Uganda
Moving Beyond Recovery: Investment and Behavior Change, For Growth
Country Economic Memorandum
Volume I: Summary and Recommendations
September 2007
Poverty Reduction and Economic Management Unit
Africa Asia Region

Document of the World Bank
CURRENCY EQUIVALENTS
Currency       =    Ugandan Shilling (UGS)

FISCAL YEAR
July 1 – June 30

WEIGHTS AND MEASURES
Metric System

ABBREVIATIONS AND ACRONYMS

AFRITAC  Africa Regional Technical Assistance Center
BBW    Banana Bacterial Wilt
BuU    Bank of Uganda
CAS    Country Assistance Strategy
CEM    Country Economic Memorandum
CPAR   Country Procurement Assessment Report
CWD    Cuffe Wilt Disease
DEC    Development Economics Research Group
DHS    Demographic and Health Survey
DTS    Diagnostic Trade Integrated Study
ERT    Electricity for Rural Transformation
FAO    Food and Agriculture Organization
FDI    Foreign Direct Investment
FINCA  Foundation for International Community Assistance
GDP    Gross Domestic Product
GNI    Gross National Income
GOU    Government of Uganda
ICA    Investment Climate Assessment
ICT    Information Communications and Telephony
IMF    International Monetary Fund
MDG    Millennium Development Goals
MDI    Multilateral Debt Initiative
MOPED  Ministry of Finance, Planning and Economic Development
MTCS   Medium Term Competitiveness Strategy
NAADS  National Agricultural Advisory Services
NGO    Non governmental Organization
NRM    National Resistance Movement
NSDS   National Service Delivery Survey

NSSF National Social Security Fund
ODA    Overseas Development Assistance
OECD   Organization for Economic Co-operation and Development
PA     Poverty Assessment
PEAP   Poverty Eradication Action Plan
PER    Public Expenditure Review
PMA    Plan for Modernization of Agriculture
PPP    Public Private Partnerships
RAFU   Roads Agency Formation Unit
RFED   Regional Program for Enterprise Development
SACCO  Savings and Credit Cooperative
SAM    Social Accounting Matrix
SME    Small and Medium Enterprise
UBI    Uganda Business Inquiry
UBOS   Uganda Bureau of Statistics
UCBL   Uganda Commercial Bank Limited
UMU    Uganda Microfinance Union
UNSS   Uganda National Household Survey
UPE    Universal Primary Education
USAID  United States Agency for International Development
VAT    Value Added Tax

Vice President: Obiageli Kanyen Ezekwesili
Country Director: John Murray McIntire
Sector Director: Sudhir Shetty
Sector Manager: Kathie Krumm
Task Team Leader: Dino Morotto
# VOLUME 1

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>i</td>
</tr>
<tr>
<td>FOREWORD: WHY A STUDY OF UGANDA'S GROWTH?</td>
<td>1</td>
</tr>
<tr>
<td>SUMMARY AND MAIN MESSAGE</td>
<td>6</td>
</tr>
<tr>
<td>MACRO STOCK TAKE AND OVERVIEW OF UGANDA'S ECONOMY</td>
<td>11</td>
</tr>
<tr>
<td>AGRICULTURE STOCK-TAKE: AND LINKS TO OVERALL GROWTH</td>
<td>18</td>
</tr>
<tr>
<td>GROWTH DIAGNOSTIC</td>
<td>24</td>
</tr>
<tr>
<td>MANAGING UGANDA'S INFRASTRUCTURE NEEDS AND ASSETS</td>
<td>31</td>
</tr>
<tr>
<td>MAKING THE FINANCIAL SECTOR WORK HARDER FOR GROWTH</td>
<td>35</td>
</tr>
<tr>
<td>SPECIFIC RECOMMENDATIONS FOR A GROWTH STRATEGY</td>
<td>37</td>
</tr>
<tr>
<td>Map 1: Location of Uganda's Businesses</td>
<td>13</td>
</tr>
<tr>
<td>Map 2: Uganda's Transport Infrastructure</td>
<td>15</td>
</tr>
<tr>
<td>Map 3: Uganda's Power Infrastructure &amp; Population Density</td>
<td>17</td>
</tr>
<tr>
<td>Map 5: Distribution of Firms By Age and District</td>
<td>40</td>
</tr>
<tr>
<td>Map 6: Uganda – Access to Electricity in 1991</td>
<td>40</td>
</tr>
<tr>
<td>Map 7: Uganda – Access to Electricity in 2002</td>
<td>42</td>
</tr>
<tr>
<td>Map 8: Location Of Employment</td>
<td>43</td>
</tr>
<tr>
<td>Map 9: Location Of Uganda's Traditional Export Crops</td>
<td>44</td>
</tr>
<tr>
<td>ANNEX 1: INFRASTRUCTURE CONSTRAINTS AND GROWTH OPPORTUNITIES</td>
<td>45</td>
</tr>
<tr>
<td>ANNEX 2: SPECIFIC DETAILED RECOMMENDATIONS FOR A GROWTH STRATEGY</td>
<td>49</td>
</tr>
<tr>
<td>BIBLIOGRAPHY:</td>
<td>54</td>
</tr>
</tbody>
</table>

### List of Figures

- Figure 1: Selected Countries: Change in Number of Dependents per Worker (1965-2000) .... 14
- Figure 2: Trend growth has not slowed down after adjusting for bad terms ................. 22
- Figure 3: Agricultural output has grown steadily since 1996, but prices have fluctuated significantly since 2000, and may explain the slow down in poverty reduction .......... 22
- Figure 4: Growth is not creating enough jobs in the formal sector ......................... 22
- Figure 5: Returns to education seem to have stopped rising - except for .................... 22
- Figure 6: Returns to private capital in manufacturing are quite high, and seem to be related to electricity ................................................................. 23
- Figure 7: Bank's interest rate margins are high ....................................................... 23
- Figure 8: Bank lending is a low share of deposits .................................................. 23
- Figure 9: Electricity and Roads indicators for Uganda are low and lagging ............ 23

1 Distribution of Volume II to follow
ACKNOWLEDGEMENTS

This report has been a team effort.

The work benefited from financial support from DFID, the Embassy of Ireland, and the Netherlands Ministry of Foreign Affairs, as well as from World Bank Consultancy Trust Funds supported by the Governments of Denmark and the Netherlands.

Volume II incorporates papers prepared by several World Bank staff members, in particular, Rachel Sebudde on the macroeconomic stock take, Madhur Gautam on agriculture and rural development, Hans Lofgren on growth paths, Helena Tang on Trade, Cecilia Briceno-Garmendia and Astrid Manroth on infrastructure, and Michael Fuchs and Thorsten Beck on financial sector. Supee Teravanithan and Karen Rasmussen provided inputs for these papers.

Early discussions with Keith Muhakanizi, Damoni Kitabire, Lawrence Kiiza, Maris Wanyera, Michael Atingi-Ego, David Kihangire and members of their staff in the Ministry of Finance and Bank of Uganda’s Research Department were very useful in orienting this research. The authors are grateful to the Economic Policy Research Consortium, in particular Marios Obwona, John Okidi, and Fred Muhumuza for valuable discussions and contributions. We are also heavily indebted to the staff of the Uganda Bureau of Statistics, in particular Imelda Atai and Stephen Bahemuka, and their Executive Director, John B. Male Mukasa.

