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# Uganda Promoting Inclusive Growth

## Transforming Farms, Human Capital and Economic Geography Synthesis Report

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**ABBREVIATION AND ACRONYMS**

ABEK	Alternative Basic Education for Karamoja
ASWG	Agricultural Sector Working Group
BTVET	Business, Technical, Vocational Education and Training
CEM	Country Economic Memorandum
DRC	Democratic Republic of Congo
DSIP	Development Strategy and Investment Plan
EAC	East African Community
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GIZ	Gesellschaft für Internationale Zusammenarbeit
HDI	Human Development Index
HE	Household Enterprise
IASSA	International Arctic Social Science Association
ICT	Information and Communication Technology
IDP	Internally Displaced Person
IFPRI	International Food Policy Research Institute
ILO	International Labor Organization
IASSA	International Institute for Applied Systems Analysis
LFP	Labor Force Participation
LFPR	Labor Force Participation Rate
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries
MDG	Millennium Development Goal
MoFPED	Ministry of Finance, Planning, and Economic Development
MoPS	Ministry of Public Service
NAADS	National Agricultural Advisory Services
NAARI	National Arid Agricultural Institute
NARO	National Agricultural Research Organization
NDP	National Development Plan
NGO	Non Governmental Organization
NDP	National Development Plan
PEAP	Poverty Eradication Action Plan
PMA	Plan for Modernisation of Agriculture
PMU	Project Monitoring Unit
PSFU	Private Sector Foundation Uganda
RAI	Rural Accessibility Index
RIT	Restructuring Implementation Team
SACCO	Savings and Credit Cooperative Organization
SME	Small and Medium Enterprise

SPAM	Spatial Crop Allocation Model
SSA	Sub-Saharan Africa
UBOS	Uganda Bureau of Statistics
UNHS	Uganda National Household Survey
UPE	Universal Primary Education
UPPET	Universal Post Primary Education Training
USAID	United States Agency for International Development
UVQF	Uganda Vocational Qualifications Framework
WDR	World Development Report

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## PREAMBLE

Over the past two decades, the Ugandan economy has sustained strong per capita income growth driven to a large extent by the implementation of an ambitious reform program. Annual growth, which was averaging an already high 6.3 percent over the 1990s, accelerated to 7.0 percent during the 2000s, making Uganda one of the best performing economies of the past 20 years. In per capita terms, Uganda's income growth averaged 4.0 percent over this period. This growth is well above the Sub-Saharan African average of 0.8 percent over the same period. More recently, toward the end of the 2000s, growth has slowed down because of a number of shocks, both globally—including the most recent global economic crisis—and domestically as a result of volatile weather that affects agriculture. In addition, there have been some effects on economic performance as the economic conditions start mapping the political cycle.

The good performance on the growth front has been accompanied by a not less stellar performance in poverty reduction. Indeed, between 1992/93 and 2009/10, poverty (head count, based on the national poverty line) declined from 56.4 percent to 24.5 percent, with both rural and urban poverty declining (the former from 60.2 percent to 29.1 percent and the latter from 28.8 percent to 9.1 percent). Accordingly, Uganda has already met the first Millennium Development Goal (MDG) of halving poverty by 2015. Moreover, with an elasticity of poverty reduction to growth (one of the key measures of the efficiency of growth in reducing poverty or of the inclusiveness of growth) of 1.4, Uganda is well above averages observed in other countries. For example, Ghana grew at an average of 4.6 percent per year between 1992 and 2010, a period when poverty declined from 50 percent to 28.5 percent, which, in turn, would imply an elasticity of 0.48. Similarly, Kenya grew 3.4 percent per year between 1997 and 2010 and managed to reduce poverty only marginally from 52 percent to 47 percent, hence a low elasticity of 0.29 (World Development Indicators database).

So why does this report emphasize inclusive growth when Uganda's achievements both on the growth and poverty reduction fronts over the past years are so significant? Don't these achievements imply that the country is on the right track? The implicit answer that this report provides is that although the country needs to be recognized for all those achievements, there is also a series of elements that, looking forward, may require the attention of policy makers. As the following chapters highlight, one element is the recent evolution of income inequality, which has increased significantly over the past years. A second element is related to the opportunities and challenges of the government of Uganda's strategic vision (as elaborated in the National Development Plan (NDP) for 2010/11–2014/15) and emphasized in the new government's manifesto), which rightly puts an emphasis on transformation of the economy into high productivity areas through skill development and value addition, but that could come with more concentration of economic activity and increasing inequality trends. A third element can be tracked to the role that oil will play in coming years. There is no doubt that oil will enhance growth prospects, but its effect on poverty reduction will depend on public policies more than on standard trickle-down results. A fourth element emerges from the fact that as poverty declines, further poverty reduction achievements tend to be more and more difficult because there are groups in society that may fail to benefit from the growth process.

On the first element in parallel to high growth and significant poverty reduction, Uganda has also observed a marked increase in income inequality over the past two decades. This trend is evident

by examining the evolution of the Gini index (perhaps the most popular measure to assess the evolution of inequality), which rose by 6 percentage points from 0.37 in 1992/93 to 0.43 in 2009/10. This inequality is an issue to keep present for several reasons. First, for a given average income level, higher income inequality means higher poverty, so the poverty impact of the observed growth could have been even higher if accompanied by stable or, even better, decreasing income inequality. Second, higher inequality also weakens the effect of aggregate income growth on poverty: the more unequal income distribution is, the faster the rate of growth required to achieve a given reduction in poverty. In other words, the poverty elasticity of growth (and, as noted earlier, the inclusiveness of growth) declines as inequality increases. And, third, higher inequality can be a source of distributive conflict and social tension, which tend to undermine the legitimacy of policies and institutions as well as their stability and, in particular, weaken property rights, thus discouraging investment and thereby growth. Therefore, to the extent that inequality continues to increase in the years ahead, the country will likely face a new set of challenges.

On the second element, the current government strategic vision not only broadens the country's strategic focus from poverty reduction to structural transformation but also emphasizes skilled employment growth and the sectoral shift to higher value-added activities as the main drivers of higher growth and better living standards. As this report argues, this vision appears to be a step in the right direction. But it needs to take into account the international experience that suggests that economic activity will be concentrated, while growth based on skill-based technological change typically is associated with higher inequality levels. Those inevitable consequences point to the discussion on inequality trends. In other words, the implementation of a very valid growth and development strategy may need to be complemented by interventions that address the situation of those without access to or incentives to acquire the skill levels demanded by the new economy and that remove constraints to integration of leading and lagging areas.

On the third element, oil will have a positive effect on Uganda's growth prospects, but the government needs to grapple with the fact that the direct poverty reduction effect of oil-driven growth may be limited. The labor intensity of oil production (and more generally of extractive industries) tends to be quite small, which, in turn, may imply that oil-driven growth may in many cases be characterized by jobless growth. In turn, the oil boom may lead to "Dutch disease" pressures in the exchange rate, penalizing other sectors of the economy that are much more labor intensive (e.g., manufacturing or export-oriented agriculture). Consequently, oil-driven growth could increase inequalities. International experience has shown that the government can play a crucial redistributive role through the management of its fiscal revenues. It will need to take three related decisions: (a) how much of its fiscal revenues will be consumed or saved, (b) what their geographical allocation will be, and (c) what their sectoral allocation will be. Failing to properly address those three decisions will endanger the stability of the transition process. The report does not respond to the first decision, but it provides insights about what could be optimal allocation of revenues from geographical and sectoral perspectives.

And for the fourth element, policy makers must keep cognizant that as poverty declines because of high growth, it is more apparent that certain groups in society do not benefit from the growth process (or at least do not benefit in a comparable way to the rest of society). This development, in turn, may require targeted policies to address the economic exclusion of important segments of the population; otherwise poverty may tend to self-perpetuate. Indeed, some groups may not

have access to important assets to escape poverty such as education or credit, because they are poor to start with and may be in what is known as a poverty trap.

This report, therefore, looks at Uganda through those lenses and calls the attention of policy makers to a number of drivers including the smallholder farmers; the new generation of primary education attendants; and the movement of factors of production (in particular, labor), ideas, and products across locations. Those drivers should help accelerate the economic transformation of the country through innovation and job creation as illustrated in successful emerging countries. The government can play a key role in providing the right context and adopting supportive policies, notably through (a) having better prioritization of infrastructure, (b) reforming land markets, and (c) equitably delivering social services. Those cross-cutting actions will supplement the responses to specific challenges of agricultural transformation, human capital transformation, economic integration, and urban congestion as discussed in the body of the report.

I am sure that the analysis, findings, and reflections of this report will be very valuable for a country that has shown an outstanding performance on the growth and poverty reduction fronts in the past years and has the potential to further improve in the years ahead.

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## SUMMARY OF MAIN RECOMMENDATIONS

1. Uganda's development experience over the past two decades has been characterized by high growth and significant declines in poverty. Growth accelerated from 6.3 percent in the 1990s to an annual average of 7.0 percent during the 2000s, implying that Uganda has sustained one of the fastest growth rates in the world over the past two decades. In per capita terms, Uganda's income growth averaged 4.0 percent over this period and is well above the Sub-Saharan African (SSA) average of 0.8 percent over the same period. More recently, toward the end of the decade, growth has slowed down because of consecutive excessive shocks, both globally—including the most recent global economic crisis—and domestically, as a result of volatile weather that affects agriculture. But the country is still poised to display growth rates in the 6 to 7 percent range over the coming years. Parallel to this growth performance, the country has also managed to significantly reduce poverty, which, on the basis of the head count index that is based on the national poverty line, was halved over the past two decades. This reduction is remarkable, and the country should be acknowledged for it.

2. At the same time, the road ahead is still long. Even as its per capita income almost doubled over the past 20 years to US\$490, Uganda remains a poor country even by SSA standards, which currently average US\$1,127. In comparison to the middle income group, which Uganda aspires to catch up with, the gap has become even larger in more recent years as per capita income levels in this group of countries has grown almost three percentage points. And given the fast-growing population, Uganda would have to grow much faster than it has in the past to double per capita income in the next 15 years so it could edge closer to middle-income status.

3. Moreover, the country will need to face several challenges if committed to continue benefiting from high, sustained, inclusive growth. There has been a marked increase in income inequality over the past years, which if it persists, could affect social stability beyond the negative effect it has on poverty. The government of Uganda's strategic vision, as elaborated in the National Development Plan (NDP) for 2010/11–2014/15 and as emphasized in the new government's manifesto, rightly puts an emphasis on transformation of the economy into high productivity areas through skill development and value addition. This strategic vision will indeed support the transformation process and hasten growth. However, as development history from across the world suggests, on the one hand, faster and higher productivity growth will come with more concentration of economic activity and likely leave some regions and people behind. As the geographic transformation progresses, economic activity has already become concentrated—most high-value production (including higher-commercial-value agriculture) is geographically concentrated around the South, Central, and West regions of the country), while most industrial activity is clustered around large towns and along transport corridors. On the other hand, growth based on skill-based technological change typically could come with higher inequality levels. Therefore, the very valid growth and development strategy would need to be complemented by integration policies that allow people to benefit from the growth process.

4. Uganda's challenge of moving labor from low to higher productivity areas will become even larger as the population swells. Uganda's past growth generated jobs, but with a fast-

growing labor force, only a small fraction got into productive employment, leaving the bulk of labor in low value-added activities, particularly in agriculture and the informal and household enterprise sectors. Poor skills, given that the majority of new labor market entrants have not completed primary school, remain a key obstacle to productive employment and decent wages. Looking forward, job creation will become an even greater social and demographic challenge as more youth enter the labor market (about 400,000 youths every year) and as unemployment and underemployment become social bombs, especially in urban centers where inequalities are more visible.

5. Another challenge will come from oil, as commodity-driven growth typically comes with low job creation resulting from low labor-sector intensity. And finally, it will be important to also recognize that trickle-down poverty reduction typically works better at high poverty levels; it may not be the same at low poverty levels when the remaining groups are excluded from the growth process.

6. Against this background, the report addresses the question: which areas may require some additional attention in Uganda to sustain and accelerate inclusive growth? This report zeroes in on four key issues: (a) transforming agriculture; (b) transforming human capital; (c) transforming across space or the economic geography; and (d) planning for increased urbanization, which will be inevitable as transformation of the agriculture, human capital, and space progresses. Concretely, in agriculture, Uganda needs to ensure that the smaller holders (not only big farms) get access to basic infrastructure, finance, inputs, and institutions that will support their commercialization. In building human capital, the emphasis should be given to the new generation of primary education students to make sure that they get quality education and progress to secondary education. Firm growth and faster job creation will come from economic concentration (facilitating economies of scale in production and distribution processes) that should, therefore, be allowed or even facilitated—fighting concentration of production is tantamount to fighting growth. Policies need to encourage the movement of factors of production (in particular, labor), ideas, and goods and services between lagging and advanced areas. Thus, the key policy levers for accelerating transformation and making growth more inclusive should hinge on the following:

- a. Improving prioritization of infrastructure investments toward promoting more economic density, tapping agricultural potential through better connectivity in producing areas, while providing connectivity to support integration of leading and lagging areas
- b. Improving land usage to accelerate transformation from low-value production within and across sectors, and within and across space
- c. Ensuring equitable and efficient delivery of social services across locations
- d. Using special interventions to increase the living standards in the especially lagging areas, and to address other specific challenges of agricultural transformation, human capital transformation, and urban congestion

7. Beyond those cross-cutting levers, specific issues must be addressed across the strategic sectors or themes to accelerate the pace of transforming the farms, human capital, and economic geography.

## *Transforming Farms*

8. To accelerate the transformation of farms, the government's role will need to go beyond the current policy of subsidized technologies. The proposed reform agenda, while not entirely new, stresses how past public sector failures, which have constrained farmers (mainly smaller ones) to access and use new technologies, land, and credit, can be overcome.
- a. First, farmers need new technologies and need to access to them to raise farm yields and mitigate the negative impact of pests and diseases, as well as climatic changes. Stronger links between research and advisory services at the local level and between advisory services and farmers need to be promoted, especially for small farmers. Successful experiences in countries such as India have shown that organizing small farmers (including women) into groups brings high dividends because it helps attract service providers and reduce fixed costs associated with such programs. While the introduction of irrigation and indexed insurance schemes would help farmers manage climatic risks, those schemes need to be accompanied by preventive measures that are based on new information technologies, including social networks, information and communication technology (ICT) such as mobile phones, and other technological penetration methods.
  - b. Second, agricultural development requires land security and an appropriate human settlement policy. Strengthening the security of land tenure through stronger laws is required to remove the current ownership overlaps, land wrangles, and disputes. The ongoing efforts to improve land registration are a step in the right direction and need to be followed by amending some provisions of the Land Amendment Act of 2010 to remove land right uncertainties and by increasing the funding of the Land Fund. The political economy challenges of land reforms abound, particularly given the cultural and ethnic bonds with land ownership in several parts of the country. As experiences in other countries including neighboring Kenya show, cultivating trust and adopting policies geared toward engendering government commitment to protecting land rights, especially in the customary owned land in the high-potential agricultural terrain of the north, will be critical.
  - c. Third, improving access to agricultural credit needs stronger savings and credit institutions, legalization of leasing arrangements, and promotion of grant-matching schemes. Direct credit through the commercial banking system, as well as recently introduced agricultural support credit, has improved access to agricultural credit, but mainly for the large farmers. The smaller farmers, who often have no collateral, cannot access credit. To close the gaps, a more effective system of savings and credit cooperative organizations (SACCOs) needs to extend outreach within rural areas and specifically to tailor rural finance access to the needs of smallholder farmers. Given the collateral situation, designing new approaches to credit risk management, like use of better monitoring technology (e.g., fingerprinting) and commitment savings programs should help. Conversely, new innovations in ICT, such as mobile money, can help overcome required institutional frameworks for traditional credit institutions and can provide easy and cheaper access to finance. An independent leasing law would streamline the legal framework for leasing, while matching grants for farmers and use of warehouse receipts would raise access to finance.

9. Beyond the farm gate, the government needs to remove existing bottlenecks to commercialization by improving (a) the connective infrastructure from producing areas to markets, (b) the investment climate for agroprocessors, and (c) the institutional framework to support delivery of agricultural services. Stepping up investments in connective infrastructure in areas with high agricultural productivity, high agricultural potential, and links to the market is needed. On average, a farmer travels 5.8 kilometers to access a market, farther in some areas, particularly the north, yet rural roads are mostly seasonal. Furthermore, landlocked Uganda needs to ensure connectivity for access to ports to expand markets for its increasing commercialized agriculture. This emphasis on port access would require a more efficient system of allocating resources for infrastructure investments, including choosing between road maintenance and new road construction, and prioritizing road investments that are based on agricultural potential, cross-border trade opportunities, and load consolidation. More success in agribusiness, including agroprocessing (the bulk of which currently operates at only 50 percent capacity) will thrive on lower costs of operation including energy and transport.

10. The current institutional arrangements have failed to deliver agricultural transformation particularly given the gaps in extension services, regulation, and inspection of non-NAADS services. A multitude of private and public institutions providing support to farmers exist, but there are significant gaps in extension services, regulation, and inspection. The National Agricultural Advisory Services (NAADS), which is currently the main public channel for delivery of those services, lacks the capacity and appropriate mechanisms for delivery and is also encumbered with political intervention. Extension services, for instance, are scattered among private entities and nongovernmental organizations (NGOs) except for traditional cash crops such as cotton (Cotton Development Organisation), coffee (Uganda Coffee Development Authority), and dairy (Dairy Development Authority). The reform of the Ministry of Agriculture Animal Industries and Fisheries (MAAIF) under the 2010 restructuring exercise addressed some of those shortcomings, but it urgently needs to be implemented. In contrast to the more intrasectoral focus that is espoused in the current agricultural sector Development Strategy and Investment Plan (DSIP), agricultural transformation interventions are multisectoral and hence require better coordination among the various institutions to minimize duplication, which dissipates effort, consumes more resources, and undermines efficiency and value. For example, to ensure that NAADS remains focused on its core mandate of providing information and technical advice to farmers, it must not be overloaded with delivery of inputs and veterinary services.

### ***Transforming Human Capital***

11. Transforming Uganda's human capital is a twofold challenge: (a) ensuring quality primary education and stronger transition to secondary education, and (b) equipping the labor force with the requisite skills to support transformation of the economy and its inclusiveness. At Uganda's stage of industrialization, the main demand for labor remains for relatively unskilled labor activities, but further transformation will require a move into higher productivity activities and a gradual shift from low- to high-skilled labor. Prioritization of reforms is critical to achieve those objectives.

12. On the first challenge, accelerating quality improvements and completion at the primary and secondary public school levels will remain the foundation for a capable human capital base.

In spite of education interventions at the primary and secondary levels, Uganda is still behind other countries, such as Ghana, in terms of educational attainment. With the student population increasing by about 2 percent every year, the pressure is increasing and reforms in the education system need to develop rapidly to absorb this influx while addressing the high dropout rates, the low completion rates, the low levels of achievement (percentage of students attaining desired proficiency standards at various levels), and the imbalances in access to quality education across regions. Those reforms will require the following:

- a. Accelerate the quality enhancements at primary and secondary levels, including teacher deployment, curriculum reviews, and better infrastructure.
- b. Target interventions specifically designed for problem areas, like the North and Northeast. In particular, the Northeast urgently needs an in-depth study to help improve the existing methods of delivery of education services that are now poorly adapted to this context.
- c. Address household demand for investing in human capital across different parts of the country. This policy would entail sensitization programs and economic empowerment. In addition, evaluation of existing pilot programs in Northern Uganda, where vouchers or conditional cash transfers are being used for this purpose, could provide insights on whether and how such programs could be used to boost demand for education in other parts of the country. Furthermore, parental participation in the education of children needs to be emphasized even though the country has moved into universal free education.

13. Second, as the country transforms into higher productivity activities, plans to move up the education and skills ladder need to be established, including making strategic choices on (a) the institutional framework that will support the transformation process, (b) the amount of public money to be allocated in both the short and long terms, and (c) the mechanisms that will strengthen private sector participation and coordination. Education and skills provision will need to become a more dynamic process in a transforming economy. As seen in the Asian economies, readjusting the education system to meet the demanded skills would need to account for the stage of transition of the economy, including the structure of production and the structure of the labor market. Institutionally, this challenge is not a Ministry of Education and Sports issue alone. It spans entities responsible for planning the economy's structural transformation, for labor force planning among others. A number of institutions already exist in Uganda, including the National Planning Authority; the Ministry of Labor, Gender and Economic Development; and the Ministry of Industry and Trade, but the objective would be to make them more operational and better coordinated. The strategy would, therefore, entail the following:

- a. Give special attention to the informal sector. With the formal sector absorbing only 20 percent of the new entrants in the labor market, most jobs are in the informal sector. To support their growth and productivity, the labor force entering this sector needs to be equipped with the requisite skills by improving the quality of existing informal sector operators through impact evaluation to guide future interventions, and coordination of training with private sector needs through the Private Sector Foundation (PSF). Development and implementation of the modular competency-based training programs should also be encouraged.

- b. Establish a coordination mechanism among the various players so that the economy's transformation is supported by the appropriate development of skills and competencies. Such effort will require strategic planning for skills development and a close collaboration with firms. This collaboration would also be required to guide the transformation process by identifying immediate skills needs and those for the short, medium, and long term and would empower education and skills training institutions to deliver those skills.
- c. Establish a mechanism for private sector participation in skills provision. Learning from the experiences of other countries, the government would need to increase private sector engagement in skills provision. Although large firms can be encouraged to integrate training into their own capacity-building programs, partnerships between the public and private sectors are often useful to promote vocational and on-the-job-training programs for small and medium enterprises (SMEs) that do not have the human and financial resources to launch their own activities. Initiatives such as Enterprise Uganda need to be promoted and expanded to meet firm demand for skills, and mechanisms must be developed for generating sustainable financing through collaboration with the private sector.

### ***Transforming Geographically with Integration***

14. The geographic transformation process that has started in Uganda will likely come with more uneven landscapes of economic activity. A careful choice of public investments is needed to generate the highest payoff for economic efficiency and geographic equity. In particular, territorial integration policies aimed at connecting people ought to focus less on providing economic opportunities in lagging areas and more on strengthening interactions among the areas. The suggested strategy, therefore, aims at connecting people to prosperity by promoting fluidity of factor and product markets to allow Uganda to maximize benefits of geographically uneven growth. This strategy includes the following:

- a. Set priorities for equity in access and quality of basic social services. This is the sharpest instrument for integrating leading and lagging areas because it empowers people to seek economic opportunity, and it reduces the congestion costs caused by migration arising from deficiencies in access to social services.
- b. Invest in infrastructure, but selectively toward priorities that will maximize growth, while improving connectivity between lagging and leading areas. Place-specific physical infrastructure is best suited for where it has the largest economic returns, while social and connective infrastructure is needed across regions to promote equity of social services and support mobility.
- c. Reform the land tenure system and institutions for land management to make land markets more active and fluid, despite the political economy challenges previously mentioned. Land will remain the main asset to transform production, while its liquidity enhances mobility and economic integration.
- d. Promote special interventions in the North in particular for a faster convergence with the rest of the country in access to social services. Those interventions will also provide market and connective infrastructure to support market access for trade with Sudan, with

the Democratic Republic of Congo, and among internal regions. Such special efforts to make land more fluid will support agriculture, which is the region's key comparative advantage.

15. To be most effective in connecting people to prosperity, the government must tailor the policies to specific challenges in the different locations, depending on the population density and the distances among the leading and lagging areas. As an example, in China, whose lagging areas are sparsely populated, the policy response would be different from what is needed in Brazil, where the poor are also located in the leading areas. Uganda has both situations in some areas. In the sparsely populated lagging Northeast, providing quality social services (education and health) may be the best option for integrating this part of the country. The Eastern and Midwestern parts of Uganda that are densely populated but also lagging are characterized by misplaced densities that need social services as well as infrastructure connecting them to leading regions, in particular the Central region. Finally, while the Midnorth and West Nile areas are sparsely populated, they are also divided from the South through natural barriers like languages and have been left behind because of war. Those characteristics justify special interventions that have been started through the Northern Uganda Recovery and Reconstruction Program and the Northern Uganda Social Action Fund (NUSAF) to accelerate the pace of recovery in production, and also for those areas to catch up with regard to social services.

### ***Planning for Efficient Urbanization***

16. Together with regional integration, policy makers need to ensure a smooth urbanization process, particularly of the Kampala agglomeration. Concerns about regional inequality and disparities between the more urbanized Central region and less urbanized areas, and the size and fast growth of Kampala may tempt policy makers to move businesses into smaller towns and less urbanized areas. Such a move would be counterproductive—businesses locate in Kampala because they benefit from a range of diverse financial and other services as well as a consumer market, all of which are not available elsewhere in the country. In fact, reports of Kampala turning into an “executive slum” are a signal of policy neglect, not of city size. For towns at the lower end of the urban portfolio, improvements in agriculture and agroprocessing will increase demand for their services.

17. The three forms of transformation discussed earlier—agriculture, human capital, and economic geography—inevitably drive faster urbanization. Because this urbanization process is largely an irreversible phenomenon in Uganda as it is in other countries, there is an urgent need to address the five following key issues:

18. First, increase the density of economic activities. This strategy would benefit from using land for higher value activities over time, but (a) the limited extent of formal tenure security (18 percent of land is registered and titled), (b) the lack of a credible system to value land, and (c) the limited incentives for landowners to rent out land will constrain land-based transactions. In urban areas, not only private entry is costly, but also public planning for infrastructure development is particularly challenging given private ownership of land per the 1995 constitution. As a result, fragmentation of land parcels and rapid suburbanization has ensued, with fiscally starved local governments unable to acquire land and protect rights-of-way for infrastructure improvements. Land policies and institutions have to change to support a more efficient urbanization process.

The priorities include developing a credible system for documenting and valuing land, along with measures to improve local urban authorities' finances to acquire land and pay for infrastructure. Efforts at land titling that are being piloted should be expanded to cover the entire country. In addition, specific actions to raise local urban authorities' finances would include (a) improving the coverage of and compliance with the property tax and (b) reconsidering transfers from the central government (in 2010, urban areas received only 3.4 percent of total transfers of U Sh 1.2 trillion to all local governments).

19. Second, minimize large differences in access to basic services, in particular education and health. This policy has adverse consequences for social inclusion. Yet education and health are portable assets, key for Uganda's rapidly growing and young population expected to move into urban areas in the next few years.

20. Third, reduce congestion costs that reduce the efficiency of urbanization. In that context, the recommendation is that Uganda's urban transport systems should be better designed with attention to user preferences and better coordinated with land-use planning. At current income levels, many motorized transport options are unaffordable for the poor (70 percent of urban workers walk to work), yet even the small percentage that uses motorized transport can be caught in costly traffic congestion. In the short term, it is important to provide a wide range of service levels and modes at different prices—and invest in sidewalks to reduce pedestrian fatalities in traffic accidents. In the longer term, policies for taxing motor vehicle use (e.g., with gasoline taxes) and a greater supply of public transport choices will be necessary components of a functioning urban area.

21. Fourth, increase movement of products and hence interactions across boundaries. Today the cost of transport to connect Uganda to the rest of the world is too high—at US\$8 per kilometer on the Kampala-Mombasa corridor (home to most of Uganda's industrial production)—and serves to discourage trade. Beyond in-country improvements for the main corridors joining Uganda to its neighbors, regional coordination of transport investments is critical, together with an effective regulatory regime in a transport system.

22. Fifth, improve living condition in urban areas. The rapid population growth in urban centers and rural urban migration have already generated housing shortages and squalid living conditions in many urban areas. Beyond improving access to land, targeted interventions in disadvantaged areas would have to take into account tenure choice and location choice. Regarding tenure, many poor people cannot afford to enter the owner-occupied housing market and prefer to be renters. Demand for home ownership will increase with incomes, but a range of shelter and tenure options need to be available to urban residents in the short to medium term. Household decisions on where to live are often based on the trade-off between land prices and transport costs, particularly time cost of travel. In fact, when land prices are high, many people will substitute into the informal land market (slums) rather than be cut off from the labor market in urban areas. Thus, the development of institutions that increase flexibility of land markets and infrastructure for better urban transport are prerequisites for successful housing interventions and will be critical.

23. In addressing the economic transformation of the country, Ugandan policy makers will have to modulate their interventions according to locations and challenges. Those interventions might depend on the economic density, the level of capacity of the existing institutions, and the needs of the population. This report argues, however, that such policy actions should be prioritized to make the agricultural sector more productive, the workforce more skilled, and the urbanization process more capable to promote economies of scale and improve living conditions. Such structural transformation would help create jobs and thus encourage the gradual inclusion of workers and households in production processes that in turn will lead to higher income and growth. Inclusion is key for long-term economic success.



# 1. INTRODUCTION

1.1 At an average above 6.0 percent per year over the past two decades, Uganda's growth rate was impressive by all standards. In parallel, poverty declined significantly, not only in urban areas, but also to some extent within the rural areas. This combination was possible because the key drivers of growth were labor-intensive services sectors, some of which are agriculture based. In fact, Uganda's growth process has reduced overall poverty faster than what has been observed in many other developing countries.

1.2 However, the increase in inequality (both income and living standards) and perhaps the prospects of further increases ahead have raised a debate about how this growth process can be made even more inclusive and self-sustainable over time. Income inequality has increased among and within regions. Poverty in the North and East, for example, remains four times and eight times deeper, respectively, than in the Central region. On average, a household in the Kampala region consumes 100 times as much as a household in the adjacent Wakiso district, and more than 1,000 times as much as a household in Adjamani. The differences in income poverty are as wide as the differences in other aspects of human development and welfare, including access to health and education services.

1.3 Achieving fast and sustained growth will also come with challenges. The government of Uganda's strategic vision, as elaborated in the National Development Plan (NDP) for 2010/11–2014/15 and emphasized in the new government's manifesto, rightly puts an emphasis on transformation of the economy into high productivity areas through skill development and value addition. This strategic vision will indeed support the transformation process and hasten growth. However, as development history from across the world suggests, on the one hand, faster and higher productivity growth will come with more concentration of economic activity and likely leave some regions and people behind, and on the other hand, growth based on skill-based technological change typically is associated with higher inequality levels. Therefore, the very valid growth and development strategy would need to be complemented by integration policies that allow people to benefit from the growth process.

1.4 Although Uganda's growth generated jobs, with a fast-growing labor force, only a small fraction got into productive employment, leaving the bulk of labor in low value-added activities, particularly in agriculture and the informal and household enterprise sectors. Poor skills, given that the majority of new labor market entrants have not completed primary school, remain the main obstacle to productive employment and decent wages. Looking forward, job creation will become an even greater social and demographic challenge as more youth enter the labor market (about 400,000 youths every year) and as unemployment and underemployment become social bombs, especially in urban centers where inequalities are more visible.

1.5 This report addresses the issue from a double perspective: sectoral and geographical. From a sectoral perspective, it concludes that the agricultural sector needs transformation because it remains the primary employer; it is the country's main comparative advantage and bedrock for industrialization. More broadly, identifying sectors with potential will be important for employment opportunities, which in turn will be largely dependent on productivity levels and

thus on the level of education and skills of the labor force. From a geographical perspective, transformation generally yields concentration of economic activities that leaves some locations lagging in prosperity. This unbalanced growth needs to be supported with appropriate economic integration policies that have been analyzed in the report.

1.6 The report tries to be both selective and strategic to inform the most critical issues for growth inclusiveness in Uganda, given its current state of development. This report is neither a poverty report nor does it delve into issues of chronic poverty, social protection, and social safety nets. It instead discusses the country's transformation processes that improve production efficiency and job creation, while identifying the public policies needed to promote geographic equity in living standards. Technological change, an important channel of raising productivity, is indirectly addressed as part of the transformation of agriculture, human capital, and urbanization.

1.7 Structural transformation will remain pertinent as Uganda starts using its recently discovered oil, whose reserves are estimated at about 800 million barrels and, at full scale operation, could produce 150,000 barrels of crude oil per day over the next 20 or so years. Oil discovery is a great opportunity, particularly in terms of providing financial resources to support the structural transformation process in the country. However, its effect on the economy will be significant, even though preliminary estimates indicate that Uganda may not become a petro state (i.e., oil revenue impact is roughly estimated at 50 percent of fiscal revenue needs, 50 percent of export revenues, and about 10 percent of gross domestic product [GDP]). A booming oil sector is likely to modify the economic and social landscape in many ways, key of which could be attracting new capital and labor to the industry. Moreover, if the oil boom produces "Dutch disease" effects that shift investments away from agriculture and labor-intensive manufacturing, the production structure of the economy can change dramatically. This issue and others such as oil-related environmental sustainability, the effect on sustainable growth, or the governance and political economy of inclusive growth are being handled in other ongoing and future analytical work, including some from the World Bank.<sup>1</sup> What will remain crucial is for Uganda to strategically choose investments across geographical location and sectors to support transformation to higher value production while productively absorbing its labor force in the production process.

1.8 This report draws from current research and thinking about growth inclusiveness and job creation. Recent research in the Bank identifies inclusive growth with "a pace and pattern of growth that allows an increasing proportion of the population to contribute to and benefit from growth," which takes a long-term perspective that focuses on raising productivity of resources (in particular people), as a means of "increasing incomes for excluded groups." This perspective of inclusive growth, therefore, resonates with structural transformation, a multidimensional process that takes place within sectors, across sectors, and across space. More recently, McMilland and Rodrik (2011) observe that "the speed with which this structural transformation takes place is the key factor that differentiates successful countries from unsuccessful ones." Sectorally, no country was able to sustain rapid transition out of poverty without raising productivity in their agricultural sector (see the World Development Report, or WDR, in World Bank 2008 and Timmer and Akkus 2008), not only because this sector provides jobs for a large

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<sup>1</sup> World Bank (2011d) and World Bank (forthcoming).

fraction of the active population, but also because it is critical to provide food to workers moving out of farming activities. From a spatial perspective, the WDR 2009 argues that even as production concentrates as economies grow, the best way to get both benefits of concentration of production (hence faster growth) and long-term benefits of convergence of living standards is through economic integration, which should encourage interactions between leading and lagging areas.

1.9 The report also draws some lessons of development from around the world. For example, geographically unbalanced growth has characterized the development experiences of the most prosperous countries like Japan and the United States, and those experiences are being repeated in China, India, and other parts of the developing world that are prospering fast. Brazil, China, and Vietnam also offer lessons in transforming agriculture, while the Republic of Korea and Singapore rapidly transformed their human capital to support the fast transformation of their economies and helped create new jobs in high-productive areas.

1.10 Finally, the report carries forward the World Bank's vision for Africa's development, whose emphasis is to ensure that the continent's next phase of growth is accompanied with structural transformation that allows a bigger proportion of the poor to benefit from growth. According to the World Bank's Strategy for Africa, this structural transformation is multisectoral and, hence, cannot depend on a single sector or product to trigger sustained growth and poverty reduction.

### ***Structure of the Report***

1.11 The rest of this report synthesizes, in four parts, the findings and recommendations of the various policy notes and background reports that were prepared under the inclusive growth project. Part 1 frames the background to the report and is divided into two chapters. Chapter 2 aims at understanding the past growth experience and the evolution of geography of production in Uganda, while chapter 3 explores the poverty trends and geography of living standards in the country over the past two decades.

1.12 Part 2 has two chapters that examine transformation from two angles: transformation of agriculture—the most important sector for inclusive growth in Uganda—is investigated in chapter 4, with special emphasis on how to accelerate the process of commercialization. Chapter 5 identifies the gaps in the country's current human capital stock and offers directions on how to foster it so that the labor force can support the transformation process and growth inclusiveness agenda of the country.

