for regional entities. This gap feeds through to the regional-to-ULG support. Regional governments, through their revenue authorities and BOFED, are responsible for assisting ULGs in ensuring that the tax rates/bands and revenue-enhancement plans are realistic and ambitious and for updating ULG tariff proclamations. Yet in practice BOFEDs and the regional revenue authorities focus on maximizing collection of state revenues, leaving an important lacuna in real-time guidance and support to ULGs in enhancing their municipal own-source revenues.

133. **ULGs that collect higher state revenues than foreseen at the start of the year are required to transfer the excess collections to the regional level.** This significantly reduces any incentive to collect state revenues at the local level beyond the planned threshold, as local governments cannot retain even a portion of these resources.

134. **Municipal revenue displays considerable variation across ULGs**. In addition to potential differences in municipal revenue effort, differences in municipal revenue collections across regions are likely to stem from differences in geographic and demographic conditions, and in the economic structure of regional states in Ethiopia. In addition, a city's population size is found to be highly correlated with the size of the city's formal economic base, which will have an important impact on own-source revenue potential and collections. The amount of per capita revenue collected is generally positively correlated with city size. Table 20 highlights this relationship for the twelve selected ULGs and shows a relatively strong, positive relationship between city size and per capita municipal revenue collections. For every ten thousand person increase in population, a city might be able to collect roughly two more Birr per person. All else being equal, this means that smaller cities have lower revenue potential than larger cities. A number of cities including Bishoftu, Jimma, Axum and Shire Enidasilase deviate from this pattern, as their municipal revenue per capita is higher than expected at their population level. This is largely explained through the local urban economic growth in these cities that outpaces national growth, particularly in industry and tourism.

[163] The fifteen municipal revenue taxes would include: Real property tax; residence tax (a "head tax" or "poll tax"); fuel and utility tax; telephone, fax, telegram and other electronic services tax; environmental protection tax; business tax; sur-tax on tobacco, alcohol, soft drinks; cattle tax; boat tax; bicycle tax; cart tax; emblems & sign board tax; market stall fee; fees and charges; other taxes/fees/charges as may be levied from time to time.

Table 20: Municipal Revenue for Selected Urban Local Governments (FY 2011/12)

	Population	Municipal Revenues (ETB million)	Per Capita Revenues (ETB)	Per Capita Revenues (US$)
Addis Ababa	3,103,673	1,242.9	400.5	21.5
Mekelle	286,624	114.6	399.9	21.5
Adama	282,974	89.7	316.9	17.0
Bahir Dar	276,218	67.1	243.0	13.1
Dire Dawa	269,134	57.4	213.4	11.5
Gonder	264,964	35.8	135.0	7.3
Hawassa	225,686	59.0	261.3	14.0
Jimma	155,434	65.3	420.1	22.6
Dessie	153,691	27.9	181.4	9.8
Jijiga	152,674	19.3	126.4	6.8
Shashemene	129,084	31.1	241.1	13.0
Bishoftu	128.408	59.0	459.5	24.7
Harar	112,781	18.6	165.2	8.9
Sodo	109,225	13.2	120.8	6.5
Arba Minch	107,542	7.9	73.8	4.0
Hosanna	100,528	11.1	110.0	5.9
Dila	84,952	12.4	145.4	7.8
Debre Berhan	83,461	6.7	80.8	4.3
Adigrat	76,447	14.2	185.7	10.0
Kombolcha	75,078	8.7	116.1	6.2
Gambella	64,602	5.2	81.2	4.4
Shire Enidasilase	62,769	20.1	320.6	17.2
Axum	59,269	18.5	312.3	16.8
Ziway Batu	56,104	7.7	138.0	7.4
Adiwa	53,763	10.8	201.5	10.8
Asosa	40,686	1.1	27.1	1.5
Total/Average	**6,515,771**	**2,025.5**	**210.6**	**11.3**

135. **The three most important municipal revenue sources are: (i) municipal rents, including rentals of housing, land, shops and market stalls, administered by ULGs; (ii) lease income from land administered by the ULG; and (iii) licenses, fees, and other municipal charges** (Table 21). Cities are given tax and user-fee authority for own-source revenues and are allowed to retain all the revenues from land leasing. In principle, this is a viable division of financing responsibilities. It provides cities with incentives to develop own-source revenues to meet city-specific service priorities. The theory of subsidiarity—the basis of fiscal decentralization—suggests that smaller units of government can better determine the appropriate level of taxation and allocation of public expenditures to match people's choices and needs, bringing allocation efficiency to the fiscal architecture. Consistent with this, each

unit of government would seek to balance own resources with expenditures, thereby both preserving fiscal autonomy and promoting accountability to tax-paying constituents.

Table 21: Municipal Revenue for Selected Urban Local Governments (% of total) (FY 2011/12)

	Municipal taxes	Municipal rents	Urban land lease	Licenses, fees, charges	Other revenue	Total
Hawassa	1.2	14.7	39.0	40.6	4.5	100
Hosanna	16.9	21.0	28.9	32.8	0.4	100
Ziway Batu	33.5	46.7	0.0	12.1	7.7	100
Adama	0.0	28.5	20.5	44.1	6.9	100
Mekelle	2.7	13.3	51.7	31.6	0.6	100
Adiwa	19.9	14.4	44.7	17.7	3.2	100
Bahir Dar	1.6	6.8	40.2	44.5	6.9	100
Debre Berh	67.7	7.7	0.0	3.9	20.8	100
Asosa	15.0	75.7	0.0	9.4	0.0	100
Gambella	8.5	21.1	20.3	49.5	0.6	100
Jijiga	2.8	1.1	0.0	93.7	2.3	100
Harar	0.0	28.6	12.7	54.8	3.8	100
Average	**14.1**	**23.3**	**21.5**	**36.2**	**4.8**	**100**

136. **Reliance of larger cities on unsustainable land lease revenues.** [164] Some municipalities' increased reliance on land- and property-related revenues[165] injects a degree of risk into the municipal finance system, because land-leasing revenues are volatile and will eventually decline.[166] This is particularly true of land leases with upfront payments and installment payments that end long before the lease expires. The present practice of using the proceeds from land leasing to finance municipal infrastructure investment shields municipal governments from some of this risk, but over the intermediate term, revenue generation from land leasing is expected to slow its rate of growth.

137. **Ethiopia is one of the few countries in the world where own-source revenues are the primary source of finance for urban infrastructure**. But it faces problems:

i. **Revenue generation.** Municipalities on average collect around Br 210 (US$11) per urban resident in municipal revenues. (More populous cities typically collect more municipal revenues per capita than smaller cities, but with heavier reliance on land lease revenues.) This amount is comparable to other countries in the region. Yet because most urban investments are expected to be funded through

[164] The Constitution designates land as belonging to the people of Ethiopia. The government administers the land on behalf of the people. ULGs are delegated powers to administer the land, including leasing for extended periods to households.
[165] Reliance on land revenues is increasing in some (i.e. Bahir Dar from 40 percent in FY 2011/12 to 63 percent in FY 2013/14) but not all ULGs: In Addis Ababa, land revenues have grown in absolute terms but decreased as a percentage of the total budget.
[166] In EFY2004, for instance, urban land lease constituted 52 percent, 45 percent, 41 percent, and 40 percent of total municipal revenues in Mekele, Adwa, Bahir Dar, and Hawassa, respectively.

these revenues, and given other investment priorities, urban areas face a steep funding shortage;

ii. **User fees charged for infrastructure services are low and do not cover operational and capital costs**. Ensuring cost recovery through tariffs is important since it opens possibilities for financing that may otherwise be impossible. Without cost recovery, there may well be no funds remaining for maintenance or new investments. By contrast, adequate cost recovery can open the door to private investment and take some of the burden away from public finances. If services were priced closer to cost recovery, estimates suggest that US$102 million could be captured each year for Ethiopia's infrastructure. However, there is also a need to be mindful of the distributional impacts and affordability of full cost pricing systems;

iii. **Lack of local control over rate-setting.** Licenses, service fees, and charges are an important revenue driver**.** For seven out of 12 sample ULGs[167] studied closely, service fees and charges represent the largest municipal revenue category, followed by income from municipal rent and land lease. Collection of service charges is robust, which ensures a strong link between municipal service provision and revenue collections. However these revenues are, in principle, tied to funding specific services and therefore do not provide the municipality with general revenues to finance important infrastructure and services or to provide other municipal amenities for which user charges are not practical.[168] Moreover, taxes, service fees, and charges are prescribed at fixed levels in the regional tariff proclamation, leaving ULGs unable to adjust user charges to reflect actual service costs, gauge economic demand for different services in light of these costs, or generate project revenue to finance high-priority investments in the future.[169]

138. **In short, urban local governments face significant financial constraints, despite their importance to the process of urbanization within a decentralized governance structure**. Only 3 percent of public revenue collection took place at the municipal level, while municipal own-source revenues are expected to finance majority of urban development. By contrast, inter-governmental transfers are often barely enough to cover operating costs. Combined with the limited authority and capacity of local governments, these financial constraints make it much harder for cities to finance the necessary infrastructure and services to provide for rapidly growing urban populations.

[167] ULGs include: Adama, Jijiga, Mekele, Bahir Dar, Hawassa, Harar, Hosaena, Debre Birhan, Ziway/Batu, Adwa, Gambella, Asosa, as part of the World Bank. *Ethiopia Local Government Revenue Study*, (2014).

[168] It is possible that, despite their categorization, some of these service fees are actually collected in the shape of taxes. For instance, a sanitation charge might be collected as a surcharge to a (simple) property tax. In fact, some of these charges may even be collected to fund non-excludable public goods, such as road drains.

[169] Fortunately, this problem has been recognized. Regions are starting to take steps to remove the constraint. Oromia Region, for example, formally authorized first-grade cities to establish their own fees, charges, and tax rates, taking into account local ability to pay, local service costs, and local demand for services.

4. The Path Forward: Connecting All Ethiopians to Prosperity

4.1 Introduction

139. **Ethiopia's transformation from a predominantly rural society to an urban one is not automatic, nor should the potential benefits—for individuals and the economy—be taken for granted.** If urbanization is to work for the country's development and connect all Ethiopians to prosperity, it must be managed by proactive government leadership. There are clear signs of this, particularly under the vision created by MUDHCo. Suggestions in this section aim to strengthen this vision.

140. **First, land management and administration system should be reformed and strengthened, along with underlying institutions for urban governance and municipal finance (subsections 4.2, 4.3, and 4.4). Second, targeted sector interventions should ensure that cities are attractive places in which to live and work—and that urbanization contributes to economic growth (section 4.5).** Policies and investments that fail to address underlying causes are unlikely to achieve long-lasting results. To promote better and better managed urbanization and close the gaps in jobs, infrastructure, and services, a robust institutional framework is required to allow for efficient and sustainable land management, urban governance, and municipal finance. The roles for national, regional, and urban local governments will have to evolve as they transition from being the sole agents of planning, management, and implementation to being the enablers and coordinators of action by a growing number of stakeholders, public and private.

4.2 Land Management

141. **The current land management system of supplying land and infrastructure for legal urban development has several consequences**. Substantial portions of the urban and peri-urban populations have no choice but to seek housing in growing informal settlements, mostly living in slum conditions (according to international definitions). These settlements account for a large part of urban growth, with urban populations expanding outwards rather than upwards. The resulting urban expansion has further ripple effects for infrastructure and service delivery. And the residence requirements built into the existing land tenure system act to discourage rural–urban migration, which in the long run may hamper effective distribution of labor.

142. **The longer the delay in addressing these issues, the higher the future costs** of rectifying unruly urbanization to benefit all citizens, including inhabitants of informal settlements. Moreover, further delays may render such rectification infeasible given limitations on resources available to the government and Ethiopian people.

143. **International experience indicates that the strategic direction of reforms should be to redefine the roles of government and the private sector in urban development.** First, the government needs to reposition itself as an enabler of the private sector and an

effective regulator, rather than a direct and leading provider of key components of urban development. Second, in order to help address shortages of land for formal development and affordable housing, the country needs to engage its private sector in at least two key areas: assisting the government in the delivery of housing (including affordable rentals) and in the supply of serviced land and infrastructure. This paradigm shift needs to be accompanied by a recognition of the true market value of urban land, which would allow the government to benefit from its fair share of this value. Or, even if the government decides to price the land at below market price, it would be cognizant of such a gap and be able to ensure pricing that permits land cost recovery. This reform can be pursued while still abiding by the current paradigm of government land ownership, as stated in the Constitution. The policies that Turkey followed along its path to urbanization, and how Singapore maintains the balance of public and private interests, are shown in Box 6 and Box 7, both offering possible lessons for Ethiopia.[170] Similarly, the positive experience of Vietnam (Box 15) shows how the housing needs can be addressed through the large-scale supply of rental housing by private land holders.

[170] Though Singapore's experience is not directly applicable to Ethiopia, because of the huge difference in wealth and the fundamental differences between a city-state and the great geographic expanse of Ethiopia, a substantial share of its developable land is in private ownership, and its government manages very few leases compared with Ethiopian cities.

Box 6: Making Urbanization Work for Turkey

Turkey may offer important lessons for Ethiopia's urbanization journey. Advancing from nascent urbanization in the 1950s to its current fully developed stage, it offers a glimpse for Ethiopia of how this process took place, how Turkey managed to harness agglomeration economies, and how urgent infrastructure services were delivered (including the policy and institutional adjustments needed to more effectively manage urbanization). Several factors contributed to Turkey's growth-oriented and inclusive urbanization.

First, Turkey allowed its markets to work. Policies in the 1980s promoting economic liberalization attracted new domestic and foreign private investment. This created a critical pull factor for rural migrants, enabled the convergence of production and consumption markets, and promoted agglomeration economies in cities.

Second, a metropolitan municipality regime adopted in 1984 provided the administrative framework to manage fast-growing cities across their economic footprint.

Third, a permissive tenure regime granted squatters on urban public land legal status, which prompted households and host municipalities to invest in their dwellings and neighborhood infrastructure, avoiding the squalid conditions of slums prevalent in many other fast-urbanizing developing countries.

Fourth, efforts to scale up housing supply through state brokering services triggered a private sector response, which helped accelerate the expansion of the housing stock. On the demand side, mortgage-based finance was expanded, particularly over the past decade, with extended maturities that allowed the housing sector to expand downmarket.

Fifth, interventions from national programs helped fiscally-constrained localities meet national service coverage targets, through the use of matching-grant subsidies to support the expansion of access to water, sanitation, and other basic municipal services.

Sixth, policies that promoted market-based pricing of municipal services helped attract private investment and partnerships to share the financial burden, while private management know-how enabled innovation and efficiency gains in service delivery.

Source: The World Bank, *Turkey Urbanization Review: Rise of the Anatolian Tigers* (2014).

Box 7: Singapore—Roles of Public and Private Sectors in Urban Development

Singapore, an island nation of around 710 square kilometers with more than 5 million people, is one of the densest yet most livable cities in the world.[1] How does the city-state manage its most precious asset—land? Currently, 75–80 percent of the land is state owned (around 60 percent under direct state ownership, 15–20 percent on lease to government agencies, and 1 percent leased to the private sector),[2] while the other 20–25 percent is privately owned (freehold).[3] The private sector plays a leading role in land development. A key principle is maintaining the delicate balance between safeguarding and delivering for public interests, and leveraging private sector resources and market forces for development.

Long-term, integrated, land-use planning provides the broad guidance necessary for development, and ensures corresponding public infrastructure provision (capacity and timing). Development principles and land use decisions, reflected through the master plan, are overseen by an interministerial, master planning committee. In addition, a "whole-of-government" approach is taken, in which all development-related agencies consult with each other. This enables coordinated planning, financing, and delivery of infrastructure, services, and amenities according to the plan. Land use plans are also highly transparent (e.g. the use and density stipulated for every plot of land can be found online), yet flexible (e.g. private developers can initiate a request for a change in land use or density). This enables easy participation by the private sector and increases its confidence in investments.

The land-tendering process is market-based and highly transparent, to maximize land value captured. State land is released through two main channels: from the state to government development agencies for public services provision, or through the Government Land Sales Program to private developers for commercial, residential, and industrial uses. In both cases, the land is sold on long-term leases with a clear, accountable land value. Land sales to private developers are all conducted through competitive market mechanisms (tender and auction) and are subsequently directly marketable and transferrable.[4] The government plans and publicly releases a list of sale sites every half-year for bidding, with the primary objectives of meeting market demand, supporting stability of the property market and economic growth, and realizing national planning and development objectives (such as providing affordable housing). The inventory of sale sites is sourced from the stock of available state land. To determine the appropriate level of land supply, detailed and realistic projections for the demand on various types of properties are carried out based on floor area (considering both land area and development density).

Private land is acquired for developing public infrastructure and practiced very prudently. Urban development relies more on mutually beneficial public–private collaborations. The government can acquire private land, but only for developing public infrastructure such as roads and public transit. Compensation is paid at the prevailing market value and owners can appeal if they are dissatisfied. In fact, land acquisition is practiced very judiciously and the government employs innovative ways to advance urban development, especially through incentives. For example, bonus gross floor areas are awarded for sites near a mass transit station to promote higher density and transit-oriented developments. Over the years, the master plan has also been revised to encourage and allow for higher density, compact, and mixed-use developments that cater to the rising population and economic growth. With the stipulation of higher gross plot ratios, developers are incentivized to voluntarily redevelop their land to increase the value of their property.