Background papers were prepared by Carlos Cuevas (rural finance), and by consultants David Bevan and Christopher Adam (Dutch disease), Frida Johansen (transport), Gulum Dhalla (energy), Kees Burger and Karen Boumeester (informal sector enterprises), EPRC (investment), Graeme Harrison (infrastructure expenditure, public sector imports), and Bongchan Ha (manufacturing firms).

A number of Bank colleagues, including Vikram Nehru, Roberto Zagha, provided valuable advice and insights as did reviewers Paul Collier, Gaiv Tata, Humberto Lopez and Peter Watson (consultant). Kathie Krumm, Young Chul Kim, Ron Kopicki and Praveen Kumar provided many helpful conversations and encouragement along the way.

Thanks are especially due to Rachel Sebudde, Maria Shkaratan, Heiko Hesse, Adam Mugume, and James Keough and Paul Mpuga for excellent support on data and analysis, and to Arlette Sourou for efficient and cheerful processing of the report and the consultants’ work.
FOREWORD: WHY A STUDY OF UGANDA'S GROWTH?

1. Economic growth is the key to the prosperity of nations. Countries that have sustained strong economic growth have been able to reduce poverty, strengthen their democratic principles and political stability, improve the quality of their environment, and reduce conflict, crime and violence; Barro (1996 and 2002), Easterly (1999), Dollar and Kraay (2002). Understanding the sources of past growth, removing the constraints to present growth, and maximizing the prospects for future growth for a country must therefore be a central aim for policy makers. These are the three pillars of this Country Economic Memorandum. The report comes in two volumes. This volume provides an executive summary and recommendations. Volume II contains 8 detailed chapters presenting the analysis which underpins this summary.

2. This report comes at a time of reflection on economic growth for Uganda. The people of Uganda have re-elected the National Resistance Movement (NRM) to Office, and have returned President Yoweri Museveni to State House for an unprecedented third term. January of 2006 marked the 21st year in Government for the NRM. Their legacy speaks for itself. In 1986 Uganda was a war-torn shell of a country, whose people faced a dismal quality of life and a shattered economy. In 2006 most of the people of Uganda—with the notable exception of those in the conflict-blighted Northern Region—enjoy a better quality of life and brighter opportunities in a stable and growing economy. Uganda’s economy has bounced back beyond what could be regarded as recovery, with real incomes per person now exceeding the levels reached at Independence in 1962. This extraordinary 20-year period of sustained per capita income growth was kick-started by a combination of peace and reconstruction, followed by the systematic implementation of one of the most far-reaching and comprehensive programs of macro economic and structural reforms on the continent of Africa. More recently the economy has gradually started to transform, new products have emerged, and growth has become more robust to the external shocks which have buffeted it in recent years. Financed increasingly by budget support from Uganda’s development partners, access to primary education and clean water has improved for the majority of Ugandans, although health sector performance lags behind. These improvements in growth and social services have benefited poor people in Uganda, reducing the proportion of people in poverty from 56 percent in 1992 to around 38 percent in 2002/03, and to 31 percent, according to the UBOS 2005/06 Household Survey.

3. Recently, economic growth in Uganda has slowed slightly, as the economy recovered to the pre-conflict levels of the 1960s, and was hit by lower export prices, drought, and an energy crisis. In addition, between 1999 and 2002/03, there was a decline in the pace of poverty reduction and inequality widened. With population growth having increased to 3.3 percent by the end of the 1990s, per capita incomes have only been rising in recent years in line with the average for Sub-Saharan Africa. Uganda is failing to close the gap on richer countries in US dollars per capita terms, and is falling behind other rapid growth economies. Wanting faster development for Ugandans beyond recovery, the President and the Government have become understandably impatient. They have started intervening in an ad hoc manner to hasten the pace of growth. Uganda’s development partners have been uncomfortable with these ad hoc interventions.

4. The report also comes at a time of reflection about economic growth in academia and within the World Bank. Recent academic research points to the centrality of product diversification and new product ‘discovery’ to the growth process. It also points to the need for country specificity in developing growth strategies; growth spurts in countries around the world
have started and stopped for many different reasons. These reasons extend beyond a country’s success or failure to implement supply-side policy prescriptions to “stabilize, liberalize and privatize.” Most recently, academic research and international growth experience have re-opened the debate on the importance and content of industrial policy for growth.

5. **What do the economic growth experiences of countries around the world offer Uganda?** India, China and Vietnam have thrived, whereas countries like Argentina, Bolivia, Peru and Nicaragua which adopted more orthodox reform strategies have not come close to matching their growth rates. The recent publication of “Economic Growth in the 1990s: Learning from a Decade of Reform,” a review of different growth experiences by the World Bank, has sparked a fresh look at the lessons of country successes and failures within the Bank.

6. **How should Uganda react to the lessons of reform and innovations in thinking about economic growth?** We suggest cautiously. Uganda must first get its infrastructure basics right. With all this global analysis and debate, and with impatience with recent growth at home, it would be tempting for Uganda’s policy makers to move to a new course in pursuit of more rapid growth. Based on the analysis in this report, we believe that would be a mistake.

7. **Uganda does not need a fundamental change in growth strategy.** Our analysis of the recent past shows quite robust growth in the face of severe shocks. Given its geographical disadvantages and limited mineral wealth, Uganda is doing rather well, and this reflects the soundness of the economic strategy the country has followed. Our advice to Government therefore is to avoid the temptation to abandon stable and market-friendly policies which actually seem to be working; such as public sector withdrawal from commercial activity, banking reform, and NAADS. Instead of re-committing the “sins of commission” by extending Government where it is not needed, we suggest that Government needs to re-invent itself to address the “sins of omission.” These are the market failures from inadequate provision of infrastructure and public goods, from coordination gaps, and from information externalities. This re-invention will require a change in behavior at all levels of government in Uganda.

8. **This amounts to fine tuning an orthodox approach to growth with targeted investments and interventions.** As a symbol of continuity with the gains of the past, the title of this report “Investment and Behavior Change” was chosen from “Beyond Recovery” the closing chapter of the last comprehensive World Bank study of policy reforms in Uganda. Like that review, this report begins by taking stock of the achievements of the past.

9. **So what’s new for Uganda in this report? Why read further?** First, we recognize the need for Ugandan policy makers to pro-actively steer structural transformation and job creation through public policies and targeted investments. Second, we identify the importance for savings, investment and growth of a swift demographic transition in Uganda. Third, we suggest focusing on just a few key constraints in infrastructure and the financial sector. We try to limit the list of growth priorities to those that matter the most now. Fourth, we recognize the importance of Kenya’s transport infrastructure to landlocked Uganda’s growth path. Finally, in discussing possible sources of financing for infrastructure, we add to the debate on aid and Dutch disease in Uganda.

---

Structure of the Report

10. The rest of this first volume synthesizes the conclusions from analysis in Volume II. In Chapter 1 of Volume II, emphasis is placed on understanding what drove past growth at macro and sector levels, and in particular, on how Uganda's firms and farms have evolved.

11. Chapter 2 continues the retrospective of past growth in agriculture - the most important sector of the economy. We provide a comprehensive review of growth trends in agriculture, using several data sources. The chapter provides fresh insights on recent trends in poverty and inequality. We argue that a fundamentally new emphasis in strategy for agriculture is misguided.

12. Chapter 3 presents our growth diagnosis. It identifies short-term actions to remove emerging constraints to present and near-term future growth. We focus analysis on identifying these constraints, and the actions needed to remove them.