1.13 Part 3 examines Uganda's geographic transformation. Partially using the analytical framework developed by the 2009 *World Development Report* (World Bank 2009d), part 3 is also divided into two chapters. Chapter 7 describes the geographically unequal development process in Uganda and its effect on living standards and opportunities by region. It then proposes a series of public policy priorities for integrating the country economically by connecting people to prosperity and increasing geographic equity in living standards. Chapter 8 identifies the country's policy priorities for an efficient urbanization process as such a process is expected not only to offer opportunities for agglomeration effects but also to amplify infrastructure and services needs.

1.14 Part 4 concludes by bringing together the key issues to inform the transformation process in chapter 8. From the perspective of transforming Uganda's agriculture, human capital, and economic geography, this chapter highlights the policy priorities for growth inclusiveness in Uganda.

### ***Data Sources, Challenges, and Recommendations for Future Analysis***

1.15 As mentioned earlier, this report adopted a multipronged approach to analyzing inclusive growth in Uganda. Both the sectoral and geographic transformation analysis required exploring a multitude of data sources. The Uganda National Household Surveys (UNHS), produced by the Uganda Bureau of Statistics (UBOS), were the foundation for the data used across the different aspects of the report, but they had to be supplemented by data from other sources.

1.16 On agricultural transformation, supplementary data came from the National Service Delivery Surveys 2004 and 2008, GIS data on agro-ecological zones and crop production potentials by FAO and the International Institute for Applied Systems Analysis (IIASA), GIS data on crop production from the IFPRI spatial crop allocation model (SPAM), and the road infrastructure based largely on UNEP data, estimated travel times, and the 2009 PER on roads. The 2008/09 agricultural census provided insights on production, but was of limited use because of quality limitations and incompleteness. The data also raised issues of consistency between data from the UNHS and that from the National Accounts.

1.17 In the diagnostic of human capital accumulation, the UNHSs were supplemented with data from the Ministries of Education and Sports, Internal Affairs, and other published indicators. Analysis of the labor market was also heavily constrained by the data, in spite of the various surveys on the labor market that exist. In addition, although the 2009/10 UNHS contained an in-depth module on labor, usage of these data was constrained by several issues including inconsistencies and missing data, which raised doubt about the representativeness of the module (see Appendix 1).

1.18 On the spatial analysis and territorial integration, fiscal data came from the Ministry of Finance, Planning, and Economic Development (MoFPED), while the Population Census of 2002 from UBOS supported the labor mobility analysis. The 2010 census of business establishments provided insights into firm location as well as job creation, which is to be followed with in-depth analysis on firm growth, job creation, and export diversification, but which could not be completed for this report because of a lack of data.

1.19 UBOS, the primary source of statistics in the country, has grown tremendously over the years, providing Uganda with a rich set of data that have continuously facilitated economic policy research and policy formulation. The periodic household surveys are among the best in Africa in terms of methodology, individual survey execution, and adoption of new approaches. However, the challenges noted above, in particular incomparability of data across time for the household surveys and inconsistencies across different sources especially in agriculture, need not continue casting a shadow over the quality of data in Uganda. UBOS ought to preserve the quality and comparability of the data that it is producing. This process is particularly important when UBOS is adopting new methods.

**PART A:**  
**PAST GROWTH, GEOGRAPHY OF PRODUCTION, AND GEOGRAPHY  
OF LIVING STANDARDS**

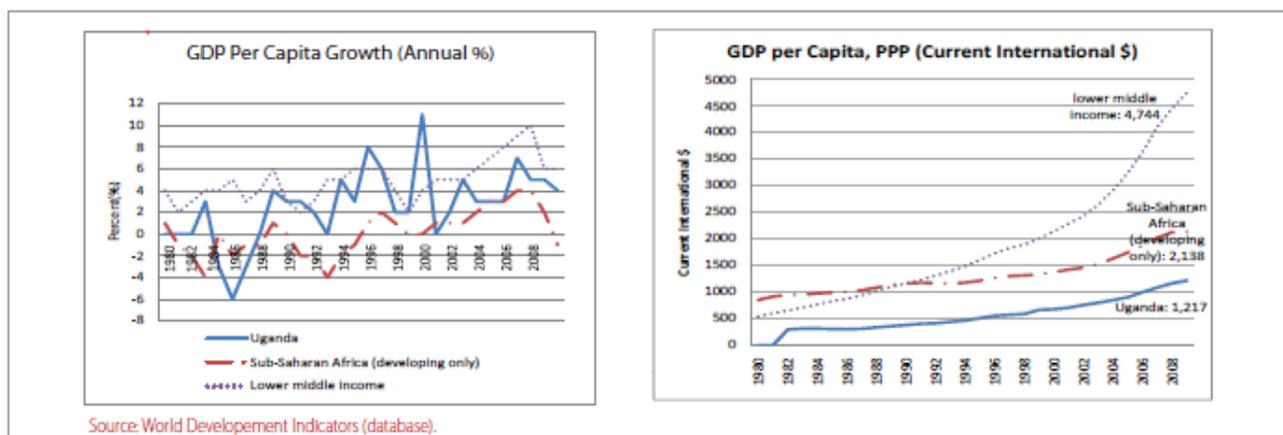
## 2. GROWTH AND STRUCTURAL TRANSFORMATION ACROSS SECTORS AND GEOGRAPHY

### *The Macro Economy and Growth—Evolution over the Recent Past*

2.1 The Ugandan economy continues to reap impressive gains from a steadfast reform process started in the 1990s. Growth accelerated from 6.3 percent in the 1990s to an average of 7.0 percent per year during the 2000s, showing that Uganda has sustained one of the fastest growth rates in the world over the past two decades. In per capita terms, Uganda’s income growth averaging 4.0 percent over this period is well above the Sub-Saharan African (SSA) average of 0.8 percent over the same period (figure 2.1, left panel). More recently, toward the end of the decade, growth has slowed down because of consecutive excessive shocks, both globally—including the most recent global economic crisis—and domestically as a result of volatile weather that affects agriculture. In addition, there have been some effects on economic performance as the economic conditions start mapping the political cycle.<sup>2</sup>

2.2 But even as its per capita income almost doubled to US\$490 by 2009, Uganda remains a poor country even by SSA standards, which currently average US\$1,127. And in comparison to the middle income group, which Uganda aspires to reach in less than five years, the gap has become even larger in more recent years as per capita income levels in this group of countries has grown almost three percentage points higher (figure 2.1, right panel).

**Figure 2.1. Uganda Needs to Accelerate the Impressive Growth Rates to Attain Middle Income Status**



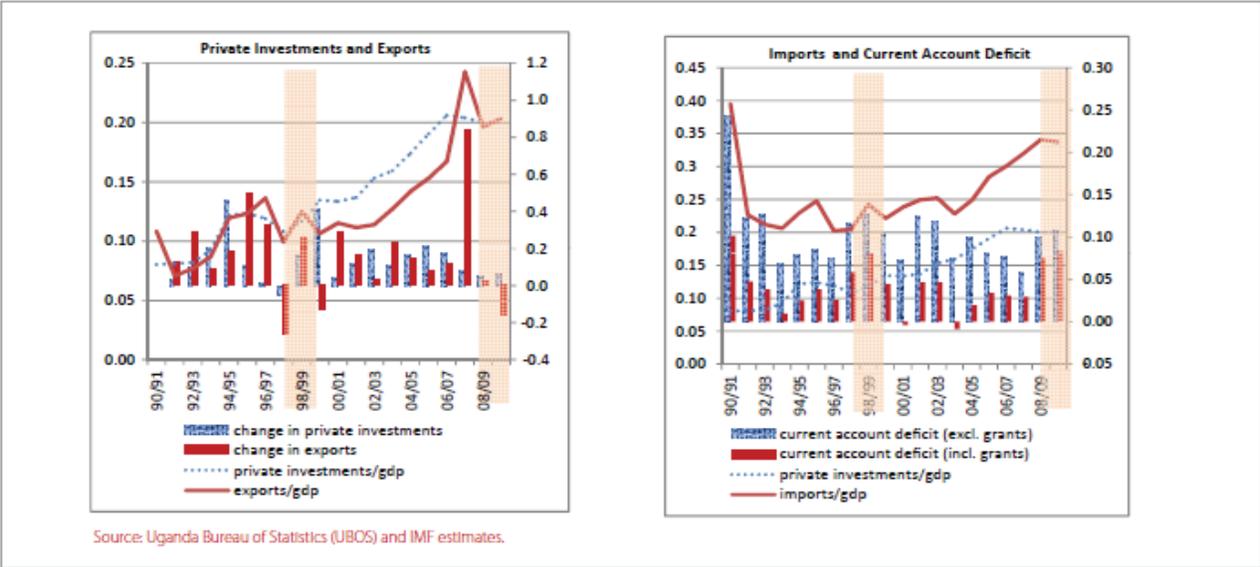
2.3 To achieve the aspiration of middle income status, Uganda needs to grow much faster than it has in the past as it works toward engineering a demographic transition. Uganda’s population is growing rapidly at 3.3 percent and is not likely to slow down in the medium term because the population is young (about 49 percent are below 15 years of age, compared to the world average of 26.8 percent and the Africa average of 43 percent), and with a fertility of 6.7 children per woman, which is the highest rate in the world. These demographics slowed per

<sup>2</sup> Although the ruling National Resistance Movement party took power in 1986, Uganda transitioned into multiparty politics gradually. Two elections in 2006 and 2010 have been held under a multiparty system, and all of them were held in a politically and economically tense atmosphere with riots in Kampala and other urban areas. Those developments affected investments and economic activity.

capita income outcomes in the past and will remain critical in the future. According to a recent report on demography and economic growth in Uganda (World Bank 2011a, the Demography and Economic Growth as listed in references), a demographic transition realized mainly through lower fertility can yield positive results on growth—per capita income could double by 2050. However, this transition will take time—even under the most optimistic scenario of fertility reduction, per capita income growth does not start accelerating until 2030. Faster growth in overall GDP will be needed for Uganda to achieve the per capita income level of middle income countries and to create the more than 8 million new jobs needed for the rapidly growing labor force.

2.4 Strong private investment and exports growth sustained growth through the decade, but has lately slowed down because of exogenous shocks. Private investment and exports maintained an upward trend through the decade—as a share of GDP, private investments increased to an average of 18 percent of GDP, compared to 11 percent in the 1990s, while exports increased from 9 percent to 14 percent over the same period (figure 2.2). At an average of 5 percent per year over the three years to 2011, private investment growth has been subdued as the effects of consecutive exogenous shocks set in. First was the turbulence of the global economy that started in 2008 with the global economic crisis, followed with near recovery and then near-depression conditions that are facing key economies. Second, while Uganda remains an oil importer, the surges in oil prices have had adverse effects on the domestic prices, in particular the cost of production. Third have been the prolonged drought and, more generally, the unpredictable weather, both of which constrain agrobased investments because there is no agroinsurance. The external current account also worsened over the latter part of the decade as imports surged to support investments.

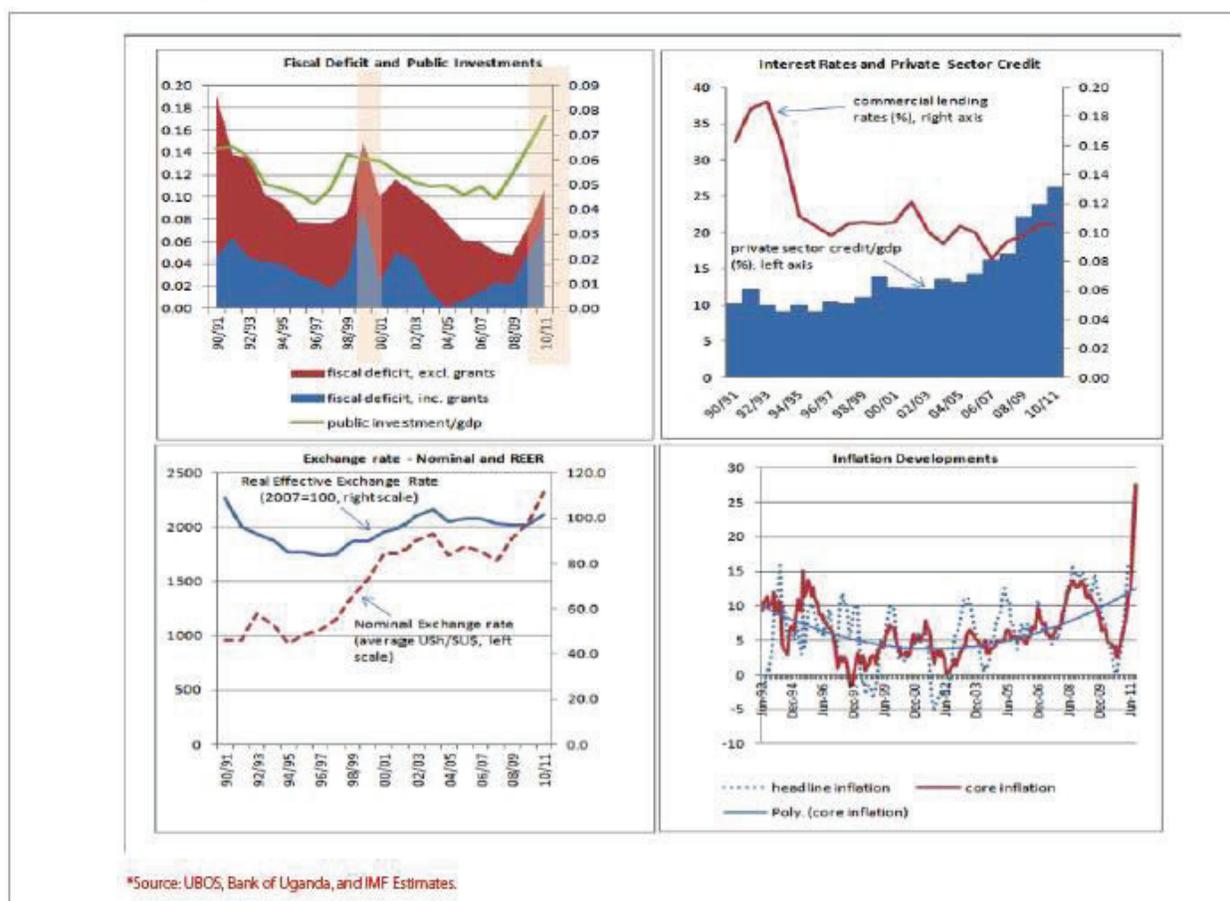
**Figure 2.2. Private Investments and Exports Supported Growth, but Faster Import Growth Propped High Current Account Deficit**



2.5 The economic fundamentals, including a prudent fiscal policy, responsive private investment, stable prices and a liberal economic environment, underpinned the strong growth and need to be sustained to support growth acceleration (figure 2.3). Building on the successes of the

1990s, fiscal policy maintained prudence during the 2000s—while fiscal policy went through a rapid consolidation during the decade, public investments did not decline at the same rate. And the increase in the deficit beginning in 2008/09 was accompanied by a fast increase in public investments to about 6.8 percent of GDP. The financial sector also worked harder to support growth, doubling private sector credit in GDP to 25 percent. The nominal exchange rate gradually depreciated, but remained stable in real terms; however, the current account deficit gradually increased from 7 to 10 percent of GDP over the latter part of the decade. Through the 2000s, domestic inflation was kept at single digit levels. The long-term trend suggests an upturn in inflation, as exogenous shocks reverse the negative trend established until the early 2000s.

Figure 2.3. Selected Macro Performance Indicators over the Past Two Decades



2.6 More recently, amid shocks, fiscal policy deteriorated toward the end of the decade, inflation more than doubled, and the exchange rate depreciated drastically. Accelerating expenditure to address infrastructure gaps partly supported a noncyclical response to the global economic crisis, thereby mitigating its effect on the economy. However, macroeconomic management has become a challenge more recently. In the midst of exogenous shocks, a depreciating exchange rate, and occasional fiscal slippages, inflation has been more volatile even in the core inflation measure, which excludes volatile food and utilities. More cautious macroeconomic management would be needed to ensure stability that can support investments and sustained growth.

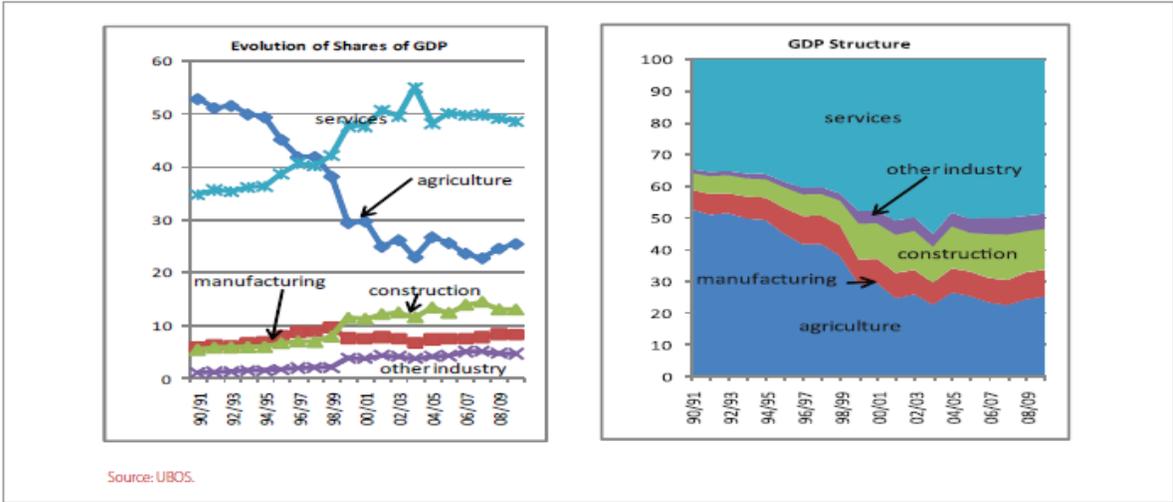
**Structural Transformation Is Under Way**

2.7 Uganda has been going through some structural transformation over the past two decades. The production structure has drastically changed, exports share in GDP has more than doubled, and production has changed geographically.

2.8 On the production structure, the share of agriculture in GDP was halved to about 20 percent between the 1990s and the 2000s, although manufacturing has not evolved much. This shift was mainly driven by services in the 1990s, but for the latter part of the 2000s, the bulk of structural change was due to a construction boom (see figure 2.4). According to the National Accounts, the share of agriculture in GDP declined from 45 percent in the 1990s to 27 percent in the 2000s, while services increased to 45 percent and construction almost doubled to 17 percent of GDP.

2.9 Agriculture remains important, even as the National Accounts seem to underestimate the contribution of agriculture. According to the Uganda Bureau of Statistics (UBOS) 2010 Census of Business Establishments, agribusiness was the fastest growing business sector over the decade. Indicative numbers of agricultural yields from the national household surveys also suggest productivity improvements, while strong poverty reduction occurred for households engaged in agriculture. Those developments, together with the strong agrobased export performance, suggest that agriculture may have grown faster than the average of 2.6 percent postulated in the national accounts, which depict a slowdown compared to 3.7 percent in the 1990s.

**Figure 2.4. Services Took Off Earlier, but Construction Boom Drove Most of Recent Structural Transformation**



2.10 Services and the construction industry dominate as manufacturing grows much more slowly. Although all the other sectors are estimated to have decelerated during the 2000s, the services sector grew faster, raising its share in GDP to 45 percent. Growth in manufacturing slumped from 13.8 percent in the 1990s, to 6.6 percent in the 2000s, and its contribution to GDP remained stagnant at 7.4 percent through the two decades. This decline was partly because manufacturing was the sector hardest hit by the shocks during the latter part of the decade, but

overall, Uganda's transformation is consistent with what has been observed—from agriculture to more services, before firms specialize to go into higher value production like manufacturing.

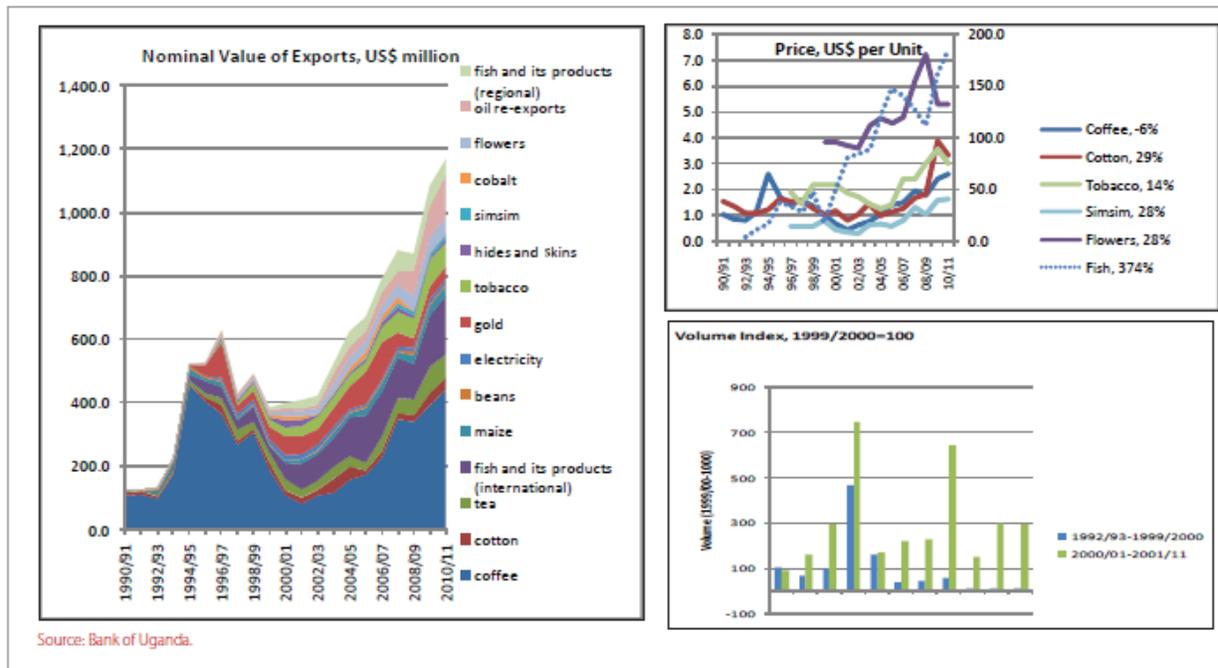
2.11 Beyond the data issues highlighted above, the slower pace of transformation partly reflects Uganda's current comparative advantage in agriculture and the need to raise productivity in this sector as a strategy for faster growth. With its natural climate and good soils, Uganda exhibits huge potential that needs to be tapped, while lifting the livelihood of the more than 75 percent of the population who primarily depend on agriculture.

2.12 Further transformation of production into manufacturing and higher value-added products will benefit from recent acceleration in infrastructure investments. Although manufacturing firms faced stiff global conditions where they source most of their inputs, the reorientation of policy to raise investments in infrastructure starting in FY 2007/08 should enhance growth for firms that still find it hard to break even because of the high costs of energy and transport. Firm growth is also mainly within the low value-added products, as households divest away from agriculture and entrepreneurs find solace in low-value retail services.

2.13 The second aspect of this structural transformation is the exports performance, which continues to reap the benefits of an open economy through faster growth and diversification of its markets. Uganda opened up its current account in 1994, before it moved into an open capital account in 1997. Exports have been booming and destinations more diversified as local firms became more competitive, particularly in nontraditional exports including processed fish, flowers, and foodstuffs such as grains. As terms of trade became favorable to Uganda over the 2000s, volumes of existing products accelerated and exporters diversified into new products.

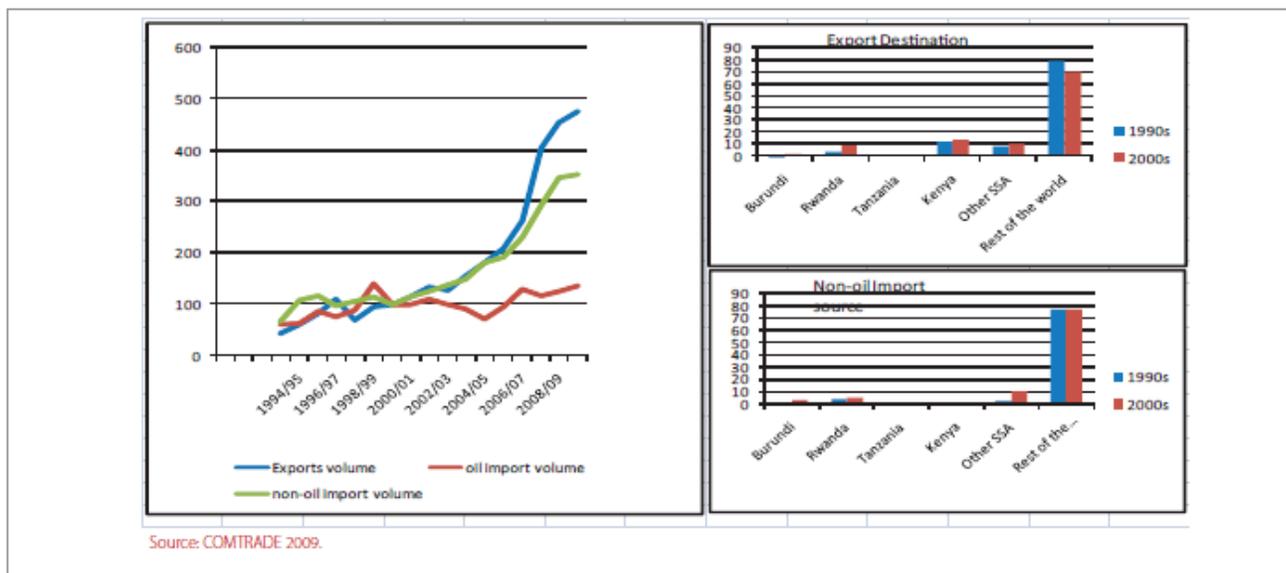
2.14 Uganda should continue to nurture the regional export markets that have sustained growth amidst shocks to terms of trade and global demand. As world demand slowed at the dawn of the global economic crisis, Uganda has been trading actively not only in industrial cash crops as shown in figure 2.5, but also in food staples—across borders and with the World Food Program—for which Uganda is the largest source of locally procured maize in Africa. This export growth did not compromise food prices for consumers within Uganda as they remained the lowest in the region until more recently, while international prices raged on. The volume of exports grew tenfold between 1994/95 and 2009/10, driving the U.S. dollar value equivalent from US\$253 million to US\$3,431 million, while the average share in GDP increased from 10 percent in the 1990s to 16 percent in the 2000s.

Figure 2.5. Evolution in Composition of Exports 1990–2010, Millions of Nominal US\$



2.15 But markets beyond the region will remain important for Uganda too. Export destinations are diversifying—the share of East African Community (EAC) regional exports in trade, which increased from 18.6 percent in the 1990s to 26 percent in the 2000s, but the increase is even more robust when exports to the rest of world (see figure 2.6). Furthermore, it will be important for Uganda to grow and maintain the markets, for they will be the larger source of demand for high value exports given that they generate higher incomes.

Figure 2.6. Evolution in Destination of Exports and Sources of Imports, Volume Index 1999/2000(left panel), Percent(right panel)



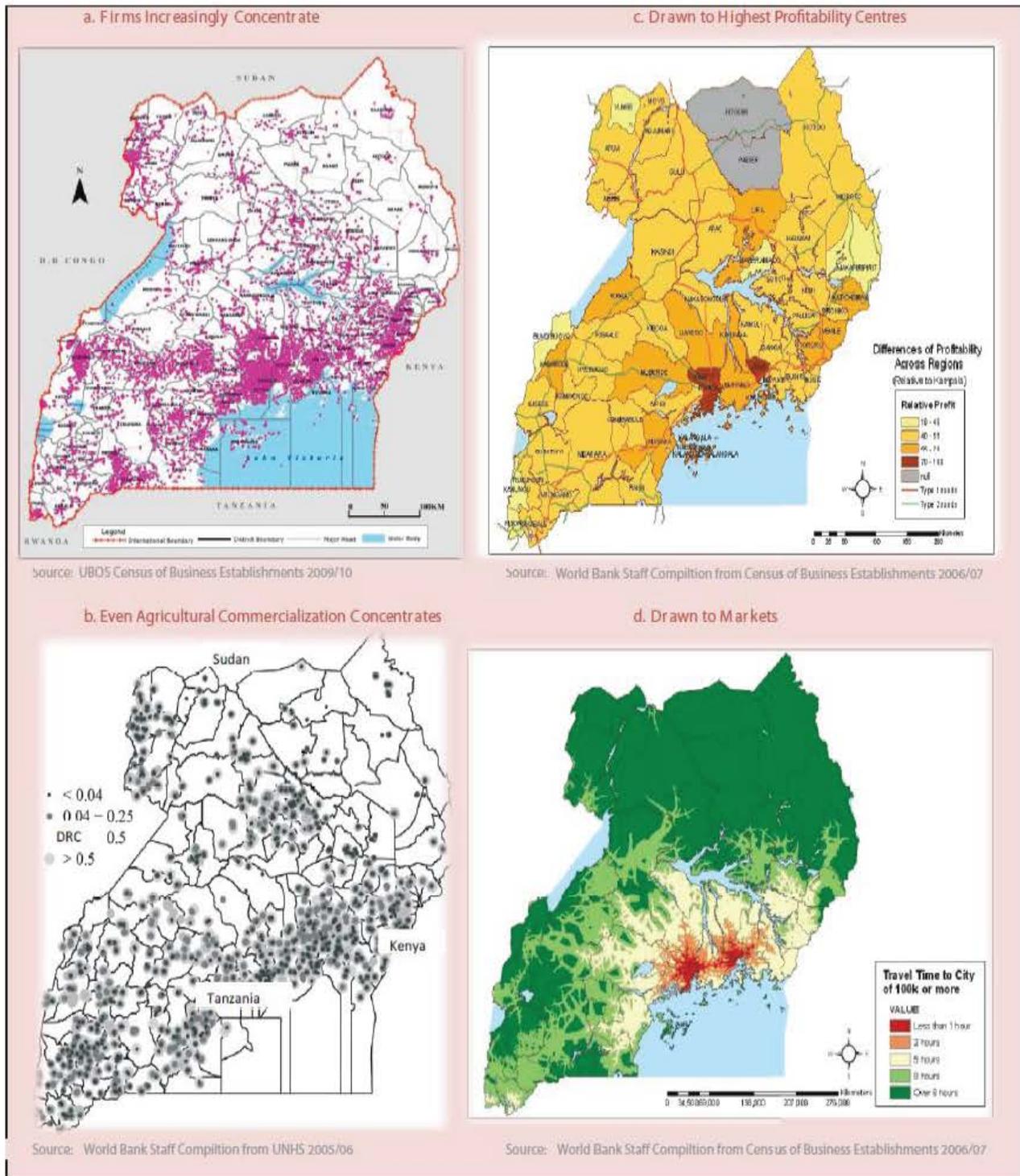
2.16 Supply response of exports would need strengthening. By 2009/10, prices realized by Uganda's exports had reached levels of the mid-1990s boom, but the supply response was varied. Coffee and cotton export volumes were all lower than 10 years ago, even as prices have increased more than 50 percent. The star performers are fish, simsim, and maize, partly driven by regional demand, and tobacco and flowers, which have sustained volume growth in spite of the dent caused by the global crisis.

2.17 The third aspect of structural transformation is the concentration of production, which is already under way in Uganda. Concentration of production is part of the development process, as has been observed by developed and developing countries around the world. Although the original patterns of productions may have been formed by history, high productivity businesses and higher commercial value agricultural production have been geographically concentrated. Firms have favored locating around the Lake Victoria crescent, which encompasses the Southern, Central, and Western regions of the country. Much of the industrial activity is clustered around large towns and along major transport corridors (see figure 2.7); in fact, 70 percent of manufacturing firms are located within strong, urbanized economies. Firm profitability, driven by proximity to each other, infrastructure, and access to markets have driven concentration of economic activity.

2.18 As farms have transformed into firms, economic geography and not natural geography has played a part in shaping Uganda's economic landscape. Although agricultural production in Uganda has been determined by climatic and soil conditions, the returns differ across locations. The leading region in agricultural income generation is the West, where the farming households select the most profitable crops and achieve higher yields. In the East and Central regions, average yields are lower than in the West, but farmers there obtain higher output prices. In the North, considered to have the highest agriculture potential, most farmers produce low-value food crops and achieve the lowest yields, causing food prices to be among the highest in the country (the rising demand for food in southern Sudan also drives food prices up in northern Uganda). Nonetheless, commercialization, considered to be the key vehicle for transformation of the sector, is also concentrated as is the agribusiness industry.

2.19 Like elsewhere in the world, the benefits of agglomeration economies, both within the same industry and for overall diversity, market access, and infrastructure endowments, have outweighed the costs imposed by congestion. If wages and prices have increased faster in the chosen locations, the rise in concentration has been accompanied by higher productivity and hence contributed to higher growth.

**Figure 2.7. Industrial Firms, Business Services, and Commercialized Agriculture Are Concentrated Mainly in Areas with Market Access and High Returns**



### 3. POVERTY TRENDS AND GEOGRAPHY OF LIVING STANDARDS

3.1 Growth needs to translate into poverty reduction and improvements of living standards of the country. The section below summarizes how this trend has evolved in Uganda.

#### *Poverty Trend over the Past Two Decades*

3.2 Uganda's sustained growth in the past two decades has continued to be rewarded with strong poverty reduction. Income poverty halved, with the poverty head count rate declining from 56.4 percent in 1992/93 to 24.5 percent in 2009/10 using the national poverty line. Both rural and urban poverty declined. The poverty head count declined from 60.2 percent to 29.1 percent in rural areas and from 28.8 percent to 9.1 percent in urban areas between 1992/93 and 2009/10. Thus, Uganda has already met the first Millennium Development Goal (MDG) of halving poverty by 2015. This conclusion remains valid even when the international poverty line of \$1.25 per person per day is used as the basis for poverty calculation.

3.3 The reduction in poverty is a genuine improvement in living standards as reflected by the permanent increase in consumption incomes. Consumption per capita grew at an annual rate of 3 percent between 1992/93 and 2009/10, wherein the permanent consumption level was increasing at an annualized rate of 2.2 percent for urban areas and 1.9 percent for rural areas. This strong household consumption growth was underpinned by economic growth, particularly in the Central region, and a dividend of peace in the north. The elasticity of poverty reduction to growth of 1.4 in Uganda is well above averages observed in other countries. For Ghana, which grew at an average of 4.6 percent per year between 1992 and 2010, poverty declined from 50 percent to 28.5 percent, implying an elasticity of 0.48. However, in Kenya, the growth of 3.4 percent per year between 1997 and 2010 reduced poverty only marginally from 52 percent to 47 percent, hence the elasticity of 0.29 (World Development Indicators database).

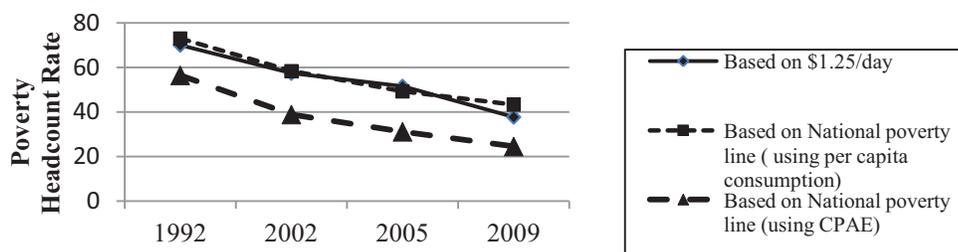
3.4 The measurement issues that are starting to cloud this impressive performance in poverty reduction ought to be addressed. A comparison of Uganda's poverty rates with those of countries of similar income and development status casts Uganda as an outlier (see box 3.1). Compared to other African countries, Uganda's poverty rate seems to be low for its level of income (Tsimpo and Rasmussen 2011); indeed, a significant proportion of households appear to be just above the poverty line. This distribution partly explains the high reduction in poverty between 2005 and 2009. The poverty estimates between 1992/93 and 2009/10 have been based on a national poverty line derived from a 1993 consumption basket as a basis for computing the cost of basic needs in Uganda, while consumption patterns certainly have since changed. A new poverty line that reflects the higher consumption standards at this stage of development would be more appropriate, while keeping the old poverty line to measure extreme poverty.