Notes:
1 Singapore is also wealthy. Its GDP per capita increased from US$2,530 in 1960 to US$36,898 in 2013 (constant 2005 US$).
2 This 1 percent translates to around 7 sq km, or 1,200 sites since 1967 (the majority of land development parcels are around 1 ha or less), with investments totalling around US$35 billion (or around US$30 billion).
3 Given that only 30–40 percent of total land is considered "developable," i.e. usable for work (commercial/industrial) and living (residential) spaces, about half of the developable land is in private sector–led developments.
4 According to the sales conditions, the successful tenderer must complete the entire development (i.e. ready for occupancy) within a certain time (usually five or six years) as agreed in the tender document. No sales or subleases are allowed before the development is complete. After that, generally, the successful tenderer may sell, sublease, or otherwise dispose of the land and the development, in whole or in part.

144. **Given the complexities in Ethiopia, no single action can channel urbanization onto a more sustainable and efficient path**. Comprehensive, multi-dimensional reform of land management and land administration is therefore needed, which would entail revising some of the current policies, laws, regulations, and practices. The following options for reform are divided into three time categories, ranging from incremental changes that can be implemented fairly quickly to more systematic reforms that the government may wish to consider over the longer term. The suggested changes also explicitly unbundle land issues so that they can be addressed separately, contributing in gradual and identifiable improvements. It is also crucial that the needed land reforms go beyond the scope of any single ministry, and therefore requires strong intergovernmental cooperation.

145. **International experiences indicate that un-bundling land issues and addressing them separately can be an effective way forward.** Box 8 below presents examples of how China, Egypt, countries in the Balkans and Poland have been reforming specific components of land management, thus improving the overall situation.

Box 8: Approaching land reform by un-bundling the issues

Legalizing illegal housing

The Balkan countries. All of these countries introduced laws and procedures to legalize informal, unauthorized buildings, while preventing their further emergence. The latter is achieved by a combination of (i) clear legal rules on what constitute illegal construction and their enforcement and (ii) elimination of backlogs of issuing permits at local governments. As a result, new illegal construction in such countries as Croatia, Bosnia and Herzegovina, Montenegro, and Serbia has diminished. Regularization of informal settlements remains to be done.

Reforming dual rural-urban land tenure

China. Chinese government and society, while proudly recognizing "China's economic miracle," acknowledge that transition to an urbanized society won't be accomplished as long as a divide exists in land and social rights of rural and urban people, and urbanization is based on involuntary land requisition by government (Liu Sgouying, Li Yihao, 2014). Land reform is envisioned as the core factor of China's new growth model and a national priority. It will include integration of rural and urban land rights (based on provincial and municipal experiments with innovative land tenure arrangements), integration of rural and urban land markets, and shifting land supply from quantity increase to improving land use efficiency (including economic density of urban land uses).

Diversifying and improving land pricing

China. Starting in the 1990s, Chinese local governments exercised diversified approaches to pricing urban land they were releasing for private and semi-private uses. Land for industrial use was allocated directly at low administrative prices (often 10-30 times lower than prices fetched at competitive allocations). In 2006, the government introduced a law requiring competitive procedures for allocating industrial land. Meanwhile, allocation of commercial and residential land has been dominated by competitive procedures since 2001. On average, however, until 2011, the amount of land allocated competitively across China has been always higher than in direct allocations (Urban China, 2014).

Egypt. Various government agencies are trying to make better use of the economic value of land, though this has not become yet the nation-wide policy. The Ministry of Housing has made land auctions the main mechanism for disposing of primary public land, except for land intended for low-income housing. New Urban Communities Authority (NUCA) started using auctions to allocate large tracts of land. The first auctions in June 2007 generated LE 17 billion from the sale of six large land sites, with some parcels (e.g. in New Cairo) going at LE 4,050/square meter. There were speculations in Egypt – though without hard evidence - that prices on these auctions have been driven up by the influx of investment money from oil-rich neighboring countries. The Tourism Development Agency reportedly conducted an experimental auction of two sites, and took off the market six sites previously offered for the administrative price of US$1/square meter (Kaganova et al., 2007).

Making urban planning more attuned to infrastructure costs and needs of the private sector

Poland introduced a legal provision that requires urban planners to estimate costs and revenues associated with implementation of spatial development plans. A special Financial Impact Study (FIS) must estimate expected land-related revenues from the area covered by the local development plan and public expenses related to its implementation. On the revenue side, the property tax and other land-related revenues should be estimated based on size/density and expected value of taxable properties allowed by the plan. On the expenditure side, FIS must estimate the cost of building streets, sewerage mains, water mains, and the cost of purchasing private land to build this infrastructure. Reportedly, there are examples when the costs associated with the local development plans turned out to be so high that urban planners had to redesign the plan in order to reduce the cost (e.g., by narrowing a street so that less private land needed to be expropriated) and increase revenues (e.g. by allowing higher density of land use on privately-controlled land sites) (Kaganova and Buczek, 2010).

Sources:

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4.2.1 Short Term

R1. Establish an inter-ministerial task force, under the leadership of MUDHCo that brings together different levels of government to define approaches to land management and land administration reform, as well as an action plan for implementation. Similar to China, the biggest challenges of land management take place at the interface of urban and rural land. It would be difficult to address them in an optimal manner without very close collaboration between branches of government responsible for urban and rural land (at all levels of government), which is the main reason why intergovernmental cooperation is needed. The task force should work within an agreed agenda and schedule, and preferably be facilitated by technical experts. The task force's work product should be a document that would lay the groundwork for further legislative, regulatory, and implementation action. The approaches developed by the task force should be publicly discussed to incorporate feedback from the government at all levels, the public, and those in professional circles. The resulting framework and roadmap could be officially adopted by the federal government as binding guidance for further action. The action plan should identify which documents will be prepared, when, and by whom.

R2. Undertake a total inventory and audit of land in urban areas held by all levels of government and their entities, initiated and spearheaded by the federal government. The purpose is to identify excess land that could be reclassified and released for development. Agencies that hold such land need to be provided with incentives for releasing their land (e.g. eligibility for a share of revenues from auctioning the land for private development). In the medium term, all agencies should maintain land inventories and be responsible for protecting their land from unauthorized use. Hawassa has positive experience with such land reallocations, which could be leveraged in other areas (Subsection 3.2).

R3. Moderate land consumption by government entities and for public purposes, in order to increase efficiency of land use and reduce the costs of urban development. Allocation of free-of-charge land for government agencies to provide public services, including basic utilities, needs to be based on more efficient land utilization patterns (densities, etc.). This would be consistent with international good practices; many governments are minimizing their footprint as well as land and floor space consumption, locating their offices in modest, not prime, locations, and using their real estate occupancy or land development to revitalize neighborhoods. In addition, land consumption planned for public use (e. g. roads) can be reduced according to international good practices, particularly in newly urbanized territories.

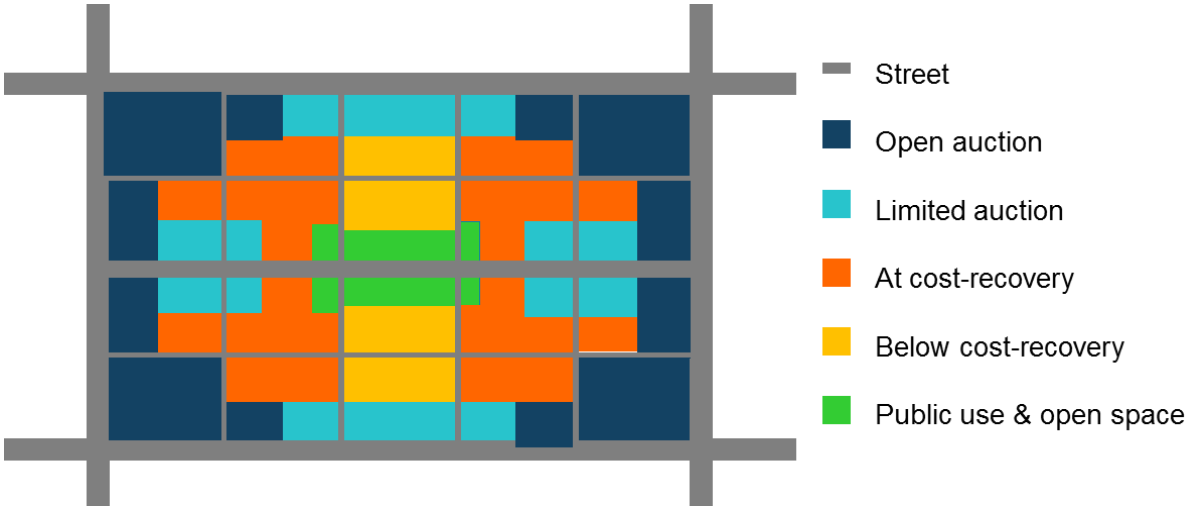
R4. Diversify land allocation mechanisms with different pricing implications, in order to improve cost recovery for the government and provide cross-subsidies for the needy. Key forms of land allocation (direct allocations, lotteries, various types of auctions, and requests for proposals), along with land pricing associated with each form and suggested applicability of these forms, are presented in Annex 5. No single instrument is universally applicable for all situations. Therefore, a *diversified* approach is recommended. For example, while allocating land on newly-subdivided territories, several allocation forms and associated land pricing can be combined (a schematic illustration shown in Figure 25):

- A small number of small parcels inside blocks can be allocated at below-cost prices via direct allocation or lottery to low-income people (a cross-subsidy that is facilitated

by other methods, such as auctioning, without compromising the ability to cover the cost of acquiring and servicing the land);

- Some other, slightly larger parcels can be allocated at prices that are above-the-cost of land to government (i.e. the cost of land acquisition and infrastructure provision), also via direct allocation or lottery, to people from the waitlist;
- Some blocks of parcels can be sold at auction, but with limited access to participation (e.g. for housing cooperatives only) and starting prices just above-the -cost of land to government;
- Finally, some of the best-located parcels (corner parcels, parcels along main streets / roads) can be sold at open auction with starting prices slightly below estimated market value, in order to maximize revenues from these auctions and use proceeds to cross-subsidize below-cost allocations inside the block.

Figure 25: A Schematic Example of Using Diversified Land Allocation Mechanisms within the Same Territory



Such a combined approach would allow recovery of all or most of the costs of making this land available for development by cross subsidizing between uses and beneficiaries. At the same time, when single parcels of government land are allocated for commercial uses (including non-subsidized housing), particularly when in desirable locations, as a rule, these parcels should be allocated through auctions. In general, the share of land allocated at market value or, at the very least, above cost recovery for land acquisition and infrastructure, should be increased substantially from the current small proportion.

In particular, it is critical that the government stop uncontrolled hidden subsidies when allocating land for free or below market prices (e.g. for condominiums), as these subsidies go to private developers and buyers of condominiums at the end of the chain rather than benefit the broader public or low-income people. Moreover, pricing land at market value would moderate land consumption and reduce the amount of land needed to accommodate population growth, with an important positive impact on mobility and productivity. Further, revenues from land allocation (and auctions in particular) should be earmarked for infrastructure development or other capital investment in social infrastructure.

R5. Start and continue building capacity of local governments and local consulting entities on land economics, land management, and urban planning. Key issues include the impact that land use planning requirements and limitations (e.g. proportion of land reserved for public use, land coverage, and building heights) have on productivity of urban land and its value (Box 9). Another skill acutely needed is the ability to estimate the cost of implementation of urban development plans.

Box 9: Using the Bertaud Model to Examine How Land Use Influences Market Value

The Bertaud Model is a spreadsheet model that connects parameters of land uses on a specific land site, all costs of real estate development, and expected revenues from the final real estate product. It allows a user to calculate land use parameters (such as maximum land coverage, number of floors, etc.) that would make market-oriented real estate development attractive for private investors. It also suggests starting land prices for municipal land auctions. Calculations are based on prices typical for the local real estate market, construction and development costs, and assumptions about the expected profit of a developer.

The model has been widely used internationally by the World Bank and adopted by governments and private consultants. For example, this model was used for proposed residential, commercial, and mixed-use development projects in Russia (Kazan, Nizhni Novgorod, Novgorod, St. Petersburg, and Tver), and it proved its worth in all cities. It also was used in training for urban planners in seven Balkan countries and the Kyrgyz Republic.

4.2.2 Medium Term

R6. Revise rural and urban land rights in a way that harmonizes them, particularly in territories subject to rural-to-urban conversion. According to good international practices, holders of rural land should be allowed to convert it into land for development in alignment with urban growth and service delivery plans, and to benefit from its increased value (in one form or another) along with the community or government.

R7. Better utilize the private sector in closer cooperation with government for urban development, through forms of cooperation such as "land readjustment" or "land pooling." Given that current practices are unsustainable fiscally, spatially, and socially, they need to be gradually replaced. In particular, land expropriation in areas of urban expansion needs to be reduced to the absolute minimum required for public infrastructure. Developing the rest of the needed land can be achieved through a combination of tools, including better targeted urban planning (e.g. selection of urban growth areas where minimal expropriation will be needed), reduced land consumption through higher density of land use, and use of participatory techniques of land assemblage for development (such as government-led land assemblage and "land readjustment" and "land pooling"—Box 10 and Annex 4).

R8. Substantially simplify the urban land leasing system with the purpose of making lease rights investment-friendly for private holders, and easily manageable for local governments. In particular, lease payments need to be simplified and standardized to equal annual payments during the total duration of a lease (with periodic inflation adjustment but without interest incurred on future lease payments). Winners at auctions need to be determined by one simple criterion—the highest price offered—as is universally practiced in international auctions. In the Ethiopian context, this would mean the highest annual lease offered. Further, draconian measures against leaseholders deviating from government-

imposed construction schedules need to be removed or substantially relaxed. Such controls would not be needed if the lease is priced at market value, since land holders will incur costs if they delay action. Moreover, in market economies, investors and developers need flexible time frames for construction, to respond to market demand signals.[171]

[171] For detailed discussion and justification of this recommendation, see Kaganova Olga with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).

Box 10: Instruments for Land Supply

Instrument	Where and How Used	Comments
Voluntary purchases from landholders	1. A prevailing method of rural-to-urban land conversion organized and conducted by private developers in market economies, including former socialist countries in Eastern Europe. 2. An increasingly preferred method of land acquisition for public use (roads, schools, etc.) by governments in market economies (Canada, Sweden, the United States, etc.), instead of expropriation.	1. When private developers initiate the assemblage and conversion of privately held land, governments use various instruments to ensure that land for public use is secured (e.g. in the United States many local jurisdictions require that developers dedicate some proportion of the land for public ownership or use); and that developers pay for off-site public infrastructure (e.g. an impact fee in the United States or a development fee in Eastern Europe). This instrument can, though, be hard to use when land is to be acquired from many holders. 2. After decades of experience with land expropriation for public use, many governments have come to a practical conclusion that assembling land through voluntary purchase is cheaper, faster, and politically more popular, as it can avoid prolonged and expensive expropriation that creates unhappy voters (this is the case in Tunisia post-2011). Currently, official policies in many governments are to start land assemblage from voluntary purchase at negotiated prices based on market value, as determined by independent appraisal. Expropriation is applied only to landholders who do not want to sell voluntarily.
Expropriation	The power of government to expropriate land for public use or public interests, while paying just compensation to landholders, exists to varying degrees in all countries. In democratic market economies, this power is used much less now than in the past, often replaced by voluntary purchase from landholders.	In some countries, such as Japan, this power is very limited. But in most countries, governments may expropriate land. However, this instrument is associated with controversy on two main issues: 1. *How public use or public interest is defined.* Expropriation for true public use (e.g. roads or public schools) is generally accepted. However, expropriation for other purposes (e.g. economic development or transfer to the private sector for further development) is strongly opposed in many countries, and directly prohibited by law in some countries and subnational jurisdictions (e.g. some states in the United States). 2. *How just compensation is defined*. In the United States it is defined as the property's "fair market value," but this has been much criticized because it does not factor in business losses or reallocation costs. In Canada, the compensation includes other components besides the fair market value.
Land readjustment – government-led land development with private participation	Used in Australia, France, Germany, Hong Kong SAR, China, India, Israel, Japan, Netherlands, Republic of Korea, Taiwan, China, among others. Also used for urban redevelopment (as in Beirut, Lebanon).	See details on land readjustment in Annex 4.

R9. Substantially modify and modernize the system of urban spatial and land use planning, along with building standards for small-scale housing. Rigid and static land use planning, typical for many counties, is giving way to more market-responsive systems. The current Ethiopian Urban Plan Preparation and Implementation Strategy already signals a positive shift in this direction. Elements included in the list below, many of which are interrelated, would help modernize urban planning practices further:

- Regional and local governments need to have more flexibility in establishing standards and requirements for spatial and land use planning documents (along with building standards for small-scale housing). This would allow the creation of standards reflecting what ULGs and local residents can afford at a particular time, within the paradigm of "fit for purpose"[172], as opposed to the current centralized standards that reflect city's size and grade but still are oriented toward international standards[173] that are used in countries with higher financial and human capacities. For example, is it reasonable to consider *chika* houses illegal when they represent 80 percent of urban housing stock and are often the only form of housing that people can afford?[174] As areas become more prosperous and as higher standards become more affordable, land use and construction standards can be revised locally. Also, as soon as people have more secure land rights, they will invest voluntarily in improving their homes.
- Overall policy needs to aim at reducing the number of rules and regulated parameters to the minimum that society can afford. A useful tool can be a regulatory audit to review the body of regulations and identify those for which costs (monetary and social) exceed the benefits they produce.[175]
- Land use plans must be based on current maps of land use, which can be obtained through inexpensive satellite imagery. In particular, these plans need to realistically reflect and respond to the presence of informal settlements, and should be coordinated with relevant local policies.
- Before spatial and land use plans are approved, a "price tag" should estimate government implementation costs, including the cost of land acquisition or expropriation and the cost of public infrastructure stipulated in the plan (roads, water, etc.). Knowing the expected costs would stimulate the government to ask for affordable planning options.
- Moderate land consumption standards should be used when planning how much new land is needed for urban expansion.
- The objective of the Urban Land Development and Management Policy and Strategy that establishes land use proportions (30% roads and infrastructure, 30% social, and 40% economic/construction) needs to be reexamined, as this target may be neither feasible nor beneficial for sustainable urban development.
- Permitted land use densities within existing city borders should be increased. Permitting high densities is especially critical where the market value of land can be high, as in city centers or along main transport arteries and public transport routes. The intent is to permit densities that do not limit market demand. For example, even if

[172] Stig Enemark et al., *Fit-For-Purpose Land Administration* (2014).
[173] Urban Plan Preparation and Implementation Strategy (2014).
[174] Kaganova Olga with Sisay Zenebe, *Land Management as a Factor of Urbanization*, Ethiopia Urbanization Review Background Paper (World Bank, 2014).
[175] Alain Bertaud, *Land Markets, Government Interventions, and Housing Affordability* (2010).

the market is expected to ask no more than a floor-to-area-ratio of five, the regulation should allow a somewhat higher threshold to adjust for market changes. Further, internationally known methods of increasing land use density need to be applied, e.g. through spatial design, mixed use, and later such advanced instruments as density bonuses and tradable development rights. Such measures would help reduce development of informal settlements and increase efficiency of urbanization.