13. Chapter 4 models alternative future growth paths and the impact of alternative public investments on growth using a SAM-based CGE model. The analysis reveals there is little to be gained from 'robbing Peter to pay Paul' for example fixing infrastructure by reducing education financing. Additional resources need to be found, either from value for money savings or efficiency savings, or from additional aid. The simulations show clearly that Government's fiscal sustainability strategy is suboptimal to these alternatives, because it reduces private consumption, incomes and even private spending on health care. The analysis of growth paths highlights the importance of exports to growth. Chapter 5 picks up this trade theme, summarizing the findings of the Diagnostic Trade Integration Study.

14. Chapters 6 and 7 return to the short-term priorities to remove binding constraints to growth, and put meat on the actions identified in Chapter 3 as being required in the financial sector (Chapter 6) and in infrastructure (Chapter 7).

15. Chapter 8 ends by assessing the scope for an externally financed scale up of infrastructure. In common with other chapters we start with an empirical look back at the symptoms of Dutch disease for Uganda. We find no firm evidence. The chapter uses the results of Ugandan model simulations to derive conclusions on how to minimize Dutch disease effects through spending on infrastructure.

16. This report deliberately narrows in on what we call “binding constraints.” No single report can do justice to as dauntingly broad a topic as “economic growth.” It is worth lowering expectations from the outset. The specific aim of this report was to narrow down to detailed, practicable priorities for economic growth in Uganda; sequenced now, soon, and later. The analysis therefore ‘starts broad’ and narrows in, to try to find the potentially binding constraints to growth. The thorough stock take of past performance and the growth diagnostic identify strengths, gaps, and emerging constraints in Uganda’s growth strategy. Uganda is a poor country in which many things need fixing. There will consequently be something for every reader in the early chapters’ identification of problems. Just because a problem is not further analyzed in the quest for binding constraints does not mean that it is not considered a serious problem for growth now, or in the near future. Its exclusion means only it is not yet regarded as binding for growth now; i.e., even if it were fixed, it would not immediately stimulate growth because something else is more binding.

17. Links to other studies. Some growth issues are being covered elsewhere or will be dealt with in future reports. This report does not analyze priorities for human capital and skills
development; although Chapters 1 and 3 both offer some pointers on the importance of understanding labor market dynamics and anticipating skills gaps in future. This will be a topic for future analytic work on skills and labor markets. Nor, having introduced the topic in Chapter 4, does this report propose specific suggestions for creating "fiscal space" for investments in power and road transport. This is best dealt within the annual PER process, through which more work will be tabled on fiscal sustainability, revenue policy, expenditure efficiency, and value for money. Nor having mentioned poverty and inequality concerns was the report intended as a study of poverty. The 2006 Poverty Assessment has just been completed, and a new household survey will be analyzed in the coming two years. A study of service sectors has been compiled in parallel to this report, and will be completed shortly. Finally, while competitiveness is discussed in Chapter 1 and the DTIS work is summarized in the trade section (Chapter 5) this report takes as read the detailed analyses presented in the Investment Climate Assessment and the Costs of Doing Business studies.

Data: Sources, Gaps and Constraints

18. **We use a variety of sources of Ugandan data.** National accounts data are taken from the macro unit, Ministry of Finance. Financial sector data were supplied by BoU. Data on infrastructure access come from a variety of predominantly UBOS sources; the Population Census, household surveys, the National Service Delivery survey, checked against sector annual reports and studies (including the Tahal study for roads transport). The firm-level analysis is drawn from the Uganda Business Inquiry, the World Bank's RPED surveys of 1998 and 2002/03, and for households, the Informal Sector Survey of the 2003/04 UNHS conducted by UBOS. Labor market analysis draws on the Labor force survey which accompanied the 2003/04 household survey, as well as UBI and RPED data. For the trade work a combination of UBOS, BoU and UN Comtrade data have been used. In the absence of an agriculture census which is long-overdue, agriculture analysis has drawn on numerous alternative sources. UBOS 1992 and 1999 UNHS data have been used, but the quality of data in the 2003/04 survey prevented its use. The agriculture module of the 2002 population census was used, as was the NSDS for analysis of input use. In addition the agriculture chapter draws on sample surveys conducted under the LADDER and the REPEAT studies. FAO data are also used. The UBOS Social Accounting Matrix—prepared under this study—uses multiple sources but is based primarily on a Supply and Use Table prepared by an IMF AFRITAC consultant.

19. It is worth recording **weaknesses in the coverage of Uganda's data** so that these can be corrected in the context of the UBOS strategic plan.

- Firm survey data methods need to improve. The 1998 and 2002/03 firm surveys conducted by RPED for the Bank are imbalanced in terms of industry and firm size, do not form a panel of firms, and ask slightly different questions on similar topics. This makes time-series comparisons difficult. The sample firms in these ICA surveys are not linked to the comprehensive list of firms sampled in preparing the Register of Businesses for the Uganda Business Inquiry. Nor are they linked to the firms interviewed in the Bank of Uganda/UBOS private investment surveys. Hence it is not possible to combine information on firms across these surveys, or over time, to create a broad understanding of investment determinants, productivity growth or employment. A comprehensive review of available firm data and how it can be linked is required, and should be pursued by UBOS with help from DEC.
• Uganda needs an agricultural census.
• Future household surveys need to collect reliable information on secondary sources of income, household enterprises, and agriculture.
SUMMARY AND MAIN MESSAGE

“UGANDA NEEDS INVESTMENT AND BEHAVIOR CHANGE FOR GROWTH...”

20. To accelerate economic growth Uganda needs to scale up targeted investments in infrastructure and to deliver higher quality public services which are more responsive to business needs. The public sector should continue to leave prices to markets, and to focus the role of the State on providing high quality public goods, leaving product discovery to businessmen. With limited resources Government must prioritize its growth and fiscal strategies and produce public goods more efficiently. Better strategic planning of public goods is required for a better investment climate. Priorities are better quality infrastructure at lower user costs, and fixing coordination problems in energy and transport sectors. The priority in education is ensuring quality, especially in post-primary education. Quality post-primary education must not be traded for higher access. In the short-term Uganda should be opportunistic: Government should consolidate gains in agriculture, should seek rebound-growth by rehabilitating infrastructure in transport corridors to the North, and should develop enhanced infrastructure zones in Kampala and regional towns. Longer term, infrastructure investments should focus on raising the competitiveness of exports, to narrow the current account deficit. To create room in the Budget for infrastructure priorities, and to ensure value for money in infrastructure, the next phase of growth in Uganda will require a step-change in accountability in the public sector. Uganda’s leadership should seek to eliminate waste and instill a culture of better performance in the public sector.

21. Uganda does not need a fundamental change in growth strategy. Recent growth has continued to be robust in the face of severe shocks. Given Uganda’s geographical disadvantages and limited mineral resources to date, the economy is doing rather well. This reflects the soundness of the stable, open, market friendly and private investment friendly economic strategy which the country has followed. There is no single ideal growth strategy for a country like Uganda which is landlocked and resource poor. Progress will be needed in all areas where there is potential: in food crop agriculture, livestock, export commodities, agro-processing, and in a range of services—including for export to its neighbors. Some unlikely discoveries such as fresh fish, cut flowers, plastics and metal products have done well in Uganda, whereas some more intuitive businesses in cotton garments have struggled. This underscores the need for policy makers to leave product discovery to businessmen and have the government provide the necessary infrastructure and investment climate.