### Box 3.1. Is it Time to Reconsider? A Closer Look at Uganda's Official Poverty Figures

The Uganda Bureau of Statistics (UBOS), using the international standard approach, produces the official poverty figures from its periodic Uganda National Household Surveys (UNHS). Those poverty figures are based on a national poverty line derived from a 1993 consumption basket to compute the cost of basic needs in Uganda. The poverty line makes adjustments for household demographic compositions (i.e., using adult equivalent scales in place of household size). Poverty rates based on this poverty line show a steep decline in poverty from 56 percent in 1992/93 to 24 percent in 2009/10.

At face value, the poverty rates appear consistently lower than poverty rates based on the international poverty line of \$1.25 per day per person, adjusted for relative prices (see **Error! Reference source not found.**). At Uganda's income per capita of US\$490 and ranking of 143rd (out of 169 countries) in the Human Development Index (HDI), a poverty rate of 24.5 percent is an outlier when compared to other countries with almost similar development indicators (per capita income, food consumption share in total expenditure, access to electricity, water, urbanization rate, and alphabetization) (see box figure 3.B.2 and Tsimpo and Rasmussen 2011). Even though demography and the relatively low price of food in Uganda partly explain the discrepancy, these differences cast a shadow over the official poverty rates.

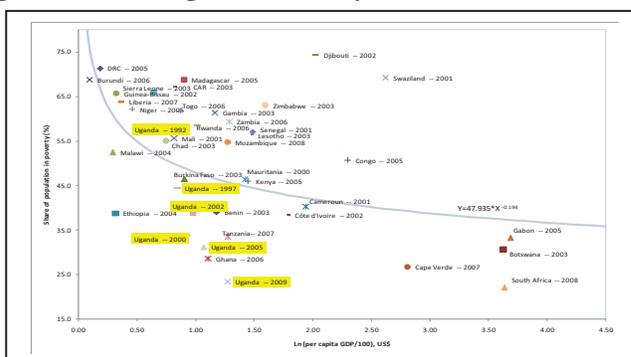
**Figure 3.B.1. A Comparison of Poverty Rates, National Poverty Line, and International Poverty Line**



*Source:* POVCAL Net and World Bank staff calculations from IHS 1992/93, UNHS 2002/03–2009/10.

**The difference between the international poverty line and the official national one is to a large extent methodological.** Unlike poverty rates reported by UBOS, those based on the \$1.25 per day line do not adjust for household demographic composition. The failure to adjust for household demographic composition understates the welfare measure considerably. For example, the welfare measure in 2005/06 is understated by an average of 30 percent. Computations show that poverty rates based on the national poverty line would be just as high as the \$1.25 per day figures if they are not adjusted for household demographic composition as well. Since the adjustment for household consumption is widely recommended (Haughton and Khandker 2009), the criticism of the official national poverty rates on the basis that the national poverty line is lower than the widely used international poverty line is not adequately justified.

**Figure 3.B. 2. Is Uganda's Poverty Too Low for Its Income per Capita?**



The difference in other countries with similar indicators suggests that there is room for improvement on measuring poverty in Uganda. The country has made significant progress in development during the past two decades, and consumption patterns have changed since the 1993 pattern in line with Uganda's economic progress. A poverty line based on the 1993 consumptions basket is possibly outdated and evaluates the welfare of Ugandans on standards they have outgrown in accordance with gains from the country's impressive economic performance. In acknowledgment of this progress, it is worthwhile to reconsider the consumption basket used to compute the poverty line to reflect the present aspirations of Ugandans at this stage of development. This reassessment would entail moving to a higher poverty line based on current consumption standards.

*Source:* Tsimpo & Rasmussen (2011)

### ***How Did Poverty Decline?***

3.5 The most important factor driving poverty reduction was the subtle structural transformation in livelihoods as Ugandan households diversified economic activity away from overdependence on the farm. Between 1992/93 and 2005/06, the proportion of all households relying on only farm income declined by a third, from 54 percent in 1992/93 to 36 percent in 2005/06, with the transition stronger in rural areas than in urban areas. The new income sources are the nonfarm or household enterprises (HEs), growing fast at a rate of 6 percent per year despite a high risk due to overdependence on the family network.

3.6 Thus while agriculture remains a source of income for 75 percent of households in Uganda, many households supplement agriculture with income from other activities that are often more productive. This diversification increased household incomes directly by expanding the income base and indirectly by boosting agricultural income. In fact, agricultural households with nonfarm income are more commercialized and report higher income from agriculture on average. Going forward, these HEs need support in terms of financial services and a more efficient, progressive tax structure.

3.7 Second, the growth in wage and salary employment has raised incomes. Between 1992/93 and 2005/06, employment in private wages and salary grew at an annual average rate of 7.7 percent, with the latter five years (2002/03 to 2005/06) accelerating to 12.5 percent. This growth was combined with the rising wages both in the private sector (5 percent per year) and in the public sector (13 percent per year). This employment growth is impressive and comes second only to Ghana within Africa. However, the transformation of the labor force into higher nonagriculture wage jobs as the primary form of employment has been slow, owing to the low base of wage jobs and the high rate of population growth.

3.8 Thus, while 100,000 nonagricultural wage jobs were created per year between 2002/03 and 2005/06, they absorbed only a quarter of new labor market entrants. The rest were employed mainly in nonfarm HEs and in family agriculture. It would be important to sustain policies that have generated growth in wage and salary jobs.

3.9 Third, incomes received a dividend as growth rebounded in the North because of a peace dividend. From the conflict situation when growth in real per capita consumption (1.5 percent) was less than half of the national average of 3.6 percent, the return to peace changed the economic climate in Northern Uganda. Poverty in the northern region decreased 14 percentage points between 2005/06 and 2009/10. This decrease constituted half the decline in poverty reduction in Uganda during that period. Despite those recent improvements, consumption levels and growth in the region remains below the national average for all but the richest 10 percent in the rural North. Special attention would be needed to be given to the North to ensure that it moves beyond recovery.

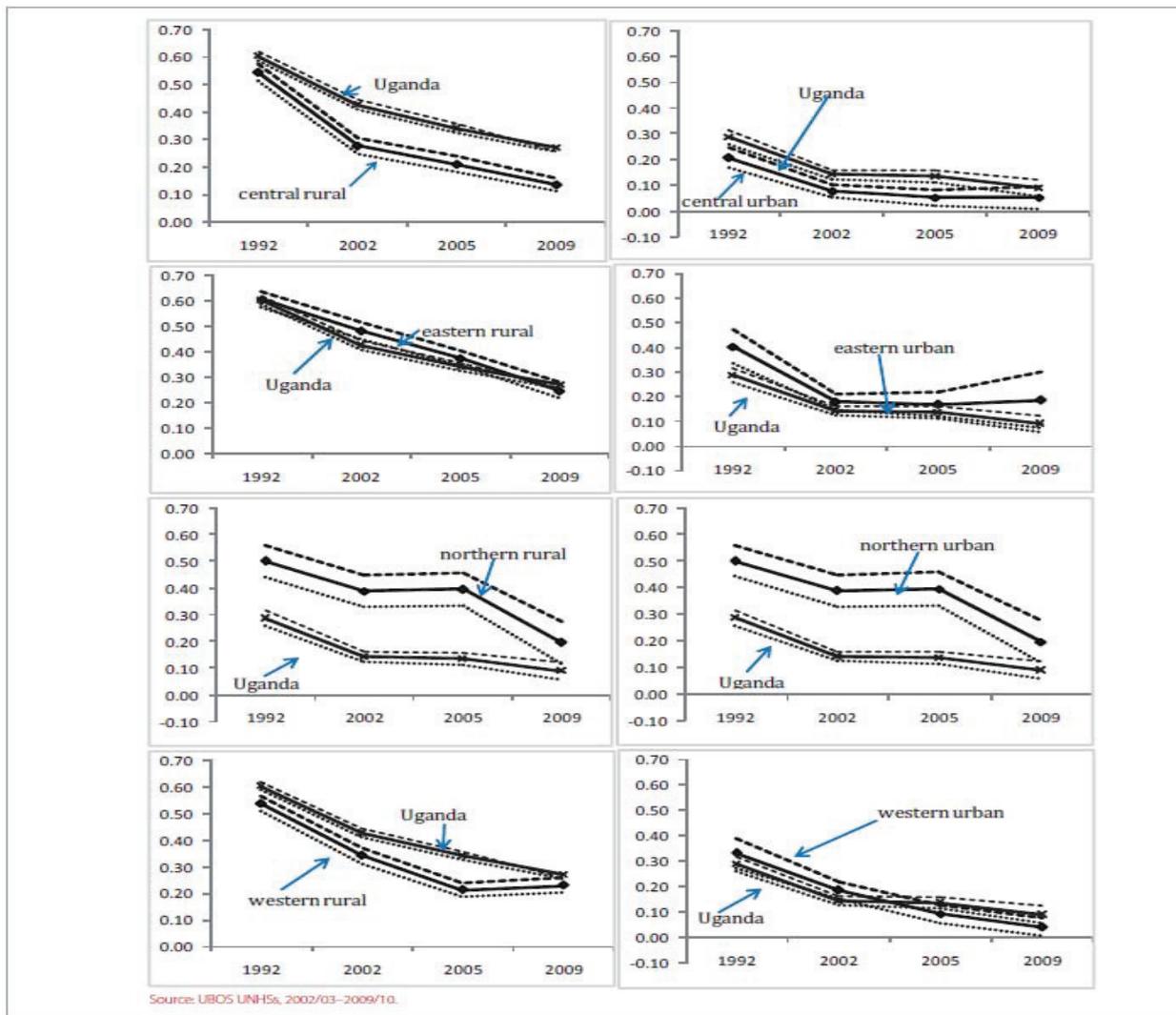
3.10 Fourth, poverty among households engaged in only agriculture halved from 64 percent in 1992/93 to 33 percent in 2005/06. Indicative trends based on UNHSs suggest significant improvements in agriculture yields for some crops, hence productivity. Concurrently, increased exports of agricultural commodities (e.g., maize) and relatively lower-than-regional-average food inflation in Uganda also point to improved agricultural productivity.

3.11 In sum, the reduction in poverty, especially in rural areas driven by agriculture and increased diversification of nonfarm activities, will remain a key pillar for more inclusive growth.

***Geography of Living Standards: Inequality Persists***

3.12 Uganda has made some progress in improving the living standards of its people, but gaps in welfare remain. According to the United Nations HDI, which gives a broader definition of well-being, living standards are twice as good as they were two decades ago. Uganda’s HDI increased from 0.281 in 1990 to 0.422 in 2010, compared to the Sub-Saharan African region, which increased from 0.293 in 1980 to 0.389 today, placing Uganda above the regional average. Yet living standards remain very low because Uganda’s HDI is today ranked 143rd out of 169 countries across the world with comparable data. However, the gaps in welfare at the regional level (figure 3.1 and 3.2) raise the question of the extent that public policies can work toward balancing living standards to make development inclusive in Uganda.

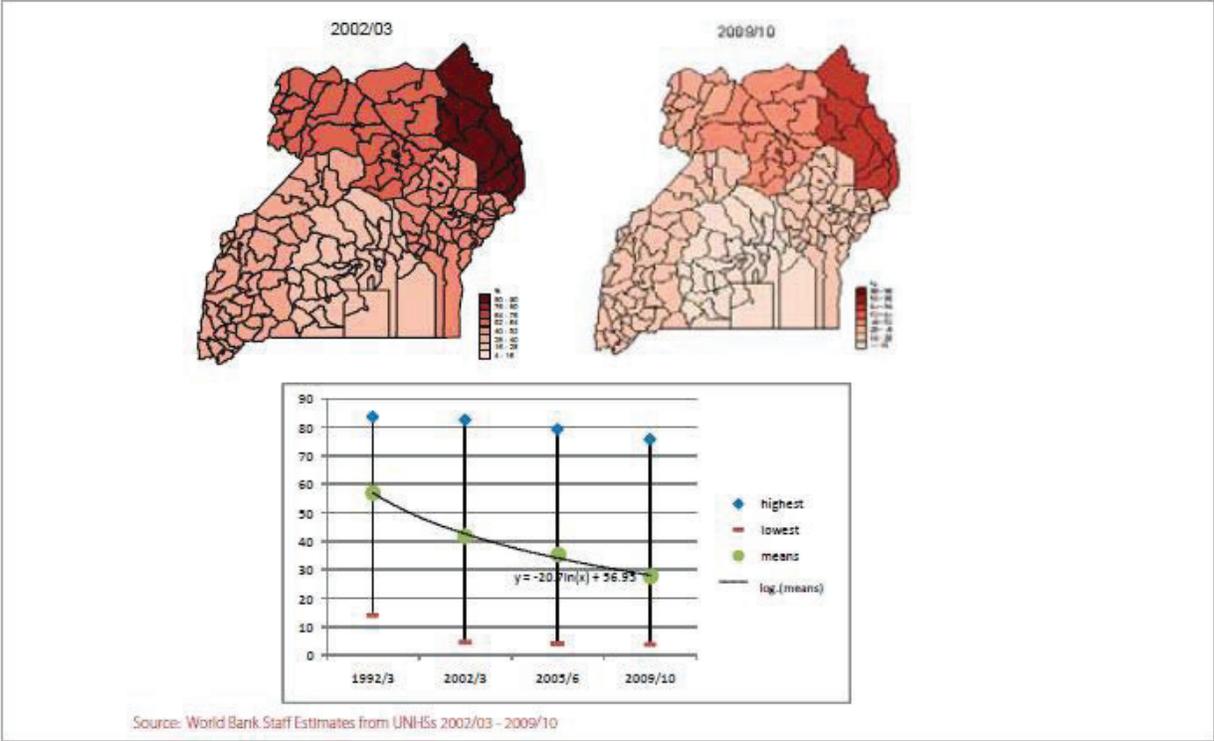
**Figure 3.1. Income Poverty Declining, but at a Different Pace Across Regions**



3.13 Poverty density is generally higher in areas where poverty is high, but leading areas are not necessarily devoid of poor people. Kampala, the most leading region, also has the highest density of poor people. Beyond Kampala, poverty density is generally higher in areas where poverty is high. The exception is the Midnorth, which, although very poor, displays a relatively low density of poverty because it also has low population density.

3.14 Beyond income welfare, Uganda has made significant progress toward meeting at least three of the seven MDGs directly related to living standards at the aggregate level, but not across all regions. Uganda has made progress in reducing the share of the population that suffers from hunger, in promoting gender equality, and in empowering women, while universal primary education (UPE) has already been met (see figure 3.3). Uganda is on track to meet the targets for access to the human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) treatment and access to safe water. Nonetheless, slow progress has been recorded for achievement of primary education, given quality and completion issues, and on child and maternal mortality. Performance differs across regions, with the North and Northeast lagging in most indicators, while the Southwest performs worst in health-related indicators.

Figure 3.2. Incidence of Poverty Reduces while Inequality Persists



3.15 Overall, income welfare and living standards remain regionally unbalanced, while transformation in production is becoming more concentrated. Regional disparities have to be expected in the development process, but they have to be managed to maintain a coherent social and political equilibrium. The lessons of experience are that the government of Uganda should aim at ensuring not equality, but equity across regions, by promoting better integration and connectivity as well as improving the delivery of education and health services that will help augment human capital (mobile factor) and, therefore, facilitate the transition process (see table

3.1). The rest of this report highlights the transformation that ought to be undertaken both sectorally and geographically to promote more integration and, to the extent possible, the interaction between the two geographies. As the WDR 2009 showed, growth will be unbalanced, but development must be inclusive.

**Table 3.1. Some Regions Are Falling Behind on the Millennium Development Goals**

Goals or targets set in 1990 to be achieved by 2015	Achievement	
	At national level	Districts or regions lagging
<b>Goal 1: Eradicate extreme poverty and hunger.</b>		
Target: Halve the proportion of people whose income is less than \$1 a day. <b>Indicator:</b> Poverty head count	Surpassed	Midnorth, Northeast, West Nile
Target: Halve the proportion of people who suffer from hunger. <b>Indicator:</b> Prevalence of underweight children under 5 years	On track	North, Southwest
<b>Goal 2: Achieve universal primary education (UPE).</b>		
Target: Ensure that children everywhere can complete a full course of primary schooling. <b>Indicator 1:</b> Net enrollment ratio in primary school <b>Indicator 2:</b> Primary completion rate <b>Indicator 3:</b> Literacy rate of 15- to 24-year-olds	Reversed Reversed Slow	Northeast, West Nile Midnorth East, North
<b>Goal 3: Promote gender equality and empower women.</b>		
Target: Eliminate gender disparity with regard to all levels of education. <b>Indicator 1:</b> Ratio of girls to boys in primary <b>Indicator 2:</b> Ratio of girls to boys in secondary <b>Indicator 3:</b> Ratio of girls to boys in tertiary	On track	Midnorth Midnorth Midnorth
<b>Goal 4: Reduce child mortality.</b>		
Target: Reduce by two-thirds the mortality rate for children under 5 years. <b>Indicator 1:</b> Mortality rate for children under 5 years (per 1,000) <b>Indicator 2:</b> Mortality rate for infants (per 1,000) <b>Indicator 3:</b> Ratio of 5-year-olds immunized for measles	Slow Slow Impressive	West Nile, Southwest, North Northeast
<b>Goal 5: Improve maternal health.</b>		
Target: Reduce by three-quarters the maternal mortality ratio, and achieve universal access to reproductive health care. <b>Indicator 1:</b> Maternal mortality ratio (per 100,000) <b>Indicator 2:</b> Births attended by skilled health personnel <b>Indicator 3:</b> Unmet need for family planning	Slow Slow Slow	North, West, Southwest West Nile
<b>Goal 6: Combat HIV/AIDS, malaria, and other diseases.</b>		
Target: Halt and begin to reverse the spread of HIV/AIDS, malaria, and tuberculosis. <b>Indicator 1:</b> Condom use at least for high-risk sex (male/female) <b>Indicator 2:</b> HIV-infected persons accessing antiretroviral drugs <b>Indicator 3:</b> Usage of mosquito nets for children under 5 years <b>Indicator 4:</b> Prevalence of tuberculosis	Reversed On track  Impressive Slow	East, West East, West  West, Southwest West, Southwest
<b>Goal 7: Ensure environmental sustainability.</b>		

Target: Reverse natural and biodiversity loss, and double the proportion of people with sustainable access to safe drinking water and basic sanitation.		
<b>Indicator 1:</b> Proportion of population (rural/urban) using improved water sources.	On track	North, West
<b>Indicator 2:</b> Proportion of population (rural/urban) using improved sanitation facilities.	On track	North, West

*Source:* Ministry of Finance, Planning, and Economic Development, *MDGs Report for Uganda 2010*, and World Bank staff adjustments.

**PART B:**  
**TRANSFORMING ACROSS SECTORS: FARMS AND HUMAN CAPITAL**

## 4. TRANSFORMING FARMS: AGRICULTURAL COMMERCIALIZATION

4.1 Transforming agriculture will remain a critical element of Uganda's growth agenda. Global evidence suggests that growth originating from agriculture is more effective in raising incomes of the poorest third of the population than that from nonagricultural activities (WDR 2008). Further research has shown that countries may not be able to sustain a rapid transition out of poverty without increasing agricultural productivity (Timmer and Akkus 2008). For Uganda, this transformation is even more critical given that agriculture is the primary source of livelihood for more than 75 percent of the labor force. Agriculture is the base for industrialization if Uganda is to use its comparative advantage in agriculture to industrialize given that the bulk of exports are agricultural commodities. However, more than 70 percent of the farming is still in the subsistence sector.

4.2 Agricultural transformation<sup>3</sup> in Uganda cannot happen overnight, as it is not a mere shift by a few households from food crop to cash crop production, neither is it a shift by a few individuals to large-scale production. It should not be taken for granted that transformation of traditional agriculture progresses efficiently, not to mention equitably, even if the point of departure—subsistence agriculture—happens to currently be poor but efficient. By focusing on the notion of transformation that aims at increasing the proportion of the agricultural population that participates in the market, strategic policies can be adopted that help accelerate the transformation process. The key transformation policy question is how to move as many farmers out of subsistence agriculture to commercial farming and nonfarming sectors. A number of programs and policies (see box 4.1) have been tried in the past but with little success.

4.3 According to National Accounts data, agricultural output expansion over the past two decades seems to have come from the rapid increase in the agricultural labor force and the area expansion, rather than productivity growth. Agricultural statistics in Uganda are problematic, like in many other countries that still use older systems for intrasectoral weights and thus underestimate the subsectors showing the most dynamism. These data problem make it difficult to discern concrete evidence about trends in agriculture. Although the National Accounts figures need to be interpreted with caution, changes in agricultural output have been closely correlated with labor growth in the sector and land area expansion from 18.3 percent to 26.8 percent of the total land area between 1961 and 2007, but because of the population pressure, the land/labor ratio shrank from 0.98 hectares (ha) in 1980 to 0.56 ha in 2007 per worker. By contrast, while the world makes progress in agricultural productivity, Uganda seems to be lagging even behind Sub-Saharan Africa (SSA) (see figure 4.1).

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<sup>3</sup> Transformation can be defined as a major shift in the agrarian structure, the mechanization of some functions, the expansion of irrigation and water resources management, a set of changing patterns of specialization, and a set of changing roles for government in the sector.

#### Box 4.1. A Multitude of Agricultural Development Policies and Programs Pursued over the Past Two Decades

From Entadiikwa (Seed Capital Initiative) alongside the Poverty Eradication Programs (1997/98–2008/09) and the Plan for Modernization of Agriculture (2001–09) to the more recent Bona Bagagawale (Prosperity for All) alongside the National Development Plan (2009/10–2014/15) and the National Agricultural Advisory Services (NAADS), various agricultural development strategies have yielded little progress in transforming the sector.

While some programs have been adopted in parallel and thus overlap, others were sometimes inconsistent because they were adopted as ad hoc interventions that cannot sustainably develop the sector. The core elements have included input subsidization to ensure that farmers can access inputs and technologies, agricultural zoning and enterprise development to allocate agricultural public funding, and support to large-scale agriculture to transform agriculture.

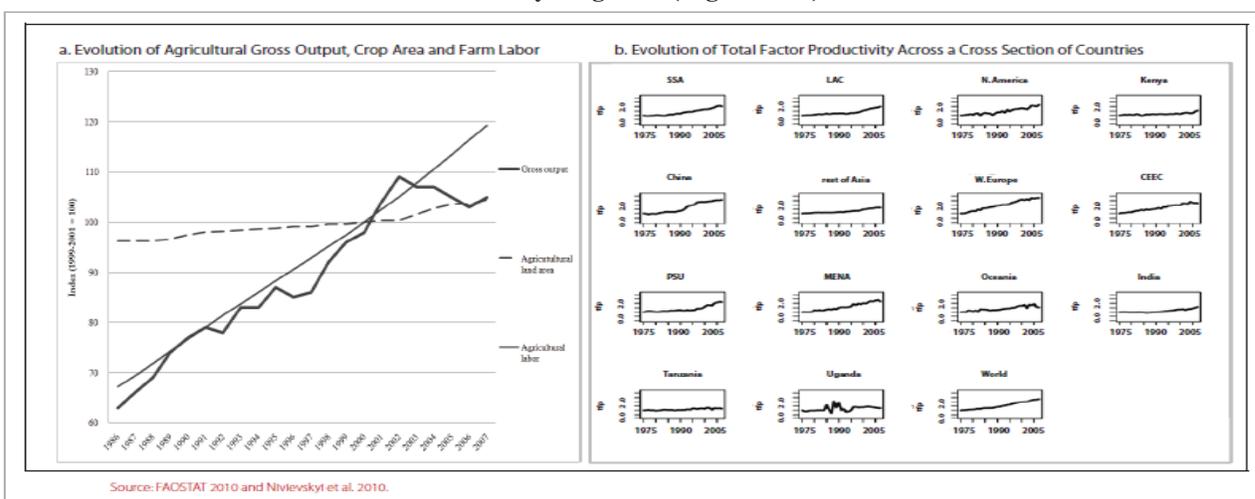
These ad hoc interventions have rendered existing policy frameworks and programs irrelevant. Such examples include (a) the directives to provide inputs for six farmers per parish in contrast to the NAADS program that aimed at using established farmers groups and (b) the use of NAADS to distribute free inputs in spite of the weak administrative capacity, hence resulting in elite capture.

There is a belief among some not insignificant policy makers that agriculture transformation can come about only with large estates using tractors and combine harvesters; hence, they argue for less attention to subsistence farmers.

The current Development Strategy and Investment Plan (2010/11–2014/15) aims to ensure food and nutritional security, increase incomes of farming households, promote trade, and ensure sustainable use and management of agricultural resources. This plan, together with the new policy framework that is also being developed, could benefit from a more consistent and sustainable approach to transforming agriculture.

4.4 However, a wholesale assumption of stagnant productivity in the agricultural decline over the past decade would be misleading, given evidence of reasonable performance in some key areas. Even as the National Accounts depict a modest performance of agriculture, the reduction in rural poverty from more than 60 percent to 26 percent between 1992 and 2010 was driven by agriculture and relatively low inflation during the decade compared to neighboring Kenya, Sudan, and the Democratic Republic of Congo. Pockets of good performance were depicted as reflected by booming agricultural exports, and the indicative improvements in yields for some crops like maize and beans (according to UNHS data). Policy interventions need to build on these areas of progress even if the contradictions highlight the importance of strengthening agricultural statistics in the country.

Figure 4.1. Uganda's Agricultural Output Growth Driven by Labor Inputs (Left Panel) While Total Factor Productivity Stagnates (Right Panel)



Source: FAOSTAT 2010 and Nivlevskiy et al. 2010.

4.5 Uganda's agriculture is still lagging other good performers Vietnam and China, and raising productivity of the small farmers in particular will be important. Small farms account for at least 51 percent of farms across the country, while medium-size farms compose 38 percent (table 4.1). Both types of farms must have performed relatively well because past agricultural growth could not have been driven by only the 4 percent of production coming from relatively large farms (above 5 hectares).

**Table 4.1. Distribution of Farm Size**

<b>Agro-ecological zones</b>	<b>Small (up to 1 ha) (%)</b>	<b>Medium (1 to 5 ha) (%)</b>	<b>Large (5 ha or more) (%)</b>	<b>Observations</b>
Eastern Highlands	53	43	3	1,689
Karamoja Drylands	73	25	2	76
Lake Albert Crescent	51	44	4	655
Lake Victoria Crescent	66	30	3	609
Midnorth	62	35	2	312
Southern Drylands	56	38	5	669
Southwest Highlands	55	40	4	375
West Nile	66	30	4	576
Western Highlands	63	34	3	406
<b>National</b>	<b>58</b>	<b>38</b>	<b>4</b>	<b>5,367</b>

*Source:* World Bank staff calculations based on UNHS III (2005/06).

4.6 Uganda's agriculture would perform better if poor rural infrastructure, undercapitalization of farmers, and high cost of inputs had not left the bulk of farmers out of reach of modern technologies and inputs. Maintenance of many rural roads has been inadequate, keeping costs of inputs high and farm prices low, twice penalizing the farmers. Fertilizers, seeds, and chemicals in Uganda are 50 percent more expensive than in Kenya. Yet acquiring credit under volatile weather and output price unpredictability (covariant risks) is too costly for many farmers, irrespective of their scale of production. The proportion of farmers applying for credit is increasing only slowly—rural households applying for credit increased from 10 percent in 2005/06 to 17 percent in 2009/10, but less than a quarter of these were related to agriculture.

4.7 The low use of modern technologies and inputs results in low yields, curtailing chances of tapping Uganda's agricultural potential. Ugandan farmers' yields are not even 40 percent of those attained at the country's research stations. Although overall farm yields are unlikely to reach the levels attained at research stations, they can certainly increase as the result of improved low-input and high-input technologies. Demonstration results under pilot programs promoted by the National Agricultural Advisory Services (NAADS) and others, in particular the U.S. Agency for International Development (USAID) (see table 4.2) and Danish International Development Agency projects, confirm the possibility of closing the gap. Otherwise, Uganda's significant agricultural potential will remain unrealized.

**Table 4.2. Yields Obtained by USAID Agricultural Productivity Enhancement Program–Supported Farmers in Uganda (kilogram per acre)**

Commodity	National baseline (2003/04)	Demonstration plot yield with low-input technology	Demonstration plot yield with high-input technology	Average farmer yield with low-input technology	Average farmer yield with high-input technology
Coffee Robusta	295	700	1,350	450	1,250
Coffee Arabica	135	800	1,800	400	1,750
Banana	2,350	10,000	21,000	7,500	n/a
Cotton	185	420	750	375	680
Upland rice	600	1,500	2,250	1,250	2,000
Sunflower	250	600	900	525	n/a
Maize	520	1,100	2,000	1,000	1,800

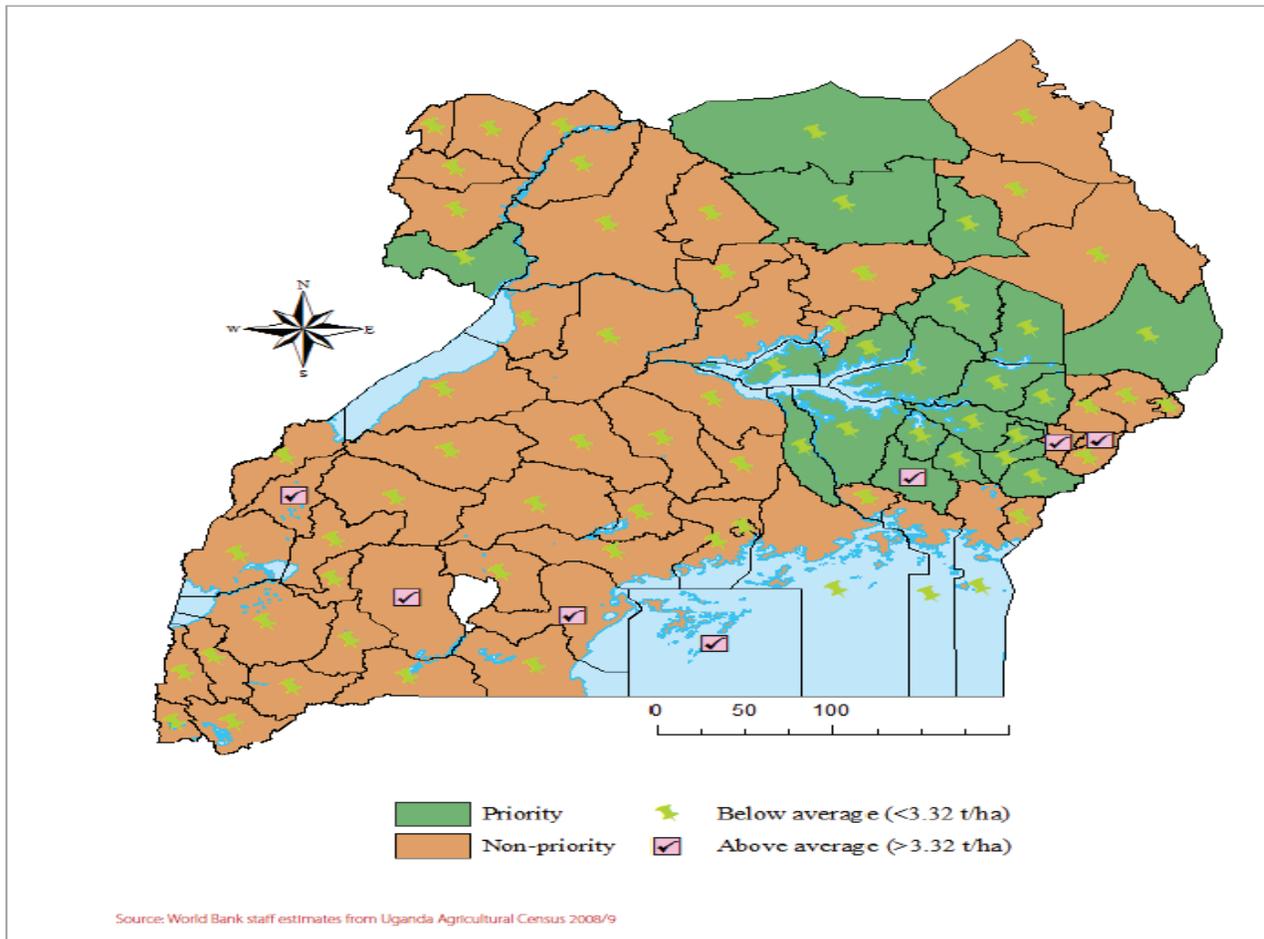
Source: Uganda: Formative Evaluation of the Agricultural Productivity Enhancement Program (USAID 2007).

4.8 There are geographical differences in farm value-added, particularly in the underperforming North. In the West, where value-added is highest, farmers select the most profitable crops and achieve higher yields, having good access to infrastructure and markets for inputs and outputs. The country’s Central and East regions perform worse, having worse agricultural conditions, fewer people, and weaker infrastructure than the West. The differences in performance between poor and nonpoor farm households within regions are not significant, with both households generating agricultural income far below those in the nonagriculture sectors. Undoubtedly, the North lags behind and, thus, requires more targeted interventions during the next decade to unlock its potential.

4.9 There has been little gain from the agricultural zoning approach adopted over the past decade to support farmers in raising production. Allocation of crops across the different agro-ecological zones and enterprises identified under the national agro-ecological zone priority setting is neither consistent with the crop preferences of farmers nor with the yields realized across the zones. While the Ministry of Agriculture Animal Industries and Fisheries (MAAIF), through NAADS, has used 10 preset agro-ecological zones with priority crops enterprises, these enterprises often have not been chosen by farmers. Maize, for instance, was identified to be grown in three zones: the Kyoga plains, the Lake Victoria Crescent, and the Highland Rangers. Nonetheless, according to the 2008/09 agricultural census, up to 43 percent of maize farmers within the prioritized zones had yield below the average of 2.33 tons per hectare, while 21 percent in the nonprioritized zones performed above average. For cassava, 71 percent of farmers in the prioritized zones performed below the national average of 3.32 tons per hectare, compared to 49 percent of farmers in the nonprioritized zones who achieved yields above national average.

4.10 The government of Uganda would need to rethink the criteria for allocating crops to zones and improve coordination among NAADS, the research and advisory services, and farmers before using zoning as the main instrument for allocating resources as is the case under the Development Strategy and Investment Plan (DSIP).

**Figure 4.2. Cassava Yields Outperform across the Nonprioritized Zones**



### ***Prospects for Agricultural Commercialization***

4.11 Over the past two decades, Uganda has adopted various initiatives to promote commercialization of smallholder farmers as highlighted above, but results have been mixed. Export commodities fetching relatively high values (i.e., US\$1,000 per ton and higher) and with the ability to compensate for high transaction costs in Uganda have recorded some success. Flower export volumes have multiplied more than 450 percent, while tobacco, fish, and tea exports are almost 250 percent higher than they were 10 years ago. Performance of low-value food staples, accounting for the bulk of farms, has been less successful, except when farmers accessed nearby regional markets, especially in Sudan and the Democratic Republic of Congo through cross-border trade.