- Among all land use planning goals and related land management tools, a top priority should be planning and securing land for an adequate street network as well as public open spaces.[176]
- Mixed-use planning should continue to be promoted in practice at the city level. The Urban Plan Preparation and Implementation Strategy already requires that any residential land use be planned as mixed use instead. The Addis Ababa 2013 Structural Development Plan follows this rule and defines all residential zones as mixed use (although it is unclear whether other cities already follow this rule). Further, mixed use of land should be permitted and encouraged for nonresidential use as well, when functions are not mutually exclusive for ecological or health reasons. Areas for mono-use (e.g. "industrial") should be phased out to not more than 10–15 percent of the territory, according to international good practice.[177]

R10. Better coordination of infrastructure planning and delivery with land use planning. In particular, allowing higher land use densities may require increasing capacity of public infrastructure in these areas (roads, water, schools, etc.), which should be planned, financed, and delivered accordingly.

R11. Encourage and support local experiments, and publicize successful experiences. Though developing and adopting the concept of reform is a matter of national importance, the complexity of land reform warrants local experiments with land reform before moving to countrywide implementation. For example, the government, perhaps with donors' assistance, may allow legal pilot experiments with property rights, land re-adjustment, and farmers supply of land on the market. Positive local experiences, such as reallocation of land held by government agencies in Hawassa or regularization of informal settlement in Dire Dawa, deserve national dissemination.

4.2.3 Long Term

R12. Establish a system for registering property rights of urban holders (a legal cadaster) developed within a unified minimum set of requirements and made simple enough to secure long-term operational sustainability. It may be wise to not try to reproduce the cadaster system set up in Addis Ababa and other cities, given the complexity and cost of operations. Instead, simpler systems should be considered:

- Special state property registration bodies need to be established, and local governments relieved from sole registration responsibility.

[176] Alain Bertaud, *The Formation of Urban Spatial Structures: Markets vs. Design* (2014).
[177] UN HABITAT, *Urban Planning for City Leaders* (2013).

- The urban registration system needs to be made compatible with land certification in rural areas, particularly to accommodate the rural registration and certification documents in *kebeles* converted from rural to urban jurisdictions.
- According to a 2014 international generalization of past experiences with cadaster systems in developing countries, the systems that work and can be sustained over time possess such key qualities as:[178]
  - Affordability for the government to establish and operate and for society to use;
  - Attainable terms of establishing the system within a short time frame and available resources; and potential for
  - Ability to incrementally upgrade and improve over time, in response to social and legal needs and emerging economic opportunities.

R13. Review and revise land administration regulations and building standards. A general direction should be legalization and regularization of regulations and standards, as already required by the Urban Land Development and Management Policy and Strategy. Simultaneously, the current scope of regulations and standards need to better reflect local conditions. For example, rules on land use and construction standards could be modified to allow for more flexibility and draw on a graduated approach to better accommodate the ability of lower income groups to meet these rules. These rules can be developed and refined through consultations with local communities to comport with their specific needs and expectations. Positive local experiences with legalization of informal settlements, as with Dire Dawa, can be used and further improved.

R14. Clarify justifications for government expropriation of land. In particular, determine in laws and regulations what constitutes a valid public purpose for expropriation, and improve the procedural elements. Current regulations, along with the timelines set for expropriation, compensation, and appeals, substantially deviate from international best practices. Updating practices could start by documenting and discussing the extent to which current expropriations in rural and urban areas are in line with, or deviate from, international best practices, particularly when current requirements affect households' ability to maintain their livelihoods. This collected evidence will be valuable in recommending regulatory and procedural changes at the federal and regional levels, which might include: assistance to region governments on harmonizing regulations on land valuation; structuring compensation for expropriation; and establishing administrative appeals procedures independent of the expropriating agency and representative of all stakeholders. The government can then put in place programs to build expertise, based on realistic estimates of administrative capacity required for such changes.

R15. Recognize the true value of land and help create a market-based land valuation and compensation system. Government transactions with land, including allocation and expropriation, need to reflect (to a greater or lesser degree) the market value of land, even when this value is not used in a particular transaction (such as direct allocations at below-market, cost-recovery prices). In particular, "market-led compensation" for land expropriation is an acute issue. To estimate the market value of land and prevent land-related conflicts, local governments and other market participants need access to two important elements of real estate market infrastructure (to be further developed):

[178] Stig Enemark et al., *Fit-For-Purpose Land Administration* (2014).

- **A trained cadre of appraisers.** This can be achieved through the private sector and educational or training institutions, with the help of international professional organizations, such as the Counselors of Real Estate (United States) or the Royal Institution of Chartered Surveyors (United Kingdom), and supported by donor organizations if needed.
- **Access to data on property transactions, with basic attributes of the property.** Local governments must be obliged to publish such data on each parcel they auction. The data on private-to-private transactions should eventually be published by the cadaster (property registration) offices. Private sector entities (real estate brokers, banks, private appraisers, etc.) should be encouraged to share these data voluntarily, for example through professional associations or by promoting advantages of multiple listing services.

4.3 Urban Management and Governance

4.3.1 Institutional Structures

146. **Since the early 2000s, Ethiopia has devolved substantial legal authority and responsibility for service delivery to ULGs.** But despite ULGs' increasing importance in local governance, they are constrained in carrying out their mandates because key powers are still retained by regional governments. This issue is particularly pronounced in municipal finance, personnel management and land management.

147. **Regional governments retain control of key legislative functions** in areas such as; financial and tariff regulations, personnel management (including deciding on ULG level staffing, functions, and salaries, the power to set wage rates, add or eliminate positions and change the classification of a position), and the definition of land use categories. This is not only significantly limiting for ULGs to properly carry out their mandates, but at times also contrary to the proclamations for the organization of ULGs in the regions.

148. **The existing legal and institutional structures do not make a clear distinction between state and municipal functions at the local government level**. Local governments in Ethiopia are responsible for a significant number of essential municipal services and state-level functions which they execute on behalf of their respective regional governments. However, legislation for functional assignments is open for interpretation and ULG duties can be assigned inconsistently or without the assignment of necessary revenue to finance the function.

4.3.2 Organizational Structures

149. **ULGs have very limited ability to determine their organizational structures in line with their particular local imperatives**. Internal organizational structure of a ULG is, in principle, to be decided by the ULG. Some legislations (such as the Amhara City Proclamation) even make this explicit by law. However, in practice, while it is true that ULGs hire their own staff, decisions on their staffing levels, employment conditions and enumeration and even the level of qualifications for particular posts (pay grades) are determined by the state bureaus of civil service. Thus, it is difficult, if not impossible, for

ULGs to design their particular organizational structures to best address their own contexts, or provide incentive packages to address their particular human resource (HR) needs.

150. **Many direct household municipal services such as collecting garbage, emptying pit latrines, and maintaining drainage systems are carried out at the *kebele* level.** *Kebeles* provide a range of services that can be difficult to deliver effectively and efficiently from one administrative center. Most cities with multiple service centers – *kebeles* – are often better at mobilizing local resources for service delivery. The extent of decentralization to *kebeles* varies among regions and ULGs. Subcities in Mekele, for instance, have their own budget and autonomy, while all these functions are centralized in Bahir Dar.

4.3.3 Capacity

151. **Many cities simply lack human and financial resources to provide effective governance and service delivery**. Fieldwork conducted for this study, along with other analysis, suggests that a very basic level of local capacity to perform key municipal functions exists, with significant variation across ULGs, notably on key areas such as participatory planning and identification of priorities, procurement, financial management, asset management, operation and maintenance, and revenue collection. It is important to note the capacity variation between cities in the ULGDP and cities which are either recently included, or not included in ULGDP. Notwithstanding these, there is rarely enough staff for infrastructure creation and management in almost all ULGs. Further, the overall capacity of local government staff is low, and no ULG has the full staffing for approved posts.

152. **There is a need for deepening the understanding of HR management issues in ULGs**. While there is a wide recognition of existence of problems related to staff retention and motivation in ULGs, a substantive and robust analysis on the topic is lacking.

153. **The shortcomings on institutional, organization and capacity structures are interlinked and mutually compounding**, where the lack of actual power to design the appropriate organizational structures and employ (and retain) adequately qualified staff compounds the existing capacity problems.

154. **Both the federal government and the regional governments will have important roles to play in reforming and strengthening the urban local government system.** The federal government's role in providing the overall guidance, direction, enabling environment and leadership for the overall reform will be key. The regional governments, on the other hand, will have the crucial role of actually executing the reforms, as they have the legal relationship with and oversight over most local governance matters. Therefore, the regional governments will be the de-facto implementing entities of the changes suggested below.

155. **In light of these issues, options for reform to urban governance and institutions presented below may offer a path to making urbanization work better for Ethiopia:**

R16. Create a comprehensive list of local government responsibilities, along with a clear distinction between mandatory or permissible functions. MUDHCo realizes that there are shortcomings in the current legislative framework and has started an exercise to

address these problems.[179] In doing so, special attention should be paid to state level mandates without the necessary state level revenue assignments.

R17. Align ULG powers with mandates - particularly in municipal revenue, staffing and land management. Local officials must be able to restructure their organizational setup to correspond with community priorities and other local contexts. To do this, they need to be able to determine their own human resource needs, set wage scales and capacity. To attract and develop qualified personnel, ULGs must be given the incentives to have flexible salary structures for responding to local conditions, and to provide training.

R18. Invest in human resource capacity at the ULG level. On the one hand, Ethiopia's local governments are responsible for delivering a long list of key services. On the other hand, they suffer from chronic staff shortage and are not able to attract qualified personnel. Correcting this imbalance in the nearest term will be key in ensuring that ULGs are able to properly execute all mandates assigned to them. To do this, the federal government needs to significantly ramp up its efforts, in collaboration with the Ethiopian Civil Service College and other possible training providers, in training staff with necessary urban management and governance skills. In parallel, and in cooperation with regional governments, the federal government needs to help ULGs introduce staff retention and talent development incentive schemes.

R19. Conduct a follow-on analysis on urban institutional strengthening and capacity building. This urbanization review shows the need for a significant amount of institutional strengthening regarding the powers, mandates, structures and human resource establishments of urban local governments, and capacity building, pertaining to the administrative and operating systems and skills levels of local governments in Ethiopia. A number of key recommendations have been made to help improve these. However, a follow-on analysis, covering both of these above dimensions is suggested. This work, at the institutional level, should build on this report's analysis and examine the structural and institutional weaknesses of the urban local government system. It should provide detailed proposals for the development of specific institutional reforms to the local government external and internal institutional structures. Secondly, the work should undertake a detailed assessment of the operating systems and human resource capacities of urban local governments. Further, the follow-on work should develop a capacity-building strategy and action plan, to be executed in cooperation with the institutional-strengthening plan, covering actions of the national and regional governments.

4.4 Municipal Finance

156. **Financing needs of rapidly growing urban areas in Ethiopia are mostly expected to be addressed through meager municipal own-source revenues**. This points to a disconnect between the significant funding requirements of rapidly growing cities and the overall system to provide the capital and recurrent resources for these requirements.

[179] MUDHCo: Terms of Reference for Good Urban Governance Institutionalization Consultancy Service January 23, 2015. A tender for the services were launched early 2015 and selection of consultants is expected around mid 2015. The assignment for review and refinement of legislation is expected to be implemented over a period of several years.

157. **Budgetary and public financial management (PFM) systems in Ethiopia require a more robust system of reporting and monitoring municipal expenditures and intergovernmental fiscal transfers.** There is also a lack of systematic data collection and reporting on municipal revenues at all three levels of government.

158. **Consolidated government accounts present data on spending and revenues at each level—federal, state, and woreda—but essentially ignore intergovernmental fiscal flows.** This would be appropriate if all government levels were administrative tiers of the same government entity, as often found in centrally-planned economies and de-concentrated systems. In a devolved system such as Ethiopia's, intergovernmental fiscal transfers from one government level to another should be systematically captured in government financial reports, on revenue and expenditure sides at each government level.

159. **BOFEDs are responsible for guiding and supporting ULGs in enhancing own-source revenues.** In practice, however, the BOFED and regional revenue authority seem to focus almost exclusively on state revenues. Similarly, too few regional Bureaus of Urban Development provide good practices on enhancing municipal revenues, although they technically backstop ULGs for preparing revenue-enhancement plans for ULGDP. Site visits suggest that these bureaus are generally inappropriately staffed—nor do they have the necessary technical skills—to effectively champion and backstop municipal revenue collections within their regional state.

160. **Federal policy leadership on municipal revenues needs to be improved.** MoFED is the steward of all public finances in Ethiopia, including municipal finances. In 2008 it was given the task of helping enhance municipal finances, a role previously played by MUDHCo. MoFED delegated this role to ERCA, without making the necessary amendment to the proclamation that established ERCA to include this new mandate. Thus ERCA, the sole federal entity formally tasked with guiding municipal revenue enhancement, is not focusing on municipal revenues. MUDHCo, the federal entity that interacts with ULGs on a daily basis for coordinating a range of responses on urban municipal-revenue issues (such as potentially introducing a property tax system and implementing the largest local government program in the country, the ULGDP) does not have a systematic approach to coordinating activities with MoFED or ERCA.

161. **With these issues in mind, a three-pronged approach is suggested to improve urban financing in Ethiopia.** In the short run, a set of measures are proposed to help enhance the municipal own-source revenues collected, while in the medium run, changing the fiscal architecture to widen the fiscal resources available to local governments and improving the budgeting and accounting system are recommended, as detailed below.

4.4.1 Short run: Enhancing municipal own-source revenues

R20. Conduct a study to provide details on and implementation guidance for improving urban financing in Ethiopia. The scope of this urbanization review is to provide an overall analysis of urban financing and possible pathways to help improve the system. Given the analysis in this study, which shows a disconnect between urban financing needs and the fiscal system, a follow-on analysis is recommended, which would build upon the analysis and recommendations presented in this report and would focus on the details and next steps of improving financing for urban, drawing from international good practice.

R21. Strengthen the fiscal autonomy of cities through reforms to municipal finance. Because municipal service delivery is mostly financed through a city's own-source revenue, ULGs have to raise enough revenue to properly deliver services. Cities need autonomy to recover direct costs of service delivery through transparent and accountable processes and systems. ULGs should therefore not be constrained by outdated tariff schedules set at the regional level, which limit their revenue-raising potential. Possible solutions include giving ULGs a rate and tariff band within which they can set rates without the approval of the regional governments.

R22. Introduce true user costing. The present tax and fee system is based, theoretically, on recovering from users or beneficiaries the costs of municipal service provision. At present, however, municipalities do not use any program or project cost information in setting fees, and in fact do not have the legal discretion to do so. As urban capital investment gains speed, the ability to identify and allocate costs to users will become crucial, requiring both the capacity (and information) to accurately identify costs, and the legal ability to allocate project-specific costs to users, in the form of true cost-based user fees.

R23. Introduce automatic inflation adjustments for municipal fees and charges. Given the analysis presented in the main text of this report, which shows that the annual growth of municipal revenue was slower than inflation, GDP growth, and overall public revenue growth between 1999 and 2004, introducing automatic inflation adjustment for municipal revenues, which are currently determined in nominal terms, can stop the erosion of these revenues.

R24. Consider allowing local governments to keep state revenues generated in excess of targets as an incentive for increased revenue collection at the local level, which would enable better service delivery. Steps should be taken to incentivize regional governments to allow the local governments in their jurisdictions to have greater control over state revenues generated in excess of the threshold agreed at the start of the fiscal year. As mentioned in the main text, Hawassa is an interesting example in this respect, which should be studied further and with necessary adjustments, replicated in other ULGs.

R25. Coordinate federal support for municipal revenue more tightly. Two key measures need to be adopted. First, assess whether ERCA is the ideal entity to support ULG own-source revenue-mobilization efforts on behalf of MoFED. If so, its founding proclamation should be amended to include this additional task in its mandate, and its human resources should be aligned with it. Second, ensure cooperation among local representatives of MoFED, MUDHCo, and ERCA to secure coherent support to ULGs. The regional revenue consultation workshops proposed under ULGDP II could present an ideal platform for this.[180] Ensuring that these proposed consultations take place and include non-ULGDP ULGs would be a good start.

R26. Exercise caution on the potential idea of introducing a property tax system. Introducing such a system while fundamental land management challenges persist requires careful policy analysis and solid preparation for any changes. Thus property tax reform should be viewed as an intermediate- to longer-term issue, which needs to be approached in

[180] The aim is to bring together ULGs with all federal and regional entities working on municipal revenues once every two years, in order to review ULG revenue-enhancement plans and to update tariff proclamations.

parallel with urban land management policy reforms and thoroughly examined with all the parties to be involved in its administration and revenue payment—most important, citizens.