22. However, Uganda cannot continue to evolve along its recent growth path. Whereas Uganda’s growth performance these past 20 years has been amongst the best on the continent of Africa, some of this success can be attributed to rehabilitation and policy reforms. Rehabilitation allowed rural people to profitably work their land and open up new land for cultivation, and it allowed businesses to re-open their operations. Policy reforms allowed farmers and firms to make better choices on how much of what to produce, and with which inputs (static efficiency gains to market liberalization). Policy reforms which removed inefficient state provision of products and services allowed more efficient private firms to profitably step in and expand (static efficiency gains to privatization). With price signals and markets working, new crops, products

---

3 Insufficient information is currently available on the recent discovery of oil.
4 Collier and Ndulu (2006).
and services emerged. At the macro level, the labor released from traditional sectors—as they became more productive since the mid-1990s—moved into these new sectors (dynamic efficiency gains). Uganda was helped in the 1990s by good weather and good coffee and cotton prices. Each of these sources of growth reflects in the unusually high measure of total factor productivity in Ugandan growth over the past 20 years. Since rehabilitation and policy rebound have run their course, only the last source, investment in product innovation and structural transformation, can sustain rapid per capita income growth in future. Good recent investment rates and new product discoveries are cause for continued optimism in Uganda. But congestion on the roads and the power crisis are symptoms that growth in Uganda’s economy is outstripping the infrastructure stock.

23. **An imbalance is emerging between Uganda’s stocks of human capital and physical capital, especially equipment.** This is reflected in the returns to each in the economy. Unless physical capital investment continues to grow rapidly in the next decade of rapid labor force growth, the capital to labor ratio in the economy could fall, bringing a decline in labor productivity and slower growth. In Volume II, we show that returns to private equipment and firms’ growth are closely correlated in Uganda with infrastructure access, implying that growth in public infrastructure will be needed to encourage investment in private equipment. The emphasis in education should be on improving quality rather than access at primary and secondary levels, and achieving excellence at Makerere. Quality secondary education should be rolled out as the labor market demands it. Increasing access by girls to secondary education—especially in the North—will be important to reduce the high fertility rate.

24. **Uganda’s demographic time-bomb makes more rapid structural transformation urgent.** With more than half of the population under 15 years old at the time of the 2002 Census, Uganda’s labor force is set to double against the 2002 level in the coming decade. A large share of Uganda’s future workforce is already enjoying better access to primary education than their parents received. If quality in primary education can be improved, this human resource presents Uganda with a growth opportunity; if the base of the economy can be transformed from one of rural smallholder farmers to one of urban manufacturing and services, and if Uganda can hasten a demographic transition. If not; that is, if urban jobs with higher productivity cannot be found for a large proportion of Uganda’s youth, growth in per capita income in Uganda will slow down. The natural environment—on which Uganda’s people have depended through history, and will continue to depend—could suffer with the population explosion. Since savings rates depend upon the dependency ratio as well as upon income growth, domestic savings will most likely not reach the level required to reduce foreign dependency unless Uganda can increase the number of workers per dependent by hastening a demographic transition.

25. **We are therefore sympathetic with Government’s impatience to accelerate economic growth and structural transformation.** The “Wealth for All” initiative will flounder without faster growth coupled with a more rapid rate of formal sector job creation outside of food crop agriculture. The reasons are Uganda’s highly rural economic base of small scale farming and very high population growth. Rural growth will need to come initially from higher productivity in food crop agriculture. Small-scale farms facing a land constraint will release labor as they become more productive. (Otherwise there will be diminishing returns to labor in agriculture given an increased labor to land ratio with population growth.) For farmers to get higher incomes as they produce more for the market, food crop prices have to decline by less than how much their output grows. So total food demand will need to increase. Increased demand for food will need to come from household and industrial use within Uganda, and from new food-based product markets in the region and beyond. Increased domestic demand for marketed food could
come either from domestic industrial use, or from Ugandans moving off farms (where they eat their own food) into jobs in industry or services in the towns and cities.

26. **In sum, for Uganda to accelerate economic growth, an increasing share of one of the world’s fastest growing workforces will need to find off-farm employment.** For per capita income growth to accelerate, the employment these workers find will need to be in jobs with higher productivity than those they left in agriculture. Not only must labor productivity in agriculture increase, but the labor released by agriculture must find ‘better’ jobs. It seems unlikely that the burgeoning low return informal rural enterprise sector in Uganda will provide enough jobs with the required level of productivity.

- For the **Central, Western, and Eastern Regions**, there are growth prospects in traditional exports, agro-processing and high-value, high-employment, natural resource-based industries such as fisheries, floriculture and horticulture for export seems appropriate for Uganda; especially if supported by an expansion of service sectors.

- For the **Northern region** labor productivity will increase simply with the return of displaced people to their land. Along with resettlement, if key energy and transport infrastructure is rehabilitated in the corridor from Jinja and Mbale to Soroti and on through Lira to Gulu, the rebound effect witnessed for other regions in the 1990s could yet be experienced by the North (see map 2).

**THE INVESTMENT AGENDA**

27. **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.** We refer to Government’s required response to this challenge as the “investment” agenda. 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.

28. **Careful prioritization and sequencing is the key to an investment-led growth strategy for Uganda.** High return public infrastructure investments should be selected which reduce business costs, increase productivity, and encourage job-creating private investment—especially by exporters. Not just any investment is needed; Uganda particularly needs public investments that facilitate private investment in products or services which can be competitively exported, which create jobs, and which generate new product discovery. The key to avoiding such growth from further widening and rising inequality in Uganda, will be to ensure that it is regionally balanced, and that it makes use of Uganda’s abundant agricultural resources.

29. **Priority sectors for public investment are electricity and transport.** We recommend first fixing the energy crisis, then lowering transport costs, whilst moving quickly to get cheaper energy supply to key industrial areas. In the short-run, before the national grid and transport system is improved, investment in *Infrastructure Enhanced Zones* in well connected towns with carefully identified growth potential could help prevent geographical imbalance, and help kick-start export processing of Uganda’s agricultural produce. Investments that stimulate new demand for agricultural produce, either for export or for processing, should help to reduce poverty and inequality. But these will need to be accompanied with private investments that reduce volatility in agriculture, particularly price volatility.

---

5 The exception for the next decade or so is in the Northern Region, which could still experience a ‘growth rebound’ to peace and resettlement as unemployed land and labor become productive again.
30. **Export production also needs better infrastructure in neighboring Kenya.** As a landlocked country, important constraints to Uganda’s growth and competitiveness (high import costs reduce Uganda’s export competitiveness) are beyond the control of Uganda’s authorities. The full potential for export-led growth in Uganda will only be attained if problems with Kenyan infrastructure can be resolved. The principal ones are the woeful performance of the Port of Mombasa, the poor rail link from Kampala to Mombasa, and the roads and vehicle inspection points from the border to Nairobi and onwards to Mombasa. Freight costs per ton kilometer for imports and exports are higher for the Kenya leg of the journey than within Uganda or by ocean freight. Uganda should initiate serious negotiations with Kenya to attempt to resolve these problems, perhaps in collaboration with Rwanda, Southern Sudan, and business interests in Eastern DRC. Without resolving them, Uganda’s new non-traditional exports will be bound by the viability and availability of air cargo flights from Entebbe.