4.12 Most farmers in Uganda are, therefore, at the lower end of output and input commercialization. In 2005/06, out of all households engaged in agriculture, the most commercialized quintile of households sold no more than 50 percent of their output, while the same quintile purchased even fewer inputs—equivalent to no more than 23 percent of their total production value. The rest of the farmers sold insignificant amounts or did not sell at all, while they did not buy inputs. Larger farms are more market oriented because they sell a larger share of their outputs and buy more inputs, but farm size has mattered to only a certain limit—

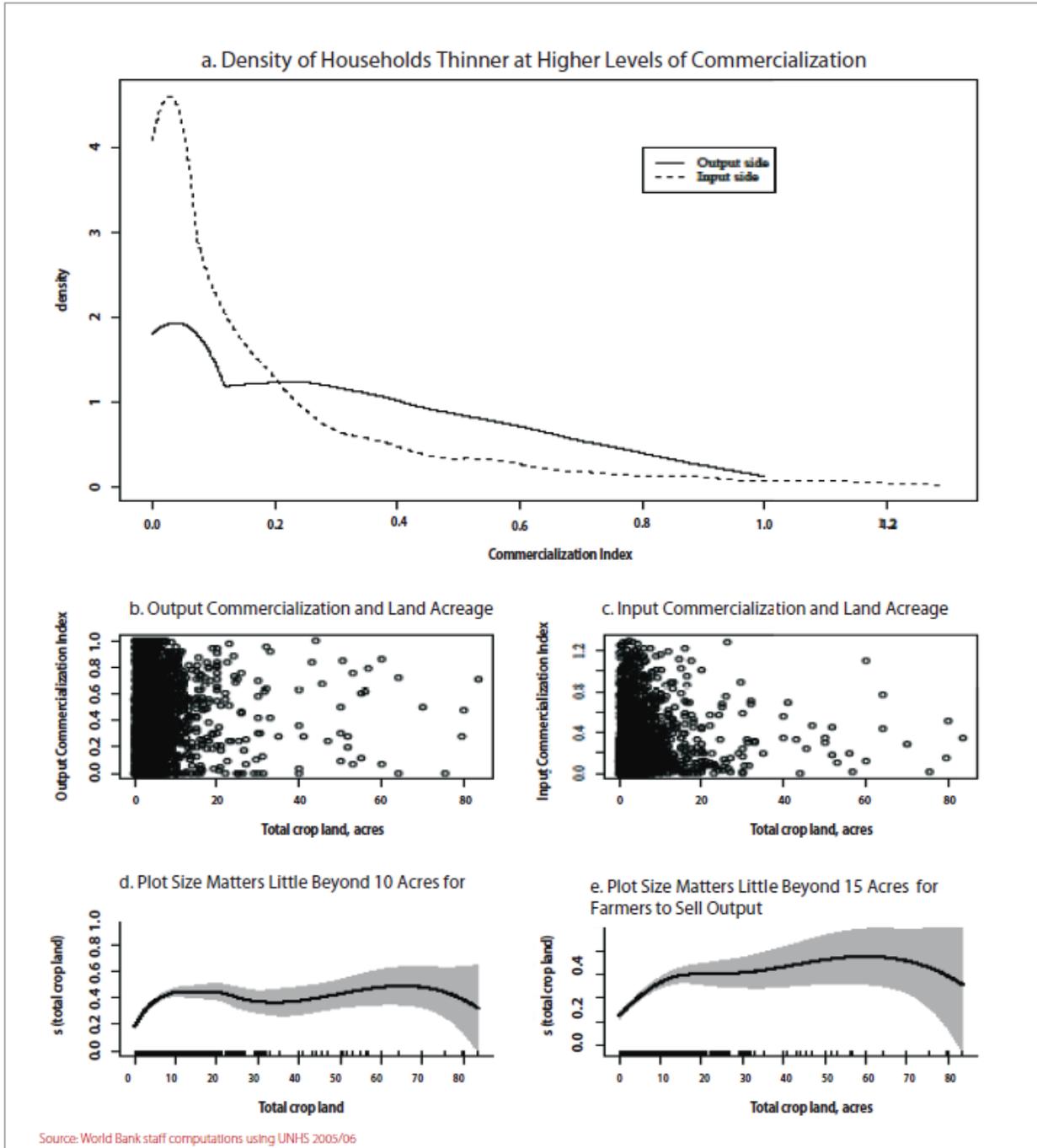
commercialization increases as the scale of farms grows and stabilizes after reaching the maximum of about 10 and 15 acres for output and input commercialization, respectively. The speed of growth to the point of maximum, however, is different. Adding more acres (up to about 10 acres) quickly brings households in food surplus that allows them to start selling, while opting for purchased inputs is a much slower process. Beyond that threshold, increase in size does not necessarily translate into higher levels of commercialization (see figure 4.3).

4.13 The free market environment in Uganda has helped provide undistorted price incentives to farmers. In 2010, for instance, a Ugandan farmer in Rakai was getting US\$0.66 per kilogram of cherry robusta coffee, compared to only US\$0.53 for his Tanzanian counterpart in Kagera. For cotton, the Uganda producer prices are the highest in Africa, at 70 percent of the border lint prices. Those price incentives, however, come with price volatility and risk for farmers, since there is no stabilization mechanism.

4.14 Yet high risks to farmers from weather and price volatility push them into various diversification strategies and away from specialization in one commercial product. The bulk of Uganda's agriculture is weather dependent, hence naturally susceptible to climatic changes. Unfortunately, there are no water management schemes (including irrigation) or weather-indexed insurance schemes available to farmers to help them manage those risks. Therefore, for more than 75 percent of the agricultural households that are commercialized, farmers will on average grow not less than three crops at the same time to manage both the weather- and price-related risks.

4.15 But like other countries with similar environments of risk, Uganda's agricultural commercialization is proceeding in stages—first through diversification and specialization, and then through significant commercialization. Global experience suggests that before farmers begin selling a larger share of their produce, they first increase diversification of their production portfolio until they reach about 16 percent of output commercialization. Very few farmers immediately begin to specialize for markets. This U-shaped relationship implies that promoting certain technologies through NAADS, for example, would not necessarily result in the immediate specialization in that commodity. Farmers will keep having a diversified portfolio until they get adequate access to markets, human capital, and factors of production to disconnect their production decisions from consumption. According to the 2005/06 UNHS analysis of farmers from 750 rural communities, only when farmers consistently begin selling more than 40 percent of their output do they turn to specialization for markets. This process is not unique to Uganda, but it is important to recognize it, so as to influence it and make optimal use of it.

**Figure 4.1. Not More than 25 Percent of Farmers Are Substantially Commercialized, While Degree of Commercialization Depends on Size of Land Not Far Beyond 10 Acres**



4.16 There are differences in performance between small and large farms. Larger farms are more market-oriented because they sell a larger share of their outputs and buy more inputs—but the farm size effect is significant up to only about 10 acres. Smaller farms in Uganda appear to use limited resources more efficiently than larger farms, in contrast to popular beliefs in the country. There is, in fact, a systematic inverse relationship between farm size and crop income per acre and a huge difference between small and large farms. The crop income of small farms is

three times higher than that of large farms. The difference in income generation is the largest in the high potential agricultural areas of West Nile, Western Highlands, and Lake Victoria Crescent. Except in the Midnorth, large farms in Uganda are very inefficient in their land use.

4.17 Smaller farmers are more productive and profitable than large farms because of lower supervision costs and higher incentives for family labor. Agricultural production is geographically dispersed and requires the ability to quickly adjust to changes in climate and soil. Family farms incur lower supervision costs and have better incentives for family members to work hard and reinvest in their farms than do commercial outfits. Family members have higher incentives to provide effort than does hired labor. They share in output risk and can be employed without incurring hiring or search costs. Even though owner-operated family farms may hire or exchange labor for seasonal tasks, they avoid the need to supervise permanent waged workers, implying that the family farms enjoy a productivity advantage compared to large farms with numerous hired laborers. The advantages of large-scale farms in marketing, access to capital, and technology only rarely surpass those inherent benefits associated with the family farm, thereby explaining the significant inverse relationship between farm size and productivity.

4.18 The pathway to more commercialized agriculture is through getting it right on the first acre, then replicating the same practices to incremental acres. In China, Thailand, and other Asian economies, where land constraints are even larger than those in Uganda, farms are small and perform well. The smaller farms in Asia have generated a large pro-poor growth and contributed to faster convergence toward less inequality than in regions with larger farms. Where farms are quite large, for instance in land-abundant Eastern Europe, South America, and the United States, the process of farm enlargement has been driven not only by arable land availability, but also by the fast outmigration from rural to urban areas. This process will move forward in Uganda when growth in the nonagricultural economy accelerates to absorb labor released from agriculture and from the fast-growing population. For now, Ugandan farmers need to improve efficiency of existing farms on an incremental basis. A farmer cultivating 20 acres of a particular crop with family labor and realizing 5 bags of yield per acre is not a commercial farmer but a “big peasant” when compared to one who may only be cultivating one acre using modern technology and getting a yield of 20 bags per acre.

4.19 Beyond efficiency, smallholder commercialization is also good for inclusive growth. Many poor people are also engaged in agriculture, tilling small pieces of land. Yet empirical evidence suggests that 0.5 acres would be sufficient to lift a poor household out of poverty. This number is not very large even in land-constrained Uganda, but it requires flexible land markets to support farm expansion.

### ***Proposed Policy Recommendations***

4.20 To accelerate agricultural commercialization, the government must use a more comprehensive multipronged approach that addresses farm level constraints and those beyond the farm gate. Subsidized inputs by themselves are not likely to boost farm productivity. The effect of improved seeds on farm productivity, for instance, depends on the planting season and the ecological zone, partly explained by the differences in farming practices and level of modernization in the different zones. However, many factors that affect farm productivity and commercialization can be influenced through public policy, with special attention to the North

because of its specific challenges, in particular (a) its vulnerability to food insecurity, (b) the prevalence of land disputes, and (c) the engrained dependency mentality resulting from the prolonged civil conflict until 2005.

### ***Addressing the Farm Level Constraints***

4.21 Like in many countries that have successfully transformed agriculture (e.g., China and Vietnam), increasing productivity at the farm level in Uganda will require attention to three major areas: (a) technology transfers (modern inputs) to farmers, (b) secure land rights, and (c) access to finance. An element of market failure in each of those areas justifies some degree of government intervention.

4.22 For effective technology transfer to the farmers, the government will need not only to invest in agricultural research and advisory services, but also to ensure that agricultural technological innovations reach and can be used by the farmer. Past investments in research and advisory services in Uganda yielded significant benefits, but the gap between yields for a typical Ugandan farmer and those realized in research stations needs to be closed. Stronger collaboration between research and advisory services, in particular at the local level, would be needed to improve adaptation of existing high-yield varieties to local conditions and to make existing varieties more profitable for farmers.

4.23 Climate change is becoming increasingly important for farmers, suggesting that tools should be developed to mitigate those effects. Developing such tools will require innovations in managing the effects, including irrigation and indexed insurance schemes. Innovative ways of providing information through social networks in extension, use of information and communication technology (ICT) such as mobile phones, and other technological penetration can be more effective. A delicate balance needs to be maintained between advisory services and inputs, while farmers become empowered with knowledge to evaluate service providers, control grant resources, and make production and marketing decisions.

4.24 Securing land ownership and reducing cost of access to land through development of rental markets will be critical for agricultural commercialization. First, strengthening the security of land tenure through stronger laws to remove the current ownership overlaps, land wrangles, and disputes will raise incentives for investing in high-value crops, sustainable land management, and enlargement of scale of farming, particularly in the land-rich North. Second, secure land ownership will encourage rental markets to provide more access to agricultural land for the landless farmers. To do so, some immediate actions include amending the Land Amendment Act of 2010 to address land right uncertainties, increasing funding of the Land Fund for better management of land administration, and effectively implementing of land legislation. The ongoing efforts to improve land registration are commendable and need to be extended as a priority to areas with major land conflicts but high agricultural potential. In this respect, special attention is needed for the customary landed North by cultivating trust and adopting policies geared at engendering government commitment to protecting land rights in this high-potential agricultural terrain.

4.25 Improving access to agricultural credit requires stronger savings and credit cooperative organizations (SACCOs), the legalization of leasing arrangements, and the promotion of grant-

matching schemes. Direct credit through the commercial banking system, as well as the recently introduced Agricultural Support Credit, have improved access to agricultural credit, but mainly for the large farmers. The smaller farmers, who often have no collateral, cannot access credit. To close the gaps, a more effective system of SACCOs needs to be adopted by extending outreach within rural areas and to specifically tailor rural finance access to the needs of smallholder farmers. Given their collateral situation, designing new approaches to credit risk management, including the use of better monitoring technology (e.g., fingerprinting) and commitment savings programs, could help. In parallel, new innovations in ICT, such as mobile money, can help overcome required institutional frameworks for traditional credit institutions and can provide farmers with easy and cheaper access to credit. In addition, there is a need to formulate new, independent leasing laws while matching grants for farmers, and the use of warehouse receipts would also increase access to finance. Finally, encouraging the organization of farmers would be beneficial, as it has been in other countries like India. Organizing small farmers (including women) might bring high dividends in terms of productivity in the agricultural sector, as the organized farmers are better able to hedge risks, obtain credit, and access markets.

### *Addressing the Beyond-the-Farm-Gate Constraints*

4.26 Beyond the farm gate, the list of bottlenecks to commercialization is quite long, including connective infrastructure from producing areas to markets, the investment climate for agroprocessors, and an effective institutional framework to support delivery of agricultural services. Stepping up investments in connective infrastructure in areas with high agricultural productivity, high agricultural potential, and links to the market is needed to improve connectivity. According to the 2008/09 agricultural census, mean distances traveled to markets equals 5.8 kilometers but can be much longer, particularly in the North. Yet most rural roads are seasonal at best. Beyond road infrastructure, overall logistics through the agricultural value chain need streamlining. With liberalization came a more complex framework of institutions (mainly private sector) into the agricultural value chain, but many of them are meant only for specific products, are unregulated, and, in some instances, take advantage of the farmer. Furthermore, commercialization will also need efficient regional connectivity for landlocked Uganda to access markets beyond its borders. All those needs for infrastructure require a more efficient system of allocating resources for infrastructure investments, including choosing between road maintenance and new road construction, and prioritizing road investments based on agricultural potential, cross-border trade opportunities, and load consolidation.

4.27 Improving the investment climate to reduce the costs of doing agribusiness would also benefit the farmer. The liberal price environment notwithstanding, most agroprocessing industries (cotton ginning, coffee processing, dairy processing, grain milling, oilseeds processing, and animal feed milling) are operating at less than 50 percent capacity. The firms face high operating costs, particularly in electricity and transport, implying that they cannot pay remunerative prices to farmers, which, in turn, hampers the farm supply response. Although some lead firms succeeded in reducing their costs, offering good opportunities for smallholders, their success is limited to a few crops and locations. Until production and commercialization costs are reduced for an industry as a whole, value-added activities will progress only slowly. Creating such comparative advantage beyond the natural endowments would require investments to reduce transport and electricity costs.

4.28 The mentioned measures would need to be taken in parallel by many ministries and agencies; thus, coordination and leadership by one central entity is essential. The changes do not necessarily imply the establishment of new structures in addition to the Plan for Modernisation of Agriculture (PMA), but rather a consistent effort to make all public expenditure and policies in Uganda more pro-rural (and thus pro-poor given that most poor live in rural areas). More road funds need to go to producing rural areas, more social funds need to go to rural schools and health centers, and more agricultural services need to be delivered to rural areas.

### ***Addressing the Agricultural Institutional Challenges***

4.29 The current institutional arrangements within the agricultural sector have failed to deliver agricultural transformation given the gaps in extension services, regulation, and inspection on the one hand, and weaknesses in technology development, testing, and delivery to farmers on the other hand. A multitude of private and public institutions providing support to Ugandan farmers exists. The National Agricultural Research Organization (NARO) and National Arid Agricultural Institute (NAARI) lead in technological development. The National Agricultural Advisory Services (NAADS) are the main public channels for technology and information dissemination and advisory services delivery. This arrangement, at the time of setting up, was a good vehicle for delivering the PMA and realized some results. However, NAADS has been restructured several times to improve its efficiency and effectiveness, but the goals have not always been fully realized. Overall, there are significant gaps in actual services that farmers receive, occasioned by inadequate capacity and staffing of the institutions, inappropriate mechanisms for delivery, political intervention, expansion of missions beyond their mandates, inadequate funding, and poor coordination. Non-NAADS extension services are scattered among private entities and nongovernmental organizations (NGOs), except for traditional cash crops like cotton (Cotton Development Organisation), coffee (Uganda Coffee Development Authority), and dairy (Dairy Development Authority).

4.30 The reform of MAAIF proposed under the 2010 restructuring exercise could address some of these shortcomings, but it needs to be urgently implemented. Suggested reforms per the 2010 MAAIF restructuring exercise, already part of the new agricultural sector DSIP, are going in the right direction. However, in contrast to the more intrasectoral focus that is espoused in the current DSIP, agricultural transformation is multisectoral, calling for more coordination among the various institutions within and outside of the government. Given the multitude of institutions, there is a need to streamline functions to minimize overlap and duplication, which dissipates effort, consumes additional resources and thus undermines efficiency and value. This task is under the ministerial guidance of MAAIF. Intrasectoral coordination should be an integral part of the work program of MAAIF, while intersectoral coordination could be effectively handled by the PMA secretariat.

4.31 MAAIF could effectively undertake a number of interim actions to demonstrate its commitment to the new structure. These actions include the following:

- a. Establishing a Restructuring Implementation Team (RIT): There is no real compelling reason why the RIT has not been established and why it is not functional. The RIT should develop detailed plans for the implementation and actualization of the new structure and should identify the set of activities that could be performed regardless of other delays.

Establishing the RIT would have made the strongest statement possible of MAAIF's intentions and commitment to the new structure.

- b. Disseminating information on the new structure: MAAIF must strengthen its efforts to disseminate information on the new structure approved by the Agricultural Sector Working Group (ASWG) despite some internal dissensions. Concerted efforts to publicize the new structure not only would have demonstrated MAAIF's commitment to the new structure, but also would have been a way to lobby for support from other key ministries such as the Ministry of Public Service (MoPS) and the Ministry of Finance, Planning, and Economic Development (MoFPED).
- c. Reviewing and reassigning staff members: Finalization of this action would depend on MoPS, but a number of actions could have been taken in preparation of that final approval. The staff audit remains necessary, whether or not the new structure is in place, to map out the current disposition of staff members including their location, roles, responsibilities, and capabilities.
- d. Identifying staff development needs: Even in the absence of a new structure, it is very important to identify and address the development needs of the staff to ensure that the institution has the right caliber of staff members to perform its responsibilities and fulfill its mandate.

4.32 Beyond coordination, the challenge of human resource capacities within the various institutions, in particular MAAIF, will need to be addressed. The public sector involved in agriculture faces both common and unique challenges related to human resources. The common challenges are those that are faced by most public sector institutions, which will include (a) poor attraction and retention rates owing mostly to poor remuneration practices and working conditions, (b) low productivity caused by low morale and motivation of officers and by inefficient organization management systems and processes, and (c) high vacancy-to-establishment ratios resulting from a combination of those and other factors. Such problems cannot be resolved by the agricultural sector on its own and require government-wide interventions to reform the public sector as a whole.

4.33 The MAAIF restructuring report of 2010 observed that MAAIF is afflicted by the tendencies and incidences of the sector agencies, in particular Project Monitoring Units (PMUs) attracting staff from MAAIF headquarters because they have far more competitive and attractive reward structures. In this regard, MAAIF is seen as a recruiting ground for these agencies. Henceforth, MAAIF could effectively take ownership of its projects and abolish the practice of setting up a PMU for each project it initiates. Related to this issue, some sector agencies have become more powerful than the mother ministry and function autonomously, like parallel institutions that are detached from the parent ministry. This situation has adversely affected the management of human resources in the sector.

4.34 The human resources issues are compounded by chronic staff shortages at MAAIF and sector agencies. In 2010, MAAIF was operating at approximately 68 percent of its authorized establishment while for its sector agencies, excluding NAADS for which no data were available, vacancy ratios ranged from 8 to 28 percent as of September 2010. It will be important to agree on a recruitment plan in collaboration with MoFPED to ensure adequate funding of these recurrent costs.

4.35 Even though the institutional structures are supportive of the planned interventions in the sector, it will be critical to ensure that the right staff members with the right skills are occupying the right positions. A skills audit could help identify staff training and development needs as a means to assist with effective human resources management and ultimately with the overall effectiveness of service delivery in the sector. Quite often countries outsource such an exercise, but certainly in the case of Uganda, this undertaking could best be done in-house by MoPS or MoFPED.

## 5. TRANSFORMING HUMAN CAPITAL

5.1. Human capital is at the center of both economic transformation and inclusive growth. The importance of human capital accumulation in transformation has been demonstrated not only by the East Asian pacesetters—Hong Kong, China; the Republic of Korea; Malaysia; Taiwan, China; and Thailand—but also by other economies that have followed the path of success including Indonesia, Ireland, and Singapore. Transformation to higher productivity production would depend not only on sheer volume of physical capital, but also on the quality of human capital and knowledge. Inclusive growth will require an increasing proportion of the labor force to participate in the growth process, which, in turn, will need to be based on a more productive and educated workforce to meet the requirements of the growth process.

### *Placing Labor in Past Growth*

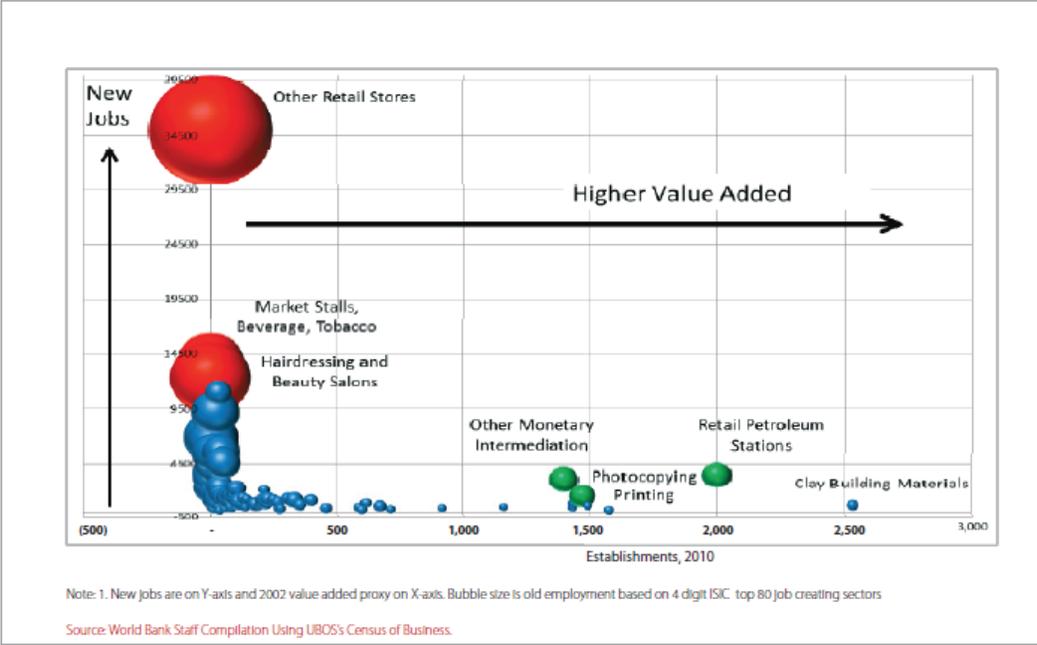
5.2. In the past, Uganda has realized impressive job creation, but with the bulk of new jobs concentrated in low-value added sectors. As a result, few improvements in productivity were recorded as the market absorbed a fast-growing, but mainly uneducated labor force. Over the period 1992 to 2003, nonagricultural jobs grew by 6.3 percent, while private sector wage and salary job growth was 7.3 percent per year. Into the mid-2000s, the growth rate of private nonagricultural wage and salary jobs accelerated to nearly 12 percent per year, and absorbed about 18 percent of the youngest net new entrants. This performance is among the best in Africa—only Ghana was able to grow wage and salary jobs faster. Informal sector wage jobs grew about 30 percent faster than formal jobs, mostly in the services sector. Over the same period, wage jobs in agriculture grew even faster—at 13 percent per year, but from a very low base. Nonetheless, a significant proportion of jobs remain in low-value-added nontradeable sectors, which bring only limited productivity gains and innovation. According to the Census of Business Establishments conducted by the Uganda Bureau of Statistics, retail stores, with the lowest value-added, were the largest source of employment at the beginning of the decade and have continued to report the fastest growth in new jobs (figure 5.1).

5.3. Growth decompositions also suggest that per capita income growth over this period was minimally driven by improvements in workers' productivity. Progress was slow because of limited labor productivity improvements within sectors and the marginal shift into higher productivity sectors. This structural transformation was restrained by factors on both the demand and supply sides of the labor market. Future research needs to explore the demand side to better understand why firms did not recruit more skilled workers to accompany their efforts to use modern technology and new capital in their production processes. On the supply side, labor productivity is influenced by a host of factors, including health, labor market rigidities, education, and skills. This chapter concentrates on what kind of education and skills training should support meaningful participation of the workforce in transforming economy.

**Education and Skilling Matter**

5.4. Education plays an important role in allocating labor among sectors and in the different market segments. An additional year of education increases the likelihood of participation in the wage and self-employment sectors, while it decreases the likelihood of working in agriculture. While only 25 percent of individuals with primary school attainment have a wage job, more than 60 percent of those with post-secondary education or university degrees work for wages. This result confirms that working in the wage sector in Uganda is closely associated with education attainment.

**Figure 5.1. Low-Value-Added Services Dominate Nonhousehold-Based Job Growth in Uganda during the 2000s**



5.5. The regional variation in education attainment has been a major source of geographic inequality. The recent poverty analysis showed that raising the level of education in lagging regions to that of the Central region would reduce poverty by 9 percent and 26 percent in rural and urban areas, respectively. Universal primary education (UPE) has equalized access to primary education, but the dropout rate is high so completion rates vary substantially by area. Transition to secondary education is also very low outside of the Central region.

5.6. Returns on education vary both across education attainment and across different regions. Although not comparable across time because of differences in the household surveys, the returns to education at each point in time portray the convex relationship normally expected in developing countries—an additional year of secondary education brings more returns than one in primary. Although this finding can partly be attributed to historical mismatches between supply and demand for skills in leading areas like Kampala, the pressure on wages because of external factors also affects leading regions, particularly the urban areas, faster. The underlying factors notwithstanding, at the subregional level, returns to education have a higher wedge with higher schooling bringing higher returns in the Central and West.

5.7. The majority of the workforce has neither attained education beyond the primary level nor acquired specific technical skills. The share of working-age population with education beyond the primary level was only 28 percent by 2010, explaining why agriculture and self-employment have remained the main employer. But Uganda, like many developing countries, aims to transform her economy from an almost complete dependency on low-value-added activities, which primarily depend on subsistence agriculture, to a more balanced production structure that depends much more on high-value-added activities and provides more and better-paying jobs.

5.8. To move up this “value-added” ladder, investment-friendly market-oriented policies are important, but special attention also needs to be given to the type of human capital to be built. The current consensus among policy makers and development practitioners is that the transformation to higher value production requires investment-friendly policies, a stable macroeconomic environment with a competitive exchange rate, and public expenditure programs that crowd in investment and deliver social services efficiently and effectively while being implemented by a motivated public service apparatus that is transparent and accountable. Very often the debate is how much public policy is needed to stimulate private sector activities, but much less attention is being paid to decisions in what type of and how much to invest in education and training. Often, it is believed that market signals should guide people’s choices, but those are hard to read and interpret for individual job seekers and households.

### ***The Challenge of building Uganda’s Human Capital***

5.9. Uganda’s challenge of building a strong human capital base extends to how to equip the next generation with education and appropriate skills. Growing at 3.2 percent, Uganda’s population is expected to reach more than 40 million in eight years, more than half of which will contribute to the workforce. Moreover, more than half of the total population is still less than 15 years of age, implying that Uganda’s population structure will remain excessively young and the rate of growth of the labor force will remain high at least for the coming 25 years. With more than 70 percent of the working population having only a primary level education today, the challenge of transforming the labor force, as well as the prospects of future expansion of education and other social services delivery, is daunting.

5.10. Uganda’s education reform programs have had significant effects on primary enrollment, which will need to be followed with better quality, higher completion, and better transition into secondary education. UPE and Universal Post Primary Education Training which started in 1997 and 2007 respectively have raised enrollment in both primary and secondary schools, but the current net enrollment at secondary level of 23 percent remains very low. Indeed, even though expected years of schooling have increased from 6 to 11 years between 1980 and 2010, the actual average years of schooling of the working age population remains a meager 4.3 years, up from 2.2 years in the 1980s. To emulate the Asian Tigers, Uganda needs to strategically accelerate secondary education attainment by ensuring completion of primary education and greater transition to secondary education across all regions and genders.

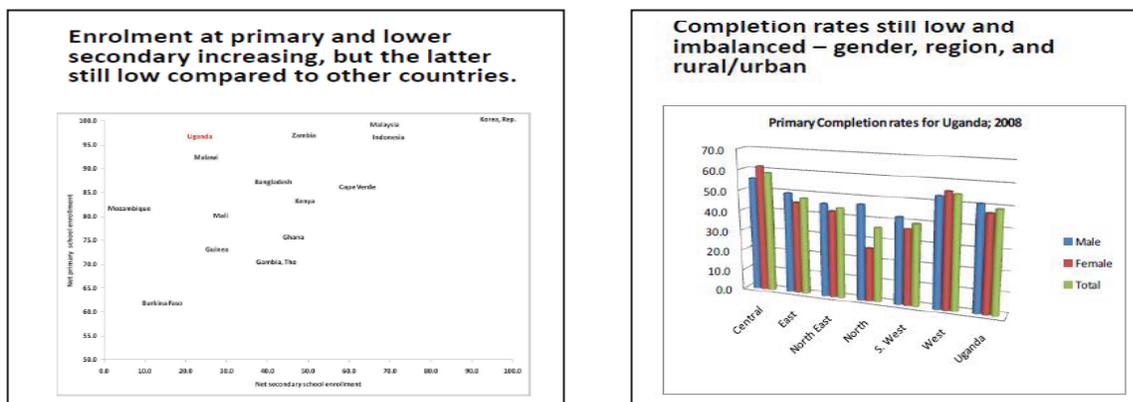
5.11. Low and unbalanced completion rates at the primary level contribute to low secondary transition. The primary completion rate is 59 percent in the Central region, but only 36 percent in the Northern region. With the exception of the Central and Western regions, completion rates for

girls were lower than for boys across regions, the highest gender gap being observed in the Northern region, where the gender parity index is 0.56. By 2009, the districts of Moroto, Nakapiripirit, and Kotido in the Karamoja region registered completion rates below a third of the national average for either gender in addition to even greater differentials within them. Compared to the national average male completion rate of 66 percent, the Moroto district had 20 percent, while the Nakapiripirit and Kotido districts followed with only 11 percent and 8 percent, respectively. Similarly, girls' completion rates in Moroto, Nakapiripirit, and Kotido districts stand at 13 percent, 5 percent, and 6 percent, respectively, compared to a national average of 63 percent, despite innovative flexible education programs for highly nomadic regions (the Alternative Basic Education for Karamoja [ABEK] program). For the districts in the North that have suffered protracted civil strife, the performance is diverse—Gulu and Kitgum completion rates are well above national averages, while Pader is almost 2.2 times lower. Performance is worse for girls across the north. Not surprisingly, large differentials in secondary education access exist among regions—secondary school enrollment stands at 14 percent for the Northeast and the North and at 18 percent for the Southwest. There are even wider intraregion gender disparities. (See figure 5.2.)

5.12. Pupil proficiency in fundamental skills remains low within the public education system and portrays major differentials across regions and among rural and urban areas. The ongoing curriculum reviews and quality enhancement initiatives, including reforms in teacher deployment for equitable service delivery, need to be accelerated to quickly improve the quality of learning.

5.13. The rate of human capital accumulation at the intermediate and technical level is still low. By 2009, the transition rate from lower secondary to upper secondary—transition to senior five (S5)—was estimated at 48 percent compared to 31 percent in 2001. Furthermore, enrollment in technical institutions and colleges is still dismal and biased in favor of boys. According to the 2009 urban employment survey, about 42 percent of the urban labor force had attained primary education, another 41 percent had secondary qualifications, and only 2 percent reported attending vocational training upon completion of primary or secondary education. Once they had joined their employment, a significant number (23 percent) reported acquiring additional skills through friends and family networks rather than organized skills transfer programs.

**Figure 5.1. High Primary Enrollments Have Not Translated into the Secondary Level, While Completion Is Diverse across Regions**



5.14. Technical training and skills development institutions exist, but program delivery is not coordinated and lacks a clear strategic approach. Most institutions are underresourced leading to understaffing and a lack of instructional materials, equipment, and infrastructure. Their programs are also costly to run and less affordable for students compared to secondary education, and the lack of public appreciation makes the majority of students use them as a last resort after having failed to get into the formal education system.

5.15. The current Business, Technical, Vocational Education and Training (BTVET) program targets only those who are still in school (see box 5.1). To date, 30 technical schools, 16 polytechnics, and 4 farm schools<sup>4</sup> enroll students in this national program. For sustainability and efficient service delivery, a partnership with private providers of vocational training was also initiated so that an additional 16 private BTVET providers are located primarily in districts without government technical institutes. A number of private providers of BTVET training, especially in large urban places, are registered and operational in line with government-established guidelines. However, only 1 percent, 3 percent, and 7 percent, of primary, lower secondary, and tertiary education graduates, respectively, enroll for BTVET. The high costs of BTVET programs compared to other formal sector programs of equivalent levels coupled with the high failure rates (49 percent) further account for the low enrollment. The training also focuses on traditional skills including bricklaying, mechanical and electrical engineering, plumbing and carpentry, metal works, and traditional female trades like tailoring and cooking, whose delivery is lengthy and more theoretical than practical because of insufficient equipment and supplies as well as a shortage of instructors. School dropouts and the unemployed can also acquire skills through various systems, but their efficacy has been plagued by lack of coordination. A proliferation of private nonformal systems is now being supervised under the Uganda Vocational Qualifications Framework (UVQF).

5.16. After 2000, when the government of Uganda prioritized skills development and training under the Medium Term Competitive Strategy (2000–05), various programs of skills development and training have been

**Box 5.1. Some Examples of Existing Skills Training and Development Programs**

- (a) Uganda Gatsby Trust model, affiliated with the Gatsby Charitable Foundation in the United Kingdom, combines training with other services like credit and technical assistance provision.
- (b) UNIDO Master Craftsman Programme (MCP-UNIDO) provides hands-on technical advisory and training services to small and medium enterprises (SMEs) in rural areas.
- (c) Gesellschaft für Internationale Zusammenarbeit (GIZ) Integrated Experts development program places international experts in local firms for the purposes of building local managerial and implementation capacity.
- (d) Austrian Development Cooperation project on sustainable timber-based batch production focuses on value-added methods, marketing, and wood usage.
- (e) Private Sector Foundation (PSF), Export Promotion Board, and Uganda Manufacturers Association support such programs.
- (f) USAID funds programs like Enterprise Uganda.