4.4.2 Medium run: Revisiting the fiscal architecture and improving public budgeting and accounting system

R27. Increase investment in urban development, to help reduce the extensive investment gap. The current system of urban development financing is insufficient. The majority of investment is based on municipal own-source revenue, which is limited. Targeted efforts to increase municipal own-source revenues of ULGs should be a high priority, to be accompanied by an increase in the scope of intergovernmental fiscal transfers, targeting ULGs.

R28. Ensure that Addis' infrastructure and institutional needs are adequately addressed. Addis Ababa does not receive block grants from the federal government. Instead, it is given extensive powers to raise own-source revenue and it benefits from grants received from federal government's engagement in international financing sources. However, the actual revenue collected in Addis on a per capita basis is not significantly higher than other ULGs. The on-grant infrastructure funding it receives through federal government international borrowing is ad-hoc and does not cover more than 10 to 15 percent of its infrastructure expenditure. Given Addis' importance, the financing system that is supposed to meet its investment needs should be revised and better aligned with its real needs.

R29. Bring systematic clarity and proper regulation on subnational borrowing. A two tiered approach is recommended:

i. At the national level, introduce rules and regulations that will target: (i) eliminating current potential risks of contingent liabilities by regulating guarantees to be provided by subnational entities to their entities, authorities or enterprises; (ii) introduction of a subnational insolvency/bankruptcy framework; (iii) subnational debt management ratios; (iv) elimination of the potential moral hazard risk introduced by full federal guarantee of subnational debt to pave the way for heavier reliance on municipal credit evaluation, rather than the current practice of exclusively relying on sovereign guarantee; (v) limiting subnational debt relative to the Central Bank of Ethiopia's capital base to prevent a possible destabilization of the country's largest bank.

ii. For managing Addis' debt, the city needs to: (a) introduce a debt policy to clarify the limits to guarantees that it may issue to its constituent agencies; and (b) develop a specific reporting on all the debt the city has guaranteed and is potentially liable to pay if the guaranteed entity does not meet its obligations. Thus, Addis should develop a set of consolidated accounts which shows not only direct city budget but also the accounts of off-budget entities for which the city is sole owner and over which it has some level of decision-making authority as well as may be at risk for potential liabilities.

R30. Prepare a periodic analysis (i.e. once every three years) of intergovernmental finance, similar to South Africa's Intergovernmental Fiscal Review. Such an analysis

would provide an ongoing evidence base for policy discussions on urban (municipal) finance in Ethiopia.

R31. Improve the government's chart of accounts and the budgetary accounting and reporting processes. The recommendation on the periodic review of intergovernmental fiscal transfer system cannot be implemented in the current state of financial reporting systems in Ethiopia, simply because there is no consistent data to properly analyze flows between regional and local governments. The key goal of improving the budget accounting and reporting is to ensure that intergovernmental fiscal transfers (block grants and earmarked funds) are properly and consistently accounted for at all three government levels as revenue and expenditure sources, per International Monetary Fund budget classification.

R32. Improve reporting on municipal revenue collections at all government levels. For instance, in order to ensure clarity and consistency, municipalities need to consistently use the revenue classification codes contained in the chart of accounts as they prepare their budget documents, their revenue-enhancement plans, and the revenue reports produced upward to the regional level. Enhanced municipal revenue transparency toward local taxpayers is a hallmark of sound local revenue practices. (The World Bank Ethiopia team, through its financial management and urban practices and operations, is working closely with the government on public financial management (PFM) solutions for local governments and woredas.) In the long run, as the PFM system in Ethiopia matures, cities should transition to accrual accounting, although given current capacity this will be challenging in the short run. An ideal incremental approach would be to start with rolling out a modified cash system in all cities. Once these practices have matured, other options, including accrual accounting, can be considered.

R33. Introduce more transparent budget practices at the regional government level. This would entail proper inclusion of ULGDP funding as revenue (subsidy) to the regional state, while recording the grant allocations to city administrations as intergovernmental transfers in the regional state budget.

4.5 Targeted Interventions

4.5.1 Jobs and Competitiveness

162. **Ethiopia has a small, yet significant, window of opportunity to exploit its demographic dividend.** Its labor force doubled over the past two decades, and it continues to have a very 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 employment. Urbanization could become one of the most important catalysts to tackle economic growth and job creation in the next few years, even decades. Cities should aim to create the conditions for entrepreneurs, firms, and industries to become competitive, to which end the following options are put forward.

R34. Identify and invest in cities' competitive advantage. Secondary and smaller cities are seeing the growth of naturally forming industrial clusters, while Addis Ababa's advantage seems to lie in its diverse industrial structure. As the government's Micro, Small, and Medium Enterprise Strategy notes, not all cities will be able to attract medium and large enterprises in equal measure; cities will end up specializing in particular sectors and

industries. Cities in Ethiopia will have different functions, and their capital and labor needs will differ accordingly. The government can encourage discrete growth corridors (e.g. Bahir Dar–Gonder, Mekele–Dessie, Harar–Dire Dawa, and Addis Ababa–Hawassa) by strengthening inter- and intracity cluster links and providing the necessary infrastructure. More generally, cities should develop their local economic development strategies (Box 11) and invest in quick-wins for identifying and exploiting their comparative and competitive advantages.

Box 11: Identifying the success of local economic development strategies

Local economic development (LED) strategies are a structured attempt at planning and organizing interventions at a subnational level, with the aim of improving city competitiveness outcomes. In developing countries, these strategies are often posed as a choice between poverty alleviation, survival, and self-reliance on the one hand, and participation in the global economy, competitiveness, and finding niche markets on the other. This has sometimes created LEDs in emerging countries and cities with no extended engagement of the private sector, limited pro-poor interventions, and a failure to spur job creation and economic growth. A review of the literature of the common success factors for strategic economic development initiatives, particularly in low-income, low-capacity contexts, yields the following:

1. Factors such as leadership, long-term commitment, consensus building, and stakeholder participation are common to economic development strategies in many different environments.
2. However, some new themes emerge that are relevant to low-capacity cities:
    - Sustainable funding for strategy implementation and other forms of continuity (like institutionalizing the strategy to protect it from political change) are important.
    - Strategies should move quickly by taking up tangible, manageable projects and getting the coordination working—in other words, placing more focus on coordination than on large projects.
    - Analytic work is often neglected in LED but it is important in setting a good direction for interventions. However, not all such work is equal, and the particular types of analysis (especially involving outreach to private stakeholders) can yield large gains.

Sources:
1. Competitive Cities Knowledge Base Project (Database of City Initiatives).
2. Andrés Rodríguez-Pose and Sylvia Tijmstra, *Local Economic Development as an alternative approach to economic development in Sub-Saharan*, Prepared for the World Bank-Netherlands Partnership Program (2005).
3. GHK Group of companies. *City Development Strategies (CDSs) Taking Stock and Signposting the Way Forward*, Discussion Report for DFID and the World Bank (2000).
4. Florian Steinberg, *Strategic urban planning in Latin America*, SINPA Number 22 (Rotterdam: Institute for Housing and Urban Development Studies, 2002).
5. International Labour Organization, *Local Economic Development for Employment Generation, Peace and Security: Approaches, Tools and Good Practices in the Philippines*, Report of an ILO-SRO Manila Technical Workshop, Edited by Aurelio Parisotto (2007).
6. UN-HABITAT, *City Development Strategies: Lessons from UMP / UN-HABITAT. Experiences from Bamako, Mali, Cuenca, Ecuador, Colombo, Sri Lanka, Johannesburg, South Africa, Santo Andre, Brazil, Shenyang, China and Tunis, Tunisia* (2002).

R35. Identify and invest in growing the "missing middle" of companies and jobs across urban areas. Most of existing employment takes place within small, entrepreneurial firms, many of which are also informal. At the same time, new and sustained job creation in Ethiopia comes from medium and large firms. Small entrepreneurial firms seldom sustain

increases in job creation. In particular, the quality of employment and associated incomes is low, suggesting that self-employment will not be a panacea for robust economic growth. Franklin (2014) finds that young people often turn to self-employment while searching for stable jobs, frequently involving long periods of transition. Wage employment is crucial to job growth and sustainability, but Ethiopia has a sizable "missing middle" – mid-sized firms that have the ability to sustain large increases in employment. Research (in Ethiopia and elsewhere) demonstrates that waged employment is associated with a fall in urban poverty and the emergence of more formal employment, the latter also increasing with city size. Stable employment in developing countries has been associated strongly with the emergence of a middle class, which in turn leads to faster growth. In fact, most waged-employment is in the formal sector, while self-employment is mostly informal and mostly young. This suggests that firm graduation from small to medium to large sizes, and the creation of stable jobs, will be crucial for growth and for poverty reduction. These patterns differ across cities—city size affects the emergence of formal and waged-employment—and so cities must identify and invest in the factors that allow existing firms to expand and create new jobs, and that encourage firms to graduate, such as better regulated taxes and access to infrastructure.

R36. Target interventions according to the constraints and the needs of different typologies of firms. The Government of Ethiopia has already taken several steps to target job creation across the spectrum – for instance, the Micro and Small Enterprise Development Agency focuses attention on the needs of micro/small firm. Secondary cities are becoming hubs for medium-sized firms owing to the emergence of clusters, and the Ministry of Industry is using industrial zones to attract investment across different regions by large firms (whether foreign or domestic). These initiatives could be strengthened further:

- **Household/Informal Enterprises:**[181] Local governments can have a large policy remit with regard to targeting household and/or unregistered, i.e. informal, enterprises. Indeed, developing country cities have used several innovative approaches to create an environment conducive to the growth of such enterprises. Although returns to urban informal sector activities are significantly lower than to formal work (often because these activities offer less security of income and tenure[182]), these enterprises provide much needed employment and services to those at the bottom of the pyramid. Addis Ababa has provided targeted assistance to informal vendors to overcome key barriers – see Box 12. Other countries, for instance Mozambique,[183] have tried to liberalize labor-market policies, and simultaneously bring down the costs of doing business and living, enabling even micro firms to grow.

- **Small enterprises**: Global evidence suggests that small and informal firms produce and sell low-quality goods and services, effectively meeting the demand for these products in developing countries. And while they tend to suffer from low levels of productivity, there is much scope for increases in operational efficiency and size if they are provided an opportunity to tap larger markets, with labor, technology and other inputs to production. Thus, local and national governments should provide light-

[181] Many of the micro and small enterprises in the country operate within the informal economy. Production within the sector is characterized by a lack of skilled labour and social protection, unregulated markets, family ownership of enterprises, and small-scale operations usually involving own or family labour and indigenous technology.
[182] Fox, L. and Gall, M.S. (2008) Working out of Poverty: Job creation and the Quality of Growth in Africa.
[183] Fox, L., Bardasi, E.and K. Van den Broeck. 2005. "Poverty in Mozambique: Unravelling Changes and Determinants." Africa Region Working Paper No. 87. World Bank, Washington, DC.

touch, supportive regulation of household-enterprises, aimed at ameliorating their constraints without adding to regulatory burdens. This could be achieved by: (i) the provision of small-scale facilities that allow enterprises to enjoy the advantages of co-location exploiting buyer-supplier, labor market and technology linkages; and (ii) support the development of small-scale businesses in sectors which have significant potential and can expand symbiotically with formal sector enterprises e.g. "boda boda" motorbikes feeding BRTs (see Box 13).

- **Mid-size enterprises**: The research illustrates that improvements in local business licensing and permitting systems help firms to grow more rapidly. The ability and capacity of urban local governments to manage their growing administrative remit (especially in cities with newly-expanded mandates) is crucial – firms interviewed in different sub-cities in Addis repeatedly identified the low capacity of public-sector employees as an important constraint on productivity. In addition, ULGs should also consider extending some of the enterprise support services, including access to space and facilities being provided to start-ups, to existing firms to enable them to expand operations faster.

R37. Large enterprises: Large enterprises in Ethiopia account for the bulk of sustained job creation in the manufacturing sector, and their continued success has much to do with the city-level business environment – including factors such as licensing, permitting and tax systems. The implementation of these systems fall under the remit of ULGs (even if rates and bands are set by regional and/or national government) with effective implementation a function of local capacity. Availability of serviced land and infrastructure also matter greatly to large investors. The federal government has taken several policy measures to support industrialization across the country, including the creation of industrial zones close to major urban centers, including in and around Addis Ababa and Dire Dawa. There is a need for a better understanding of how best to maximize the potential benefits of the co-location of cities and industrial zones, owing to their linkages across strategic objectives (jobs, investment), spatial policies (access to land and infrastructure) and industry-level issues (access to labor and final markets, regulations).

Box 12: Using clusters to help informal firms in Addis Ababa

The Addis Ababa city administration is using a cluster-based approach as an instrument to monitor and help urban micro and informal enterprises to overcome constraints to growth. In Kaliti, a sub-city within Addis Ababa, there are 270 informal traders operating within Government-supplied temporary sheds. Interviews carried out with the traders revealed that these were street vendors who had been relocated by local authorities. One of the street vendors stated that he has now been operating in Kaliti for almost four months – before this, his modus operandi involved walking around, selling his goods, while trying to avoid attention by the police or formal authorities. In his words, "*If they had caught me, they would have confiscated my goods*". Not only were traders given temporary sheds, but they were also organized into savings groups – and interestingly, were exempt from any taxes, business registration and licensing fees.

The city is able to regulate, albeit partially, the informal sector by limiting activities into spatially concentrated pockets. There is also a better understanding of the sector, which was previously almost entirely in the shadows. Evidence from the city of Bangkok reveals how metropolitan governments can use public space cleverly to find space for vendors, allowing for the growth of a dynamic consumption economy within the city (see Gisèle, Y and Nirathro, N. 2014).
Source: World Bank-GWU Capstone Project "Addis Ababa: Spatial Determinants of Growth"

Box 13: Formal-informal linkages in urban transport

Boda Boda – motorcycle taxis – in Uganda and neighboring countries, like Kenya, operate when more conventional services are uneconomic or physically impossible. They provide vital feeder services to major public transport routes. They primarily provide three types of - predominantly - short-distance services: (i) within the main urban areas, where they compete with conventional sole hire taxis and taxis; (ii) as feeders to urban areas on routes that - due either to the low density of demand or the roughness of the route - are unattractive to taxis; and (iii) as feeders to the main roads in which role they tend to complement taxi and large capacity bus services.

In many areas they are run by micro or household enterprises and tend to be in the informal sector, or run by loosely organized operator associations. Nonetheless, their functions are complementary to those in the formal transport sector, and they meet an important element of demand for urban transportation. Because of their limited capacity travel costs per km are 2-7 times those of large capacity buses, but cheaper than hire taxis. Their popularity derives from the convenience they offer and ability to meet demands that other services cannot. User surveys suggest that median use of boda boda services by users was four years, with 15 percent claiming more than 8 years. For over 90 percent of men and women users, boda boda services increased the range and number of the activities in which they engage, at the time increasing their personal performance and output. In Uganda alone, 7 percent of the population depend for part of their livelihood on the industry. The livelihoods of a further 100,000 people sare supported from the repair and sustenance services the industry needs.

Source: Howe, J. (2011) 'Boda Boda – Uganda's rural and urban low-capacity transport services'. Sustainable, Livelihoods, Mobility and Access Needs Project, DFID.

R38. Create a competitive environment for economic growth and job creation. Private sector dynamism in Ethiopian cities is low and variable—not enough companies survive and thrive, while there remain many city economies dominated by large publicly-owned enterprises.

- In the short run, it will be important to increase the capacity of ULGs to properly design and implement incentives for firms. Not only will ULGs remain the focal points for initiating and managing initiatives aimed at targeted sector interventions, but they will also be responsible for efficient functioning of factor markets and the business environment more generally. A strategic focus on economic growth and job creation will require ULGs to better understand their potential for growth, to prioritize sectors and interventions, and to design implementation strategies targeting these objectives. Key policy recommendations that ULGs could target include: (1) identification of skills and qualifications that are required to design and implement incentives for private sector growth; (2) initiating a network for best practice and experience exchange; (3) leverage educational actors and private sector to target technical training and labor supply-side issues; and (4) ULGs ought to build up in-house capacity for recurring monitoring and analysis for tracking the impact of interventions on the constraints to limit to private sector growth,
- In the medium term, cities must provide better access to the main determinants of private sector growth—power, transport, and finance—connecting markets and consumers. Foundational and capital-intensive investments could be tackled by ULGs, but would also require multi-stakeholder analysis (supporting the process of diagnostics, prioritization and implementation), wherein private sector, regional and national governments could be leveraged. This is particularly true of projects with cross-cutting regional returns to scale and those that require private sector collaboration across sectoral supply chains. Key policy recommendations that ULGs, in collaboration with other stakeholders, could target include: (1) identify flagship investment projects that would have a transformational impact; (2) target and leverage large-scale grants, donor funding and private sector resources, including Public-Private Partnerships; and (3) establish cross-jurisdictional working groups to identify spillovers from projects, also to avoid duplication and to coordinate better on implementation and to maximize scale benefits.
- In the long run, cities will need to enable smarter regulations in land markets to allow for efficient allocation of land and resources. For more details, see Section 4.2 within this Chapter.

163. **Some of these factors might lie outside the policy mandate of local urban governments, such as interventions on educational infrastructure or intercity transport infrastructure—but a number of them can be affected directly by city officials.** For instance, the importance of tax and licensing fees for firm start-ups and growth suggests that differences in local capacity to carry out functions related to private sector development could have significant effects on city competitiveness. In addition, the ability to provide land and business premises in support of clusters falls within the administrative remit of city governments, and could be used strategically in line with knowledge of comparative advantage and quick wins.