31. **In parallel with infrastructure improvements, the financial sector needs to work harder for growth, but to do so through market principles, not state direction.** Banks in Uganda need to do a better job of channeling savings to those who need credit, especially if infrastructure constraints get fixed. Lending as a share of deposits in Uganda is very low, and the financial sector, which is emerging leaner and more efficient from the banking reforms, now needs to deepen. Improving infrastructure will help to reduce bank overhead costs, and should help to reduce wide interest rate spreads. Pension reform is a linchpin to creating longer-term private investment financing. In addition we suggest fourteen priority market-friendly policy measures to improve banking efficiency and competitiveness, to increase rural access, and to support the development of term finance.

32. **An investment-led growth path will be heavily import-intensive.** Since consumption is already a high share of national income, and the dependency ratio in Uganda is the highest in the world, and is rising, private and public domestic savings will not meet these investment requirements. Until Uganda exits the demographic transition or increases exports, substantial foreign savings will be needed. Exports are themselves infrastructure constrained. A widening trade balance into the medium term is therefore required for Uganda to finance its required investments. To fill it in the short and medium-term, Uganda will need to rely upon either still higher official development assistance, or substantially higher private transfers (such as remittances), and much higher foreign direct investment. Government’s determination to wean itself off aid and soft loans is commendable. But it would require much stronger foreign private investment inflows—over a prolonged period—than have been achieved in any African economy. Reliance on aid will need to continue. We show that the risks of “Dutch disease” effects from high aid inflows are overstated if Uganda uses an increasing share of aid for infrastructure projects.

33. **Government needs to be more pro-active in this growth agenda, must focus on removing the most binding constraints to growth as they arise, and must avoid a repeat of past mistakes.** It is critical to maintain and build on the policy gains Uganda has made to date. Government must not recommit the “sins of commission” of past ill-fated public sector interventions tried either in Uganda or elsewhere. Nor is the growth agenda any longer about policy reforms to withdraw government from markets: additional supply-side policy reforms are neither easy to conceive for Uganda, nor what is binding faster growth. An investment phase is needed. The distance Uganda has already traveled on policy reform and the scope for mistakes in public investments make the task of developing a pro-active growth strategy more difficult.

---

6 With the most youthful population in the world and the third fastest fertility rate, a generation of explosive population growth will increase the dependency ratio to 112 dependents per 100 workers.
carefully designed, clearly articulated, well prioritized and efficiently implemented growth strategy is needed; one in which the public sector provides a stable, secure and market-friendly investment climate, coupled with specific targeted investments and interventions that markets need to allow businesses to continue to discover new products and new exports. This strategy will get more complicated as it evolves. It will require identifying and rectifying market failures and coordination gaps. For now though, there are some essential missing basics in Uganda’s infrastructure sectors that need to be supplied. A more challenging question than what needs doing first, is how to go about doing it.

BEHAVIOUR CHANGE

34. In addition to investment, behavior change for growth is needed in Uganda to deliver a pro-active growth strategy. It is needed amongst policy makers, technocrats, public servants, development partners and private sector groups. There are no obvious examples in history where the sort of investment agenda Uganda faces was successfully pursued through supply-side policies alone. Government will need to take an active role in steering investments to where they are needed. But a more active Government must not make the mistakes of the past.

35. Behavior change towards corruption: A positive growth agenda targeting public infrastructure investments could create opportunities for corruption, rent seeking and cronyism in roads and energy projects. If individual interests such as these are allowed to come before the national interests of Uganda, this proposed growth strategy will backfire.

36. Behavior change towards accountability in the public service. Public investments and other government services are subject to high levels of waste and unproductive spending. Public infrastructure is generally not well maintained, teacher absenteeism persists, and satisfaction with health services is low. A culture of accountability and public service needs to be re-built in Uganda with emphasis on eliminating waste.

37. Behavior change required of policy makers is to focus public interventions only on addressing infrastructure gaps and market failures, encouraging nascent innovation, and backing successes rather than preying on them. Although we are sympathetic to the need for strategic interventions to accelerate growth and jobs in agro-processing, we do not support the ad hoc and firm-specific interventions Government has resorted to. Nor do we endorse the land sales and ever-increasing tax incentives being offered to investors. Government must refrain from trying to pick winners, and must stop supporting losers.

38. Behavior change in doing business with the private sector. Uganda’s interests lie in ensuring a level and open playing field for competition in the business friendly economy which has been systematically built through market-oriented reforms for almost two decades. A change in behavior is needed to ensure this.

- There needs to be more open and transparent consultation with and amongst representative business groups to identify infrastructure bottlenecks, coordination gaps, opportunities for technological innovation, and market failures.
- These fora should be organized based upon the specifics of sub-sectors rather than at “the national level.”

7 Examples include, Tristar, Bidco.
• Transparent public support should be available to help remove specific constraints identified to innovation in promising new industries.

• Public support should not be available for firm-specific investments. It should be closely evaluated and have a finite life: if new industries don’t fulfill their promise, or investments don’t materialize as planned due to leakages, public support for them should be withdrawn.

• A different culture of cooperation needs to develop between the public and private sectors in which the public sector is seen as acting in the public interest, not conspiring against it, nor colluding with it for individual gain. Again, this calls for transparent procurement processes, and transparent monitoring and evaluation systems before the strategy is implemented.

39. **Behavior change amongst technocrats:** Whilst defending macro economic management, market friendly policies and openness, technocrats in Government—and the consultants providing them with advice—need to be more nuanced and empirical in their approach to growth. Technocrats have been very successful in achieving and maintaining macro stability. This remains critical: macro stability must not be jeopardized. But in choosing between alternative policies for stability, technocrats should take into account empirical evidence of the opportunity costs for reaching Uganda’s full growth potential that these policies might impose. Technocrats need to become progressively less dogmatic in interpreting and predicting the effects of standard policies of the “Washington Consensus.”

40. **Behavior change in the development partner dialogue.** Development partners need to fully embrace the growth agenda as fundamental—as it is—to future poverty reduction and social welfare in Uganda. Government either needs to embrace a new partnership with its development partners, which maintains high ODA inflows for infrastructure investments, or to seek massive and unprecedented increases in foreign direct investment and private transfers to fill the savings/investment gap. Development partners like Uganda’s leadership, must become intolerant of waste and inefficiency.

**MACRO STOCK TAKE AND OVERVIEW OF UGANDA’S ECONOMY:**

41. **Uganda’s economy has grown consistently at an impressive rate for many years.** During the decade of the 1990s, Uganda attained one of the highest per capita real GDP growth rates in the world, albeit from the low base of a post-conflict situation. The economy doubled in size. Real GDP growth in the 1990s averaged an impressive 6.9 percent a year, well above the average for Africa, and close to the global standard set by the East Asian “Tigers.” Early in the 1990s growth was mostly from recovery, rehabilitation, and a rebound in manufacturing. Later, structural transformation from a movement of labor into non-farm enterprises—especially in trading—and revolutionary reforms to telecommunications and banking sectors account for improvements in productivity, along with an aid-financed boom in the education sector. This has been accompanied by a slow but gradual transformation in agriculture in response to increased demand for higher value foods.