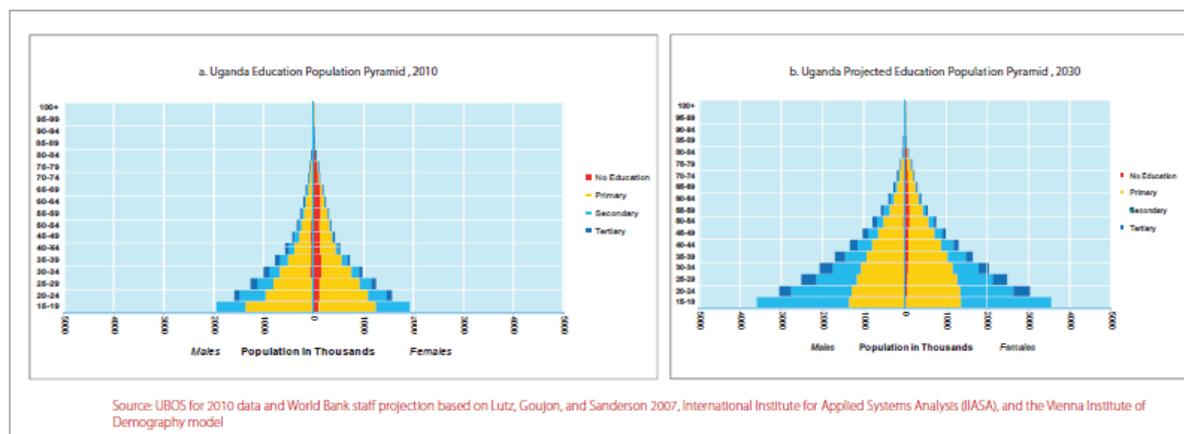
<sup>4</sup> Technical schools and farm schools admit primary seven graduates for a three-year junior certificate course. Technical institutes admit post-lower-secondary graduates for two-year programs that lead to Crafts 1, an ordinary certificate for an additional year, which leads to Crafts 2, advanced certificate courses. Community polytechnics were established to provide modular post-primary seven training but of late have transformed into technical schools that also award junior certificate courses.

adopted with support from the public sector, the private sector, nongovernmental organizations (NGOs), and the international development partners (see box 5.1). In addition to the adult literacy model that aimed at raising functional literacy with the purpose of raising productivity and workers' chances of accessing the job market, the government recently launched a new youth training program.

5.17. In sum, overall efforts at skills training remain uncoordinated, with no clear strategic direction, and would benefit from an impact evaluation to guide their design and implementation. Lessons from other African countries' experiences have also revealed that most postprimary training programs for ages 20 and above are not very successful.

5.18. If current interventions have started transforming human capital in Uganda, those efforts would be insufficient to address future challenges. The current intervention of universal education programs are expected to dramatically reduce the proportion of the population without education, but given the low completion rates and the low postprimary transition rates, only 50 percent of the labor force will have attained primary education by 2030. The majority of the labor force will, therefore, remain in the low productivity sectors, with adverse implications to the transformation of the economy.

**Figure 5.2. Uganda's Population Structure Will Evolve in Size, but Not Much in Education Attainment**

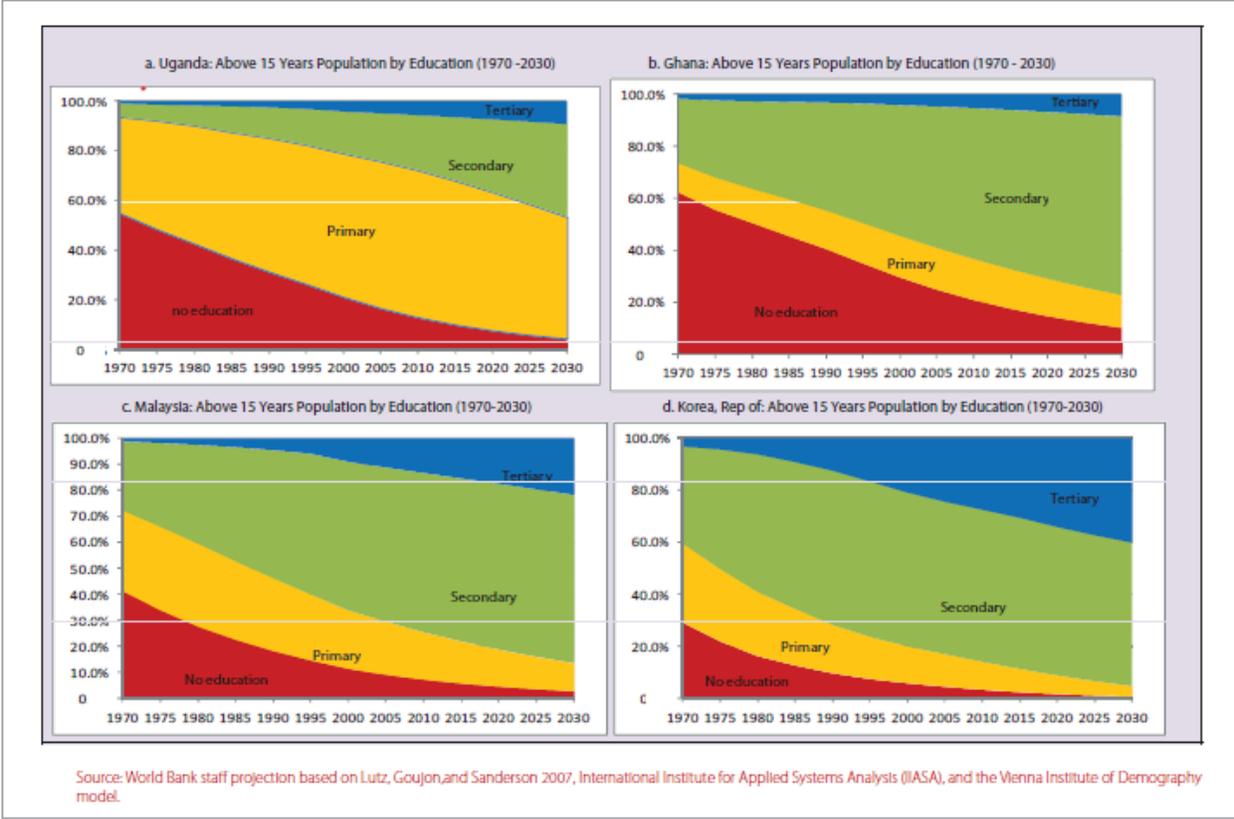


5.19. At the current pace, Uganda's labor force in 2030 will be worse off in terms of education attainment than that of Ghana today, and lower than what Korea and Malaysia were in the 1970s. Many policy makers in Uganda look up to Korea and Malaysia as countries to emulate as the country struggles to move from low- to middle-income status. At US\$500 per year per capita income and 11 years of expected years of education for the average worker, today's Uganda can draw lessons from Korea and Malaysia, where the transition in human capital played a large role in driving growth beginning in the 1970s. Beyond income levels, the structure of the labor force matches what these countries had then. For example, while the labor force in Malaysia comprised 40 percent of workers with no education, 32 percent with primary education, and 28 percent with secondary education in the 1970s, the respective shares for Uganda's labor force in 2010 were 23 percent with no education, 50 percent with primary education, and 23 percent with some secondary education. Nonetheless, the expected transformation of Uganda's labor force in the next 20 years (see figure 5.4) is not even close to that in Korea and Malaysia over the period

1970–80, on the one hand, and the comparison with Ghana (assumed to be a contemporary with Uganda on the African continent) depicts a glaring gap on the other hand.

5.20. Over a 10 year period, Malaysia had transformed its labor force such that more than 60 percent had secondary education by 1980. Yet Uganda expects its labor force to only evolve to 48 percent with secondary education by 2030. Within the continent, the Uganda labor force is likely to be much worse off than Ghana’s was in 2010—60 percent of the labor force in Ghana had post-primary education in 2010, a share that is expected to rise to 80 percent by 2030. The comparison of the evolution of Uganda’s labor force by education levels with these countries not only emphasizes the challenge facing Uganda’s policy makers to make a larger proportion of the labor force more productive and so drive growth to higher levels, but also shows that countries from which to draw lessons of human capital transformation abound.

**Figure 5.3. Uganda does not Match Other Countries in Transforming into a More Productive Workforce**

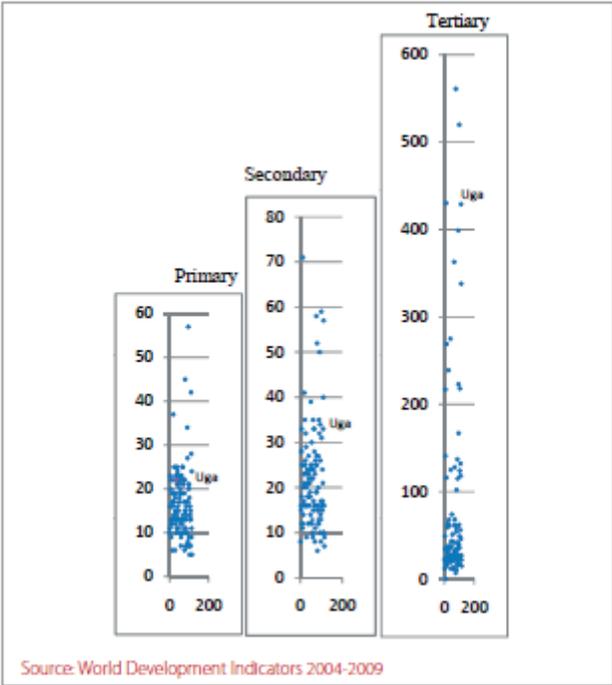


5.21. The challenge facing Uganda today is large, but Asian countries were able to address it during their initial phase of human capital transformation in the 1970s. One of the key elements of success human capital transformation in East Asian countries was the demographic transition. Uganda will find it impossible to emulate the human capital transformation realized by these countries unless it engineers a demographic transformation through better education (particularly of girls), improvement of health services to lower infant mortality, and expansion in the use of family planning services (World Bank 2011a).

5.22. The strategic transformation of the labor force will need significant financial resources because of the asymptotic increase in costs across the different levels of education. At about US\$150 per student per year, Uganda’s public spending on secondary schooling is estimated at 303 percent higher than on primary education. Per capita spending for tertiary education is more than 1,000 percent of primary, a situation quite similar elsewhere (figure 5.5). With the number of children enrolling into primary schools growing at about 2 percent per year, the fiscal cost of education for primary level alone will quickly increase.

5.23. Those projections underscore the need for the government to make strategic decisions on what the public sector can fund, while fostering alternative mechanisms for private sector participation. For example, Singapore compensated for the increase in education costs by increasing its reliance on private providers, since private schools accounted for 19 percent of primary enrollments, 42 percent of secondary level enrollments, and 70 percent of tertiary enrollments in 2010. In Uganda, private providers are increasing quite fast and are contributing to education, especially in the urban areas; by 2010, 45 percent of urban households enrolled their children in private primary schools in spite of the universal free primary education. A strategic relationship with the private sector needs to be nurtured to close the gaps that could be left by the public sector, while parental contribution to the education of their children needs to be further promoted.

**Figure 5.4. Climbing the Education and Skills Ladder Comes with Higher Costs**



5.24. Lessons from successful countries also indicate the need for a comprehensive approach, including well-defined strategic choices, institutional setup, and management of cost of education. The Asian Tigers, in particular Korea, Singapore, and Taiwan, China, are often cited as references. Quite similar to what Uganda is facing today, Korea, Singapore, and Taiwan, China, dealt with the challenge of (a) upgrading the skills of the existing labor force to support the transformation process, (b) catering to the specific requirements of the chosen form and pace

of transformation, and (c) initially containing the growing public demand for academic rather than vocational education. Their responses, albeit not uniform and flexible over time,<sup>5</sup> have nonetheless translated into four key lessons that can be useful to Uganda policy makers (see box 5.1). In particular, the institutional setup and the links with the private sector are of critical importance.

### ***Towards a Strategy for Human Capital Transformation***

5.25. Going forward, transformation of Uganda's labor force will involve improving skills acquisition beyond the primary level. Yet a large proportion of Uganda's labor force today is stuck in low productivity areas—by sector, agriculture has more than 70 percent, by type of employment, more than 70 percent are farming, and by space, more than 90 percent are in rural areas. At the current stage of industrialization, the demand from employers concentrates on relatively unskilled labor as industries aimed primarily at taking advantage of the existing cheap labor, a key comparative advantage. According to the 2009 Investment Climate Assessment, Uganda firms that are less skills intensive and less capital intensive are also less concerned about worker education and skills. In contrast, higher productivity, higher capital-intensive firms focus on better-educated and better-skilled workers—indeed, a number of firms import managerial and technical skills.

5.26. To break this vicious circle—low demand, low skills, low productivity—the education system has the immediate challenge to supply a literate and disciplined labor force. Our action plan is based on four complementary measures: (a) improving access and quality at the primary and secondary level, (b) reducing the mismatch between supply and demand of skills through closer coordination between the public and private sectors, (c) taking care of the large fraction of youth left out of school, and (d) making targeted interventions to help small and medium enterprises (SMEs) and household enterprises (HEs) and to reduce regional as well as gender disparities.

5.27. Accelerating completion and quality improvements at primary and, above all, secondary levels should be the first point of action. Uganda's ongoing education reforms have succeeded in increasing the number of students going to primary schools but are not sufficient for the acquisition of the competencies and skills required on the job market, which come with postprimary education.

5.28. Addressing the challenge would require both supply side and demand side actions. On the supply side, the emphasis should be given to better curriculum, teacher training, private sector participation, and infrastructure. On the demand side, even though private returns to education increase with years of education, secondary school enrollment needs to be boosted by addressing financial and cultural constraints. Many households face severe budgetary constraints, forcing them to take their children out of school. By 2009/10, more than 30 percent of the school

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<sup>5</sup> It is important to realize that none of the skill strategies in those countries was perfect, and none can be copied without taking into account Uganda-specific conditions. Even within the countries, the strategies differed depending on the size of the economy and the structure of production. Singapore was the smaller economy and relied on multinational corporations, Korea's economy used large indigenous conglomerates while Taiwan, China, was much more driven by SMEs, but they shared the same goal: to break into the world markets with little in the way of comparative advantage except an abundant supply of unskilled labor.

dropouts aged 6–18 years claimed school was too expensive, while another 18 percent were just not interested in school. Like in many other countries, the difference in enrollment between boys and girls widens with age because many girls become pregnant, marry, or are used in domestic tasks. Actions such as those being piloted in northern Uganda to use vouchers or conditional cash transfers would be useful in boosting the demand side of education.

5.29. Education and skills provision cannot be static in a transforming economy. Uganda's growing problem of unemployment among the more educated youths while the country imports highly skilled labor highlights the existing mismatch between the education system and the skills needed by the economy. As seen with the Asian economies, readjusting the education system to meet the demanded skills is crucial but cannot be a Ministry of Education and Sports issue alone. It must span from entities responsible for planning the economy's structural transformation to private sector organizations, labor unions, and ministries of education, labor, industry, and so forth. Although many of those entities exist in Uganda, stronger coordination among them is required to guide the transformation process and to identify immediate and long-term needs so that the education and skills training institutions can adjust and deliver these skills over time. The ongoing strategic outlook to vocational skills development in Uganda is a step in the right direction that needs to be coordinated with the rest of the education system.

5.30. Improving skills of those out of school should become a priority for both the public and private sector. According to the national household survey, only 28 percent of the labor force report having attained a trade or attended skills training beyond their formal mainstream education. Out of those, only 7 percent went through apprenticeship or on-the-job training programs. Learning from the experience of other countries, the government should increase private sector engagement in skills provision. Although large firms can be encouraged to integrate training into their own capacity-building programs, the creation of a skills development fund might prove to be useful to support training in SMEs and HEs, as it was done in Taiwan, China, (box 5.2) and more recently in other African countries that provide useful lessons on how to make these effective.

5.31. Education and skills development programs should take account of the stage of transition of the country, including its structure of production and markets. With the formal sector absorbing only 20 percent of the new entrants in the labor market, the bulk of Uganda's labor force remains engaged as agricultural wage workers or family workers (both farming and nonfarming activities). Yet poor technical and business skills are one of the three main challenges constraining growth of this sector, beyond the lack of access to working capital and poor working environment (Bakeine 2010). Therefore, the government needs to accelerate skills assessment of informal sector operators through the UVQF and to improve coordination with the Private Sector Foundation (PSF). Development and implementation of the modular competency-based training programs should also be prioritized. Workforce skills development calls for a multipronged approach, hence the need to focus on the coordination structures and building synergies across ongoing programs for efficiency and quality assurance. Impact evaluation of existing programs would also guide future interventions.

**Box 5.1. Four Lessons from the Asian Tigers Development Model of Human Capital Formation Education and skills strategy matched the stage of transition.**

a. *Takeoff stage (1960s through 1975)*: For three of the Asian tigers referenced in this study (Korea; Singapore; and Taiwan, China, the focus at this stage was to provide primary and secondary education, with Korea emphasizing BTVET, Singapore introducing some technical bias at the secondary level, and Taiwan, China, rigorously expanding vocational education to support the emerging export market for industrial manufactured goods. The actions were taken because workers in those countries lacked the technical skills for businesses to move progressively into manufacturing. Hence, the countries focused on expanding low-skilled manufacturing activities.

b. *Structural adjustment and transition to the innovation stage (1975 through 1980s)*: Korea upgraded upper secondary and tertiary education and strengthened BTVET. Singapore improved the quality of primary and secondary education, but strategically focused on developing skills for middle-level manufacturing. In Taiwan, China, industry-oriented vocational education and junior colleges became the mainstream of middle education. The ratio of vocational students to high school students was 7:3. Higher education (colleges and universities) also focused on technology for oil and industrial growth.

c. *Enhancing competitiveness and the knowledge-based economy stage (1990s through the present)*: All three countries focused on enhancing the quality of education at all levels, but in Korea, public investment in higher education has emphasized lifelong learning. Singapore has heightened its focus on higher education for innovation, skills upgrade for the existing workforce, and integration of industrial programs into the formal system, while in Taiwan, China, the focus shifted to the expansion of higher education including technology-oriented and service-industry colleges.

**2. Well-coordinated institutions were directed by a central ministry, or an agency supported the effective implementation of strategy.**

Mechanisms emerged at the center of government to ensure that the output of the education and training system (schools, colleagues, training centers, and their respective curricula) was linked to the skills demanded for the transformation of the economies, and that decisions about skills provision serviced the needs of the country above other vested interests. In Singapore, for example, this center was the Ministry of Trade and Industry, whose representatives chaired boards and councils that made the decisions in the education process. This process was supported by the Economic Development Board, which gathered skills requirements of new and existing industries and then provided the information to the Council on Professional and Technical Education. In Korea, the Economic Planning Board coordinated skills provision and education, while in Taiwan, China, this coordination was the responsibility of the Council for Economic Planning, and Development.

**3. Vocational education and skills training were an important part of the human capital transformation strategy.**

Despite being costly compared to primary and secondary schools, vocational education was actively supported by each of the three countries during the initial transformation. Korea introduced vocational high schools and limited access to higher education. Taiwan, China, initially extended the period of compulsory education to nine years and actively expanded the proportion of students attending vocational schools by restricting access to higher education. Later, as the sophistication of the economy increased, these restrictions were relaxed.

**4. Training and skills were funded jointly by the public and private sectors.**

All three countries worked at increasing private sector engagement in the skills development process. Singapore set up a skills development fund, funded by the private sector through a levy. In Korea, where most of the transformation was happening through large industrial conglomerates, *chaebols*, the government provided incentives to the private companies to integrate the training of laborers into their own capacity-building programs. Because Taiwan, China, was relying on SMEs for its transformation, the government decided to provide the training through publicly funded training institutes, which were overseen by one of the planning institutions.

5.32. Targeted intervention will be needed to address the geographic and gender inequality that has left some areas, in particular the North and East, lagging. Raising educational attainment, particularly in lagging regions, is pivotal to reducing poverty and narrowing regional inequalities. Although UPE brought equal access to education, it has yet to bring equal access to quality primary education and has created increased demand for secondary education. Thus, raising educational attainment will require going beyond UPE to improve transition to secondary school by making education accessible to the chronically poor and the vulnerable.

5.33. Gender inequality is higher in the lagging Northern and Eastern regions. Although a specific program has been launched in the Northern region, including Karamoja region districts, little is known and done about the Eastern region. Special attention is needed to ensure equal gender access to skills development programs.

5.34. In conclusion, the demographic dynamics suggest much larger interventions in Uganda's education and skills development system than had been envisaged. Otherwise, Uganda's labor force will continue to lag behind emerging countries and regional competitors. At the current pace, the gap in education attainment will become larger instead of smaller. Because the country also plans to move up the education ladder, strategic choices have to be made on what the public finances can cover while fostering mechanisms for private sector participation.

### ***The Strategy for Human Capital Transformation***

5.35. Strategically, ensuring both quality primary education and stronger transition to secondary education is the key priority because it remains the foundation for a capable human capital base. Uganda's ongoing education interventions at primary and secondary notwithstanding, it remains behind other countries, such as Ghana, in attainment. With the student population increasing by about 2 percent every year, reforms in the education sector need to develop an affordable plan to absorb this influx, while addressing the high dropout rates, the low completion rates, the levels of achievement (percentage of students attaining desired proficiency standards at various levels), and the imbalances in access to quality education across regions. This plan will require the following:

- Accelerate the quality enhancements at the primary and secondary levels, including teacher deployment, curriculum reviews, and better infrastructure.
- Target interventions specifically designed for problem areas, like the North and Northeast. In particular, the Northeast needs an in-depth study for appropriate methods of delivery of education services.
- Address household demand for investing in human capital across different parts of the country. This step would entail sensitization programs and economic empowerment. In addition, evaluation of existing pilot programs in Northern Uganda, where vouchers or conditional cash transfers are being used for this purpose, could provide insights on whether and how such programs could be used to boost demand for education in other parts of the country. Furthermore, parental participation in the education of children would need to be emphasized even though the country has moved into universal free education.

5.36. On the skill development side, special attention will need to be immediately accorded to skills for the informal sector. With the formal sector absorbing 20 percent of the new entrants in the labor market, this sector employs the bulk of Uganda's new entrants into the labor market. To support their growth, the government needs to accelerate skills assessment of informal sector operators through the UVQF and to improve coordination with the PSF. Development and implementation of the modular competency-based training programs should also be encouraged. Impact evaluation of existing programs would also guide future interventions.

5.37. As the country transforms into higher productivity activities, plans to move up the education and skills ladder need to be set in concrete strategy, including making strategic choices about the institutional framework for supporting the transformation process, what the public finances can afford, and the mechanisms for strengthening private sector participation. Education and skills provision will need to become a more dynamic process in a transforming economy. As seen with the Asian economies, readjusting the education system to meet the demanded skills would need to take account of the stage of transition of the economy, including the structure of production and the structure of the labor market. Institutionally, this is not a Ministry of Education issue alone. It spans entities responsible for planning the economy's structural transformation, for labor force planning among others. A number of these entities exist in Uganda, including the National Planning Authority; the Ministry of Gender, Labour, and Social Development; and the Ministry of Tourism, Trade, and Industry. The strategy would, therefore, entail the following:

- Develop a mechanism of coordination of the various players for the economy's transformation to manage the skills transformation process, including strategically planning for skills development to effectively supply the labor market with appropriately skilled labor to meet the needs of the economy. This coordination would also be required to guide the transformation process by identifying immediate skills needs and those for the short, medium, and longer term and to empower education and skills training institutions to deliver the skills.
- Develop mechanisms for private sector participation in skills provision. Learning from the experience of other countries, the government would need to increase private sector engagement in skills provision. Although large firms can be encouraged to integrate training into their own capacity-building programs, it may be wise to set up a skills development fund funded through a levy to publically provide training for the many SMEs that account for the bulk of firms in Uganda. Such training funds require sufficient administrative capacity as demonstrated in box 5.3, but the Youth Employment Flagship Project (World Bank, forthcoming) will provide more options on how to take these programs forward.

### **Box 5.1. Issues Worth Focusing on for a Successful Training Fund**

1. *Governance* means a delicate balance between employers and government. Most successful levy-based funds have allocated a leading role to employers (e.g., in Brazil and Singapore) or have allowed a balanced governance structure among employers, unions, and government (as in Côte d'Ivoire).
2. *Allocation of funding to beneficiaries* raises key questions: who decides on the allocations of the funding and what criteria are used? If possible, employers should be given a majority voice in the allocation of funds they provide (e.g., Madagascar's National Council for Technical and Vocational Training)
3. *Administrative autonomy, capacity, and efficiency* are required to minimize political interference, to reduce red tape, and to ease access to the funds by deserving firms. Good examples of well-administered programs include Singapore's Skills Development Fund and Chile's National Training Fund.
4. *Competition* among training providers will stimulate the training market and lead to lower training costs. In Chile's National Training Fund, an equity fund finances training only through competitive bidding among 1,000 registered and preapproved training providers.
5. *Support for small and medium enterprises (SMEs)* is essential because they operate under tight constraints that mitigate against participation in training (e.g., cash-flow problems, inability to release workers, and lack of knowledge and expertise about training). Tailoring training services toward SMEs (e.g., through vouchers to relieve the cash-flow constraints, technical assistance to assess needs and design programs, flexible delivery to alleviate some constraints of SMEs, and simplification of procedures) would ensure that the SMEs get the training needed.

**PART C:**

**TRANSFORMING ACROSS SPACE: TERRITORIAL  
INTEGRATION AND RURAL-URBAN TRANSFORMATION**

## 6. TERRITORIAL INTEGRATION

6.1. Uganda's transformation is yielding more concentration of production, a pattern that has been mapped by many other developed and developing countries. The unbalanced growth unfolding in Uganda is not unique to Uganda, but development can still be inclusive. In the *World Development Report 2009* (see World Bank 2009d for WDR 2009), subtitled *Reshaping Economic Geography*, which collected evidence from development history over 300 years, one of the main messages is that the structural transformation that takes place as countries grow from low to high incomes is accompanied by prosperity in a few places. This pattern has been observed in many developed countries and is being repeated in China, India, Indonesia, and Sri Lanka, among others. But although unbalanced growth is a norm, the most successful countries also instituted policies that made living standards of people more uniform across space. With good policies, the concentration of economic activity and convergence of living standards can be achieved together. The challenge for governments is to allow—even encourage—"unbalanced" economic growth and yet to ensure inclusive development.

6.2. Making development more inclusive involves connecting people to prosperity—a principle behind the WDR 2009 territorial development framework. This process of economic integration requires that governments and market forces work together to unleash the forces of agglomeration, migration, and specialization, not fight them.

6.3. These principles of inclusive development are pertinent for Uganda, where the geographic concentration process is already under way. As discussed in chapter 2, high productivity businesses and higher commercial value agricultural production are increasingly concentrated geographically—around the Lake Victoria crescent encompassing the Southern, Central, and Western regions of the country. Similarly, industrial activity is clustered around large towns and along transport corridors. Firm profitability, agglomeration, proximity to each other, and access to markets have driven concentration of economic activity over time.

6.4. As prosperity continues to concentrate, public policies have not been very successful in leveling social welfare and living standards across regions. Uganda is ticking off progress on the Millennium Development Goals, but convergence of living standards across subregions remains markedly uneven. The poverty rate dropped from 14 to 4 percent between 1992 and 2010 for the richest region—Kampala, but the poorest region of the northeast is recording a reduction in poverty from 83.9 percent to 75.8 percent over the same period. Uneven living standards are also visible through unequal education and health standards. Since the introduction of universal primary education (UPE) in 1997, net enrollment has increased to about 92 percent for boys and girls, and access indicators suggest that all regions have reasonable access to primary education with good uptake of the services. However, because of differences in learning environments, the learning outcomes differ significantly across regions.<sup>6</sup> By 2009, the districts of Moroto,

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<sup>6</sup> For the purpose of this analysis, Uganda is subdivided into 10 subregions. The subregion of **Northeast** includes the districts of Kotido, Abim, Moroto, Kaabong, and Nakapiripiriti; **Midnorth** includes Gule, Amuru, Kitgum, Pader, Apac, Oyam, Lira, Amolatar, and Dokolo; **West Nile** includes Moyo, Adjumani, Yumbe, Arua, Koboko, Nyadri, and Nebbi; **Midwest** includes Masindi, Bullisa, Hoima, Kibaale, Bundibugyo, Kabarole, Kasese, Kyenjojo, and Kamwenge; **Southwest** includes Bushenyi, Rukungiri, Kanungu, Kabale, Kisoro, Mbarara, Ibanda, Isingiro, Kiruhura, and Ntungamo; **Mideast** includes Kapchorwa, Bukwa, Mbale, Bududa, Manafwa, Tororo, Butaleja, Sironko, Paliisa, Budaka, Busia Katwaki, Amuria, Bukedea, Soroti, Kumi, and Kaberamaido; **Central 1** includes

Nakapiripirit, and Kotido in the Karamoja region (Northeast region) registered completion rates below a third of the national average. Deviations in health standards are even worse such as the rate of surviving children after the fifth birthday. Infant mortality stands at a national average of 76 deaths per 1,000 births, but is almost double that in the Southwest, North, and Central 1 regions. Infant and child mortality rates are lowest in the Kampala, Central 2, and East Central regions. The nutritional status of both children and mothers are a major contributing factor to differentials in mortality. Regional variation in growth faltering, micronutrient deficiencies, and common childhood diseases is substantial. Stunting (low weight for age) is highest in the Southwest and Karamoja, where more than 50 percent of the children are chronically malnourished, and about half of them are severely stunted. And although one of every five Ugandan children under five years of age is underweight, the problem is more severe in East Central, Southwest, and Karamoja.

6.5. Uganda, therefore, has to make a careful choice of public policies and investments to generate the highest payoff for economic efficiency and geographic equity. The policies adopted need to be tailored to specific challenges, on the one hand, to integrate the leading and lagging areas and, on the other hand, to ensure proper development in the leading areas, particularly by alleviating pressures on infrastructure and services delivery associated with higher economic and demographic density.

### ***Integrating Through Factor Mobility***

6.6. To be effective, public policies need to focus on increasing interactions between economically lagging and leading areas rather than promoting growth in locations left behind by firms and workers. Such approach is consistent with the territorial development framework developed by WDR 2009. Enabling geographical mobility of factors of production and improving connectivity between lagging and leading areas are key ingredients for countries to gain from rapid economic progress and convergence in living standards across locations.

6.7. Why is mobility of labor, land, and products critical for the interactions between economically lagging areas and the leading areas to take place? When factors are mobile, their allocation will become more efficient and lead to productivity gains. For example, land access will facilitate production transformation, workers will access economic opportunity, and products will be traded, making land, people, and products the key drivers of transformation.

### ***People Mobility for Prosperity***

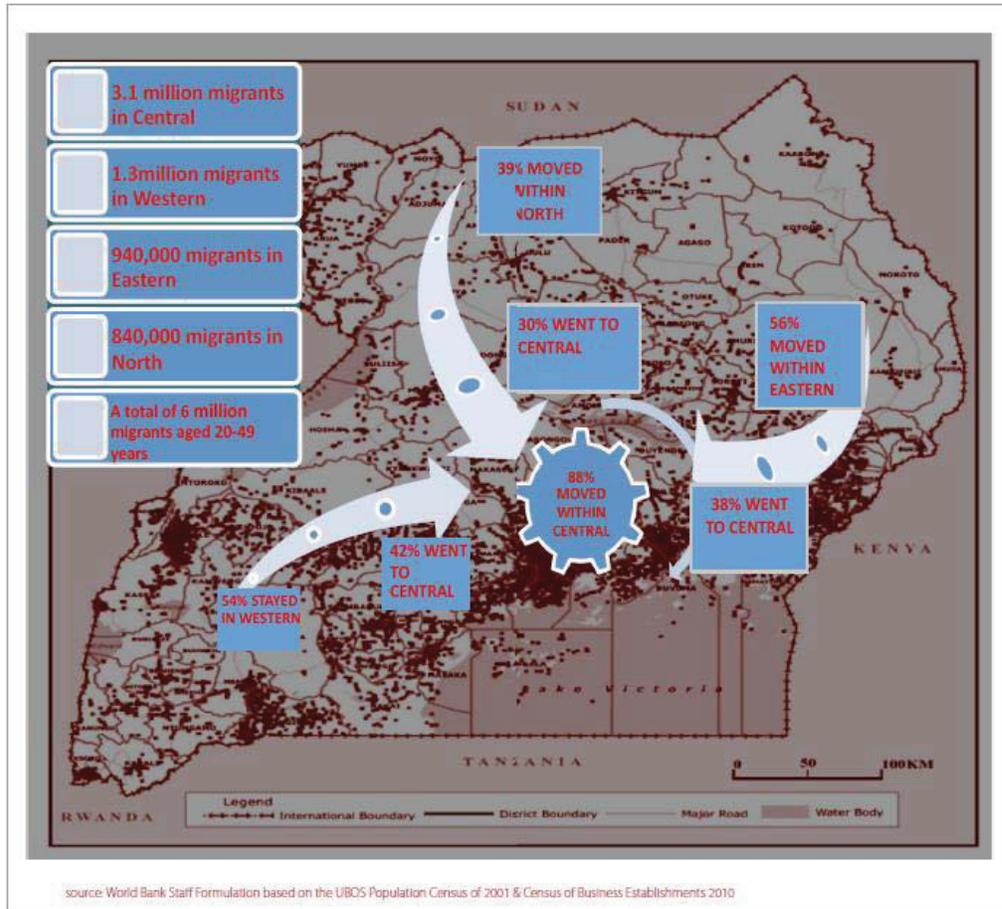
6.8. Uganda's workers have been quite mobile, contributing to the transformation process of the country. By 2001, about 25 percent of people ages 20–49 years (6 million people) were not living in their district of birth. And although the bulk of those migrants moved within their own districts of birth, those who moved out mainly flocked to the Central region (see figure 6.1). Migration was highest for Central, which is home to 3.1 million migrants (45 percent), closely followed by Western with about 1.3 million migrants (22 percent), but the movement from Western to Central records the highest extraregional flow. The movement to Central, and in

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Kalangala, Masaka, Mpigi, Rakai, Lyantonde, Sembabule, and Wakiso; **Central 2** includes Kayunga, Kiboga, Luwero, Nakaseke, Mubende, Mityana, Mukono, and Nakasongola; **East Central** includes Jinja, Iganga, Namutumba, Kamuli, Kaliro, Bugiri, and Mayuge; and Kampala.

particular Kampala, is explained by the development of the Central region as the main commercial and industrial hub of the country—65 percent of people who move to search for work moved to the Central region. Beyond Central, movements within regions also suggest people moving toward more prosperous places—from Mideast (with poverty density [i.e., number of poor people per square kilometer] at 100.5 percent) to Central East (with poverty density at 69.6 percent), and from Southwest (with poverty density at 47 percent) to Midwest (with poverty density of 31 percent).

**Figure 6.1. People Are Mobile: Of the 20- to 49-Year-Olds Moving Beyond Their Regions of Birth, the Bulk Flocks to Central per 2002 Census**



6.9. Conflict also pushed people to migrate. Movements in the North were mainly determined by conflict developments. By 2001, most migrants from West Nile had remained within the same subregion, while those from Northeast went to Midnorth despite the higher poverty density in the latter. For the latter part of the decade when stability had been restored, there has been reverse migration—indeed, according to the 2010 Uganda National Household Survey, 56 percent of migrating residents in the North were returning home after dislocation.