4.5.2 Investing in Infrastructure

164. **Many of the issues related to infrastructure are linked to the institutional factors of land, finance, and governance.** To the extent that the options outlined above help ULGs promote more compact urbanization—aided by increased authority, capacity, and financial resources—they will help make it easier for cities to invest in infrastructure. And beyond the institutional reforms outlined in the previous subsection, other interventions are targeted at infrastructure:

R39. Increase cost recovery through subsidy reform and user fees. Prices for basic services are low and do not cover operational costs. While subsidized tariffs can be justified on grounds of affordability, electricity and piped-water services reach only higher-income groups in society. Affordability is a real concern and the government will be unable to eliminate subsidies, but it should ensure that they are well designed and targeted. Cost recovery can be increased by capturing a larger amount of finance through user charges and, for some sectors, through community or household contributions to capital costs—in cash or kind. Box 14 provides an Ethiopian example of using explicit subsidies for connection fees to increase access to electricity.

Box 14: Rural Electricity Access Expansion

The goal of the Second Electricity Access Rural Expansion Project is to establish a sustainable program for expanding access to electricity in rural communities, thus supporting broad-based economic development and helping alleviate poverty. Ethiopia's goal is to increase the rate of household connections to the main power grid in rural towns and villages that already have electricity. The project allows Ethiopian Electric Power Corporation (EEPCo) to implement a connection charge financing program in which rural households pay 20 percent of the US$75 connection charge with the balance collected over five years as an interest-free loan. The utility receives an overall subsidy of US$35, which covers the interest rate for financing over five years. In total, the household must pay US$15 for the connection upfront, with the rest being paid in installments of about US$1 per month, which covers the remainder of the payment over five years.

The results of the project are very promising, as a high number of poor households are finding the electricity connection charges affordable thanks to the financing structure. A recent survey showed that close to 70 percent of participating households have annual cash incomes of US$300 or less, indicating that the subsidy has been well-targeted. Many households rely on informal connections wired in from another household, and virtually all households in the survey had completed their own internal house wiring. These preliminary results appear to confirm that spreading the initial connection charges over time increases the number of households adopting new electricity connections.

R40. Improve efficiency through capacity building. By some estimates, operating inefficiencies cost Ethiopia's infrastructure sectors US$451 million a year, or 3.4 percent of GDP. The largest component relates to undermaintenance of infrastructure assets, which should be addressed as a priority. Capacity building could help utilities in, for example, business planning, investment planning, asset inventories, financial accounting, and improved billing efficiency. Ethiopia's Road Maintenance Fund ring-fences funds to be used explicitly in maintenance, ensuring these cannot be appropriated to build new roads. While the fuel levy that finances the Road Maintenance Fund is only about half of what it would need to be to adequately finance road maintenance, it is a step in the right direction.

R41. Make sure not to neglect ongoing operations and maintenance (O&M). User fees are generally the most appropriate source of revenue for ongoing O&M, but as cost recovery is usually poor, other sources must be tapped and plans made to adequately maintain infrastructure assets. In South Africa, it was recognized that the "unintended consequence of constructing more and more new infrastructure, without addressing the condition of the existing infrastructure, in the attempt to address imbalances in access to services, is a widening gap in infrastructure maintenance".[184] South Africa's Municipal Infrastructure Grant (MIG) was introduced in 2003, and replaced all capital grants for municipal infrastructure. While the MIG program is aimed at covering the capital costs of basic infrastructure for the poor, one of the conditions of MIG funds is that the municipality must prove that it has the capacity to manage the infrastructure.[185] The MIG program requires municipalities to carefully consider the costs of adequate O&M and to include budgets for personnel, materials, and equipment to ensure that the infrastructure created is sustained. Municipalities must submit three-year capital plans, with budgets that reflect O&M costs of the three years and beyond.[186] The national MIG unit supports and monitors these plans.

R42. Improve sector planning and utility reform. This should emphasize a clear strategy, including delineation of responsibilities between different government agencies; an investment program, including details of hardware requirements and technology choices; and a financing strategy. Prioritized infrastructure investment plans should be developed by the line ministries (e.g. for electricity) and ULGs (e.g. for roads, water, sanitation, and solid waste management) using some form of cost-benefit analysis. These plans should set out expenditures over a three- to five-year period, taking into account the affordability and feasibility of what is being proposed.

R43. Improve budget execution. Low execution of capital budgets in infrastructure results in losses of around US$63 million a year. For the sectors covered by this review, this appears to be a particular problem for roads. Further analysis is required to understand why actual spending versus that budgeted is low, and to suggest ways in which municipalities can improve the execution of their investment programs.

4.5.3 Housing

R44. Undertake an independent technical evaluation of Addis Ababa's Integrated Housing Development Program (IHDP). IHDP has resulted in improving the overall quality of the housing stock in Addis and improving the availability of rental stock. It has thus resulted in a reduction in the qualitative deficit in Addis. On the other hand, it is highly subsidized and expensive, therefore may not be financially sustainable in terms of the government subsidies required. At the same time, despite the large subsidies, the lower income segments of the population cannot afford it. It is important to note also that the program is working only in Addis, whereas there is an acute housing need for new

[184] CSIR and CIDB, "The State of Municipal Infrastructure in South Africa and its Operation and Maintenance; An Overview," based on CSIR/CIDB Discussion Document: *Towards a Framework for the Maintenance of Municipal Infrastructure: In Support of Government Growth Objective* (2007), 7.
[185] South Africa's Department of Provincial and Local Government, *The Municipal Infrastructure Grant Programme: An Introductory Guide (*2004).
[186] South Africa's Department of Provincial and Local Government, *Municipal Infrastructure Grant: National MIG Management Unit Programme Management Processes and Procedures* (2006).

households outside of Addis, due to rapid urban growth. An independent technical evaluation of the program would take these shortcomings into account and be able to suggest appropriate revisions for government policy for increasing the efficacy of the design, scale and scope, affordability and outreach of this important program.

R45. Develop a sector wide approach to improve the functioning of the housing sector overall and to realize high standards, with the goal to address the key challenges of low quality, overcrowding and affordability. These challenges are inter-related and require a systemic sector wide approach which, among other things, should:

- Provide public sector subsidies for basic infrastructure and services for the bottom sections of the housing market;
- Focus available fiscal resources on provision of land and infrastructure for low-income groups and informal settlement upgrading;
- Rationalize housing standards and allow informal housing consolidation to support affordable housing delivery and household investment in top structures;
- Improve security of use rights in informal settlements;
- Increase the penetration of formal developer-supported delivery of formal housing in downmarket areas;
- Manage existing publicly-owned stock, including *kebele* stock, in order to achieve defined government objectives (ie, prioritizing access for poor households;
- Support and enable private delivery of affordable rental housing at scale. This may be a matter of a separate donor-assisted policy development effort. In particular, the experience of Vietnam, (see Box 15, with the caveats noted), which managed to engage the private sector in rental housing, including massive additions of rental units by small-scale homeowners, can be useful for Ethiopia.

R46. Invest in informal settlement upgrading. Given the prevalence of informal housing in urban areas, investing in in-situ upgrading and service delivery to these areas based on a well-defined targeting mechanism can increase the supply of quality housing for the urban poor. For example, this could ensure that new investment in services is channeled to areas which have the greatest deprivation. Such interventions can include requiring the participation and contribution of local community groups and civil society organizations or engaging the private sector through PPP arrangements. Improving access to infrastructure and services in these areas would improve residents' quality of life by expanding access to water, sanitation, health and education services and increasing urban mobility. If bundled with access to credit or small loans for eligible households, these infrastructure upgrades could encourage incremental investment to improving top structures.

Box 15: Avoiding the Spread of Informal Settlements in Vietnam

Note: It is important to note that while Vietnam's practices of avoiding widespread slums are good practice examples for Ethiopia, attention must be paid to the fact that Vietnam is a US$1,740 GNI per capita economy, whereas Ethiopia's level is US$470 GNI per capita. Therefore, Vietnam's good practice examples must be adopted to the Ethiopian context, particularly given the difference in incomes.

As a lower-income and rapidly urbanizing country, why does Vietnam have so few slums? The answer lies in Vietnam's "accepting" regulatory approach to customary and affordable housing development. Coupled with an innovative small-scale private housing construction and rental sector, this has resulted in a very low incidence of slums in its cities. This is particularly striking compared with cities in countries that have even higher urban incomes, such as Brazil, India, Indonesia, and the Philippines, to name a few. The following features have proven very successful in Vietnam:

1. Tolerance of small lot sizes, allowing people to trade location for floor space (in many cases floor spaces as small as 25 m^2).
2. A permissive attitude toward floor-to-area ratio increases, which has enabled an increase in the supply of floor space without the need for more land.
3. Incorporating and densifying peri-urban villages into the urban fabric.
4. Investment in primary/trunk infrastructure near these urbanizing villages, with communities then investing in incremental improvements in the village.
5. Dynamism of efficient and entrepreneurial low-cost, self-help, small-contractor construction.

Source: World Bank, "Chapter 3: Urban Expansion and Spatial Development in Vietnam's Cities" in *Vietnam Urbanization Review* (2011).

Annex 1: Surveys Used in the Report

1. **Demographic and Health Surveys (DHS)** are conducted by the Central Statistical Agency (CSA), Ministry of Finance and Economic Development. The DHS was designed to provide population and health indicators at the national (urban and rural) and regional levels. The DHS is a sample survey of households, which are stratified at two stages. The first is the enumeration area, which are administratively below the *kebele*, and the second stage is the household. Administratively, regions in Ethiopia are divided into zones, and zones into administrative units called *woredas* (sometimes spelled *weredas*). Each *woreda* is further subdivided into the lowest administrative unit, the *kebele*. The sample was designed to provide estimates of health and demographic variables for Ethiopia as a whole (urban and rural) and by 11 geographic areas (nine regions and two city administrations): Tigray, Afar, Amhara, Oromia, Somali, Benishangul-Gumuz, Southern Nations, Nationalities and Peoples (SNNP), Gambella, Harar, Addis Ababa and Dire Dawa. The first survey was conducted in 1999, the second in 2006, and the latest in 2011, which this report uses. The survey identifies the unit of observation at regional, zone, and *woreda* levels.

2. **The Large and Medium Scale Manufacturing and Electrical Industries Firm Survey (LMMIS)** has been conducted annually since 1978 by the CSA. The survey's universe is confined to those public and private industry establishments engaging 10 persons and above and using power-driven machines. The survey collects basic quantitative information on employment, volume of quantitative information on employment, volume of production and raw materials, and structure and performance of these industries. The unit of analysis is the establishment/enterprise. The survey identifies the unit of observation at regional and urban centers/towns. In this report we use all years between 1999 and 2010 except 2005, as that year took a sample of enterprises (unlike other years when it covered all large and medium enterprises).

3. **Urban Bi-annual Employment Unemployment Survey.** The CSA launched a Bi-annual Employment Unemployment Survey program in October 2003. It conducted two rounds in October 2003 and April 2004, and a third survey in 2006. In 2009, the survey became annual instead of biannual. The survey has covered 2003, 2004, 2006, 2009, 2010, 2011, and 2012. The survey is mainly aimed at providing information on the economic characteristics of the population aged 10 years and older—their activity status, employment, and unemployment situation. It also covers detailed socio-demographic variables such as age, gender, relationship to the head of household, educational status, training, and marital status. The unit of analysis is the household and individuals aged 10 years and older. The survey identifies the unit of observation at regional, zone, and *woreda* levels.

4. **Welfare and Monitoring Survey.** This survey was conducted by the CSA, focusing on a wide range of socioeconomic indicators like health, education, anthropometry, access to selected facilities/services, amenities and assets, all of which are vital inputs in monitoring and evaluating policies, particularly in poverty-reduction strategies. The fourth survey (2005) covered additional features like HIV/AIDS–related information, major prevailing diseases, and other variables. In this report we use the fifth (2011) survey. The units of analysis are the

household and members. The survey identifies the unit of observation at regional, zone, and *woreda* levels.

5. **Household Income Consumption and Expenditure Survey (HICES).** The HICES has been conducted by the CSA every four or five years since 1995/96. It provides statistics on household income, consumption, and expenditure. This report uses the latest, fifth (2011) survey, which does not cover household income. The unit of analysis are the household and members. The survey identifies the unit of observation at regional, zone, and *woreda* levels.

6. **Survey Limitations**

- All the surveys identify the unit of observation at regional level, but this analysis requires observations at the town or city level.
- Only LMMIS identifies the unit of observation at the town level whereas all other surveys identify the unit of observation at regional, zone, and *woreda* levels.
- As a first step, this analysis mapped the town code to *woreda* codes. Only selected or major towns could be matched with *woredas*, using the 2007 Census administrative classification. Selected towns could be matched the under following conditions: if the name of the *woreda* was the same as the town and the *woreda* had only one town; the town is a combination of more than one *woreda*; and the town has an administrative status equal to region or zone.
- The 2007 Census administrative classification usually clearly separated medium and small towns as *woredas*, whereas in the previous census classifications, medium and small towns were subdivisions of *woredas*. Therefore extending the mapping of the previous year was not possible for selected towns based on the 2007 Census.
- Though the unit of observation was identifiable at *woreda* level, the sampling and official purpose of all the surveys were to estimate variables at national or regional levels.
- Bootstrapping and inflating samples for small towns is one possible future approach to improve the precision of variables at town level.

Annex 2: Methodology and Definitions

GNI per Capita (Atlas Method)

Gross national income (GNI) per capita is GNI converted to US dollars using the World Bank Atlas method, divided by the midyear population. The GNI accounts for the total domestic and foreign output of residents in the country, by factoring the gross domestic product (GDP) plus the total income earned by foreign residents, minus income earned in the domestic economy by nonresidents. The World Bank uses Atlas method GNI per capita in US dollars to classify countries for analytical purposes and to determine borrowing eligibility.

GDP and Nightlights Data

GDP growth is rarely measured in cities or subnational regions. But recent innovations based on the use of satellite imagery have developed methods to estimate growth in economic activity at the subnational level. By looking at the extent of the lights at night and the brightness (intensity) of these lights, Henderson, Storeygard, and Weil (2012) propose satellite data on lights at night as a proxy to measure GDP growth. They develop a statistical framework that uses growth in lights to augment existing income growth measures, under the assumption that measurement error in using observed light as an indicator of income is uncorrelated with measurement error in national income accounts. For countries with poor data on national accounts, this new estimate of average annual growth differs as much as 3 percentage points from official data. Most important, lights data allow for measuring income growth in cities and subnational regions, as well economic activity in the formal and informal sectors.

Defense Meteorological Satellite Program (DMSP)-ordinary least square annual nighttime lights data are composites of cloud-free images of the world at night, captured by US Air Force satellites. Satellites fly sun-synchronous polar orbits and scan the earth's surface, recording light emissions from human settlements. The data are available for 1992–2012. Each pixel in each image represents the average light observed by a satellite over that location throughout the year. The data are described well in papers such as the CIESIN guide to nighttime lights (Doll 2008), or on the DMSP website http://ngdc.noaa.gov/eog/

Over the last two or three years these data have become a popular proxy for economic activity. Papers such as Doll et al. (2006), Chen and Nordhaus (2011), and Henderson, Storeygard, and Weil (2012) establish a strong correlation between nighttime light emissions and GDP. In the absence of economic statistics calculated at a high degree of spatial and temporal disaggregation, nighttime lights are now often used instead.

For Ethiopia, computations were made at the *woreda* level and for each satellite-year. These estimates correspond to the sum of total light within the boundaries of each *woreda* using ArcMap 10.2 software and customized Python 2.7 scripts. For years where multiple satellites recorded data, estimates were calculated as the average total light of each satellite.

Zipf's Law

Zipf's law is a very tight constraint on the class of admissible models of local growth. It says that for most countries the size distribution of cities strikingly fits a power law: the number of cities with population greater than S is proportional to $1/S$ (Gabaix 1999). This relationship was empirically tested in the Ethiopian context using Census data for the period between

1984 and 2014. This analysis showed that this mathematical relationship also holds in the Ethiopian context. In terms of variability across years, population size in cities like Nazret (Adama) and Mekele have grown rapidly, escalating their positions in the country's population ranking to become the second and third largest cities in Ethiopia, respectively.

Satellite Imagery Classification

World Bank calculations were based on remotely sensed data from the NASA Moderate Resolution Imaging Spectrodiometer (MODIS) at 500m spatial resolution (publicly available) and proprietary satellite image (2014 Digital Globe). The MODIS 500m data provide classified layers depicting global land cover following the International Geosphere-Biosphere Programme (IGBP) classification. This provides 16 land-cover classes based on spectral and temporal information, including built-up area (IGBP Type 1-Class 13). Ancillary satellite imagery (2014 Digital Globe) was classified using an image-based classification algorithm (Graesser et al. 2012). The total area of the urban footprint was calculated based on the classified -and geo-referenced- satellite imagery using ArGIS Map 9.3.

Land Use	**Classification**
Commercial	1
Industrial	2
Residential (Formal)	3
Residential (Informal)	4
Residential (Shantytown)	5
Roads	6
Vegetation	7
Barren	8
Water	9

Built-up Areas of Addis Ababa

World Bank calculations were based on satellite imagery classification (see above). The total area of the urban footprint was calculated in ArcMap 9.3, from classified and georeferenced satellite imagery from DigitalGloble (2014). In this instance, built-up areas included commercial, industrial, residential (formal and informal), and transport land use; they excluded vegetation, barren land, and water features. Distances were measured from the center of the city (roughly the National Palace) to the center of each cell in the satellite image.

Population Density Gradients

Calculations are based on satellite imagery classification (see above) and the 2007 Census and the 2014 Population Projections, both from the CSA. Total built-up area was estimated for each *woreda* using satellite imagery classification in ArcMap 9.3. The raster shapefile of built-up areas was aggregated into 200m x 200m cells (4 hectare (ha)) using the Generalize tool, and then converted to a points shapefile (1 point per 4 ha cell). Each point was assigned its respective *woreda* using the Spatial Join tool. Using the Near function, distances were measured from each point to the center of the city, and added to the points shapefile's attribute table.