42. **The economic reform program provided the growth impetus after an initial post-conflict rebound.** Much of the transformation in Uganda’s economy has its roots in far-reaching policy reforms and rural infrastructure investments. Together these provided better incentives for farmers and businesses to trade. Privatization and competition from imports may have slimmed down the formal private sector, but it has emerged more competitive as a result. Indeed there are
early signs of the emergence of a range of new processed export products, which would be worth nurturing, without targeting specific firms. Policy reforms also seem to have laid the foundation for more efficiency in manufacturing firms, who by 2002 had lower average input costs and higher profits per labor unit than in 1989. This underscores the importance of maintaining the existing policy framework of macro stability, competition in markets, and a level playing field for investors. However, by now there are few obvious macro and structural reforms left to be implemented. The policy reform agenda should get deeper into harder-to-spot sector specific issues to identify market failures, and to establish institutions which protect competition and fair trading, promote private sector innovation and encourage productive investment.

43. **Trend growth has not slowed down since 1999.** The robustness of the economy to outside shocks is further testimony of the strength of the reform program. Trend growth over the last 2 decades is estimated at 5.7 percent per year. Since 1999 real average GDP growth slowed down to 5.5 percent, compared to 6.9 percent in the 1990s. The post-conflict rebound phase of growth is by now long-gone. This return to more normal levels of consumption would conceptually explain slower growth. However, there is more to Uganda’s impressive growth than rebound. The recent slowdown in growth in Gross Domestic Income is, in fact, not explained by a return to a lower trend. It is explained by adverse terms of trade compared with the period of the 1990s when coffee was booming and petroleum was cheaper. Uganda’s terms of trade fell by much more than nearly all other African countries between 1999 and 2003; and yet still the economy grew at the same underlying rate as in the period when good policies were helped by good luck. Adjusted for the terms of trade, Uganda’s recent average growth in domestic income would have been at the same level as during the 1990s. The economy has weathered a banking crisis, a severe drought, declining terms of trade, and is now plowing on through a power crisis. Throughout all of this, real per capita GDP growth has remained positive for 20 years. Sound policies laid the foundations for this solid performance, and these should not be sacrificed in pursuit of still higher growth. Nevertheless, deeper policy reform is less critical for higher private investment at this juncture than are infrastructure investments.

44. **The quality of Uganda’s growth seems to have improved in economic terms.** Many of the features of a dynamic economy are visible in Uganda’s growth experience. For those who remained in agriculture, productivity has been increasing since 1996. Farmers are diversifying into higher return crops and are selling more of their output in markets, yet the pace of technical change in agriculture is still too slow. Household labor in rural areas is moving out of agriculture and into higher return informal service enterprises. New products and services are being discovered in the formal sector, and new exports are emerging. Exports are more diversified, although still not sufficiently, with most of the net recent total increase in export earnings coming from tourism and fish. New exports have been discovered, with higher technology content than Uganda’s traditional exports. The share of manufacturing firms exporting seems to have decreased between 1998 and 2002/03, although the value of their total exports improved. The technology component of imports is also improving: the share of high technology products in imports increased from 11 percent of imports in 1996, to 16 percent in 2004. Since 1999 exports and investment have picked up. Nevertheless, consumption continues to drive growth in domestic expenditures, and the composition of investment is heavily weighted towards buildings rather than equipment, a phenomenon which is accentuated by tax exemptions favoring construction and high taxes on transportation.

---


9 Added to this, the forthcoming National Accounts revision is likely to show higher GDP for 2002, and faster growth in services since then.
45. However, although poverty is declining (map 4), inequality has widened, and growth is not creating enough jobs; either in the formal sector, or in manufacturing. The Eastern and Northern Regions are trailing behind in terms of income and employment. The Central Region (mostly Kampala) has by far the highest formal employment and the most firms (maps 1 and 8), while the Western region has done relatively well since 1989 (map 5). The average firm size in Kampala seems to grow over time, which is encouraging. Employment growth per firm seems to be more pronounced in Kampala, Wakiso, and to some extent Mukono, but it is less consistent elsewhere, and in some Districts there are no signs that firms have been growing in size under the reform program. Furthermore, much of the growth in output and employment, including in Kampala, has been in informal and micro enterprises. By 2001, still 90 percent of firms on the Uganda Business Registry employed less than 5 workers. Furthermore, much of the employment growth and new firm entry in the 1990s has been in services. Formal employment in firms which were established between 1989 and 2001 was mostly in retail, restaurants, and education sectors, which are arguably not drivers of growth. Employment in manufacturing, large-scale commercial agriculture and formal sector services has not grown nearly as fast.


46. High population growth and a high dependency ratio—especially amongst poor families—is a concern for future growth in per capita income. Obviously an economy with more people will get bigger, because people consume. But the people will not necessarily enjoy higher average welfare. Uganda has the highest dependency ratio in the world, and unlike most
countries in the developing world which have entered a demographic transition, dependency in Uganda is still increasing. Whereas increased savings rates are predominantly determined by increased growth in incomes, high dependency is associated globally with lower domestic savings, and lower domestic savings without increased reliance on foreign savings would mean lower investment per worker. It is no coincidence that the fastest growing economies in the world in the 1990s all saw dependency rates fall markedly over the 35 years to 2000 (Figure 1). This phenomenon of dependency is leading OECD countries with ageing population to import more workers. Uganda faces the opposite problem—and so needs to generate more capital.

Figure 1: Selected Countries: Change in Number of Dependents per Worker (1965-2000)

47. Uganda could generate a substantial growth dividend by engineering a rapid demographic transition, as Kenya did in the 1980s. Half the population is under 15 years, which means Uganda’s workforce will double in 15 years. Meanwhile average years of schooling per worker will increase gradually in the next decade, as graduates of UPE enter the workforce. Rapidly reducing the fertility rate would mean the dependency ratio for Uganda could quickly invert, perhaps within one generation. This was the experience of China, the Asian Tigers and even Mexico and Brazil. Having fewer mouths to feed per worker, and better educated workers on average, coupled with the right investment climate and the right infrastructure, could stimulate an increase in disposable incomes in Uganda which could lead to increased savings and so to increased private investment and growth. To achieve this demographic dividend for growth will require political leadership, empowerment of girls through secondary education, and significant investments in reproductive health and awareness, especially in the North. This is a topic for further work.

48. In contrast, unrestrained fast population growth with rising dependency could reduce average welfare. This could happen if physical capital per worker falls, causing lower labor productivity. Unless Uganda is able to attract more foreign savings and more aid to offset higher dependency with higher investment, capital per worker could decline in future with Uganda’s youthful population profile. A second possibility is that environmental degradation
could reduce land productivity. Sustainable area expansion in agriculture has probably been reached in Uganda. Yet if fertility rates don’t decline substantially faster than they have this past decade, the Ugandan population could quadruple in 40 years. Population pressure is not only increasing the area under cultivation, it is reducing average productivity in agriculture. Large families market less of their produce, adopt fewer modern inputs (seeds and fertilizers) and enjoy significantly lower incomes per head. Unrestrained high population growth could therefore strangle national welfare in Uganda, especially if there is no out-migration from rural areas to cities.

**Map 2: Uganda’s Transport Infrastructure (RAFU, circa 2003)**

---

Human capital is improving from a very low base. Primary and secondary enrollment, and recently even university enrollment, has increased sharply. The seeds for a marked improvement in human capital have been laid. For the next two decades, Uganda’s labor force will expand in terms of both its average skills and its size. Although the mean number of years’ schooling was low, human capital accumulation exceeded physical capital accumulation each year from 1972 to 1987. In fact, assuming depreciation of just 4 percent throughout the period of conflict and political turmoil, it would have taken until 1998 for capital per worker just to reach its real level in 1972. Since 1998, human capital has grown by around the same rate as real

---


11 There has been a slow but gradual net migration to the cities, but by no means a mass-migration from rural areas.
private machinery and equipment investment, suggesting a shallowing of machinery and equipment per worker.