6.10. Overall, labor mobility has been a significant part of Uganda’s transformation process, but the future policy challenge will be to prevent people from moving for the wrong reasons, but not to prevent them from moving. Migration decisions depend on “pull” and “push” factors. The most important pull factors consist of economic opportunities and jobs. Worldwide, people move

to large cities to find employment, because these cities are the centers of economic activity. However, people can be pushed off their land by population pressure, natural calamities that make cultivation nonviable, and severe declines in agriculture productivity. Droughts and conflicts are not uncommon in Uganda, where large sections of the population have historically had to relocate because of these factors. Another important factor that pushes migrants has been the lack of adequate social amenities in economically lagging areas. In such cases, while market forces push for the concentration of economic activity, large disparities in the provision of public services persist, adding to congestion costs as opposed to contributing to agglomeration benefits.

6.11. Uganda's labor force would inevitably need to become more mobile to take advantage of opportunities in advanced areas. Divergences in consumption income depict large differences in prosperity across regions. And beyond agriculture, the primary employer, economic opportunities are concentrated in the Central region (in particular Kampala), justifying to a large extent the past and existing migration flows. The intraregion movements are also very important because of the constraint of long distances and other natural barriers such as language and cultural differences. But, again, intraregion movements were underpinned by prosperity as people mainly moved toward prospering areas.

6.12. Sustained investment in education remains key for "smart" mobility. Education was a key driver of economic and geographic transformations in many developed countries such as the United States; in fact, education of African Americans was a major factor behind the Great Migration from the US Deep South in the early 20th century. In Uganda, migration is higher for people with some secondary education or some form of certificate or diploma, and it is more than 60 percent for degree holders. For people to move meaningfully to prosperity, they need to be skilled and empowered to be able to find a job and contribute to production where they migrate to.

6.13. Higher payoff in economically concentrated regions will continue to pull workers. Differences in returns to education have been correlated with the degree of migration among regions, and differences in returns still explain the bulk of differences in the welfare of regions. This finding suggests that labor mobility has not been fast enough to reduce payoff differences between the denser Central region and other regions. If returns remain higher or even increase within the denser regions, they will continue to attract more educated workers from lagging regions as observed in other countries like India.

6.14. But movements of people have also been justified for access to better social services like education, health, water, and sanitation. In Brazil and Sri Lanka, deficiencies in access to social services influenced migration decisions. Similarly, in Uganda, migrants are more likely to move away from districts with less access to services and infrastructure (lagging areas) to those with more access. Such movement may add to the congestion cost in the prosperous areas, but, as argued in WDR 2009, labor movements that allow concentration of skills and talent contribute more to agglomeration benefits than to congestion costs.

6.15. Improving connective infrastructure would improve the mobility of people as the cost of moving decreases, and it would also ease transfers back to the lagging areas. Better infrastructure encourages mobility while allowing migrants to maintain contact with their extended families

and former places of residence. To ensure those links, investments in connective infrastructure such as roads and mobile phones would be crucial.

6.16. Places left behind by migrants also benefit through support and transfers (remittances) sent by family members who are likely to benefit from higher wages when moving to a prosperous area. As in many developing countries, Ugandan households depend significantly on remittances—about 60 percent of the households in the North report receiving remittances and as much as 72 percent of the poor in the Central region. Indeed, average real per capita incomes for households receiving domestic remittances are 5 percentage points higher than households that do not receive them. It is also reported that 60 percent of the households that have at least one migrant send remittances, which suggests a strong flow of resources from family members who have migrated. Policies supportive to the transfer of remittances, including technological innovations like mobile money, would be needed.

#### *Fluidity of Land for Prosperity of People*

6.17. Making land, a physically immobile asset, more fluid is important for geographic efficiency of production and is also critical for integration. When there are more rewarding opportunities for off-farm activities, including employment, land rental markets can facilitate farmers in migrating from agriculture to nonagriculture work because farmers can lease out land (especially if tenure is secure) and get it back when they migrate back from nonagricultural activities. A similar development happened in Thailand during the boom-bust period of 1997–99 when farmers sold their land to migrate out of agriculture and bought similar agricultural land when they returned from nonagriculture activities. In rural China, when land tenure security was strengthened through the elimination of administrative reallocation of agricultural land and the introduction of land-use certificates, existing landowners rented their land to others and migrated to the booming coastal areas and cities where they found more attractive wages. Land access and market fluidity depend on a whole host of factors, including registration of land rights and an efficient and open land registry.

6.18. For Uganda, land is a mega-asset, but its contribution would be strengthened by addressing existing constraints in the functioning of its market. Land is a treasured asset within both leading and lagging areas, but transactions are hampered by insecurity and characterized by unclear property rights, disputes, and conflicts. According to the UNHS 2009/10, whereas at least 60 percent of households own land, only 39 percent of rural land individually owned was purchased. The Central region has the largest market, with 59 percent, while in the North only 9 percent of land is purchased. Because of lack of rights on the land, 37 percent of the land cannot be sold, 34 percent cannot be rented, and 44 percent of land cannot be used as security for a loan. Those low rates suggest missed opportunities.

6.19. Reform of land policies and institutions is complicated by the built-in differences and political economy challenges. Some of the challenges emanate from the peculiar tenure structure in the different regions—a mixture of leasehold, freehold, customary, and mailo land tenures is not easy to entangle. Generally, leasehold is mainly in urban areas and mailo land is in the Central region and parts of the West (Kibaale district), while customary tenure is primarily in northern region. Freehold is scattered all over. Beyond the tenure system, sensitivities across cultural and political boundaries abound. Within the Central region, where the larger part is

titled, historical conflicts have sustained serious animosity relationships between the landlords and the landless. In the North, any transaction in land is either a communal venture or has to be cleared by the elders. Land conflicts have also been common in the West and South where cattle keeping requires space, leading to migration to other parts of the country where conflicts have arisen because of cultural differences. Those elements explained the lack of progress associated with the land question since Uganda's independence almost five decades ago. Institutional disputes and lack of funding for key institutions have also slowed down the process. For selfish interests, some political leaders who own large chunks of land are reluctant to support reforms that could tax their personal interests, but there is genuine suspicion against reforms in some communal land areas like the North where the communities want to preserve the status quo.

6.20. Going forward, the government of Uganda would need to design measures that will create a win-win for all stakeholders. The design and implementation of a clear legal and institutional framework would decisively promote security of land ownership, manage the conflicts and disputes, and encourage development of rental markets.

### ***Integrating Through Mobility of Products and Technology***

6.21. Mobility of goods through trade and ideas would be as important for inclusive growth. Isolation can confine producers to small markets for their goods and services and can restrict them to using only the inputs available in their geographic location. By enhancing connectivity, producers and firms can increase potential market size and consequently their ability to exploit economies of scale, draw from a larger and more specialized pool of workers, and have greater access to raw materials and equipment.

6.22. Over the past decade, regional, rural-urban, rural-rural, and urban-urban connectivity in the form of road access has improved in Uganda. Uganda's rural accessibility index (RAI)—the proportion of people who live 2 kilometers from all-season roads—is high by most African standards, and some researchers have indicated that the marginal return of new investment in rural roads in the future will be reportedly low (Teravananthorn S. and Raballand, G. (2008),). However, movement of goods within the country is still constrained by poor state of the infrastructure and above all by unnecessary administrative barriers. The increased use of motorized and nonmotorized transport like bicycles has improved mobility, but the country also needs to push “virtual connectivity” forward by promoting new technologies. The use of mobile phones in agriculture (see box 6.1) has proved to be useful in neighboring countries, and the exchange of ideas and money would also be facilitated.

6.23. Thus, improving connectivity is key to the effective expansion of market areas, which, in turn, can lead to substantial gains in efficiency through the exploitation of economies of scale and scope and increased competition.

**Box 6.1. How Mobile Telephony Is Benefiting Small-Scale Farmers**

Mobile phones are increasingly playing an important role in the supply chains of Uganda's agricultural produce, including coffee, fresh produce trade, and major crop products.

- Farmers and traders at village, parish, and subcounty levels make known their inputs requirements at the district markets.
- District traders inform their clients, farmers, and lower-level traders about the arrival of inputs such as seeds, fertilizer, and pesticides.
- Wholesalers and distributors from major urban centers such as Kampala, Gulu, Arua, Juba, Kampala, the Democratic Republic of Congo, and others determine estimated demand for their products before engaging transporters for their deliveries.
- Demand is consolidated at subcounty, district, and urban centers for both farm inputs and farm products throughout the supply chain of the commodities in question.

***Sustaining Integration with Growth***

6.24. Infrastructure remains critical but needs to be prioritized for cost-effectiveness. To accelerate growth, the government should ensure that geographic priorities for investing in physical or place-specific economic infrastructure, such as roads, follow economic returns. Boosting physical infrastructure is one of the four pillars of the National Development Plan (NDP) 2010/11–2014/15, consistent with the *Uganda: Country Economic Memorandum* (World Bank 2007), which identified infrastructure as the main constraint to growth. The NDP identified a series of solutions to key infrastructure gaps, including (a) improving road transport, which caters to 90 percent of transport requirements of the country but where only 4 percent of roads are paved; (b) raising power generation capacity and access, because only 11 percent of the population has access to grid electricity, consumption stands at 60 kilowatts per hour per capita per year, and the cost is double that in Kenya and Tanzania; (c) rehabilitating information and communication technology, for which the coverage is still too low and the cost too high for businesses; and (d) improving access to water for production, where consumption stands at 21 cubic meters per capita compared to the world average of 599, partly reflecting low access to irrigation. The cost-effective implementation of this ambitious plan requires prioritization for economic efficiency.

6.25. Geographic prioritization of investments in infrastructure can be complicated if the trade-off between economic efficiency and short-term welfare gains is taken into account. Economic returns suggest that investing in physical- or place-specific economic infrastructure should be prioritized in leading areas to exploit economies of scale and agglomeration, build density, and accelerate growth. Furthermore, allocating public investments to social infrastructure, such as schools, health facilities, and connective infrastructure, should be guided by their expected impact on household welfare. Geographically connective policies, such as transport and communication infrastructure, support growth and also link leading and lagging areas.

6.26. To sustain fast growth, the government will need to use infrastructure investments to generate more density and exploit the economies of scale and agglomeration. As for many other countries, Uganda firms locate where they can benefit from agglomeration economies, both

within their own industry and for overall diversity, market access, and infrastructure endowments. All these factors outweigh the costs imposed by congestion and increasing wages and prices (Deichmann, Lall, Redding, and Venables 2008). Investments in infrastructure will need to initially focus where these clusters are already forming in the Southern-Eastern corridor covering Kampala, Jinja, Mbale, and Tororo.

### ***Having Policies for Integrating Leading and Lagging Areas***

6.27. For facilitating its transformation process, Uganda needs to invest in institutions to deliver social services everywhere. Sustained high growth may inevitably result in uneven landscapes of economic activity, but careful choices of public investments may help generate the highest payoff for economic efficiency and geographic equity. In particular, integration of leading and lagging areas will require public policies to focus on institutions to deliver social services, more fluid land markets to ease land use and mobility of people, infrastructure to support social service delivery and connectivity, and special interventions to lift the North out of its post conflict quagmire.

#### *Policy of Broadening Coverage, Quality, and Accessibility of Social Services*

6.28. Social services will remain the bedrock of policies aimed at integrating leading and lagging areas. Improving incomes of households in lagging areas is best achieved by investing in social infrastructure, such as education and health, which are portable assets. A geographic production function regression that takes into account private capital, labor (human capital), and other exogenous variables such as weather and type of land tenure system in the region suggests that investments in social infrastructure yield positive returns on welfare across all regions, especially in the lagging areas. This result underscores the policy recommendation formulated by the WDR 2009 of ensuring equitable provision of social services all over the country. Improving education and health not only improves productivity in places where people live, but also improves the caliber of migrants by helping them secure economic opportunities. Furthermore, availability of education and health services ensures that people do not change locations in search of those services, avoiding congestion costs in highly dense areas.

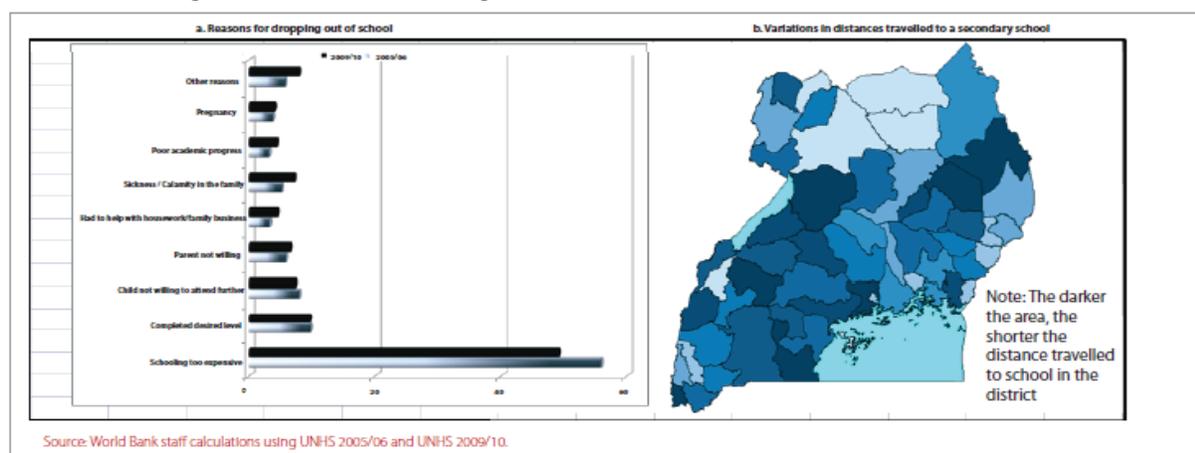
6.29. Education reform programs have raised enrollment in both primary and secondary schools and increased the average years of schooling of the working labor force, but quality would need to improve. The net enrollment ratio for primary education in Uganda is more than 92 percent, with parity achieved between boys and girls at the national level. Even though a public-private network provides education services, the majority of children in lagging areas attend public schools. Fewer children in denser regions such as Kampala attend public schools, partly because of the poor quality and the availability of private providers. In lagging areas like the North, a relatively high proportion of children attend nonpublic schools because of the existence of schools supported by nongovernmental organizations (NGOs).

6.30. The commendable improvement in access to primary schools would need to extend to all regions and be emulated at the secondary level. There has been improvement in access to government primary schools, even among poor households, but cost remains the key reason why children drop out of school. In addition, access to secondary schools is not as good as it is for primary schools—by 2010, while 53.3 percent of households were less than 3 kilometers from

the nearest government primary school, only 30.9 percent were less than 3 kilometers from the public secondary school (see figure 6.2). This unequal access, combined with geographic differences in the learning environment, contributes to the high dropout rates, student absenteeism, and low transition to secondary education. Poor households are more likely to live in communities with less access to public health centers and secondary schools—with the exception of those residing in the Northeast.

6.31. To improve education quality, the government must make resource reallocation choices. The government has increased spending on education during recent years to support the primary and secondary universal access programs. Nonetheless, with the geographic inequities just highlighted and the increasing population exerting pressure on education, the government needs to rethink its strategy of providing higher education at the expense of quality at the foundation levels of primary and secondary schooling, and it needs to reduce the inefficiencies that exist within the sector.

**Figure 6.1. Cost of Schooling and Distances Traveled Affect Education Outcomes**



Source: World Bank staff calculations using UNHS 2005/06 and UNHS 2009/10.

6.32. On the health services side, there are quite elaborate sector development policies and plans, but they have yet to register durable outcomes. Apart from malaria, usage and coverage of most health services stagnated or even declined as measured by the population residing within a 5-kilometer radius of a health facility, outpatient usage, facility deliveries, immunization coverage, and availability of qualified health workers. According to the Health Sector Strategic Plan 2010–15, by 2010, only 33 percent of deliveries took place in health facilities and only 54 percent of households were using bed nets, and these showed huge regional variances. Immunization coverage fell below 80 percent in 2010 after recording positive gains in previous years.

6.33. Streamlining health services by area and type of facilities would bring benefits to the poor. Public health spending is quite progressive since the bottom two quintiles account for at least 51 percent of the public spending on health centers, but public spending on hospitals mainly benefits the richest households. Private clinics also benefit the rich more. It is NGO health centers that mainly benefit the poorest households. Geographically, it is commendable that the lagging areas of the Midnorth (Acholi and Lango) and the Northeast (Karamoja) account for a disproportionate share of public health centers and that, over time, the shares of benefits has

dramatically increased—driven primarily by the Northeast subregion. What is needed is proper staffing of these institutions to ensure that the services reach the people.

6.34. Implementation capacity needs to be stepped up, particularly at the district level, especially in the areas of human resources, drug procurement, and logistics management. This management issue will be crucial in addressing inefficiencies and waste, absenteeism of medical personnel, and persistent drug stock-outs (partly due to waste and poor logistics management). The new impetus on addressing these bottlenecks to service delivery within the budget support framework needs to be emphasized, as should the new sector investment plans to scale up critical cost-effective interventions, improve the efficiency and effectiveness of service delivery, and deepen health stewardship with a priority on strengthening human resources for health, and improving the functionality of the existing health infrastructure and the availability of medicines and supplies.

6.35. Efforts to ensure access to clean water need to be stepped up across the country. Water services would need to improve in areas beyond Kampala. Piped water and other publicly provided water facilities benefit the richer, while boreholes and other water facilities benefit mainly the poorest households, who account for a larger share of these public services. Kampala accounts for an increasing share of piped water users and boreholes—the number of households with piped water increased to 35 percent in 2009/10, up from 21 percent in 2005/6. The subregions in Western Uganda have registered a systematic decline in the overall share of piped water benefits, as has the use of boreholes in the East Central and Midnorth subregions.

#### *Land Reforms for More Integration*

6.36. The state of land markets and existing institutions to support them need to be addressed if fluidity of land is to support the territorial integration process. The key reforms required to address unclear property rights, disputes, and land-related conflicts would need to focus on the following:

- *Reducing land conflicts and overlapping land rights.* The government needs to reactivate the district land tribunals, which were introduced by the 1998 Land Act but disbanded in the early 2000s, as independent institutions to act as alternative dispute resolution instruments. To address specific disputes, increased capacity of local land administration institutions in affected areas and accelerated systematic land adjudication and demarcation in those areas will be needed. For Northern Uganda, communal land should be demarcated and registered to protect local community land against noncommunity land incursions. As for overlapping land rights on mailo land, the government should increase funding and improve operations of the Land Fund to extend subsidized loans to bona fide and lawful occupants to buy out residual land rights of landlords.
- *Reactivating land rental markets.* The provisions of the Land Act of 1998 and the corresponding Land Amendment Act of 2010 should be amended because those laws have made landowners wary of renting out their land for fear of the occupants taking ownership once they have used it for more than one year. Incentive systems such as taxation could also be used to encourage landowners to rent out or sell underused or unused land. In this case, the proposed reform of taxing beyond a threshold under the draft National Land Policy should be encouraged.

- *Encouraging land rental markets in areas of communal land ownership.* To encourage the flow of capital and people with greater agricultural skills into those regions where land sales are discouraged by customary practices, rental markets should be encouraged through demarcation and registration of community lands for clans that are willing to register themselves and that own land as communal land associations, which are provided for under the Land Act of 1998. Such associations will be in a strong position to negotiate with investors who are seeking long-term leases for agriculture.
- *Strengthening the capacity of land administration institutions.* This capacity would prepare Uganda to set up a system to value land (including an integrated land management and registration system), manage land transactions (including compensation during acquisition), settle land-related disputes, and review regulations that govern land transactions.

6.37. The design of a clear legal and institutional framework implied in these recommendations would be the first point of action to decisively promote security of land ownerships, manage conflicts, and encourage development of rental markets. Nonetheless, bearing in mind the political economy of land reforms, lessons from other countries could provide policy makers with a menu of options, even though individual country characteristics need to be taken into account to ensure that the laws and institutions can be enforced and implemented. Table 6.1 identifies some of the political economy challenges of the land reforms proposed earlier herein and draws lessons of mitigation measures from other countries.

**Table 6.1. Reforming Land despite Political Economy Challenges**

<b>Reforming land markets</b>	<b>Political economy risks</b>	<b>Where to learn from experience?</b>	<b>Mitigation measures</b>
<i>Reform 1. Reduce land insecurity, conflicts, and disputes caused by overlapping land rights.</i>			
a. Activate district land tribunals per 1998 Land Act and revert control from the Judiciary to the Ministry of Lands.	There is a stalemate on whether tribunals should operate under the Ministry of Lands or the Judiciary.	In Tanzania and Zambia, tribunals are under the Ministry of Lands.	Learn from experience of other countries and adopt best international practice.
b. Strengthen capacity of local governments in Bunyoro, Amuru, etc. (i.e., the conflict areas)	Inadequate funding for decentralization has left many districts, especially new ones, grossly underfunded and weak.	Kenya, Rwanda, and Tanzania are stepping up funding to strengthen decentralization of land administration.	Publicize awareness of what other countries are doing to fund and strengthen decentralization of land administration.
c. Improve management of the Land Fund, including increasing its funding to give lawful and bona fide occupants subsidized loans to buy out residual rights of landlords.	A well-funded Land Fund could be wrongly perceived as a political solution to buy out and silence landlords regarded as wealthy while benefiting bona fide and lawful occupants who are not regarded as the most deserving land poor.	Malawi and South Africa have well-designed and funded land redistribution programs focused on poverty reduction; the Malawi program is funded by the World Bank.	Improve the design, funding, and operations of the Land Fund to increase its credibility as a pro-poor development program. Conduct an awareness campaign of the developmental benefits of an improved Land Fund.
<i>Reform 2. Promote land rental market activity.</i>			

<b>Reforming land markets</b>	<b>Political economy risks</b>	<b>Where to learn from experience?</b>	<b>Mitigation measures</b>
<p>a. Review the 1998 and 2010 land acts (that increase powers of tenants) to reverse the unintended effects of scaring landlords from renting out land.</p> <p>b. Institute an incentive system to encourage rent or sale of underused land (e.g., taxation, penalties for hoarding vacant land for speculative purposes).</p>	<p>Authorities may be reluctant to reduce legal powers of tenants sometimes because of political concerns.</p> <p>While the draft National Land Policy advocates this policy reform, some political leaders who own lots of land oppose it because it would tax their personal interests.</p>	<p>China, Thailand, and Vietnam have progressive policies that promote land rental markets, which have increased land access for the poor and promoted transformational growth in the countries.</p> <p>Kenya's new National Land Policy and new Constitution provide for introduction of taxation of unused land and prescription of maximum acreage of private land ownership.</p>	<p>Demonstrate to the government that mutually agreed tenancy arrangements between landlords and tenants are superior to legal threats to landlords in promoting the interests of tenants in terms of increased scope, certainty, and efficiency of land rental markets.</p> <p>Review and draw from experiences of other countries, especially Kenya, whose new land policy is a result of very thorough professional review and broad consultations.</p>
<i>Reform 3. Transform communal land toward more productivity and benefit for the community.</i>			
Encourage land rental markets in areas of communal land ownership by promoting the organization of communities into communal associations and registering their land rights per 1998 Land Act.	Local communities where there is communal land ownership may fear that the government would collude with investors to grab their land under the guise of providing them with title deeds.	Ghana, Mozambique, and Tanzania have ongoing programs to mobilize communities into formal landowning entities and to survey and register land in the names of the communities.	Undertake a two-pronged approach to raise awareness of registration of community land rights while also piloting organization of communal land associations and registering their land rights.
<i>Reform 4. Strengthen capacity of land administration institutions.</i>			
<p>a. Accelerate the development of a land information system that integrates land management, registration, and valuation functions.</p> <p>b. Accelerate the registration of land rights.</p>	<p>Manual processes and poor systems of land records contribute to inefficiency and lack of transparency in land administration.</p> <p>In some parts of the country, there is misplaced suspicion by local communities that systematic land titling programs could lead to a loss of their land by wealthy and politically connected people.</p>	<p>Many countries worldwide and in the region including Kenya, Rwanda, and Tanzania are reengineering and computerizing processes, workflows, and land records to improve efficiency and transparency.</p> <p>Kenya has more than 35 percent of its land already registered, compared to 18 percent for Uganda. Rwanda will have all its land registered by the end of 2013, and Tanzania is planning a big program of systematic titling after its pilot program registered success.</p>	<p>Disseminate and publicize international good practices to gain political support for ongoing computerization initiatives.</p> <p>Increase awareness of results from pilot programs of systematic land titling to gain support for scaling them up.</p>

Reforming land markets	Political economy risks	Where to learn from experience?	Mitigation measures
c. Clarify and strengthen the respective roles of local and central agencies in land administration.	Land administration is weak at the local level in part because of poor funding and expectation that few new districts would be created after the Land Law was passed in 1998.	Kenya, Rwanda, and Tanzania are reexamining their decentralization arrangements for land administration with a view to matching the decentralized functions with resources available to execute them at the local level.	Review and draw from experiences of other countries to refocus decentralization of land administration so that it can become effective and sustainable.

*Targeted Intervention in Northern Uganda*

6.38. Uganda is ethnically and religiously heterogeneous, with tribes in the northern part of the country barely able to communicate to southerners using their tribal languages. Such barriers partly explain why people tend to move only within their regions in Northern and Central Uganda. Worse still, the North has just emerged from a protracted civil conflict. Indicative estimates of the impact of displacement alone are quite telling of the civil conflict impact on household assets, years of schooling, and occupational choice.

6.39. Compared to those never displaced in the North, former internally displaced persons (IDPs) have 34 percent fewer assets and 1.5 fewer years of schooling than the rest of the country, with only 17 percent of primary graduates transitioning to secondary education. IDPs have equal access to health facilities but longer distances to access health services and very deviate outcomes, particularly for infant and mortality rates, and poorer access to trade and markets. In contrast, the delivery of social services was much lower and remains low compared to other regions.

6.40. Raising education levels stands to be the most beneficial channel to raising growth in the North, followed by infrastructure. Our analysis, assuming marginal productivity of 0.67 for labor and 0.33 for capital, shows that raising education levels in this region to match the national average would increase regional growth by more than 23 percent compared to a similarly calibrated growth rate of 7 percent for infrastructure developments. The assumption of equal marginal productivity for both labor and capital still yields higher growth through increased education but also raises the growth response to infrastructure to 21 percent. This result emphasizes the importance of increasing social services delivery, in particular for education in this lagging area. However, targeted interventions will need to complement social service provision and production in this part of the country, including the need to attract teachers to the region, replace school facilities lost because of the war, and change the culture and mindset about education.

6.41. Beyond education, special interventions need to focus on the identified comparative advantage in the area. The end of conflict in Sudan opened up a new era of market access for the North. From a situation of limited market access and long distances to carry produce to Kampala, the North can become a supplier and a hub for many goods that are being transported among the

Democratic Republic of Congo, Sudan, and Uganda. Building a connective infrastructure and a market infrastructure would be crucial to nurturing this aspect of development in the North.

6.42. The country also needs to tap the agricultural potential in the North as identified by several studies. Agriculture is the primary source of revenue for people in the North and will also ensure a quick return to normalcy. Although the interest in animal husbandry is strong, most products consumed today still come from Kampala because the revival of the industry is encumbered by lacks of access to capital, animal husbandry skills and knowledge, and advisory services. Furthermore, as mentioned earlier, land is a major constraint to developing agriculture in the North because the lack of fluidity constrains investors and large-scale farmers, and it prevents the migration of labor from land to other nonagriculture enterprises that would have driven productivity improvements.

6.43. Finally, with respect to industrialization, Uganda needs to carefully choose industries that have a comparative advantage to locate in the North rather than in existing agglomerations and density in the corridor, because this change will shift resources away from where they are best productive. Moreover, if all effort is put on intervention, then division will increase between the North and South.

#### *Overall Policy for Integration*

6.44. In summary, to connect people to prosperity, public policies need to (a) ensure equity in social services, (b) use investment in infrastructure selectively; (c) reform land institutions and policies to support transformation, mobility, and the best use of resources; and (d) make targeted interventions in northern Uganda. A careful choice of public investments needs to be made to generate the highest payoff for economic efficiency and geographic equity. In particular, territorial integration policies aimed at connecting people ought to focus less on providing economic opportunities in lagging areas and more on strengthening interactions among the areas. The policies adopted need to be tailored to specific challenges. For example, in China, where lagging areas are sparsely populated, the policy response would be different from what is needed in Brazil, where the poor are also located in the leading areas. Each instrument would achieve maximum impact depending on the severity of the challenge. Overall they are as follows:

6.45. First, prioritize equity and quality social services. Equitable access to social services is the bedrock of economic progress and connects people in lagging areas to economic opportunity in leading areas. Because these services empower people to seek economic opportunity while leveling the geography of basic living conditions, they are the sharpest instruments for integrating leading and lagging areas. Access to some services, such as education, is nearing equitable access, but access to others, such as health, is not. The challenge that remains is to ensure effective services through quality enhancement, particularly in the lagging areas. In education, rather than expand universal tertiary education, it is worth investing in the quality of primary education to address causes of dropouts, including the long distance to school, to promote a more meaningful primary education system.

6.46. For remote areas, it may be worth considering consolidating schools where enrollments are low and using the savings to improve the teaching environment in lagging areas. In health, access is improving, but the sector is characterized by a multitude of problems that range from

inefficiencies to waste. By recognizing that public spending on hospitals mainly benefits the richest households, a resource reallocation could be made within the sector to support staffing of lower health facilities, particularly in the remote lagging areas, while also working with NGO health centers.

6.47. Second, use infrastructure selectively depending on what it can achieve. Whereas physical infrastructure ought to be prioritized on the basis of its economic returns, connective infrastructure in remote areas would promote better access to social services, while connecting people from those areas to more prosperous ones. Improvements in road infrastructure in the Central region have a higher likelihood of raising national income than in all the other areas. Connective infrastructure may enhance national economic growth by investing more in the Central region because it is efficiently used by households in generating household incomes, which is fundamental to overall development. The negative returns on road investment in the three regions of the North, East, and West imply that road investment allocation in Uganda is done more on an equity basis rather than on efficiency grounds to promote regional balanced development.

6.48. Third, land reforms will be instrumental in supporting the much-needed transformation and mobility of people. The key reforms to make Uganda's land market more fluid would need to focus on reducing land conflicts, reactivating land rental markets, and encouraging land rental markets in areas of communal land ownership. The government needs to design and implement a clear legal and institutional framework to promote land security, manage conflicts, and encourage development of rental markets, the political economy challenges notwithstanding.

6.49. Fourth, special interventions will be needed for the North in particular for education. Given the impact of conflict, special interventions, particularly in accelerating education and health services, are needed to allow the region to overcome the deep shock suffered because of the conflict. Specific interventions to make land more fluid will be particularly important given the land tenure system in the North because it is also one of the key drivers of agricultural development in the region.

6.50. To be most effective in connecting people to prosperity, these policies need to be tailored to specific challenges in the different locations depending on the density of the population and the distances between the leading and lagging areas. As mentioned earlier, in China, whose lagging areas are sparsely populated, the policy response would be different from what is needed in Brazil, where the poor are also located in the leading areas. Uganda has to carefully choose its policies because it has impoverished populations in both types of areas. In the sparsely populated lagging Northeast, the provision of quality social services (education and health) may be the best option for integrating this part of the country. The Eastern and Midwestern parts of Uganda that are densely populated but also lagging are characterized by misplaced densities that need social services as well as infrastructure connecting them to leading regions, in particular to the leading Central region. Finally, although the Midnorth and West Nile are sparsely populated, those regions are also separated from the more prosperous South because of natural barriers such as languages and have in the past been left behind partly because of the protracted civil war. Such factors justify special interventions that have been started through the Northern Uganda Recovery and Reconstruction Program and the Northern Uganda Social Action Fund (NUSAF)

to accelerate the pace of recovery in production and also so the North can catch up with regard to social services. Table 6.2 summarizes the policies by area and gravity of challenge.

**Table 6.2. An Instrument per Dimension: Policy Priorities for Integration**

<b>Location/sub region</b>	<b>North East</b>	<b>East Central, Mid Eastern, Mid-Western</b>	<b>West Nile, Mid North</b>
<b>Challenges</b>	Sparsely populated lagging areas	Densely populated lagging area(economic distances and misplaced population densities)	Sparsely populated lagging areas with internal division(economic distance and internal divisions)
<b>Policies should facilitate integration</b>	Labour & capital mobility	Labour & capital mobility	Labour & capital mobility
<b>Policy priorities</b>			
<b>Spatially blind institutions:</b>	Improve health and education outcomes, safe water supply and sanitation	Improve health and education outcomes, safe water supply and sanitation	Improve health and education outcomes, safe water supply and sanitation
	Improve fluidity of land market	Improve fluidity of land market	Improve fluidity of land market
<b>Spatially connective infrastructure</b>		Improve communication (transport, information flow) infrastructure for connectivity with the leading areas, in particular, Kampala metropolitan area	Improve communication (transport, information flow) infrastructure for connectivity with the leading areas, in particular, Kampala metropolitan area
<b>Spatially targeted interventions</b>			Incentives to agriculture and agro-based industry, e.g irrigation support, workforce training, local transport infrastructure.  Amplify market linkages
<i>Source: World Bank Staff; Using the WDR 2009 Territorial Integration Framework</i>			

## 7. URBANIZATION: PLANNING FOR THE REALITY

7.1. Uganda's "future growth will by necessity be more urban, more infrastructure-dependent, more export-led, and will require more private investment in equipment than to date. Policy makers should start to plan infrastructure investments in the coming years to accommodate a rapid rise in urbanization, and to support agro-processing and exports. This was one of the key messages of the *Uganda: Country Economic Memorandum* (World Bank 2007) and is consistent with the *World Development Report 2009* (World Bank 2009d) message about economic transformation. Urbanization precedes concentration of economic activity and progresses as cities develop to support the density and as labor moves to denser economic space. Indeed, rapid urbanization is one of the most striking features of economic development.

### *Tracking Uganda's Urban Trail*

7.2. Uganda has started its journey into urbanization, partly driven by population growth and, to a large extent, the rural-urban migration. Even though still low at 13 percent per official estimates, Uganda's urbanization rate is almost double at 25 percent when density and proximity to urban infrastructure is taken into account. Central may be the most urban region, but in terms of urban growth, the East is urbanizing fastest. Overall, the pace of urbanization is picking up—currently at 4.5 percent per year—and likely to accelerate with rising incomes.

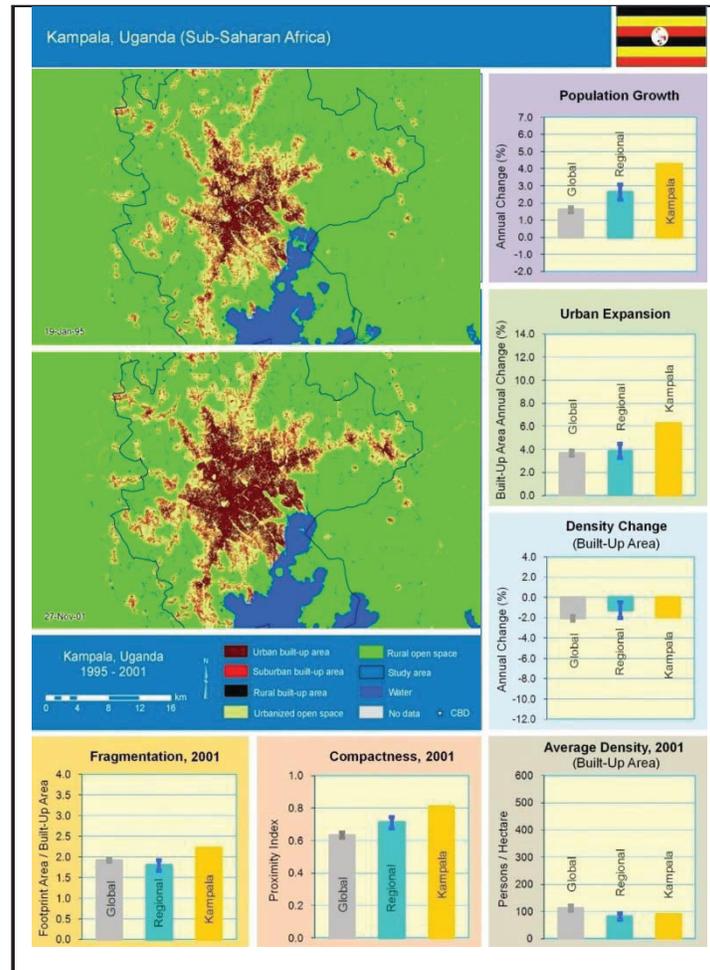
7.3. Urban expansion through reclassification of land use from rural to urban has become an important contributor to the urbanization process. Like other cities across the world, Kampala has grown rapidly by engulfing its edge, while transforming villages and farmlands around it. Kampala has grown from an administrative township of 0.7 square kilometers in 1902 to 839 square kilometers today. Between 1995 and 2001, Kampala expanded at 6 percent per year as suburban development covered previously open rural space (see figure 7.1). This pace of expansion has been superior to that observed in other cities, both within the region and globally, even though part of the growth has been redevelopment within Kampala. This process of urban sprawl is expected to continue and even accelerate as incomes rise.