To calculate densities, the total urban population of each *woreda* was divided uniformly by the number of points within that *woreda* (each representing 4 ha), i.e. total population of each point = total urban population of that cell's *woreda*/total built-up area in that *woreda*. And population density of each point = population of the point/4 ha. A table was created, listing

each *woreda* and its population density per point. The table was joined to the points shapefile of built-up area, using the Join function in ArcMap.

The resulting attribute table of points (Point ID, population density, and distance) was exported to Excel for further analysis. Distances were rounded down to the nearest kilometer, and then all distances and population densities were summarized using a PivotTable.

This analysis was limited to *woredas* within the formal administrative boundaries of Addis Ababa. Beyond these boundaries, urban populations and built-up areas did not account for a large percentage of their respective *woredas*, and would have skewed the analysis.

Land Allocated to Streets, Street Density, and Intersection Density

World Bank calculations were based on methodology from the UN HABITAT report, *The Relevance of Street Patterns and Public Space in Urban Areas* (2014). For 30 global cities, the report measured the percentage of land allocated to streets, the number of intersections per square kilometer, and street density (the total length of streets divided by the total land area). Street data are publicly available for download from OpenStreetMap (OSM). Two study boundaries were delimited for each city: the city core and the urban agglomeration "envelope," which contains the city proper, suburbs, and continuously settled commuter areas.[187] The urban agglomeration envelope is defined by UN HABITAT as a continuous settlement of 20 ha or more no more than 200 meters apart, with a minimum density to be considered a "built-up or densely populated area," and having a minimum functional dependence on the city proper (e.g. for employment and services).[188]

The same methodology was repeated for this report. For each of the cities, two study boundaries were outlined using satellite imagery from Google Earth (publicly available). The boundaries were exported as .kml files and imported into ArcMap 9.3 using a tool developed by Jason R. Parent at the University of Connecticut (publicly available).[189] Data from OSM were downloaded via Geofabrik (publicly available).[190]

In ArcMap, the street data were clipped to each urban boundary using the Clip tool and exported to new layers (one streets layer per boundary). Using the Measure tool in Google Earth, the author recorded average streets widths for each type of street within each boundary. Unpaved roads were omitted from the analysis. The spreadsheets of street widths were joined to their corresponding street shapefiles in ArcMap.

Land Allocated to Streets: In ArcMap, each street shapefile was buffered by half the street width (in both directions) and then dissolved to create a single large polygon. Land allocated to streets was calculated as the area of the streets polygon divided by the total study area.

Street Density: For each city in ArcMap, the paved roads were selected and exported to a separate layer. The author measured the total length of paved streets using the Calculate Geometry tool. Street density was calculated as the total length of paved streets divided by the total study area.

[187] UN HABITAT, *The Relevance of Street Patterns and Public Space in Urban Areas* (2014).
[188] UN HABITAT, *Urban Indicators Guidelines* (2004).
[189] Parent, Jason R., "KML to SHP Tool Overview," *University of Connecticut Center for Land Use Education and Research (CLEAR)*, http://clear.uconn.edu/%5C/tools/kml_to_shp/index.htm.
[190] "Ethiopia OpenstreetMap Data," *Geofabrik*, http://download.geofabrik.de/africa/ethiopia.html.

Intersection Density: Using the same shapefile of paved roads, the author used the Intersect tool in ArcMap to create a layer of points where each road intersected another. Intersection density was calculated as the total number of intersections divided by the total study area.

Infrastructure Cost per Urban Resident

As an example, assume that an average city of this population size has 20 kilometers of hardened (paved) road, or about 10 centimeters per urban resident, and assume a very rough estimate for the cost of procuring paved (or cobble-stoned) road at US$2 million per kilometer. If new residents were to contribute an average level of new road infrastructure (in order to extend the road network in peri-urban areas and prevent congestion on the radial access roads and in the city center), the cost for the required additional road infrastructure for each new resident would around equal US$200 per new resident.

This assumes that no congestion point is reached and that there is no diminishing marginal need for urban infrastructure as the urban population grows. If paved roads make up x percent of the urban infrastructure asset base, then the total infrastructure cost of a new resident would equal (100/x) * US$200. For the purpose of this exercise, paved roads are conservatively assumed to make up 50 percent of the municipal asset base of urban areas in Ethiopia, and therefore that the estimated urban infrastructure requirement for a new resident is US$400.

An alternative way of calculating the cost of new residents would be to take into account the cost of site preparation for land plots for new urban residents. Such costs can easily reach much higher, in the range of US$1,000–2,000 per new urban resident.

Vacant, Buildable Area in Addis Ababa

World Bank calculations were based on 2014 Digital Globe imagery (see *Satellite Imagery Classification* above). "Buildable area" is defined as vacant land, at least 4 ha in area, with an average slope that does not exceed the 99th percentile of all slopes in the currently built-up area.[191] In the case of Addis Ababa, the maximum slope for vacant, buildable land was 15 degrees. Slope data were calculated in ArcMap 9.3 using the Routine ASTER Digital Global Digital Elevation Model from the NASA LP DAAC and USGS. In ArcMap, the satellite imagery classification was generalized from 8 sq m x 8 sq m cells to 200 sq m by 200 sq m cells (4 ha) using the median classification value. Buildable land was identified as barren land or vegetation, at least 4 ha, with an average slope less than or equal to 15 degrees.

Challenges Associated with Analyzing Local Government Finances in Ethiopia

Conducting a comprehensive and proper fiscal analysis of local governments (*woredas* and ULGs) in Ethiopia is considerably complex and challenging. There is no consistent official data, or analysis on *woreda*, ULG or municipal finances conducted by the federal or state governments, just as MOFED only includes partial information on municipal finance in national consolidated accounts. Analyzing local government revenues and expenditures requires physically visiting local governments, because such data is not available either at the federal or at the regional government levels. Fiscal transfers from regional governments to

[191] Shlomo Angel et al., "Chapter IV: Measuring Urban Extent and Expansion," *The Dynamics of Global Urban Expansion* (2005).

local governments are not monitored or reported on at the federal level. Thus, MOFED does not have comprehensive and accurate data regarding the regional-to-local government transfers. At the regional government level, while some, such as Amhara and SNNP, track and report on transfers to local governments, other regional governments such as Oromia do not. In Oromia, and similar other regional governments, municipal revenues (revenue series 1700) and municipal expenditures (expenditure series 500) are managed completely separately from rest of revenue and expenditures (including the use of a different IBEX data base) and therefore are not included in the regional accounts or national accounts.

In addition to absence of local government revenue and expenditure data at the federal or regional level, at the local government level, expenditures are not consistently recorded as per the unified code of account structure of the Government of Ethiopia. While local governments respect the hierarchy at the high coding level (capital/recurrent/salaries), data at lower coding levels are not always consistently applied to allow for cross-local government comparison. Furthermore, for ULGDP cities, ULGDP expenditure data is captured through stand-alone reporting from the ULG to MUDHCo, and not through the ULG consolidated accounts.

For these reasons, a mission to visit the following local governments was fielded as part of the EUR: Bahir Dar, Adama, Hawassa, and Mekelle (ULGs), Durbete municipality within the rural *Woreda* of Achefer in the Amhara Regional State, and Addis Ababa (Chartered City). A much larger mission with a similar objective had been fielded to 12 ULGs in 2014, for the preparation of "Ethiopia Local Government Revenue Study, Part II: A Situational Analysis of Urban Local Governments in Ethiopia: The Institutional, Governance, and Fiscal Context of Local Governments" by the World Bank. The analysis presented in the EUR draws from this study, as well as the background paper on urban governance, as appropriate.

Annex 3: Detailed Methodology for Alternative Urbanization Projections Produced as Part of This Study

The Central Statistical Agency (CSA) recognizes that the growth of urban populations is attributed to three factors: natural growth, migration to existing urban centers and project sites (particularly industrial establishments such as sugar plantations and irrigation sites), and statistical growth of urban population due to upgrading of rural villages to towns and formal expansion of existing urban areas. Given the difficulty of projecting each of these components individually, the CSA employs the Urban–Rural Growth Differential (URGD) method to estimate their net effect. Also known as the United Nations Method, the URGD is defined as the growth rate of the ratio between urban and rural populations, equal to the difference between the urban population growth rate and the rural population growth rate.192

In projecting urban populations to 2037, the CSA has made separate assumptions regarding the URGD for each region of Ethiopia. It estimates the urban population to be 42.3 million people in 2037, or 31.1 percent of the total population. The CSA notes, however, that the assumptions about future URGD are explicitly arbitrary, "as there are no clear guidance or policy statements that would help quantify the likely change."[193]

Indeed, there are a couple of urbanization factors that have not been captured by these CSA projections that would account for faster urban population growth in the future and a higher percentage of urban population. These are:

1. **Migration to existing urban centers and new project sites.** According to the 2012 Inter-Censual Population Survey, migration information is only reported for interregional movement. Even though the urban population in the country is expected to increase due to migration from rural to urban areas, efforts were not made by the CSA to estimate rural–urban migration within regions, as MUDHCo has strong reservations that the URGD method would adequately account for this migration effect. In addition, the Ethiopian Government has plans to construct hydroelectric dams and mining centers, and establish a number of sugar plantations and factories in different parts of the country. Each of these megaproject sites will attract migrants to the new project sites that would engage in nonagricultural activities and lead to an increased urban population.
2. **Statistical growth of urban population due to upgrading of rural village to towns and expansion of existing urban centers.** According to the Development Plan of Action for Ethiopia, there are and will be tremendous efforts to upgrade rural villages into urban centers in each of the regions. Rural villages are upgraded into towns based on criteria established by regional Bureaus of Urban Development and Construction, including: (i) over half of the population are engaged in nonfarming activities such as petty trading, service provision, and the like; (ii) most of the residents in the area are benefiting from urban-based facilities like electricity, pipe water supply, telephone,

[192] For example, in the Afar region from 1994 to 2007, the urban population growth rate was 6.62 percent per year, and the rural population growth rate was 1.69 percent per year. Therefore the URGD for Afar over this period was 4.93 percent per year, meaning the urban population grew faster than the rural population by 4.93 percentage points per year.
[193] CSA, *Population Projections for Ethiopia 2007–2037* (2013), 26-27.

school, and health services; (iii) total population living in that particular location numbers 2,000 people and above; and (iv) the area is believed to have potential for economic growth and attraction of migrants to engage in nonfarm activities. These newly designated urban centers are not captured by CSA projections, but they will increase the urban population of the country. In addition, there is evidence that large cities such as Addis Ababa, regional capitals, and other town administrations have plans to formally expand their urban boundaries and incorporate nearby settlements. These expropriated areas would be reclassified as "urban," and their populations would contribute to the total urban population.

As a result, this study constructs a more detailed projection for the urban population, disaggregated by each of the four urbanization drivers: natural increase, migration, new town formation, and urban expansion. The calculations and assumptions for this projection are outlined below.

Natural Increase

Prior to periods of demographic transition, mortality in cities tended to be high and, as a result, migration was the only major factor of urban population growth. Currently in many African countries mortality is lower than fertility, such that urban population increases organically.[194] This projection uses the same assumptions as the CSA for natural increase, based on fertility and mortality rates obtained from the Ethiopian demographic and health surveys conducted in 2005 and 2011. For this projection, natural increase is expressed as a *rate of natural increase* in percentage points.

Migration

Rural–urban migration can arise from "push" factors (e.g. high fertility combined with fewer jobs in rural areas) or "pull" factors (e.g. employment opportunities or improved access to services in urban areas).

In this projection for the period 2007 to 2014, rural–urban migration rates were estimated based on the 2012 Inter-Censal Population Survey by the CSA. In each region, the *total number of out-migrants* from urban centers was subtracted from the *total number of in-migrants* to urban centers, and then divided by the *projected mid-year population of all urban centers* in that region. The migration rate is expressed as *net in-migrants per 1,000 residents*.

For the years after 2014, it was assumed that the migration rate would change with employment growth. According to data from the Ministry of Industry, around 204,000 jobs were created in the manufacturing sector in 2012.[195] Using data from the 2012 Large and Medium Scale Manufacturing and Electrical Industries Survey (LMMIS), as well as government plans to transform the economy, the Ministry of Industry projects that national job creation will increase as follows:

[194] Canning, Raja, and Yazbeck, 2014.
[195] Particularly in the textile, metal, food, beverage, pharmaceuticals, meat and dairy, leather and leather products, and chemical sectors.

Table A3.1: National Job Creation Projections

Year	Jobs Created	Annual Growth Rate (%)
2012	204,000	--
2015	236,000	5.36
2020	377,000	12.0
2025	780,000	18.29

According to the 2013 Labor Force Survey, one-third of migrants to urban areas had moved in search of employment opportunities. Therefore the migration rate for each region in 2008–14 was disaggregated into *migration due to employment growth* (33 percent of the net in-migration rate) and *migration due to other factors* (67 percent). For the years 2013–30, *migration due to employment* was increased at the same rate as job creation, while *migration due to other factors* was held constant.

Table A3.2: Past and Projected Rural-to-Urban Migration Rate by Region (per 1,000 urban residents)

Region	2008–14	2015–20	2021–25	2026–30
AA	9.0	9.2	9.4	9.6
Afar	20.2	20.6	21.0	21.5
Amhara	20.7	21.1	21.5	22.0
BG	28.0	28.5	29.1	29.8
Dire Dawa	29.2	29.7	30.4	31.0
Gambella	33.3	33.9	34.6	35.4
Harari	21.1	21.5	22.0	22.4
Oromia	25.1	25.5	26.1	26.7
SNNP	19.9	20.3	20.7	21.1
Somali	(4.6)	0.0	0.0	0.0
Tigray	17.2	17.5	17.9	18.3

Development projects induced migration: Migration to urban areas of Ethiopia is also affected by the job opportunities created by megaprojects near resource centers. These projects have a capacity to attract workers and their families, and to develop from settlements to urban centers. This projection focused on sugar plantations and irrigation projects, which tend to generate substantial employment after construction. Data on planned projects was obtained from the Ethiopian Sugar Corporation and the Ministries of Water, Energy, and Irrigation (see tables A3.3 and A3.4 below).

The Planning and Monitoring and Evaluation Department of the Ethiopian Sugar Corporation provided rates of job formation per project. In the case of sugar plantations, it was assumed that one job would be generated per 2.5 hectares of project land. Furthermore, each new job would result in 3.7 new residents in total (the average household size in 2012), and all of the new residents would live in urban areas. In the case of irrigation projects, it was assumed that one job would be generated per 0.5 hectare of project land. Each job would result in 3.7 new residents in total, but only half would live in urban areas. This assumption is based on the fact that the agglomeration of the population residing in such irrigation areas does not only comprise those who directly engage in farming activities but also those who engage in

provision of technical support as well as business transactions. About half of the population living in irrigation sites in Ghana (Drechsel and Keraita 2014) and the Central Oregon area located within the upper basin of United States (Aylward 2006) are urban residents.

For both types of projects, it was assumed that 70 percent of jobs (and urban residents) would be generated in the first year of the project, and the remaining 30 percent would be realized in the second year. Although project data were not available beyond 2020, the Ministry of Water and Irrigation estimates that irrigation project sites will increase by 50,000 hectares per year during this period. For the projection, this land area was allocated across the regions according to their total share of planned projects.

Table A3.3: Project Land and Additional Urban Residents for Sugar Plantations

Land Added (ha)	2013	2014	2015	2016	2017	2018	2019	2020	2021
Tigray					25,000	25,000			
Afar		25,000	45,000						
Amhara		50,000						25,000	
Oromia	20,500	16,000	20,000						
SNNP			25,000	50,000				100,000	

Residents Added	2013	2014	2015	2016	2017	2018	2019	2020	2021
Tigray					25,900	37,000	11,100		
Afar		25,900	57,720	19,980					
Amhara		51,800	22,200					25,900	11,100
Oromia	21,238	25,678	27,824	8,880					
SNNP			25,900	62,900	22,200			103,600	44,400

Table A3.4: Project Land and Additional Urban Residents for Irrigation Projects

Project Land Size	2014	2015	2016	2017	2018	2019	2020	2021	2022–30	Factor (%)
Afar		11,084						5,702	5,702	11.4
Amhara	14,000	5,000	13,000	4,040				18,540	18,540	37.1
Oromia		13,613					19,745	17,160	17,160	34.3
BG							10,000	5,144	5,144	10.3
SNNP		6,713						3,453	3,453	6.9

Urban Residents Added	2014	2015	2016	2017	2018	2019	2020	2021	2022–30
Afar		28,708	12,303					14,768	21,097
Amhara	36,260	28,490	39,220	24,894	4,484			48,019	68,598
Oromia		35,258	15,110				51,140	66,362	63,493
BG							25,900	24,424	19,034
SNNP		17,387	7,451					8,944	12,777

Statistical Growth of the Urban Population

The population living in urban Ethiopia is also increasing due to upgrading of rural villages into towns and areal expansion of existing cities and towns.

Upgrading of rural villages into towns: Each year some rural settlements are reclassified as "urban," when they meet criteria outlined by regional governments. The Ministry of Urban Development, Housing and Construction provided data on new town creation by region from 2007 to 2014 (Table A3.5). In the four large regions (Tigray, Amhara, Oromia, SNNP) MUCHCo assumed that new town creation would continue at half the current rate. In Afar, Somali, and Gambella, no new towns were designated between 2007 and 2014; however, MUDHCo assumed that these regions would follow the same trend as Benishangul as they are all pastoral areas.