50. **The physical capital stock needs to improve in size and composition.** Total investment in Uganda remains low by international standards, and its composition may no longer be as productive as it was in the recovery period. Within capital formation, the shares of machinery and equipment and public infrastructure need to expand. The investment pattern in recent years shows rising private construction, falling machinery and equipment, and falling public construction: the opposite of a virtuous trend. Decomposition of gross fixed capital formation reveals a significant increase in real commercial buildings investment, and falls in equipment investment as a share of GDP. The fall in equipment investment looks problematic. In Uganda, nearly all capital goods are imported—which makes the exchange rate and border taxes important in determining investment prices.

51. **Policy makers should target investments that improve private sector productivity, because productivity can dwarf capital accumulation in its growth impact.** To maximize growth through encouraging additional investment, it is very important relative to the quantity of investment, that policy makers raise the quality of investment. Public policy should therefore set the right price and policy incentives for private investments which yield the highest social return. There is reason to believe that improvements in infrastructure which benefit domestic goods and services (i.e., non-tradeables) can yield the highest productivity impacts for public investment projects in Uganda. As noted in Chapter 8 of Volume II, such productivity gains can offset short-term Dutch disease costs from financing these investments externally, especially if aid is directed at infrastructure projects with a short-gestation period and a high import content.

Power Infrastructure

- Cities > 50,000

Existing Power Plants - Capacity (MW)
  - < 10
  - 10 - 50
  - 50 - 100
  - 100 - 450

Transmission Lines (kV)

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>132</td>
<td>132</td>
</tr>
<tr>
<td>220</td>
<td>220</td>
</tr>
</tbody>
</table>

Population Density

- < 10
- 10 - 50
- 50 - 100
- 100 - 500
- > 500

AGRICULTURE STOCK-TAKE: AND LINKS TO OVERALL GROWTH

52. The previous section and Chapter 1 in Volume 2 look at the economy as a whole, at employment and at firm performance. This section looks in more detail at agriculture because of its importance to rural livelihoods and overall growth.

53. Agriculture will continue to play a critical role in growth and poverty reduction in Uganda. Past performance has been impressive on both growth and poverty reduction counts. More recent growth has been slower, in large part due to a prolonged price decline for food crops, and increased volatility in cash crops.

54. Growth in agriculture since 1987 has come largely from area expansion, although since 1996 yield and productivity growth increased significantly. Ugandan agriculture is becoming increasingly more commercial and shifting to higher value crops. These developments, along with continued strong growth in output, indicate that the current policy framework and strategy of the PMA is yielding results. This needs to be strengthened to promote future productivity growth. The needs and prospects for the North on the other hand will be more like those of the rest of the country 20 years ago. If peace and stability can be maintained, there is scope for both area expansion and rapid productivity growth in the Northern region, as people return to their villages and farms.

55. Exports have performed well, with increasing diversification in formal exports, despite the sharp decline in coffee. There is also a significant volume of informal exports of traditional food staples to neighboring countries. Looking to the future, this suggests that Uganda stands to gain not only by focusing efforts on exporting “high value” formal exports, but also through regional trade which offers significant potential for helping commercialize even farmers who currently grow “subsistence” crops.

56. Broad based productivity growth in agriculture is required, given the strategic importance of both food crops and industrial or export crops. Government should avoid targeting only export crops. A critical role of agriculture in poverty reduction is to maintain downward pressure on real food prices. But to ensure adequate producer incentives and enhance producer welfare, productivity gains have to outweigh declining producer prices. This requires not only productivity gains in production, but outlets for agricultural products and hence a focus on the demand side; both domestic demand (for food and raw materials) and export (for industrial crops). Improved marketing efficiency should help to lower final consumer and raw materials prices, and so make Ugandan exports more competitive. And while improved markets will help stimulate some demand, higher real non-farm incomes, particularly among the urban and rural poor, will be important to increase the demand for agricultural commodities. Thus, for a robust strategy for pro-poor rural growth, actions on all three fronts of supply, demand and market efficiency are needed to increase farmer incomes through higher productivity, even as the final consumer prices (and producer prices) decline. This will require creating considerably more jobs “off-farm.”

57. The slowdown in agricultural growth since 2000, and the slow down in poverty reduction in Uganda are due to a significant, prolonged, and unexplained negative price fluctuation. Meanwhile output has continued to grow at a healthy and steady pace. It is important to fully understand the causes of the prolonged real price decline in 2001-2002 and take appropriate action to address it. Since output was growing, the price shock seems to have come
on the demand and marketing side. Poor market integration does not seem to be the problem, although further transport sector improvements will help to reduce prices and increase returns to farmers. Inter-temporal margins remain high, indicating storage problems, likely due to insufficient access to trade finance. This suggests demand-shocks have affected prices rather than supply.

58. **The primary challenge to sustained growth in productivity in Ugandan agriculture is the rising population.** In its current structure, the agriculture sector cannot absorb such large increases in workers and dependents. In the past, with available land, growth was sustained through area expansion. In recent years yields have contributed to output growth, but area expansion still remains the major source of growth. Now the limits to environmentally sustainable area expansion in Uganda have probably already been reached, except perhaps in the North. Without significant possibilities for further area expansion, future growth will have to rely on a combination of more intensive agriculture and—crucially—the movement of labor out of own-account agriculture to urban and rural non-farm activities. The latter will be important, as population pressure is already leading to uneconomical farm sizes, subsistence orientation of households and reduced adoption of productivity enhancing technologies because of higher risk aversion.

59. **The recent expansion in off-farm employment is encouraging in this regard, but it is discouraging in another.** Whereas it is positive that labor shifted out of agriculture, it has shifted into rural retail and trade services. The market demand for these is ultimately determined by movements in productivity and price in Ugandan agriculture, and so rises and falls with the fortunes of farmers. An additional urban or external (export) demand impetus is needed to sustain off-farm employment growth.

60. **The second major challenge is to reduce volatility in agricultural growth.** Agriculture is naturally more susceptible to weather variability. In the case of Uganda, it appears to be also significantly subject to market (price) shocks. Large exogenous shocks can have devastating and long-lasting impacts. It is critical to better understand the factors driving price and production volatility, and their impact on household welfare. The analysis would then help identify appropriate policy actions to address the underlying causes. The various analyses undertaken in this paper suggests that both price and weather shocks are important in household decision making and outcomes. Diversification of demand sources—e.g., through agro-processing and regional export markets could help to stabilize prices, but would most likely require better storage facilities and lower transport costs.

61. **There are many options that can help cushion the impacts of exogenous weather related shocks.** These include the development of irrigation to reduce the impact of droughts, but also to help enhance productivity through a stable water supply. This is curiously uncommon in Uganda. Another option may be to put in place a safety net program in the form of a public works or employment scheme that the affected people can turn to in times of extreme and widespread weather outcomes (such as a major drought). Such safety nets provides income earning opportunity for households in distress and can be used to help build labor intensive public infrastructure for future productivity growth. An alternative, to deal with more localized shocks may be weather indexed insurance, which pays out in times of an objectively defined weather outcome based trigger. Finally, the creation of formal jobs through growth in agro-processing would help provide income diversification and help cushion the impact of a negative shock to agricultural incomes.
62. **A third main challenge for agriculture is to improve rural infrastructure and market access.** This is an important and consistent theme emerging from almost all analysis in this report. Productivity enhancement, diversification, adoption of inputs and market performance are all found to be significantly influenced by access and infrastructure. Over time, the performance of major markets for agricultural crops has improved significantly, and evidence shows that most markets are performing well. However, the transport costs from the farm gate to primary and secondary markets remain high. Thus, the challenge is to tackle the rural transport problem, which adds much more in proportional terms to the post-farm gate costs than the transport between urban centers/markets. High fuel costs may be an important element in this, as motorization rates seem very low (see Chapter 6).