7.4. Uganda's urban landscape is dominated by Kampala City but consists of other medium and small towns with unique functions. Given the magnitude of potential economies of scale for manufacturing industries, Kampala has attracted more people and nurtured more economic activities than other cities. This urban center has, therefore, grown to account for more than 35 percent of the country's urban population. In parallel, smaller towns, particularly linked to the level and distribution of agricultural activity and trade routes, have emerged, with more prosperous agricultural hinterland increasingly demanding more urban services as commercialization takes off.

7.5. Kampala's size ought to be viewed with respect to the regional economy, not only the local economy. As the economic and political capital of a small landlocked economy, Kampala's size has been constrained and some of its productivity benefits foregone. But the size of Kampala will be determined by how effectively it grows in response to regional integration to provide a range of amenities and services that a larger market from an integrated economy will desire. As such, the debate on Kampala's optimal size is not very useful; instead, it is more useful to ask if the metropolis is serving the needs of firms and households and if it is flexible to compete with

similar urban centers within the East African region and beyond. City size will be determined by those functions.

**Figure 7.1. Urban Expansion in Kampala**



Source: Angel 2010.

### ***Weighing the Benefits and Costs of Urban Growth***

7.6. The economic benefits of urban growth come from exploiting economies of scale and agglomeration effects as well as effective substitution between land and nonland inputs. The link between urbanization and economic growth is based on the propensity of nonagriculture activities—manufacturing and services—to develop faster in urban areas. To date, Uganda’s small urban footprint is dominated by the corridor that connects Kampala to neighboring Kenyan cities, justifying the concentration of more than 70 percent of the country’s manufacturing sector (see figure 7.2). There is also a high degree of geographic concentration of supportive business services like finance, insurance, printing, and publishing.

7.7. Like elsewhere in the world, firms’ location decisions in Uganda are based on existence of infrastructure, markets, and existence of urbanization economies. Infrastructure includes access to information sharing, process and product innovation, and producer amenities, which, in turn, include business services, finance, logistics, banking, advertising, and legal services (Lall,

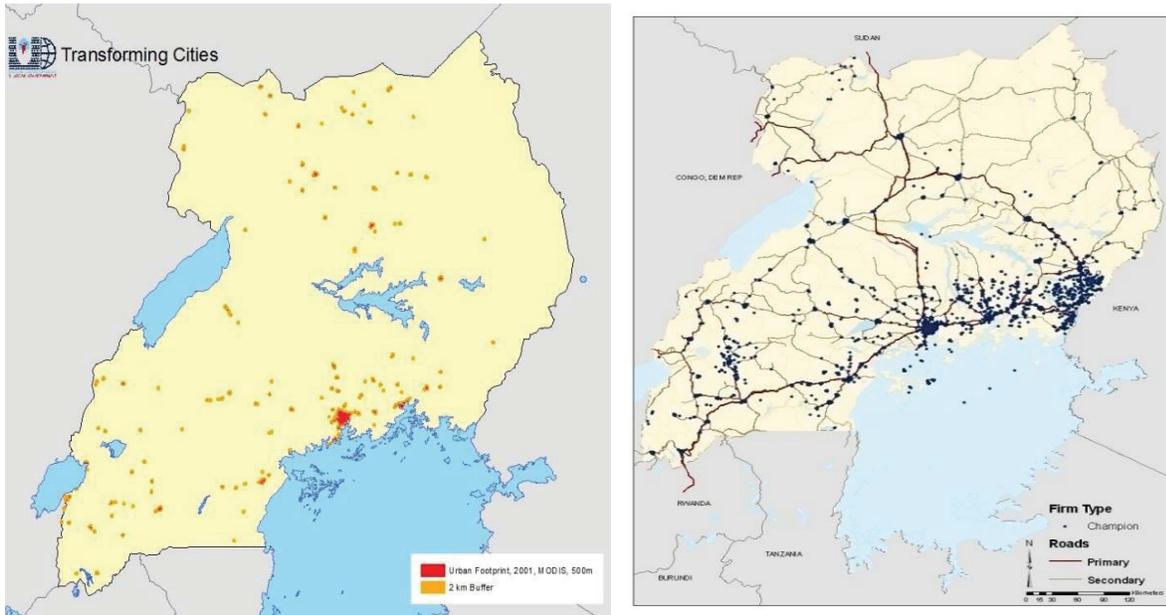
Schroeder, and Schmidt 2009). These amenities are found in cities, mainly Kampala. The advantages have to be balanced with congestion costs, especially in the use of land that rapidly becomes a rare asset. Thus, there is a need to develop a clear planning strategy about land use that will optimize the benefits of urbanization over time. Options include allowing capital to substitute for land by building high-rise factories and designing processes where land use is minimized. Services can be carried out in buildings of any size, but the presence of scale and agglomeration economies increases the likelihood of their geographic concentration. Complementary services such as banking and finance as well as proximity to markets for profitability (inventories in retail trade and consumers for financial services) will also enhance gains from urbanization.

7.8. The move to cities is welfare enhancing but can increase the risk of economic distress. According to the 2005/06 UNHS, most households with the same size, composition, and education did better when they migrated to urban areas than they did in rural areas. Yet with the urban sector formal jobs not growing fast enough, a fraction of the migrants have to settle in informal jobs with low incomes. The informal sector accounts for about 70 percent of the firms registered by the Uganda Bureau of Statistics, while about 50 percent of urban households own a nonfarm household enterprise. For them, the government would need to devise ways of (a) improving their access to reliable financial services, (b) supporting informal skills training, (c) creating incentives for local governments to facilitate the productivity of household enterprises (including access to workspaces) as part of local economic development programs, and (d) establishing a new tax base for local governments and reforming tax enforcement so that the tax rate on the smallest enterprises is not higher than the tax rate on corporations.

7.9. Economic distress in urban centers is often aggravated by the quasi-absence of social protection programs. Traditional safety nets, such as the family network, are not as effective in the urban context, and the government has not yet developed a comprehensive strategy. If NGOs can play a role, they cannot substitute for a collective action because of asymmetric risks and the need to have a relatively large system. The development of a social protection strategy, including housing provision, for urban centers has, therefore, become a priority for Uganda.

7.10. Uganda's urban transformation is occurring in a period of particular flux or change, and hence flexibility is key. The changing climate is likely to adversely influence rain-fed agriculture and correspondingly its comparative advantage, both of which will have a bearing on the prospects of small towns that serve as interlocutors with the rural economy. At the other end, closer economic integration in East Africa will increase the reach of the country's largest metropolis but place it in direct competition with other metropolises in the region. As prices of tradables converge in an open economy, considerable thought and effort will be needed to reduce the prices of nontradable services that can help maintain economic competitiveness. Given the status of urbanization in the country (see snapshot in table 7.1), policy makers—at both the national and local levels—need to see themselves as change managers who encourage flexibility in how Uganda's towns and cities respond to emerging needs of business and households at the local and regional levels. Planning ahead is important, but not locking settlements into today's market needs becomes even more important.

**Figure 7.2. Urban Footprint Mainly Serves the Growing Concentration of Manufacturing along the Regional Transport Corridor**



**Table 7.1. A Snapshot of Key Facts about Uganda’s Urbanization Process**

Key facts	Data sources and analysis
<p>Currently at incipient levels (13%), urbanization is rapid in Uganda—urban growth is estimated at 4.5% annually. Alternate definitions of urbanization (Agglomeration Index) considering density and proximity to a large city estimate urbanization at 25%. The pace and magnitude of urbanization are consistent with countries at low incomes—and urbanization will accelerate with economic development.</p>	<p>The 25% figure is calculated as the “Agglomeration Index”—a globally comparable measure of urbanization that measures those living at high population densities (150 people per sq km) within 60 minutes’ travel time of a town with a population of 50,000 or greater.</p>
<p>Uganda’s urbanization is characterized by short-distance movement of people from neighboring hinterlands as well as geographic expansion of its existing cities. Cultural divisions may be limiting long-distance mobility as well as the scope of agglomeration economies.</p>	<p>Analysis of UNHS data</p>
<p>Debates on Kampala’s size are misplaced—focus should be on how the metropolitan area can cater to changing needs of firms and households. Kampala’s substitutes are other large cities in an integrated East Africa, not Uganda’s small settlements. Kampala dominates the urban landscape with 35% of the urban population and provides a range of producer and consumer amenities typically available in only a few cities in countries at early stages of development. Uganda’s urban primacy is consistent with many countries in the region. Kampala coexists with many small and medium urban settlements that typically serve their hinterland markets.</p>	<p>World Bank data (WDI) and city population data ;analysis of firm location decisions based on UBOS business registry</p>
<p>More than 90% of the poor live in rural areas—and rural/urban disparities in basic services are large and sustained. These services include drinking water (water source is three times as far in rural areas) and health facilities (twice as far in rural areas). These disparities have implications for balanced regional development as well as urban efficiency.</p>	<p>Analysis of UNHS data</p>
<p>Land policy institutions are increasing the cost of urban entry. It takes 171 days to get a construction permit in Kampala at 1,200 times the per capita income, and it takes 77 days to register property.</p>	<p>World Bank Enterprise Surveys</p>
<p>Urban transport fares cost 41% of income for the poorest 20% in Kampala—making transport services unaffordable for the poor. Approximately 70% of work trips are on foot in Ugandan cities—but pedestrians have the highest fatalities among all road users. Improving urban transport is strategically important, but accommodating the travel demands of the poor is a tactical necessity.</p>	<p>Africa Infrastructure Country Diagnostic’s (AICD) community survey, Stuck in Traffic: Urban Transport in Africa</p>
<p>Freight transport prices are high along the Kampala-Mombasa corridor relative to southern Africa as well as in countries such as Brazil, China, and the United States. The corridor from Kampala to the east is the economic hub of the country. Transport prices are US\$.08 per km, compared with US\$.06 per km between Durban and Lusaka, US\$.05 per km in China, and US\$.04 per km in the United States. The alternative route that connects Kampala to Dar es Salaam is not competitive anymore.</p>	<p>Raballand and Macchi (2009)</p>
<p>Uganda needs to build five million housing units in the next 20 years, of which about 1.02 million would be required for Kampala City alone. But housing policies need to be accompanied by land use flexibility and transport improvements to enable people to make rational decisions on where to live.</p>	<p>UNHS and background paper by Martin Onyach-Olaa</p>

## *A Strategy for Efficient Urbanization in Uganda*

7.11. Uganda’s urbanization strategy ought to be more concerned about ensuring that Kampala serves its functions as a large city than about constraining its growth by pushing businesses out of the city. Kampala’s size together with the regional disparities between the more urbanized central region and less urbanized areas has concerned policy makers. It may be tempting to move businesses into smaller towns and less urbanized areas. However, substitutes for Kampala are not Uganda’s smaller towns, but other large cities in East Africa that can offer the same level of services and markets. At higher incomes, the economy may be able to provide amenities in more towns and cities, but active efforts to push industries out of Kampala are likely to be counterproductive. In fact, Kampala turning into an “executive slum” is a signal of policy neglect, not of city oversize.

7.12. If one looks beyond Kampala, appropriately planning for the urban sprawl will be as important. For small towns, improvements in agriculture and agroprocessing will increase demand for their services, as will the growing trade within Uganda and among Uganda and its neighbors. Those developments have to be planned well in advance.

7.13. Beyond location issues, Uganda’s urbanization strategy needs to focus on building institutions to deliver equitable social services, govern land markets, and deliver infrastructure to amplify growth engines while supporting local urban mobility and regional connectivity. Kampala dominates Uganda’s urban landscape, accounting for one-third of Uganda’s urban population, serving as the economic engine of the country, and connecting the country with the East African economy. However, most of Uganda’s population still lives in small towns and rural areas, where public policy has not yet been successful in setting up institutional foundations for ensuring universal access to basic services and in reducing impediments for changing land use in anticipation of future market needs. Going forward, planning for urban transformation across the country will be needed to ensure that the cities perform their appropriate economic role and grow efficiently.

7.14. The specific planning, policy, and investment bottlenecks that the government ought to address to optimize pace and returns from urbanization span five pillars.

7.15. The first pillar is equitable basic services as the key foundation of a successful urbanization strategy. Currently, there are large differences in access to basic services such as water, sanitation, and electricity between rural and urban areas. This disparity has adverse consequences for social inclusion because places that have been bypassed by businesses also suffer welfare losses from limited access to public services. Furthermore, the lack of services would remain an important factor in rural–urban migration, and hence contribute to congestion in towns and cities. Health services are concentrated in economically prospering places. Conversely, although education reforms under Universal Primary Education (UPE) and the increase in private coverage have balanced the coverage of primary school enrollments between rural and urban areas, noncompletion and nonproficiency—particularly in rural areas—suggest gap. Those portable assets are key for Uganda’s young and rapidly growing population.

7.16. The second pillar is reform of land policies and institutions to support urban efficiency. Increasing density of economic activities is one of the key features of successful urbanization,

enabled by using land for higher value activities over time. Uganda's challenges of encouraging land-based transactions include the limited extent of formal tenure security (18 percent of land is registered and titled), lack of a credible system to value land, land conflicts and overlapping land rights on mailo land, limited incentives for landowners to rent out land, and creation of land markets in areas of communal land ownerships.

7.17. The land-related constraints have affected both the urban and rural dimensions of urbanization process. In urban areas, land-related constraints are increasing the cost of entry—for instance, despite recent restructuring that has recorded some improvements, it takes 125 days and costs an equivalent of 947 percent of the national per capita income for a business to get a construction permit in Kampala, while registering property takes 48 days. Planning for urban infrastructure has become particularly challenging as the 1995 constitution created private land ownership and abolished land leases vested with urban local bodies. On the one hand, fragmentation of land parcels and rapid suburbanization has ensued, with fiscally starved local governments unable to acquire land and protect rights-of-way for infrastructure improvements. On the other hand, rural-urban migration could be exacerbated by the unclear property rights and related conflicts that adversely affect agriculture—overlapping property rights on the predominant mailo land (created by the Land Act of 1998 and the Land Amendment Act of 2010) have created disincentives for investment and are estimated to have reduced agricultural productivity by up to 25 percent. Yet customary tenure systems in the West, East, and North restrict the sale and rent of land.

7.18. The key priority for land reform includes developing a credible system for documenting and valuing land, as well as specific reforms to support a more fluid land market in Uganda as elaborated in the previous chapter. Such reforms would aim to reduce land conflicts and overlapping land rights, reactivate the land rental markets, encourage rental markets in the areas of communal land ownership where change in tenure system is not likely to be realized soon, and strengthen the capacity of land administration institutions. Furthermore, urban local body finances would need to be improved to acquire land and pay for infrastructure. Options include improving the coverage and compliance of the property tax, reconsidering transfers from the central government (urban areas received only 3.4 percent of total transfers of U Sh 1.2 trillion to all local governments), and sharing future oil revenues.

7.19. The third pillar is connectivity and mobility within cities. The benefits associated with urbanization are reduced by diseconomies from congestion. Well-designed urban transport systems that pay attention to user preferences and coordinate with land-use planning are likely to help. At current income levels, many motorized transport options are unaffordable for the poor (urban transport fares cost 41 percent of income for the poorest 20 percent of Kampala's population). In fact, 70 percent of urban workers walk to work. In the short term, it is important to enable the availability of a wide range of service levels and modes at different prices—and invest in sidewalks to reduce pedestrian fatalities in traffic accidents. In the longer term, policies for taxing motor vehicle use (e.g., gasoline taxes) and a greater supply of public transport choices will be necessary components of a functioning urban area.

7.20. The fourth pillar is the regional transport for freight movement spanning through infrastructure improvements and regulatory reform. Recent evidence points out that the transportation cost is considerably higher along the Kampala-Mombasa corridor (home to most

of Uganda's industrial production) relative to southern Africa or countries such as Brazil, China, and the United States. Transport prices are US\$.08 per kilometer between Mombasa and Kampala, compared with US\$.06 per kilometer between Durban and Lusaka, US\$.05 per kilometer in China, and US\$.04 per kilometer in the United States. The alternative route through the central corridor is not any cheaper. Although the roads on these two major corridors (the northern corridor and the central corridor) are generally in good condition, some parts are of poor quality and in disrepair, needing infrastructure improvements (including in neighboring countries). This problem emphasizes the need for regional coordination of transport investments and maintenance. For extra-urban connectivity, policy priorities for Uganda ought to also include further competition in the trucking industry (leading to cartel pricing) and improvements in the internal efficiency of the transport industry (increasing fleet usage). An effective regulatory regime is needed so that the profit margins of transport operators become reasonable (they currently go over 85 percent) and thus contribute to lower transport costs in the country.

7.21. The fifth pillar is housing and slum improvement for livability. Rapid population growth and rural urban migration has generated housing shortages and squalid living conditions in many urban areas. Currently, about 60 percent of the urban population lives in unplanned settlements (slums), and dirt roads make up a large percentage of the road network, with the few tarmac roads full of potholes. The government of Uganda already estimates that 4 million housing units would have to be built over the next 25 years. The government-owned National Housing Company has already initiated plans for the middle income class. To make the efforts worthwhile, the government needs to consider tenure choice and location choice in planning Uganda's housing policy. Regarding tenure choice, many poor people cannot afford to enter the owner-occupied housing market and prefer to be renters. Demand for home ownership will increase with incomes, but a range of shelter and tenure options need to be available to urban residents in the short to medium term. Household decisions on where to live are often based on the trade-off between land prices and transport costs, particularly the time cost of travel. In fact, when land prices are high, many people will substitute into the informal land market (slums) rather than be cut off from the labor market. Thus, institutions that increase flexibility of land markets and infrastructure for better urban transport are prerequisites for successful housing interventions.

7.22. The government would need to formulate a national urban policy and strengthen the legal framework for urban planning. Because of a lack of plans integrating both sectoral and spatial planning, urban growth has been met with inadequate provision of basic services, weak urban management capacity, and significant fiscal constraints. Congestion diseconomies are setting in early—most urban landscapes are dominated by informal settlements, and urban health services are compromised by inadequate infrastructure and sanitation facilities and a lack of basic hygiene practices such as safe water, solid waste management and proper sanitation, and adequate drainage networks. Those congestion diseconomies limit the ability of towns and cities to exploit agglomeration economies. Uganda needs to formulate an urban policy that will also guide the implementation of the Physical Planning Act of 2010 and aim to address the issues of weak capacity of local urban governments, improperly managed land, and conflicting laws.

7.23. Given the rapidly changing market dynamics, Ugandan planners and policy makers should resist the temptation to develop rigid master plans. This is a key lesson from other countries such as China and Vietnam, where master plans have often been ignored or modified.

The planning process must be aligned with market dynamics to guarantee optimal results. The recommendation is therefore to produce a simple spatial strategy document that could be updated every year by staff members of a city's urban planning department. Its main objectives would be to ensure housing and land affordability and adequate mobility. Such a process would focus on analyzing real estate prices and supply and demand constraints for all income groups, firms, and households. The plan would cover three topics: (a) land use and geographically distributed demographics, (b) road and transport networks, and (c) land use and development regulations. Rather than attempting to cover all sectors, when the spatial strategy is approved by the government, it could be distributed to line agencies that have the technical expertise to develop plans consistent with their program budget constraints and investments that are consistent with the geographic distribution of the population. Line agencies must be provided with a constantly updated geographic distribution of populations so that they can adjust their investment programs to meet current and future demand.

7.24. To integrate the geographic and sectoral components of the strategy, Uganda could learn from the policy framework for urbanization developed under the 2009 WDR on economic geography. The policy framework focuses on *institutions* that govern and manage land as well as manage the provision of basic services; *infrastructure* that improves connectivity within urban areas and between urban areas and their hinterlands; and targeted *interventions* that reduce social and economic divisions. How can institutions, infrastructure, and interventions be prioritized and sequenced in Uganda?

- For rural areas and small towns that dominate the country's landscape (and where urbanization is incipient), the policies should encourage economic density by focusing on institutions that make land markets flexible and extend basic services.
- For medium-size cities (with more than 50,000 people), the focus should be on encouraging economic density as well as connectivity. Land-use planning institutions should set aside and protect rights-of-way to guide urban form and to develop infrastructure and should link the plans with future transport improvements. Connective infrastructure to improve mobility is important—including setting and enforcing safety standards along with managing heterogeneous types of transport providers. Because many residents use nonmotorized transport, planning for sidewalks will help reduce risk to pedestrians. Institutions and infrastructure are priorities at this stage of urbanization.

- For the country's largest metropolis, Kampala, the policy challenges are more complex. Rapid spatial expansion—although a natural process—will necessitate coordinated policy and planning efforts among Kampala City and neighboring jurisdictions. Although annexation and centralized management have been proposed as options for managing the metropolis, international evidence suggests that there are alternative models of service delivery in metropolitan settings that merit consideration. Transport improvements become critical at this time to connect the expanding city and physically integrate labor markets. Investments in busways should be considered, along with options for reducing use of private vehicles. In addition, targeted interventions will be needed to improve and expand the housing stock, but these need to be supported by improvements in land use institutions and transport infrastructure.



**PART D:**  
**CONCLUSIONS AND SUMMARY RECOMMENDATIONS**

## **8. REFRAMING THE DEBATE FOR GROWTH INCLUSIVENESS**

8.1. Over the past two decades, Uganda has adopted various initiatives to transform the economy and promote more inclusive growth. Uganda has attained an impressive growth and poverty reduction record. However, the persistent inequality and imbalances in living standards have raised questions about growth inclusiveness. New policies aimed at making growth more inclusive need to preserve and accelerate what has been achieved. Macroeconomic stability and proper prioritization of public investments will remain a cornerstone of sustained growth. This report underscores the importance of transformation, both across sectors and space, to make Uganda's growth more inclusive. On the one hand, transforming agriculture is the most critical, given Uganda's comparative advantage. As the bedrock for industrialization, modernizing agriculture can raise the livelihood of the more than 75 percent of the Ugandan labor force that primarily depend on the farm. On the other hand, Uganda's human capital will need transformation, not only because it is a key input for moving production to higher value, but also because the people are the target for development. Across space, the transformation that comes with growth will need to be supported by appropriate integration policies.

8.2. This report argues that one of the most important channels to transform Uganda's agriculture will be through more commercialization, especially of the small farms that account for 96 percent of total production. In 2005/06, only 25 percent of households engaged in agriculture were selling more than 50 percent of their output and were purchasing more than 20 percent of inputs, a very low level of commercialization. In general, small farmers have been more efficient in the use of limited resources. The crop income of small farms is three times higher than that of large farms, particularly in the high potential agricultural areas of West Nile, Western Highlands, and Lake Victoria Crescent. Only 4 percent of total agricultural output is produced by large farms of more than 5 hectares. For commercialization, farm size has mattered only to a limit. Increasing acreage improved market orientation of farmers but only up to about 10 acres. As was the case in land-constrained China and Thailand, Uganda will need to prioritize small-scale farming to transform agriculture before outmigration from rural to urban areas and faster growth of the nonagricultural economy can allow for farm enlargement.

8.3. The report further argues that while human capital transformation is at the center of both economic transformation and inclusive growth, it remains an enormous task for Uganda. A significant proportion of Uganda's labor is currently engaged in low value-added activities. By sector, agriculture is the primary employer for more than 70 percent of the labor force. By type of employment, more than 70 percent are engaged in farming, and by space, more than 90 percent are in rural areas. Expanding sources of growth while getting an increasing number of the labor force to participate in the growth process not only requires firms to transform their production processes, but also requires the labor force to transform from the current uneducated, unskilled force. Less than 30 percent of the labor force has acquired education beyond the primary level or trained for any other technical skills. Given the demographic dynamics, Uganda's labor force will grow very fast. The challenge of building human capital to support growth and transformation is, therefore, about how to equip this labor force with education and appropriate skills. The current intervention of universal primary and secondary education programs are expected to dramatically reduce the proportion of the population without formal education. However, given the low completion rates and the low postprimary transition rates, not more than 50 percent of the labor force will have attained primary education by 2030.

8.4. The unfolding geographic imbalance in growth is not unique to Uganda, but growth and development have to be inclusive. Uganda's fast growth has also come with the concentration of economic activity. The high productivity businesses and higher commercial-value agricultural production have been geographically concentrated. Firms have favored locating around the Lake Victoria crescent, which encompasses the Southern, Central, and Western regions of the country, and much industrial activity is clustered around large towns and along transport corridors, which is driven by profitability, access to markets, and desire for proximity. By concentrating production, Kampala, the nation's capital as well as the densest area, has productivity and wages more than three times those in the Western region, the second most prosperous.

8.5. Although production and prosperity continue to concentrate, welfare and living standards remain geographically imbalanced. Income poverty dropped from 14 percent to 4 percent between 1992 and 2010 for the richest region, Kampala. The poorest region, the Northeast, recorded a reduction in poverty from 83.9 percent to 75.8 percent over the same period. Beyond poverty, uneven living standards abound. While the introduction of universal primary education (UPE) in 1997 raised overall net enrollment, learning outcomes differ across regions. Deviations in health standards are even worse. Nationally, nearly one in every seven children born in Uganda dies before its fifth birthday, making Uganda's child mortality rate one of the highest in the world. Moreover, in the West Nile and Southwestern regions, this death rate is one in five children. Infant mortality of 76 deaths per 1,000 live births at the national level is almost double in Southwest, North, and Central 1 because of differences in the nutritional status of both children and mothers.

8.6. More growth will come with more geographic concentration, but public policies ought to focus on connecting more Ugandans to prosperity than on spreading production. Public policies ought to increase interactions between economically lagging areas and leading and not be exclusively concerned about stimulating growth in places left behind by firms and workers. Enabling geographical mobility of factors of production and improving connectivity between lagging and leading areas are key ingredients for countries to gain from rapid economic progress and convergence in living standards across places. Where factors are mobile, land-use changes facilitate production transformation, workers can access economic opportunity, and products can be traded, thus making land, people, and products the key drivers of transformation.

8.7. Economic integration comes with the challenge of urbanization, a journey that Uganda has begun but will continue only in a very dynamic environment. From a low urbanization level of 4.5 percent, Uganda's urban transformation is expected to accelerate as integration of leading and lagging areas progresses. Urbanization will progress in a very dynamic environment. Continued agglomeration as the country grows has implication for large cities. Policy- and climate-driven agricultural transformation has a bearing on the prospects of small towns that serve as interlocutors with the rural economy. The East African regional economic integration is expected to grow the country's largest metropolis, while placing it in direct competition with other metropolises in the region. The economic benefits of urbanization will come from exploiting economies of scale and agglomeration and by increasing fluidity in factor markets that enable substitution between land and nonland inputs.

8.8. Considering transformation of the two key sectors of agriculture and human capital, combined with integration across space, refocuses the growth inclusiveness debate on four key issues: (a) better prioritizing infrastructure investments for more economic density and tapping agricultural potential through better connectivity in producing areas, while providing connectivity to support integration of leading and lagging areas; (b) better using the land, a valuable but finite asset, to support transformation from low value production across sectors and across space; (c) ensuring equitable and efficient delivery of social services across locations; and (d) focusing special interventions that will be important to uplift the living standards of the most lagging areas, and addressing other specific challenges of agricultural institutions to support agricultural transformation, human capital transformation, and urban congestion. In a nutshell, inclusive growth is about better prioritized infrastructure investments, more fluid land markets, equitable social services, and interventions. Next, we highlight the key areas that need to be prioritized to make growth more inclusive.

8.9. *Infrastructure:* Investment in infrastructure will remain an important priority for growth, but for faster transformation and inclusiveness, it will need to be better prioritized to accomplish the following:

- a. Maximize growth and job creation through agglomeration effects. Place-specific physical infrastructure is best suited for where it has largest economic returns, while social and connective infrastructure is needed across regions to promote equity of social services and support mobility. Hence, while the Central region is the most prosperous, it should by necessity remain a priority destination for physical infrastructure investments aimed at attracting firms to build density and to support fast growth for the country. To lift the incomes and living standards of lagging regions, the government should prioritize investing in social infrastructure, particularly in education and health (the portable investments), as opposed to spreading infrastructure to raise growth.
- b. Improve connectivity to move people, products, and ideas. Isolation can confine producers to small markets for their goods and services and can also restrict them to using only the inputs available in their geographic location. By enhancing connectivity, producers and firms can increase potential market size and consequently their ability to exploit economies of scale, to draw from a larger and more specialized pool of workers, and to have greater access to the right kind of raw materials and equipment. Connective infrastructure that links producing areas to markets and that increases interaction between places will reduce costs for agroprocessing firms and, hence, will facilitate both agricultural and geographic transformation. Uganda already has a high rural connectivity index and a road network similar to that of China. The challenge is to get a more efficient system of allocating resources for infrastructure investments, including choosing between road maintenance and new road construction, and prioritizing road investments that are based on agricultural potential, cross-border trade opportunities, and load consolidation. Currently, the Southwestern region, which seems to be the most productive, would be the priority, while special attention is paid to Northern Uganda to tap into the potential production and trade links with Southern Sudan.

- c. Improve urban transport and mobility to reduce congestion costs and, hence, increase growth in dense areas. Congestion can easily erode the gains of economic density by reducing the efficiency of an urban economy. Investment in better infrastructure in urban areas and transport systems coordinated with land-use planning is crucial. In the short term, it is important to enable the availability of a wide range of service levels and modes at different prices and invest in sidewalks to reduce pedestrian fatalities in traffic accidents. In the longer term, policies for taxing motor vehicle use (e.g., gasoline taxes) and a greater supply of public transport choices (e.g., bus rapid transport system) will be necessary components for a functioning urban area.
- d. Improve regional transport for freight movement. Beyond in-country improvements for the main corridors joining Uganda to its neighbors, regional coordination of transport investments would be critical, together with an effective regulatory regime in a transport system. Therefore, maintaining the corridors in good condition—while adjusting to the growing traffic flow—would be important.

8.10. *Land:* Land use will support increasing densities and transformation from low value production across sectors and across space. Policy makers need to focus on how to most effectively use this valuable, socially and politically sensitive, and finite asset. Flexible land markets are critical for investment and productivity growth, transformation of agriculture, labor mobility, and transformation of land use to higher value activities, which supports building economic density. However, this flexibility also requires secure rights, credible systems for documenting and valuing land, and effective implementation of laws and policies to guide land transactions. As in many places in the world, land reforms are encumbered with political economy challenges that have to be overcome. Although sensitizing the public about the benefits is crucial, strategic positioning of the reforms will also yield a win-win situation for the stakeholders. Making land ownership more secure to promote flexible land markets would require the following:

- a. Strengthening the security of land tenure would need to go hand in hand with measures to address land conflicts and disputes. The measures will raise incentives for investing in high-value crops and sustainable land management, large-scale farming, particularly in the land-rich north, and transforming land use to higher value production everywhere in the country. Although overlapping ownerships can be addressed by enacting laws that map clear ownership, there is also a need to have independent institutions to serve as alternative dispute resolution instruments to the standard court system. In this respect, reactivating the district land tribunals introduced by the 1998 Land Act, but disbanded in early 2000s, would help. If one is to address specific disputes, building the capacity of local land administration institutions in affected areas and accelerating systematic land adjudication and demarcation in those areas will be needed. For Northern Uganda, communal land should be demarcated and registered to protect local community land against noncommunity land incursions. Special efforts should be made toward cultivating trust among government, the private sector, and communities, and adopting policies geared at engendering government commitment to protecting land rights in this high potential agricultural terrain. One way of doing so could be through pilot programs that demonstrate the benefits of clearer land rights. As for overlapping land rights on mailo land, the government should increase funding and improve operations of the Land Fund

to extend subsidized loans to bona fide and lawful occupants so they can buy out residual land rights of landlords.

- b. Encouraging rental markets would provide more access for agricultural land for the landless farmers. The Land Amendment Act of 2010 ought to be amended to remove land right uncertainties.
- c. Improving land registration and management institutions would make land markets more active. Land will remain the main asset to transform production, while its liquidity enhances mobility and integration.
- d. Developing a credible system for documenting and valuing land, along with measures to improve urban local body finances to acquire land and pay for infrastructure, would support urban efficiency. Specific actions include improving the coverage and compliance of the property tax and reconsidering transfers from the central government (urban areas received only 3.4 percent of total transfers of U Sh 1.2 trillion to all local governments).

8.11. *Basic social services:* Delivery of equitable and quality social services, in particular education and health, will be the bedrock of inclusive growth because it accelerates economic progress, raises productivity of the labor force, and connects people in lagging areas with prosperous places. The commendable improvement in access to primary schooling in the country would need to extend to all regions, be emulated at the secondary level, and extend to attainment at both levels. Resource allocation choices have to be made for these measures to be achieved. The government should rethink the strategy of providing free tertiary education at the expense of quality and equal access at the primary and secondary levels. On the health side, streamlining services by area and type of facilities would bring benefits to the poor and improve access across regions.

8.12. *Interventions:* Special interventions will be important to uplift the living standards of the most lagging areas, especially the North because of existing divisions, and to address other specific challenges of transformation including agriculture, human capital transformation, and urbanization.

- a. Integrate the North with the rest of the country. To implement special interventions in the North geared specifically at equalizing social services, the government should focus on the difficulties of reaching those areas.
- b. Improve education and skills training. Transformation to higher value products requires better skills to raise productivity and competitiveness, but the labor force also needs to be better educated and equipped with skills. Strong institutions will be required to manage the dynamic process of providing education and skills in a transforming economy and market structure, while addressing geographic and gender imbalances in social services access. Readjusting the education system, for instance, to meet the demanded skills is not a Ministry of Education and Sports issue alone. It spans entities responsible for planning the economy's structural transformation, for labor force planning among others. Although many of these entities exist in Uganda, a mechanism of coordination among them would be required to guide the transformation process by identifying immediate skills needs and those for the short, medium, and longer term and to enforce education and skills training institutions to deliver those skills.

- c. Address challenges of urban growth. The government should consider interventions to find institutions that can meet the expanding demand for social services and other amenities. The challenge of improving housing availability, slum conditions, and livability requires consideration of tenure choice and household decisions on where to live, based on the trade-off between land prices and transport costs, particularly the time cost of travel. In fact, when land prices are high, many people will subsist by moving into the informal land market (slums) rather than be cut off from the labor market. Thus, institutions that increase flexibility of land markets and infrastructure for better urban transport will be prerequisites for successful housing interventions.
- d. Transforming the agricultural sector: Interventions will be required to build institutions to support transformation of this sector. Technological innovations, coordination between research and producers, delivery of advisory services to farmers, the transfer of knowledge between research and advisory services, and access to finance and matching grants all thrive on well-functioning institutions. Interventions may be needed to ensure that those institutions become functional and can support agricultural transformation.