Each of the new towns created in 2007–14 had populations under 5,000. Therefore in each region the population of newly created towns was assumed to be the average population (in 2014) of all existing towns under 5,000 people in that region.

Table A3.5: Annual New Town Formation, by Region (2008-2030)

Region	2008–14	2015–30	Estimated Population
Afar	0	1	1,689
Amhara	22	11	2,911
BG	1	1	2,431
Gambella	0	1	1,948
Oromia	29	15	2,901
SNNP	16	8	2,256
Somali	0	1	2,758
Tigray	5	3	3,371

Boundary expansion of existing urban areas: In Ethiopia, the urban population increases as cities expand their administrative boundaries and rural residents are reclassified as urban residents. To account for this factor of urbanization, the urbanization projection assumed that a city's territory expands at the same rate as its total population growth. For example, if a city's population increases by 3 percent in a year, this projection assumes that its territory will expand by 3 percent as well. This methodology is based on the New York University's urban expansion research initiative in Ethiopia.[196]

Land areas were available for 23 cities in six regions. *Expandable area* was defined as the average city area multiplied by the region's average annual urban population growth. *Population increase from urban expansion* was assumed to be equal to the *expandable area* multiplied by the region's *rural population density*. For example, in Amhara, the average city was 74.9 square kilometers, and its population grew by 3.2 percent from 1994 to 2007. It is assumed that the territory expanded by the same rate, or 2.4 hectares per year. Based on the region's rural density, this would be equivalent to 287 additional urban residents per year per city.

[196] See http://urbanizationproject.org/.

Table A3.6: Urban Expansion Factor by City and Region

	Area (km^2)	1994 Population	2007 Population	Annual Rate (%)	Expandable Area	Regional Density	Population Increase Due to Expansion
Amhara Region	**74.9**	**440,934**	**668,662**	**3.2**	**2.4**	**119.8**	**287**
Bahir Dar	110.0	96,140	155,428				
Debre Birhan	53.9	38,717	65,231				
Debre Markos	51.7	49,297	62,197				
Dese	63.0	97,314	120,095				
Gondar	122.2	120,000	207,044				
Kombolcha	48.5	39,466	58,667				
Dire Dawa	**137.7**	**173,178**	**233,224**	**2.3**	**3.2**	**241.9**	**763**
Harar	**82.2**	**76,378**	**99,368**	**2.0**	**1.7**	**613.9**	**1,021**
Oromia Region	**85.6**	**436,810**	**684,042**	**3.5**	**3.0**	**106.8**	**315**
Adama	130.0	127,842	220,212				
Asela	55.6	47,391	67,269				
Bishoftu	82.6	73,372	99,928				
Jima	100.2	88,867	120,960				
Nekemet	62.2	47,258	75,219				
Shashemene	83.1	52,080	100,454				
SNNP Region	**68.5**	**210,911**	**434,070**	**5.6**	**3.8**	**159.1**	**605**
Arba Minch	61.9	40,020	74,879				
Dilla	48.9	33,734	56,007				
Hawassa	111.0	69,169	157,139				
Hosaena	57.9	31,701	69,995				
Sodo	62.9	36,287	76,050				
Tigray Region	**78.9**	**186,772**	**365,513**	**5.2**	**4.1**	**116**	**473**
Adigrat	47.6	37,417	57,588				
Axum	37.0	27,148	44,647				
Mekele	192.0	96,938	215,994				
Shire	39.2	25,269	47,284				

The population increase due to urban expansion was not applied uniformly to all towns in a region. For those with populations between 50,000 and 100,000, the increase was divided by half; for those with populations between 20,000 and 50,000, the rate was divided by one-fourth. Finally, the regional increase due to urban expansion was converted to a percentage: increased urban population from expansion, divided by the urban population of the region in 2007. In the population projection, this percentage increase is held constant for each region through 2030.

Table A3.7: Population Increase due to Urban Expansion, by Region

Region	100,000+ Towns	50,000–100,000 Towns	20,000–50,000 Towns	Average Pop Increase	Total Increase	Urban Pop	Increase (%)
Tigray	1	4	7	473	2,247	844,040	0.27
Afar			3	287	215	185,135	0.12
Amhara	3	5	18	287	2,870	2,112,595	0.14
Oromia	4	7	28	315	4,568	3,317,460	0.14
Somali	1	1	3	287	646	623,004	0.10
BG			1	287	72	105,926	0.07
SNNP	3	2	15	605	4,689	1,495,557	0.31
Gambella		1		287	144	77,925	0.18
Harar	1			1021	1,021	99,368	1.03
Dire Dawa	1			763	763	233,224	0.33

Urban Population Projections

According to the CSA, the urban population of Ethiopia was 11,833,785 in 2007. Based on the authors' projections, it is estimated that Ethiopia's urbanization rate will reach 30 percent by 2027, and its urban population will triple to nearly 36 million by 2028. The tables and figures below summarize the factors behind these projections.

Table A3.8: Population Increase due to Various Components of Urban Population Growth in Ethiopia, 2008–37

	Actual Growth				Statistical Growth		Total	
	Natural Increase	Rural-Urban Migration	Migration to Sugar Factories	Migration to Irrigation Projects	Upgrading of Rural Villages to Towns	Expansion of Urban Areas	Urban Population Increase	Total Urban Population
2007								11,833,785
2008	266,033	211,492	0	0	203,553	17,233	698,312	12,532,097
2009	282,896	225,938	0	0	203,553	18,417	730,803	13,262,900
2010	300,563	241,091	0	0	203,553	19,659	764,866	14,027,766
2011	319,075	256,989	0	0	203,553	20,960	800,577	14,828,343
2012	338,473	273,667	0	0	203,553	22,325	838,018	15,666,361
2013	337,682	291,165	21,238	0	203,553	23,756	877,395	16,543,756
2014	357,355	309,529	103,378	36,260	203,553	25,242	1,035,317	17,579,073
2015	380,323	340,301	133,644	109,842	112,523	26,953	1,103,585	18,682,658
2016	404,955	363,784	91,760	74,085	112,523	28,798	1,075,905	19,758,563
2017	429,061	386,569	48,100	24,894	112,523	30,682	1,031,828	20,790,391
2018	407,579	408,326	37,000	4,484	112,523	32,482	1,002,395	21,792,786
2019	427,809	429,542	11,100	0	112,523	34,237	1,015,210	22,807,997
2020	448,373	451,167	129,500	77,040	112,523	35,994	1,254,596	24,062,593
2021	474,145	488,625	55,500	162,517	112,523	38,250	1,331,560	25,394,153
2022	501,292	518,151	0	185,000	112,523	40,551	1,357,518	26,751,671
2023	471,883	548,302	0	185,000	112,523	42,843	1,360,551	28,112,222
2024	496,582	578,659	0	185,000	112,523	45,152	1,417,916	29,530,138
2025	522,341	610,344	0	185,000	112,523	47,563	1,477,772	31,007,909
2026	549,208	657,755	0	185,000	112,523	50,079	1,554,565	32,562,475
2027	577,490	693,391	0	185,000	112,523	52,729	1,621,134	34,183,609
2028	540,076	730,610	0	185,000	112,523	55,497	1,623,707	35,807,316
2029	566,468	768,030	0	185,000	112,523	58,279	1,690,301	37,497,616
2030	593,962	807,039	0	185,000	112,523	61,179	1,759,703	39,257,319
2031	622,602	847,707	0	185,000	112,523	64,202	1,832,034	41,089,353
2032	652,440	890,104	0	185,000	112,523	67,353	1,907,420	42,996,773
2033	683,526	934,306	0	185,000	112,523	70,637	1,985,992	44,982,765
2034	715,912	980,390	0	185,000	112,523	74,061	2,067,886	47,050,651
2035	749,656	1,028,438	0	185,000	112,523	77,629	2,153,247	49,203,898
2036	784,815	1,078,534	0	185,000	112,523	81,350	2,242,222	51,446,120
2037	821,449	1,130,767	0	185,000	112,523	85,228	2,334,967	53,781,087

Table A3.9: Distribution of Population Increase due to Various Components of Urban Population Growth in Ethiopia, 2008–37

	Actual Growth				Statistical Growth	
	Natural Increase	Rural-Urban Migration	Migration to Sugar Factories	Migration to Irrigation Projects	Upgrading of Rural Villages to Towns	Expansion of Urban Areas
2008	38%	30%			29%	2%
2009	39%	31%			28%	3%
2010	39%	32%			27%	3%
2011	40%	32%			25%	3%
2012	40%	33%			24%	3%
2013	38%	33%	2%		23%	3%
2014	35%	30%	10%	4%	20%	2%
2015	34%	31%	12%	10%	10%	2%
2016	38%	34%	9%	7%	10%	3%
2017	42%	37%	5%	2%	11%	3%
2018	41%	41%	4%	0%	11%	3%
2019	42%	42%	1%		11%	3%
2020	36%	36%	10%	6%	9%	3%
2021	36%	37%	4%	12%	8%	3%
2022	37%	38%		14%	8%	3%
2023	35%	40%		14%	8%	3%
2024	35%	41%		13%	8%	3%
2025	35%	41%		13%	8%	3%
2026	35%	42%		12%	7%	3%
2027	36%	43%		11%	7%	3%
2028	33%	45%		11%	7%	3%
2029	34%	45%		11%	7%	3%
2030	34%	46%		11%	6%	3%
2031	34%	46%		10%	6%	4%
2032	34%	47%		10%	6%	4%
2033	34%	47%		9%	6%	4%
2034	35%	47%		9%	5%	4%
2035	35%	48%		9%	5%	4%
2036	35%	48%		8%	5%	4%
2037	35%	48%		8%	5%	4%

Figure A3.1: Decomposition of factors contributing to urban growth in Ethiopia, 2008–37

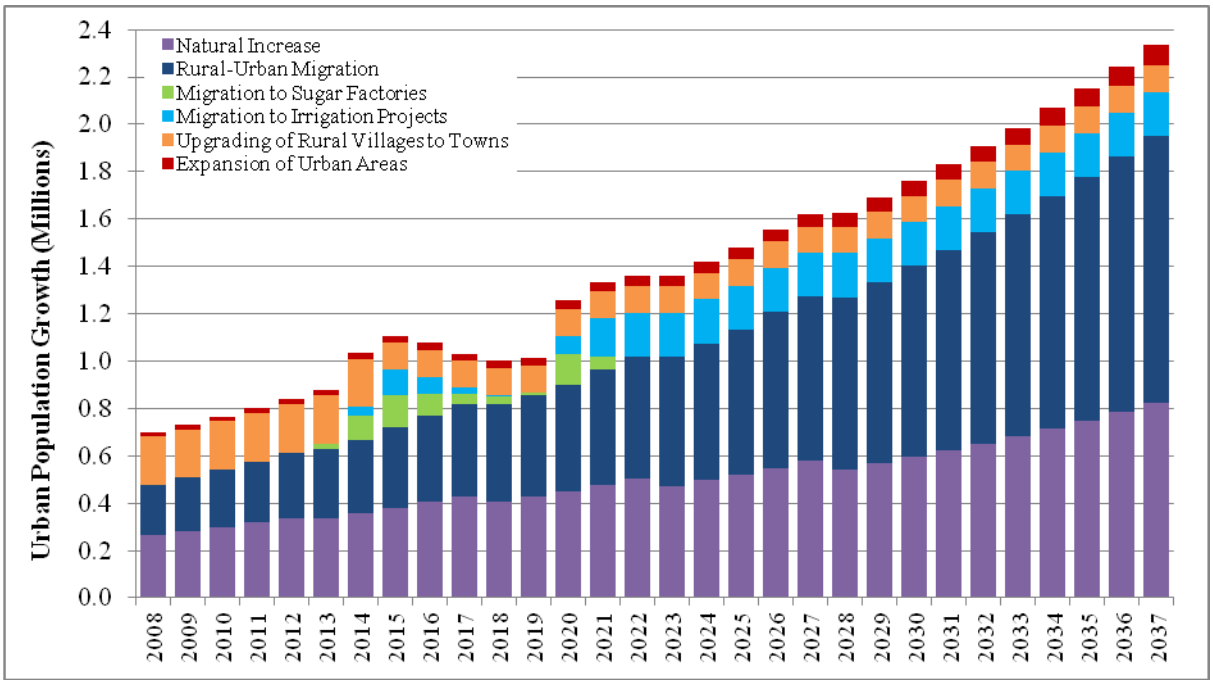
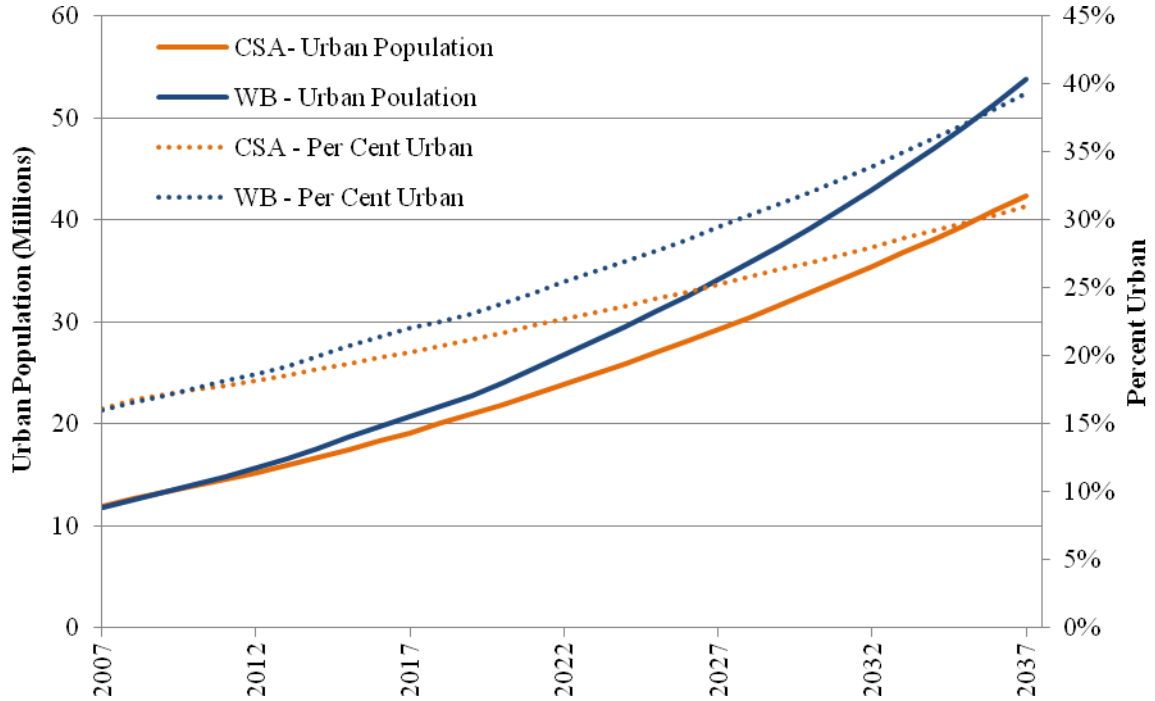


Table A3.10: Urban Population Increase by Urbanization Factor (National)

Urbanization Factor	2007	2012	2017	2022	2027	2032	2037
Natural Increase		338,473	429,061	501,292	577,490	652,440	821,449
Rural-to-Urban Migration		273,667	386,569	518,151	693,391	890,104	1,130,767
New Town Formation		203,553	112,523	112,523	112,523	112,523	112,523
Migration to Sugar Plantations			48,100				
Migration to Irrigation Projects			24,894	185,000	185,000	185,000	185,000
Expansion of Urban Areas		22,325	30,682	40,551	52,729	67,353	85,228
Urban Population Increase		**838,018**	**1,031,828**	**1,357,518**	**1,621,134**	**1,907,420**	**2,334,967**
Urban Population	**11,833,785**	**15,666,361**	**20,790,391**	**26,751,671**	**34,183,609**	**42,996,773**	**53,781,087**
National Population*	73,845,000	83,742,000	94,352,000	105,166,000	115,946,000	126,514,000	136,792,000
Percent Urban	**16.0%**	**18.7%**	**22.0%**	**25.4%**	**29.5%**	**34.0%**	**39.3%**
Urbanization Growth Rate		**5.6%**	**5.6%**	**5.4%**	**5.3%**	**5.2%**	**5.0%**

* From the CSA.

Figure A3.2: Comparison of Urbanization Projections for Ethiopia

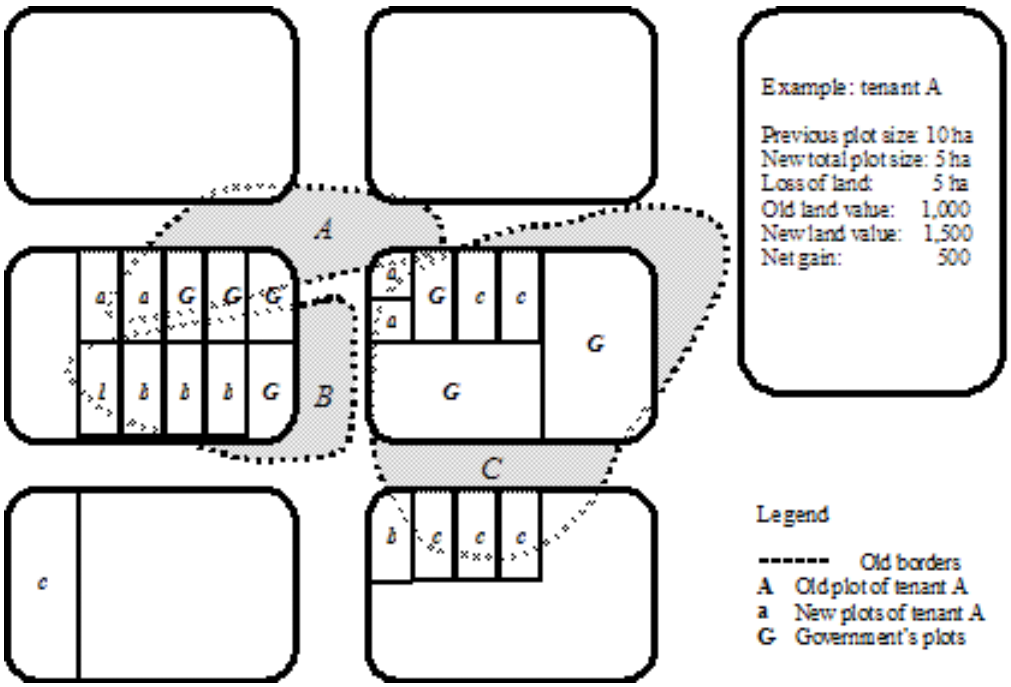


Annex 4: International Experiences on Land Readjustment

When a local government wants to expand a city by building infrastructure in formerly rural areas, or wants to redevelop areas within the city, it generally has to acquire land through expropriation and compensation, which is often expensive and contentious. The original landholders are usually displaced and do not benefit from the project improvements. Land readjustment (LR) is seen as a more efficient and inclusive instrument for orderly rural-to-urban conversion or urban redevelopment, still led by the government but with the engagement of local land holders.