8.13. Overall, inclusive growth will not come from spreading production, creating large industries everywhere, and promoting large-scale farming to transform agriculture. It will also not come by providing tertiary education while a large majority of the labor force does not go beyond primary, or by fighting against labor mobility and urbanization. Instead, policy makers will make Uganda's growth more inclusive by ensuring that smaller farmers get the basics of infrastructure, finance, inputs, and institutions that will support transformation. Policy makers should also ensure that quality and delivery of primary and secondary education improves, while devising mechanisms to provide skills to support the transformation process to higher productivity economic activities, more concentration of economic activity, and urbanization. For more inclusive growth, appropriately prioritizing infrastructure investments and ensuring equitable delivery of social services (education, health, water, and sanitation) are the first points of action. Concurrently, the land policies and institutions will have to be reformed to make Uganda's market more fluid, while special interventions will be needed to raise living standards in the most lagging areas (particularly the North) and in large urban areas and to enable institutions to deliver the transformation of agriculture and human capital.



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## APPENDIX:

### *More than Meets the Eye: Comparability of Labor Data from the Integrated Household Survey 1992/93 and the Uganda National Household Surveys 1–4*

#### *Introduction*

For the past two decades, the Uganda Bureau of Statistics (UBOS) collected labor market information during several rounds of the Uganda national household surveys (UNHS). The data have been useful in informing developments in the Ugandan labor market and making inferences on the growth, employment, and poverty reduction links. Nonetheless, caution should be taken when these data are used to make comparisons of labor market outcomes across time. Because none of the instruments for collecting these labor data have stayed the same, major changes have been made with each successive questionnaire. This difference by itself is cause for concern, but it is unfortunately quite common in Sub-Saharan Africa (SSA) countries. In addition, social changes often affect both interviewer and respondent perceptions of what constitutes employment, so officially sanctioned definitions have changed over the past 50 years (although they have remained fairly constant since the 1980s). Good practice survey techniques would compensate for these issues, but such techniques have been slow in coming to SSA, and some of them may be deemed unaffordable while in some cases adoption of the good practices contributed to the questionnaire changes.

As a result of successive questionnaire changes, the labor force data collected in the UNHS questionnaires are not comparable across surveys, thus affecting trend analysis. This situation does not mean that analysis is impossible, but it does mean that careful attention needs to be paid to identifying the changes and their possible biases to a trend analysis. Analysts need to examine the data carefully to distinguish between trends caused by changes in the capturing of the data and real underlying changes in outcomes.

The purpose of this note is to highlight changes in the questionnaires and their potential implications on data comparability and analysis. Our analysis shows that changes in the questionnaires overstate the growth of the labor force and labor force participation growth, particularly for women and family workers in agriculture. The note suggests some adjustments that could be made to adjust for the biases and highlights the most recent changes in the labor module—used in the UNHS 2009/10—which both make it more difficult to adjust for biases that occur in capturing data *and* render the data less suitable for a complete household livelihood portfolio analysis.

#### *Some Basics on Collecting Data on Employment and Labor Force Participation*<sup>7</sup>

The concepts used by social scientists in the analysis of labor force status and employment outcomes stem from basic microeconomics. The main ones are labor force participation (or economically active), inactivity, employment, unemployment, and earnings. Their definition and measurement have been the subject of substantial discussion and survey research in the post–World War II period, and this research has established specific, precise, lengthy, technical

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<sup>7</sup> This section draws heavily from Bardasi Elena, Beegle Kathleen, Dillon Andrew and Serneels Pieter (2010).

specifications for those terms (and associated modifiers), which are accepted by almost all national statistics offices and are often included in legal documents as well (e.g., the definition of self-employment versus employment by others for the purposes of social insurance).<sup>8</sup>

Translating the lengthy specifications into survey questions that are both easily administered and understood by respondents, yet are detailed enough to satisfy the specifications, is not easy. For example, what is “work” and what is a “job”? For someone who leaves home five days a week, goes to a factory or office for eight hours each day, and gets a regular paycheck, the answer is clear. But is work (employment) running errands in an unpaid apprenticeship? Watering vegetables in a family garden? Collecting the vegetables? Washing them for the family meal? Fetching water? According to the technical specification of the International Labour Organization (ILO), arrived at after decades of debate, all such activities are employment except for cleaning the dirt off the vegetables before serving them to the family (but if the cleaning took place prior to sale, it would be work).

It is obvious that neither most survey respondents nor even survey takers could possibly be aware of these subtle details, although many could have some ideas about a few. Therefore, the simple question “Do you work?” is not likely to elicit a response that would be either consistent across respondents or precise enough for analyzing and comparing outcomes. As a result, extensive survey research has been conducted to develop the best techniques and questions to use to obtain consistent answers that would measure the concepts as closely as possible to the technical specifications. Particular attention has been paid over the past 40 years to differences in perception and behavior across genders, ages, ethnic groups, and so forth, which would generate inconsistent responses—for example, perceptions about the economic content of home-based work done by either gender. When the wording of the employment questions emphasizes the main activity to define employment status, it may lead to underestimating the number of economically active women because of the large female presence among unpaid agricultural and family workers, for example (Dixon-Mueller and Anker 1988). To summarize a long literature, the following points are well established:

- a. Framing questions at the start of a questionnaire or module that set up clear definitions of economic activity produces more consistent and complete measures of labor force participation (LFP). This is especially the case for nonwage work, which may take place at home or away from home.
- b. There is a need for a 12-month recall period to capture seasonality in economic activity, especially for agricultural activities; a 7-day recall period is used to screen for possible unemployment, however. Screening and measuring multiple activities provides a better picture of total economic activity. Careful screening is also needed to determine whether someone is unemployed.
- c. Measuring economic activity by women is particularly difficult when women do some or all of their economic tasks at home. As a result, terms such as “domestic duties” or “housework” should be avoided at all costs in a survey because they are too imprecise.

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<sup>8</sup> See ILO (1982, 1993)

- d. Proxy respondents often produce inaccurate information; it is best to include more detailed, specific questions where proxy respondents are used.
- e. Earnings per hour, the standard measure of the benefits from economic activity, can be difficult to measure with precision across economic activities. In the case of wage work, the issue is often varied in-kind benefits, which make earnings difficult to compare unless measured precisely. In nonwage activities, both hours worked and earnings can be subject to recall error. It is best to develop specific modules for wage and nonwage earnings.
- f. All questions should be carefully tested in a variety of contexts before adoption in a national survey.

Observing all the “good practice” techniques in surveying behavior and outcomes can result in a long and tedious questionnaire—which then will become imprecise exactly because of interviewer and respondent fatigue. Some compromises are inevitably made. This is especially true when labor force and employment questions are part of a multipurpose survey. In cases of low or uncertain funding—such as Sub Saharan Africa (SSA) —the effect of the compromises may never be known.<sup>9</sup> In cases of low capacity, the National Statistical Office may not even know that compromises are being made when questionnaires are suggested by outside experts. Even worse, different compromises may be made with each successive survey. All these problems appear to have affected the UNHS surveys in Uganda.

### *Evolution of the Labor Force Questionnaire in Uganda*

The labor module used in the UNHS has gone through several changes since 1992/93. Significant changes were made to questions designed to capture labor force participation rates. Other changes involved omission and sometimes addition of questions meant to capture information such as multiple activities or earnings. Consequently, the information content in the surveys differs across surveys in terms of scope and content. Key changes in the questionnaire, summarized in table A.1, are highlighted below.

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<sup>9</sup> See Bardasi, et al (2010) for quantification of the effect of some of the compromises in an East African context. The mismeasurement found was often well over 10 percent.

**Table A.1. Evolution of the Labor Force Module in Household Surveys, 1992/93–2009/10**

Question type	Survey									
	IHS 1992/93		UNHS 1999/00		UNHS 2002/03		UNHS 2005/06		UNHS 2009/10	
	Yes/no	Type	Yes/no	Type	Yes/no	Type	Yes/no	Type	Yes/no	Type
Employment screening	<b>Not included</b>	-	Not included (in fact, there is no separate labor module)	-	Partial	“During the last 7 days did [NAME] engage in a family enterprise or in any kind of work for pay or for profit?”	Yes–7-day recall	Detailed–separate questions for wage, family farming, household enterprise (HE)	Yes–7-day then 12-month recall	Detailed–separate questions for wage, family farming, HE (including commercial agriculture)
Measurement of multiple employment activities	Yes–options	Main, secondary third (past 12 months, 30 days, and 7 days)	Yes–but activity status also includes inactivity variables: too young to work, unemployed, domestic duties,	Usual main, secondary, current main	Yes	Usual main, main last 7 days, secondary past 7 days (with screening question)	Yes	Main and secondary last 7 days, 12 months (no sector info), also includes listing of all wage jobs in past 12 months	Yes	Main– last week and last 12 months; Secondary– last week
Hours worked	Yes	For main, second and third activity: months in past 12 months, days in past 30 days, and hours in past 7 days	Not included	-	Yes	<b>Wage employment only:</b> months worked past 12 months, hours per day	Yes	<b>Wage employment only:</b> months in past 12 months, usual days per month, hours per day. Other hours captured in separate self-employment and agriculture modules	Yes	All jobs (last week)– usual hours each week, hours last week; Main (last 12 months)– months in past 12 months, usual weeks per month, usual hours per week
Income from employment (earnings)	Yes	Earnings from “gainful” activities only–past 12 months	Yes–but general employment income from past 12 months	Cash and in-kind value–main (?? which one), secondary, other activity	Yes	<b>Wage employment only</b>	Yes	Last payment cash and in-kind value (wage jobs only). Also included HE earnings, but not individual level	Yes	<b>Wage employment only</b> –main and secondary in last week, earnings and in-kind payments past months
Domestic work hours	Yes	Time use module	Not included	-	Not included	-	Yes	Detailed past 7 days	Yes	Detailed last week

Source: Authors compilation based on IHS 1992/93, UNHS 2002/03, 2005/06, 2009/10

A fundamental change in the measurement of labor force participation is the introduction of screening for employment introduced in 2005/06 (section 7A, questions 1 to 6) and maintained in 2009/10 (section 2 of the labor module). As noted above, the screening questions conceptualize what constitutes an economic activity and thus are essential to obtaining a more accurate response on LFP. Surveys prior to 2005/06 did not have detailed screening questions and relied on imprecise questions asking people their main and secondary activities.

Although both the 2005/06 and the 2009/10 questionnaires have screening questions, the level of detail differs. The 2009/10 module makes a distinction between unpaid family work and self-employment in the screening. For example, it separately asks, “In the last week, did you run a business of any size for yourself or with one or more partners even if only for one hour?” and “In the last week, did you help without pay in any kind of business run by your household even if only for one hour?” while the 2005/06 module asks only, “During the past 7 days, have you worked on your own account or business enterprise belonging to you or someone in your household, for example, trader, shopkeeper, barber, etc., at least for one hour?” The 2005/06 module also asks in one question, “Even if you did not work in the last 7 days for some reason, did you have any permanent job or enterprise such as ...?” Yet the same question is asked separately for each economic activity in 2009/10 (i.e., in question 2.5A to 2.5E). Thus, even where screening questions are included, they are not the same. Different results in similar cases can be expected.

In addition to the screening questions, the 2005/06 and 2009/10 questionnaires also screen for unemployment before asking the reason for inactivity. As an example, in 2005/06, those who did not report any economic activities are first asked this question, “Have you looked for and/or were available for work in the last 7 days?” Those who say “no” are asked, “What is the main reason you did not look for a job in the past 7 days?” In the surveys before the screening questions, information on inactivity responses were lumped together in this question, “What was your main economic activity in the past 7 days?” for which some of the optional responses also included inactivity responses such as “in school” or “disabled” as in 1992/93. In 2002/03, the inactivity questions are scattered in different sections (i.e., question 8 in section 2 and questions in section 4). This practice is known to produce imprecise and inconsistent responses (see Fox and Gaal 2008).<sup>10</sup>

The various surveys used different recall periods in economic activity screening questions and secondary employment status questions. The screening questions in 2005/06 use only a 7-day recall while the 2009/10 questions use both the 7-day recall and 12-month recall (the better option). Thus in 2009/10, people were asked, for example, “In the last week, did you run a business of any size for yourself ...?” and then asked, “Did you run a business in the last 12 months?” For secondary employment, only the 7-day recall questions are asked in 2009/10 and 2002/03, while 2005/06 has 12-month recall questions for all activities, and 1992/93 has 12-month, 30-day, and 7-day recall questions.

Another difference across surveys is that some labor modules capture additional information while others capture some information for only a subset of the sample. For example, the questions on earnings are asked only to those with wage employment in 2002/03, 2005/06, and 2009/10, while they are asked to all people who report a gainful economic activity in 1992/93. Similarly, hours of work are asked only to people who reported wage employment in 2005/06 and 2002/03 but to everyone in 2009/10. The UNHS 2005/06 module asks for all wage jobs—unlike the other surveys—while the 1992/93 module asks for up to two secondary employment activities. The other modules (UNHS 2009/10 and 2002/03) ask detailed information for one

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<sup>10</sup> When inactivity options were included in a Tanzania questionnaire, we found that some reported being inactive for their main activity but active for their secondary—not possible under the technical specifications.

secondary employment activity, and the 2005/06 module does not have sector information on secondary activities.

### *Issues Specific to the UNHS 2009/10 Module*

The 2009/10 module had the most profound changes. In an attempt to correct for possible weak data capture in the past, it added additional questions (culminating in a 32-page labor module), including (a) a detailed employment type screening section at the beginning (last week and 12-month), and then (b) detailed modules for each type of employment (wage and nonwage). The length required the module to be administered to only a subset of the UNHS 2009/10 sample. A complex labor module requires a stringent data entry protocol, but it appears the data entry program was not well constructed to meet this requirement. A longer module also raises other implementation challenges such as the need for more extensive training, and respondent and enumerator fatigue which affects data quality. Thus while tests for comparability show that the labor module subsample is comparable to the entire UNHS 2009/10 sample, the challenges that arose from both design and implementation of this comprehensive module produced data of overall lower quality than the previous survey.

Firstly, the increase in the number of questions demanded a stronger data entry and editing protocol to ensure internal data inconsistencies and minimize loss of information from the survey. This process proved to be a challenge in the UNHS 2009/10 survey as evidenced by a relatively higher level of internal data inconsistencies and missing information in the data compared with previous surveys. These issues are elaborated below.

a. **Internal data inconsistencies between responses to initial screening questions and responses in other sections of the module.** All activities reported in the later sections of the module should have been reported with the same frequency for the 7-day and 12-month recall periods. However, in the data, some respondents had main activities in later sections that they did not report at all in the screening questions (see table A.2). More than 5 percent reported a main activity in the last week that they hadn't reported in the 7-day screening questions. This proportion drops to just less than 3 percent when the 7-day and the 12-month main activity are compared instead. A stronger data entry program could have picked this up, and the survey could have been sent back to the interviewer (and the interviewer to the household) to correct.

Although this magnitude of inconsistency could be tolerated, it means that a choice should be made between using the information from the screening questions and that from the detailed employment sections, as the two sections will produce different samples of respondents who have a nonfarm, nonwage activity, for example. ***This high level of nonsampling error cannot be corrected after the survey.*** The inconsistencies also pose a challenge when dealing with missing information in other questions, which might have been imputed using responses from the screening questions.

**Table A. 2. Inconsistencies between Reported Main Activities and Screening**

<b>Reported main activity in past 7 days<sup>a</sup></b>	<b>Inconsistency with 7day screening – (Did not report activity in 7 day screening)<sup>b</sup></b>	<b>Inconsistency with 12 months screening – (Did not report activity in 12 months screening)<sup>b</sup></b>
Wage worker	3.8%	1.6%
Employer	18.8%	14.5%
Own-account-non farm <sup>c</sup>	13.2%	9.2%
Unpaid family worker – NFE	22.4%	22.4%
Apprentice	8.1%	8.1%
Family farm worker	3.2%	0.5%
<b>Total</b>	<b>5.5%</b>	<b>2.8%</b>

*Source:* World Bank Staff calculations based on the UNHS 2009/10.

**Notes:** a) Used 7 day since the 12 months main employment status is built on the 7 day main employment; b) Disaggregated by activity level, the number of observations involved is very small, except for own account nonfarm, and family farm workers, although the total number of affected observations is 516; c) This may include commercial farming

b. **Missing jobs.** Many activities reported in screening questions are not subsequently captured in employment status questions (see table A.3). This is a fundamental error of implementation. Normally, the data entry program would have checked to see whether the subsequent sections had been filled in for each activity listed in the initial screening questions. The inconsistencies would have been spotted early, and the interviewer would have been sent back to collect the remaining data.<sup>11</sup> About 18 percent of the respondents reported doing more than one activity over 7 days in the screening questions but reported only one activity to a direct question on the number of activities they were engaged in the last week. This result is partly attributable to the incorrect framing of the question, which asks the number of “income-generating” activities, potentially understating unpaid family work.<sup>12</sup> There are also activities reported in screening questions but not reported as either a primary or secondary activity in subsequent employment status questions. For example, 30 percent and 39 percent of wage jobs and family work in nonfarm enterprise, respectively, that were captured in the 12-month recall screening questions are not captured as either a primary or secondary activity in the 7-day recall questions on main and secondary activities (see table A.2). Thus there is a substantial absence of information on secondary activities even in the 7-day recall where the question was asked.

<sup>11</sup> A manual check can be performed by the field supervisor immediately after the survey as well. If the data entry program or the manual check is showing a high level of errors during either pretest or the regular field work, additional interviewer training should be undertaken.

<sup>12</sup> According to the accepted definitions of employment activities, payment is not required, so these activities should not have been excluded.

**Table A. 3. Missing Information: Comparison of Activities from Screening Questions and Detailed Employment Questions**

Type of activity (based on screening question)	Proportion of people with activity (12-month recall) (%)	12-month recall jobs picked up as either a main or secondary activity in the past 7 days			
		Primary (%)	Secondary (%)	Missing (%)	Total (%)
Wage job	26.6	51.6	18.8	29.6	100
Own account, NFE	21.3	59.1	28.9	12.0	100
Family worker (NFE)	9.2	44.6	16.8	38.5	100
Apprentice	1.6	23.9	7.1	69.0	100
Family worker (farm)	84.2	75.2	7.8	17.1	100

*Source:* Authors's calculations based on UNHS 2009/10

Next, secondary activity was asked about for the 7-day recall period only in the 2009/10 module, unlike previous UNHS modules, which asked about the main and secondary employment in the past 12 months too. This problem is compounded by (a) the observed inconsistencies between the screening questions and reports of secondary activities from the 7-day recall question and (b) substantial missing secondary information on the 7-day recall employment status question. These inconsistencies make it impossible to reconstruct a reliable variable of secondary employment in the past 12 months.

### ***Implications of Questionnaire Changes on Measurement of Labor Market Indicators***

The various differences in the labor force modules across surveys have implications for comparability of key indicators across surveys. What questions are asked or not asked and how they are asked affect the measurement of key indicators and thus affect the accurate representation of the labor market at any point in time. The changes also determine what type of analysis can be reliably done with each survey. An overview of the implications of these changes is thus made next. This overview is not exhaustive but simply focuses on the implications of the major changes on key indicators.

### ***Use of Screening Questions***

As noted earlier, the use of screening questions makes a difference in the measurement of labor force participation rates, especially for women. A screening question brings clarity to the term as opposed to relying on the respondent's own interpretation of what constitutes employment or work—which is not likely to be as exhaustive as a technical definition. This is a particular problem for women and youth, some of whose tasks (like helping on the family farm and fetching water) are ignored, yet they are considered employment. Thus, women report not being economically active because they are engaged mainly in domestic activities, yet many of them (72 percent in rural areas in 1992/93) actually perform economic activities disguised as domestic work (see table A.4). In the absence of screening questions for economic activity, such women would be classified as inactive, thereby understating women's labor force participation rates. This problem is exacerbated by the inclusion of economic inactivity responses like “domestic work” in the employment status questions when screening is not done (e.g., in IHS 1992/93).

**Table A. 4. Reports of Nondomestic Secondary Activities among Individuals whose Main Activities Are Domestic Activity, 1992/93**

Description	Nonagricultural. Household (%)			Agriculture household (%)		
	Male	Female	Total	Male	Female	Total
Inactive; primarily engaged in domestic work	2.92	45.98	24.58	0.69	9.2	5.15
<i>Reports of nondomestic secondary activity</i>						
No	71.33	62.09	62.64	51.74	27.53	28.93
Yes	28.67	37.91	37.36	48.26	72.47	71.07
Total	100	100	100	100	100	100

*Source:* Authors' calculations based on IHS 1992/93.

Poor capturing of economic participation of women doing domestic work is estimated to overstate the labor force growth between 1992/93 and 2002/03 by 9 percentage points (World Bank 2006). Labor force participation was understated by up to 12 percentage points in 1992/93 and 9 percentage points in 1999/2000. Indeed, labor survey experiments (e.g., in Tanzania [Bardasi et.al, 2010] and Egypt [Langsten and Salem 2008]) show lower reports on women's labor force participation when detailed screening is not done. The survey experiment in Tanzania (Bardasi et.al, 2010) showed that reports of inactivity owing to domestic duties by women declined by 16 percentage points when a detailed screening for economic activity is done. This finding supports the argument that inclusion of detailed screening questions in later UNHS has improved the measurement for labor force participation resulting in higher labor force participation rates, *but has resulted in an inconsistent trend in reported labor force and employment outcomes.*

#### *Use of Different Recall Periods*

The use of the 7-day recall period understates participation in economic activities because of seasonality in employment. This discrepancy affects screening for both economic activity and for the main and secondary employment status. For example, when people who work on a family farm during the agriculture season is interviewed a month after the agriculture season ended and asked whether they worked on a farm during the past 7 days, they would respond no. However, they would respond yes if the reference period was the past 12 months. Similarly, they would not report working on a family farm as their main employment in the past 7 days but might report it as their main employment in the past 12 months. Consequently, the 7-day recall questions underestimate participation by activity type. In the UNHS 2005/06, of the more than 40 percent who reported secondary activities in the 12-month question, 25 percent did not report those activities in the 7-day question.

**Table A. 5. Mismatch between the 12-Month and 7-Day Recall Self-Reported Activities<sup>a</sup>**

Reported activity in 12-month recall questions	Reported activity in 7-day recall (%)		Total
	No	Yes	
Wage job	23.3	76.7	100
Employer/Own account <sup>b</sup>	22.3	77.7	100
Family worker (nonfarm)	32.5	67.5	100
Apprentice	41.3	58.7	100
Family farm worker	14.9	85.1	100

*Source:* Authors' calculations based on UNHS 2009/10.

**Note:** a) These are self-reported activities without any adjustments; b) Although largely non-farm, this category may include commercial farmers

The UNHS 2009/10 has both the 7-day and 12-month recall periods for main employment and screening for economic activities, hence it can be used to analyze the difference in participation in activity types by recall period used. Table A.5 shows that 33 percent of people who reported participating in a nonfarm non-wage activity in the past 12 months did not report participation in the a nonfarm non-wage activity in the past 7 days. This proportion is large because many households in rural Uganda run nonfarm enterprises but not throughout the year. The switch in economic activities during different periods of the year leads to the understatement of economic participation of activities when the 7-day recall period is used. As shown in table A.6, this difference is larger in rural areas.

**Table A. 6. Distribution of Reported Activities by Type and Recall Period, UNHS 2009/10**

Location	Wage worker (%)		Self-employed (%)		Unpaid family worker non farm (%)		Unpaid family worker -farm (%)	
	12-month	7-day	12-month	7-day	12-month	7-day	12-month	7-day
Central rural	19.3	15.9	17.9	15.7	4.9	4.3	60.6	56.1
Central urban	31.0	29.1	22.1	20.1	10.4	9.6	9.8	7.4
East rural	17.9	12.8	13.1	9.8	7.2	5.0	68.7	64.0
East urban	28.9	26.2	17.2	13.7	7.2	5.6	31.7	25.4
North rural	17.9	12.4	14.4	11.0	5.9	4.0	66.4	61.0
North urban	19.7	18.0	15.4	14.8	10.9	10.7	32.7	24.4
West rural	19.1	14.7	12.9	10.2	5.1	3.6	70.9	66.2
West urban	42.9	41.3	19.8	18.3	6.9	3.5	17.2	10.0
<b>Uganda</b>	<b>20.5</b>	<b>16.2</b>	<b>15.3</b>	<b>12.5</b>	<b>6.5</b>	<b>5.0</b>	<b>58.9</b>	<b>54.1</b>

*Source:* Authors' calculations based on UNHS 2009/10.

*Note:* These are self-reported activities without any adjustments or age restriction

The UNHS data are collected throughout the year; therefore, the biases in economic participation are limited to participation by activity types rather than economic participation in at least one activity. This factor is attributable to people's tendency to change or add activities between seasons; hence, they report at least one activity at any point in time. Thus, the labor force participation rates derived from both recall periods are likely to be close (see table A.7). As shown in table A.7, there appears to be little deviation between the 7 day or 12 month recall

periods on the structure of primary employment based on the methodology applied in the UNHS 2009/10. Thus the recall period seems to make little difference on the two aggregate labor force indicators. Nonetheless, the main employment status of many of the additional people captured by the 12 months recall questions was not recorded, as the filtering to these questions was based solely on the 7 day recall screening questions. *The main employment status in the 12 month recall is thus unclassified for about 5 percent of the labor forces in the UNHS 2009/10.* The comparison is presented in table A.7.

**Table A. 7. Comparison of the structure of primary employment status by recall period, 2009/10**

Employment Status	UNHS 2009/10	
	7day recall	12 month recall
<i>Labor force participation rate<sup>a</sup></i>	<i>92.13</i>	<i>92.92</i>
<i>Primary Employment Status<sup>b</sup></i>		
Private wage - non agriculture	11.83	11.73
Private wage – agriculture	5.74	5.77
Government wage	3.33	3.18
Own account - non agriculture	13.09	13.08
Unpaid worker- non agriculture	2.19	2.13
Family worker – agriculture	61.74	59.21
Unclassified <sup>c</sup>	2.08	4.89

*Source:* Authors calculations based on the UNHS 2009/10. **Notes:** a) Unadjusted rates based only on screening questions for employment and inactivity and corresponding recall period self reported main employment status for people in the working age bracket (15-65 years). b) The composition of primary employment is based on the unadjusted employment status responses for the working age bracket, with the exception of the inclusion of domestic servants in the private wage category. c) Refers to people who reported a economic activity in the respective recall screening questions but have missing responses in the main employment status questions.

While there is little difference at the aggregate level, the recall period makes a significant difference on the reported primary activity and a micro level, thus affecting related micro analysis. At least 6 percent of the respondents in 2009/10 reported a different 7 day recall primary activity than the 12 month primary activity (see table A.8). Primary employment in non-wage work in the non-agriculture sector in rural areas is understated the most by the 7 day recall questions – which fail to capture a similar primary employment for at least 11 percent of rural people whose reported primary employment in the 12 month recall is non-wage non-agriculture work. The small deviation in reported primary employment also suggest that a greater understatement of activity specific participation in the 7 day recall is attributable to the 7 day recall picking fewer secondary activities. Indeed, 18 percent of people who reported more than one activity in the 12 months screening questions only reported a single activity in the 7 day recall screening.

**Table A. 8. Comparison of primary employment status in 2009/10: 7 day vs 12 months recall period**

Main employment status - 7 day recall	Reported same main employment status - 12 months recall					
	Rural		Urban		Uganda	
	No	Yes	No	Yes	No	Yes
Private wage - non agriculture	9.86	90.14	7.57	92.43	8.64	91.36
Private wage - agriculture	9.54	90.46	26.21	73.79	10.29	89.71
Government wage	6.08	93.92	1.89	98.11	4.46	95.54
Own account - non agriculture	11.32	88.68	4.77	95.23	8.94	91.06
Own account - agriculture	5.92	94.08	0	100	5.77	94.23
Unpaid worker- non agriculture	11.78	88.22	5.53	94.47	8.28	91.72
Family worker - agriculture	5.27	94.73	7.13	92.87	5.32	94.68
<b>All activities</b>	<b>6.28</b>	<b>93.72</b>	<b>6.31</b>	<b>93.69</b>	<b>6.29</b>	<b>93.71</b>

*Source:* Authors calculations from the UNHS 2009/10. Note: Table based on a direct question asking the main 12 month activity which has 3 responses, i) the same as the 7 day main activity, 2) 7 day secondary activity and 3) other activity.

This understatement of economic participation by activity type using the 7-day recall periods means that employment status data based on the 7 day recall gives only a partial picture of people's livelihoods, further undermining any livelihood analysis at a micro level. The absence of secondary employment status questions in the 12-month recall in 2009/10 and 2002/03 thus renders these data unreliable for a complete household analysis because it underreports some households' livelihood sources. Furthermore, the changes in economic activities across time make it difficult to extrapolate earnings obtained using the 7-day recall to annual earnings or analyze variations within groups. This difficulty arises from the inability to tell, on the basis of a 7-day recall, whether households that had high incomes or engaged in an activity in a particular month would also have high incomes or would have been engaged in similar activities in different months (Schaffner 2000). This problem is more acute when hours and days of work also have a short recall period or when the number of months worked in that activity in a year is not captured.

### ***Expanded Wage Employment Measurement in 2005/06***

The 2005/06 module was designed to capture more wage jobs than other surveys. By asking about all wage jobs worked in the past 12 months (section 8 of the socioeconomic module), the 2005/06 survey captures multiple wage jobs for some individuals who alternate between wage jobs during the course of the year. Simply using the number of wage jobs from this section will consequently overstate growth in wage jobs growth between 2002/03 and 2005/06 and understate it between 2005/06 and 2009/10, even if the limited information on secondary employment were added to the 2002/03 and 2009/10 surveys.

### ***Issues Specific to UNHS 2009/10***

The issues with the UNHS 2009/10 questionnaire imply that a reliable complete livelihood analysis cannot be done using the data. This problem arises from the absence of the detailed

employment information for those with secondary jobs not done in the past 7 days but done in the past 12 months and the inability to reconstruct this variable from existing information. The secondary employment variable in the 12-month recall could have been constructed by using the screening questions in conjunction with the reported main and secondary activities in the 7-day recall. Where a person reports more than one activity in the screening section, the economic activity not listed as the primary employment in the 12-month recall question becomes the secondary activity and its detailed information is then completed from the corresponding 7-day recall main or secondary employment activity. However, given the internal data inconsistency between the screening and employment status questions and the substantial missing secondary job information in the employment status section, reliable information on the secondary activity is not always available in the data (e.g., the identified secondary activity in the screening question is not tracked in the 7-day recall employment status question). The 12-month recall secondary employment variables can, therefore, not be reconstructed; in the absence of such information, a complete livelihood analysis cannot be done. At the same time, an analysis based on the 7-day recall is misleading because of missing jobs, and an analysis based only on primary employment gives an incomplete picture (Fox and Pimhidzai 2011).

### ***Suggestions for Dealing with Challenges Posed by Changes and Shortcomings in the Questionnaire***

#### *Constructing Comparable Labor Force Participation Indicators across the Surveys*

World Bank (2009) and Fox and Gaal (2008) have argued that knowledge of the biases in modules without screening questions for economic activity can be used to make an adjustment in the data to bring better (but not complete) comparability. The approach taken in the World Bank 2009 policy note on the structure of the labor market in Uganda is a good example. This approach addresses the under-reporting of economic activities by family workers (some of them unpaid) as a result of poor or no screening. The adjustment is based on other information in the data and is made as follows:

- In the absence of screening, identify those who have reported as inactive or who are missing status from the main employment status question, and code them as active if they report a secondary economic activity. For example, in 1992/93, a woman might report domestic activity (i.e., economic inactivity) in the main employment status question but reports helping without pay in a household enterprise (HE) or farm in the secondary employment status question. She should be coded as active.
- Use additional information to verify and recode those who remain inactive. Where there is an HE module, identify household members working in the HE, and code them as active. Use the relationship-to-head information to code all domestic servants as economically active. Code as active, women who reported economic activities in the detailed household chores section, such as fetching water or wood. Identify agriculture households (i.e., where some households' members report agriculture work), and code all women who reported "domestic duties" as their reason for inactivity as active in the agriculture sector. This recoding properly captures the participation of women who do unpaid work.

- For those still coded inactive or missing, use the education, health, and age information to verify reasons for inactivity.

But even after one makes all the adjustments, puzzling trends in both LFP and employment by sector emerge in the data, with the most complete 2005/6 survey showing the highest levels of both over the decade.

### ***Comparison of Wage Job Growth***

A comparison of wage growth using the UNHS 2005/06 must take into account that the survey was designed to capture more wage jobs than other surveys. Using a combination of primary and secondary employment status information in other surveys might mitigate the problem, but that information is not consistently available in the 12-month recall period, which better reflects participation in economic activities. Therefore, a common denominator for wage job growth would be to focus on primary wage employment (12-month recall), which is captured across surveys.

### ***Issues Specific to UNHS 2009/10***

The internal data inconsistencies in the UNHS 2009/10 module require the analysis to make a decision on which information (screening questions information versus main employment status information) to uphold or disregard in their analysis for affected observations. Screening questions have been proved to be more reliable; hence, we recommend using the information in the screening questions whenever there is a contradiction in the data. Also, the labor force participation rate (LFPR) constructed on the basis of these screening questions with some of the adjustments described earlier will be a more reliable indicator of LFPR.

Nonetheless, an analysis of complete household livelihoods cannot be reliably done using the UNHS 2009/10 module. Such an analysis would require information on secondary employment in the 12-month recall, which, as explained earlier, cannot be reconstructed because of data problems in the UNHS 2009/10 module. Thus, analysis using the data should be limited to questions that require the use of primary employment status information or simply economic participation at an aggregate level.

***In addition, any analysis of earnings or characteristics of employment or other outcomes will be problematic with this data set.*** The data in the detailed sections are collected on a biased sample. We do not know the nature of the bias—it could be related to personal characteristics such as education of the respondent or abilities of the interviewer or supervisor. The former type of error would be correlated with explanatory variables, so a regression analysis on a topic such as returns to education would not necessarily be based on a representative sample, so inferences could not be made. The latter type of error would bring about the same problem if it is systematically related to either a team who worked in a particular region or a certain time frame (e.g., the end of the survey). In this case, it might be possible to do an ex post reweighting scheme if the selectivity is independent of the variables to be analyzed.

### ***Way Forward: What Can Be Done Better?***

The evolution in the labor module over time partly reflects UBOS's endeavor to improve the quality of labor statistics in the country. Some lessons can be learned from the experience and feedback from users of these data.

- In terms of the questionnaire design, the use of both 12-month recall and 7-day recall in the screening of employment in the UNHS 2009/10 and separate questions for inactivity should be applauded and hence maintained in a good practice questionnaire. But such a questionnaire should also include questions on secondary employment in the past 12 months. Asking the hours of work, the number of weeks in a typical month, and the number of months worked in the past 12 months is also commendable. But the number of usual hours should not include "hours vary" as an optional response because no analytical value is gained by such a response.
- More complicated questionnaires demand more stringent data entry and editing protocols to ensure internal consistency in the data and to ensure that all information is followed throughout the module. Those protocols will avoid the contradictions and missing information seen in the UNHS 2009/10 module.
- On the analytical front, caution needs to be taken when comparing trends in labor market outcomes using the various surveys. If one builds on suggested remedies discussed in this note, some effort can be made toward ensuring data comparability in some but not all cases.

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