In an LR project, the land to be developed is reparceled in a pattern appropriate for development, with some percentage of the land dedicated for streets and other public use, and infrastructure is built. The new, reshaped parcels are returned to the original landholders; while these parcels are smaller than before, their land value has usually increased due to the infrastructure and the fact that they can now be legally developed. LR is applicable to land that is either privately owned or held under leases or other partial rights, as long as they are protected by law and transferable. In some cases, the government also sets aside some land for public auction and uses the proceeds to recover the infrastructure cost.

Figure A4.1: Land readjustment



In this way, the original landowners, the government, and the city as a whole all benefit from the project. For example, in 103 LR-type projects in Ahmedabad, India, 31.5 percent of land

on average was taken—23.7 percent for public use and 7.8 percent for auction.[197] All landowners lose the same proportion of their land (e.g. if the total amount of land taken for public purposes is 30 percent, each landowner's new parcel will be 30 percent smaller than their original parcel), except in cases where the original parcels are very small.

LR has been used in Germany since 1902, Japan since 1919, and in Hong Kong SAR, China; India; Israel; Republic of Korea; Taiwan, China; and some cities in Australia and Canada. For example, in Japan, almost 30 percent of urban areas went through LR by 2003, with 11,400 projects covering about 3,683 sq km.[198]

Use of LR techniques needs special legislation which frames the LR process and defines a number of parameters, in particular: (i) the conditions under which dissenting landholders can be forced to either participate or sell their land rights to the LR entity; (ii) the degree to which consensus of landholders is needed to implement the project (e.g. in Japan, holders of at least 66 percent of the land should agree to participate; in Taiwan, China the consent requirement is 50 percent; in Germany and Israel, an LR project can take place without such consent, though opposing landholders still can go to court);[199] (iii) an upper limit of a portion of land that can be taken for public use or auction to recapture the cost.

Many details of LR vary by country, but a general framework includes the following key elements.

Project Initiation

An LR project can be initiated by a public entity like a local government (Japan), a government corporation, or a private entity (e.g. individuals, landholders associations). This stage usually includes defining precisely the boundaries of the area to include in the LR, establishing an initiative group, and preliminarily mapping of all existing parcels. An entity to carry out a project is established/registered, at least tentatively.

Developing Community Support

The initiating group or entity develops a preliminary territorial development plan and a preliminary financial feasibility study, to be used in public hearings and negotiations with landholders to encourage them to participate. In good practices, this is done even in countries where the law does not require obtaining the consent of landholders. Further, in good practices, landholders participate, together with the planning authority, in planning of the final layout of reparceled land and its use; they also collectively negotiate the compensation price with those landholders who want to sell their land rights. An LR project is only considered acceptable if it can secure that the market value of parcels obtained by holders after LR is not less than the value of their initial parcels. Therefore, market demand for land, land use and permitted density are critical for creating sufficient value.

[197] Sanyal Bishwapriya and Chandan Deuskar, *A Better Way to Grow? Town Planning Schemes as a Hybrid Land Readjustment Process in Ahmedabad, India*, (2011).
[198] André Sorensen, *Consensus, Persuasion, and Opposition: Organizing Land Readjustment in Japan* (2007).
[199] Yu-Hung Hong, *Assembling Land for Urban Development: Issues and Opportunities* (2007).

Land Resubdivision and Servicing

After the final land layout and reparceling is agreed with landholders, public infrastructure is built on the designated land. The cost of infrastructure is usually covered by one of two sources: (i) direct public subsidy, especially for arterial roads and water mains; or (ii) auctioning off some parcels specially reserved for this purpose. Some land for continuing agriculture also can be preserved.

Land Reallocation

After local infrastructure is built, landholders receive back their new parcels, of smaller size but with the same or higher value. They can build on them or sell their rights at full market value. Thus, instead of expropriating land and paying compensation, government instigates property exchanges, and enables landholders to partake in land development and enjoy financial gains generated by the project.

However, success of LR projects is not guaranteed. For example, it is estimated that in Japan only one third of initially suggested LR projects materialized. Some preconditions of success include: (i) a proper legal framework; (ii) organizational capacity to prepare and implement LR, including presence of people at local governments or the private sector who are capable of leading on project implementation; (iii) cooperative actions with the affected community and strong informal relations there; (iv) clear market demand for reparceled plots, so that they can be sold by the implementing entity and landholders; and (v) flexible attitude of planners permitting higher density of land use, to support land value that can make a project financially viable.

A Note of Caution

In Ethiopia, LR is not a panacea, and what it can deliver should not be overestimated. In addition to a proper legislation and implementation capacity, the following is critical:

- LR can be successful only in locations with effective demand for land, so selection of locations for LR should be based on demand signals and not just master plans.
- Permitted density should be increased or deregulated very substantially, and construction standards reduced (at least for one-floor buildings) to make land and final real estate more affordable.
- LR projects can take a long time to implement, and this time can impose hardship on landholders: their old occupations (agriculture) may already be disrupted, while revenues from land development have not materialized yet. Therefore, old factual use of land, except that needed for roads, should be preserved as long as possible, even when land is already reparceled for reallocation.
- Given wide proliferation of informal settlements on urban fringes in Ethiopia, LR will take place, most probably, on areas with some informal development. It is important to integrate this development into LR instead of demolishing it, especially because these developments are an important channel of cheap rental housing for new migrants.[200]
- In cases where an LR project is carried out on land under active agricultural use, it implies that landholders will change their sources of livelihood and find occupations

[200] Alain Bertaud, *Land Markets, Government Interventions, and Housing Affordability* (2010).

different from their rural ones (as it would with expropriation). This is a major economic issue that goes beyond land conversion and needs to be addressed. As a safety net, a possibility of obtaining replacement agricultural land and compensation for house and relocation can be an important option to provide to those on an LR territory who wants to continue farming instead of becoming urban dwellers.

Annex 5: Common Forms of Allocating Government Land and Property for Private Uses

The table below reviews *main* forms of land allocation tested internationally and presents their key strong and weak features, along with situations when using each form can be advisable.[201]

Allocation Form	Pros	Cons	When to use
Direct (non-competitive) allocations			
1a. **Direct allocation** at below-market, below cost-recovery prices	• May reduce the cost of production/service in case of production/service land • Reduces the cost of housing if land recipients live on this land	• Requires public subsidy, which often goes not to the most needy • Often allows land recipients to capture, formally or informally, windfalls from the difference between the low price they pay and high market price of land / property • Stimulates land over-consumption • Distorts land use efficiency • Prone to corruption	Use only selectively (for narrowly-targeted recipients), in special cases based on a well-articulated policy and (e.g. a local employment zone for small / medium enterprises), in a transparent manner, and used on a limited spatial and time scale only. If used, this form should be combined with use of other forms of allocation (i.e. auctions) in the same area (like a city block), in order to increase cost recovery, land use efficiency, and public revenues

[201] A very important assumption in this table is that the market value of land (and hence the market prices) is higher than the costs of land acquisition and infrastructure provision. If this is not true, and the costs are higher than market prices, supply of such land is not economically sustainable, and the whole scheme needs to be re-examined, to see whether land value can be increased while the costs reduced. A main avenue for rebalancing the value and the cost includes choosing desirable locations iOn of

1b. Direct allocation at below-market, but above infrastructure-cost-recovery prices	• May reduce the public cost of production/service in case of production/ service land, moreso than direct allocation below market and cost-recovery prices (#1b). • Reduces the cost of housing if land recipients live on this land, but to a lesser extent than direct allocation, below market and cost-recovery prices (#1b)	• Public budgets under-collect revenues compared to cases of market price allocation • Often allows land recipients to capture, formally or informally, windfalls resulting from the difference between the price they pay and higher market price, but on a smaller scale then direct allocation, below market, below cost-recovery (# 1a) • Stimulates land over-consumption • Distorts land use efficiency • Prone to corruption	Use only selectively (for narrowly-targeted recipients), in special cases based on a well-articulated policy (e.g. a local employment zone for small / medium enterprises), in a transparent manner, and used on a limited spatial and time scale only. If used, this form should be combined with use of other forms of allocation (i.e. auctions) in the same area (like a city block), in order to increase land use efficiency and public revenues
1c. Direct allocation at market prices			Not suitable for countries with emerging markets
Competitive allocations			
2a. **Lottery** at below-market, below cost-recovery prices	• May reduce the cost of production / service in case of production / service land • Reduces the cost of housing if land recipients live on this land • Presumably is less prone to corruption than direct allocation	• Requires public subsidy, which often does not go to the most needy • Often allows land recipients to capture, formally or informally, windfalls from the difference between the price they pay and higher market price of land / property • Stimulates land over-consumption • Distorts land use efficiency • Makes waiting time unpredictable and can be perceived as unfair when winners were in a waitlist for a shorter time than losers	Use only selectively (for narrowly-targeted recipients), in special cases based on a well-articulated policy (e.g. allocation of small plots to low-income families), in a transparent manner, and used on a limited spatial and time scale only. Whether to use direct allocation or lottery depends on local traditions and circumstances If the lottery is used, it should be combined with use of other forms of allocation (i.e. auctions) in the same area (like a city block), in order to increase cost recovery, land use efficiency, and public revenues

2b. Lottery at below-market, but above cost-recovery prices	• May reduce the public cost of production/service in the case of production/ service land, moreso than lottery at below market, below cost-recovery (#2a). • Reduces the cost of housing if land recipients live on this land, but to a lesser extent than lottery at below market, below cost-recovery (#2a) • Presumably is less prone to corruption than direct allocation	• Public budgets under-collect revenues compared to cases of allocating at market prices • Often allows land recipients to capture, formally or informally, windfalls resulting from the difference between the price they pay and higher market price, but on a smaller scale than in # 2a • Stimulates land over-consumption • Distorts land use efficiency • Makes waiting time unpredictable and can be perceived as unfair when winners were in a waitlist for a shorter time than losers	Use only selectively (for narrow targeted recipients), in special cases based on a well-articulated policy (e.g. allocation of small plots to low-income families), in a transparent manner, and used on a limited spatial and time scale only. Whether to use direct allocation or lottery depends on local traditions and circumstances. If lottery is used, this form should be combined with use of other forms of allocation (i.e. auctions) in the same area (like a city block), in order to increase land use efficiency and public revenues
2c. Lottery at market prices			Usually not practiced
3. **Auctions:** by definition, this is a form of competitive allocation in which a winner is selected based on a single criterion – the highest price offered. The most common forms of auctions include: (i) bids submitted in sealed envelopes, (ii) verbal auctions, and (iii) on-line auctions. Forms (i) and (ii) can substitute one for another, and which one is used in practice is sometimes defined by tradition. However, experiences of post-socialist countries indicate that the sealed bid form of an auction is apparently more prone to corruption and abuse by government, unless rules of a procedure explicitly establish that the envelopes can be submitted in public, immediately before all envelopes are opened. The main advantage of on-line auctions is that they broaden geographic outreach to buyers and extend auction's duration, compared to the traditional forms (i) and (ii). As a result, on-line auctions can produce sale prices substantially higher than achievable at regular auctions. However, on-line auctions are more expensive and require special on-line infrastructure, so they are not recommended until the more traditional forms are tested and perfected.			
3a. Auction (of any of the above types) with a starting price below the cost-recovery level			Not recommended as a general practice, because it may result in allocating land below the cost to government, without a reasonable justification

3b. Auction (of any of the above types) with a starting price above the cost-recovery level	• The best form of land allocation from the public finance viewpoint: it allows capturing the market value of government land and use revenues for public investment • Stimulates prudent and efficient land uses by those who acquired land rights • Reduces opportunities for corruption (if auctions are well governed and conducted)	• Adds to the cost of real estate or other production on this land	Use for all well-located sites for any real estate (commercial, residential) which will be rented or sold on the market and in order to satisfy effective demand from the private sector Combine with other forms (e.g. lottery) on newly developed or redeveloped land, to improve cost recovery
4. Requests for Proposals (RFP) where winners are selected by more than one criteria (e.g. (i) price offered for land and (ii) bidder's reputation and past experiences)	• A more flexible form than auctions, as it allows incorporating various objectives, not only the price offered. For example, in addition to the price for land, a RFP may ask bidders to give the government a certain number of apartments for allocating to low-income people	• Requires a complex procurement process and advanced capacity of procurement personnel • More costly and more time required to implement than auctions • Prone to manipulation and corruption	Use in special circumstances only, not as a massive-use instrument Use only when procurement personnel is trained and practiced on simpler forms like auctions

Annex 6: Notes on Data, and Links to Other Studies

Notes on data

This report uses the best data available to describe the observed trends as precisely as possible (Annex 1). However, as is the case in many countries, particularly in developing country environments, there are data limitations in Ethiopia, which means that some estimates, projections, and figures might be discounted or overestimated. Where these limitations are evident, they have been acknowledged in the report. Calculations in this study should, therefore, be interpreted more as indications of overall trends rather than precise figures. Additionally, although this report relies on primary data from official sources—mainly the Central Statistics Agency of Ethiopia—for most of the analysis, complementary data were used in cases where disaggregated information were unavailable. For instance, nighttime lights data were used as a proxy to measure economic activity in cities because data on gross domestic product growth at the subnational level was not available. Given the caveats and limitations of using nighttime lights data for measuring economic activity,[202] these data have been used in a limited way to supplement other more traditional data and as such the report's main messages do not derive from this data source.

Where possible, the analysis incorporates relevant legislation and policies. However, certain important documents were unavailable to the study team because of confidentiality or other reasons. The report is therefore not a comprehensive review of all existing legislation and policies in Ethiopia, but based on the best available information at the time of publication.

Links to other studies

The *State of Ethiopian Cities Report*, expected to be completed by the end of September 2015, is funded by Cities Alliance, managed by World Bank, and implemented by Ethiopian Civil Service University with support and guidance from the Ministry of Urban Development, Housing and Construction. Complementary to the Urbanization Review that describes the observed urbanization trends in Ethiopia through rigorous analysis, the *State of Ethiopian Cities Report* provides baseline data for 23 cities and attempts to explain urban trends by analyzing the state of urban affairs from the bottom up. For the federal and regional government, the study aims to serve as a source of baseline information on the current realities of the urban sector, which can help inform urban development policy. For cities themselves, the data will help serve as the basis for identifying and prioritizing key urban development issues, creating local development strategies, and generating benchmarking and horizontal learning among urban centers.

The *Ethiopia Urban Expansion Initiative*, launched at New York University (NYU) in 2012, is part of an action program for rapidly growing cities to make realistic and tangible

[202] Some of these limitations respond to the nature of the data collection process. For instance, since these images are taken at night, areas that rely more heavily on electricity (presumably urban areas) are more likely to be "sampled." Similarly, the contribution of agricultural activities to economic activity might be underestimated if the productive land is only used during day time.

preparations ahead of inevitable urban expansion. The action plan for Ethiopia consists of four initiatives: (i) preparing realistic maps of lands to be converted to urban use in the next 30 years; (ii) compelling federal and regional authorities to create a single municipal jurisdiction to execute plans for the entire area of expansion; (iii) delineating a 30-meter wide arterial road grid, and transferring the rights-of-way for roads to the municipality; and (iv) identifying a hierarchy of public open spaces throughout the expansion area, and transferring land rights to the municipality. An interim report was published in August 2013 on four cities—Adama, Hawassa, Bahir Dar, and Mekele. The team is led by Dr. Shlomo Angel, Senior Research Scholar and Adjunct Professor of Urban Planning at NYU, with Dr. David de Groot, Mr. Richard Martin, Yohannes Fisseha, Tsigereda Tafesse, and Patrick Lamson-Hall. The program is supported by the Urbanization Project at NYU Stern School of Business and by the Marron Institute of Cities and the Environment. The program has also been strongly endorsed by H.E. Mekuria Haile Teklemariam, Minister of Urban Development and Construction.

The *National Urban Development Spatial Plan* aims to help guide and manage urban development across the country through analysis of current and future trends in urbanization, beyond providing concrete local development and urban design plans. The project consists of two components:

- *National Urban Development Scheme*: A national assessment of the structure and functioning of the existing (2014) urban sector, in addition to scenarios for what the urban sector might look like in 2037.

- *Local Development and Urban Design Plans*: Preparation of neighborhood development plans and urban design plans for 12 cities in Ethiopia, which may also be used as templates for other urban areas in the country. An Urban Design Manual will also be produced.

The project began in January 2014 and is scheduled for completion in June 2015. The Ethiopian executing agency is the Ministry of Housing, Urban Development and Construction.

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