63. **Fourth, the commodity storage market remains problematic.** The intra-year price rises have become less pronounced over time as shown by declining trends, but the absolute magnitudes of inter-temporal margins are quite high. Despite the decline in the inter-temporal margins, these continued high returns call for a further investigation into the working of the commodity storage markets.

64. **A fifth theme emerging in influencing household choices is weather-, pest-, and disease-related risks that affect all aspects of farmers’ production decisions.** Importantly, in addition to addressing the drought risks mentioned above, damage from excess water has a larger quantitative impact than droughts, indicating need for better water and natural resources management. This points to a need to increase investments in public goods targeting pest and disease control, while also focusing on natural resource management issues and household risk management. Two examples which are costing the economy significantly are the Coffee Wilt Disease (CWD) and the Banana Bacterial Wilt (BBW). The decline in coffee production is a direct impact of CWD, costing Uganda about half its potential coffee earnings. Similarly, being a preferred staple, the decline in matooke production is also significantly hurting producers through foregone income.

65. **The analysis in Chapter 2 of Volume II suggests Government should be extremely cautious in extending supply-driven subsidized credit for input use.** There are three main reasons:

- **First, fertilizers are most likely not being used efficiently, which explains the lack of more widespread adoption.** There is insufficient evidence that the cost of fertilizer is a binding constraint on its use. There seem to be other reasons that farmers are not adopting it, such as price volatility, problems with the fertilizer supply chain (which is poorly regulated and frequently abused), and low returns to incorrect fertilizer use. Further and better analysis is needed to guide policy actions, especially on the determinants and economics of fertilizer use.

- **Second, increased access to credit is unlikely to lead farmers to adopt more inputs, including fertilizer.** Our analysis concludes that infrastructure and relevant and effective agricultural advisory services have a more important impact on technology adoption. The evidence on the strong impact of effective and demand-driven technical advice (as opposed to simple delivery of old-style extension services) calls for a more rapid roll out and strengthening of the NAADS program which has been constrained to date by the budgetary resources provided to it.

- **Third, farmers are not signaling that they are credit constrained.** Of the 16,000 households interviewed in the 2004 National Service Delivery Survey, 72 percent
nationwide indicated they had no need for credit during the preceding 12 months. Only 11 percent of rural households in all quintiles applied for credit, and just a quarter of these applications were agriculture-related; i.e., less than three percent of rural households applied for credit for inputs.

66. The previous two sections summarizing Chapters 1 and 2 of the main report conclude our backward look at growth. The next section (drawn from Chapter 3) builds on the stock takes, and looks in more detail at what might presently be constraining more rapid growth and structural transformation. The aim is to identify a “binding constraint” from the very wide range of things that need fixing for growth, and we start by suggesting that Government should prioritize its growth strategy. We conclude that infrastructure is the binding constraint now, and that financial intermediation could become binding soon. Infrastructure is also found (in Chapter 5) to be constraining Uganda’s export trade. After the growth diagnostic therefore, this report looks in more detail at priorities in infrastructure and financial sectors.
Figure 2: Trend growth has not slowed down after adjusting for bad terms of trade

Figure 3: Agricultural output has grown steadily since 1996, but prices have fluctuated significantly since 2000, and may explain the slow down in poverty reduction

Figure 4: Growth is not creating enough jobs in the formal sector...

Figure 5: Returns to education seem to have stopped rising - except for tertiary education
Figure 6: Returns to private capital in manufacturing are quite high, and seem to be related to electricity...

Figure 7: Bank's interest rate margins are high...

Figure 8: Bank lending is a low share of deposits...

Figure 9: Electricity and Roads indicators for Uganda are low and lagging....

<table>
<thead>
<tr>
<th>Sector</th>
<th>Indicator</th>
<th>Low Income Countries</th>
<th>Africa</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>% Households reporting access to electricity</td>
<td>34.7</td>
<td>27.2</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>% Households Reporting Access to Modern Cooking</td>
<td>11.7</td>
<td>13.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Water</td>
<td>% Firms citing electricity as a major or severe constraint</td>
<td>34.8</td>
<td>39.8</td>
<td>44.5</td>
</tr>
<tr>
<td></td>
<td>Average Non-Revenue Water (% of total)</td>
<td>19.4</td>
<td>19.1</td>
<td>24.0</td>
</tr>
<tr>
<td>Roads</td>
<td>Paved Roads (% of total)</td>
<td>36.8</td>
<td>35.8</td>
<td>42.1</td>
</tr>
<tr>
<td>Telecom</td>
<td>% Firms Citing Transport as a major or severe constraint</td>
<td>27.2</td>
<td>23.1</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>Telephone Outages (average days per year interruptions)</td>
<td>17.0</td>
<td>20.6</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>% Firms Citing Telecom as a major or severe constraint</td>
<td>17.3</td>
<td>24.2</td>
<td>17.8</td>
</tr>
</tbody>
</table>

(*) World Bank Database, based on the latest Observation available for the period 2000-04.
GROWTH DIAGNOSTIC

67. We recommend policy makers in Uganda should continually seek to diagnose, identify and seek to remove the most binding constraint to growth. On average globally, most accelerations in per capita income are not sustained beyond about 8 years because they run up against a binding constraint to growth. Uganda’s 20 years of unabated per capita income growth therefore suggests that policy makers have done a lot of the right things at the right time to preserve high growth. Encouragingly, empirical research globally suggests that growth accelerations may be unleashed by relaxing a very limited number of country-specific binding constraints. This is found to be particularly true in developing economies like Uganda, because they typically exhibit a high degree of “slack.” It is certainly true in Uganda that manufacturing firms have spare capacity.

68. Prioritization is key for a growth strategy. The search for a set of potentially binding constraints is particularly challenging in a growing low income country like Uganda, where most things could work better and growth is already underway. However, this makes it all the more important to slim down the list of priorities for growth. In the ideal world all distortions would be removed, and all investment-enhancing infrastructure and institutions would be put in place simultaneously. But Uganda has neither the resources nor the implementation capacity to fix everything at once. To keep growth from slowing, and to accelerate it, the challenge is to identify the most binding constraint at any given time, and remove it.

69. Our first attempt at a growth constraints diagnosis for Uganda finds that returns to physical capital are high, as are returns to skills. But average returns to basic education seem to have stopped rising. Low returns to basic education could be due to a number of factors including; a human capital growth in excess of growth in physical capital, selectivity, adverse selection or falling standards. We suspect the first. Regardless of which is the cause, this finding suggests—as did the growth accounting exercise in the macro stock take—that it is time for Uganda to reconsider the balance of resources between human and physical capital. Consolidating the successes in UPE is of course still vital, but at the margin resources in the economy need to be directed towards physical capital. This means public and private investment. Average returns to private capital from the 2001/02 Uganda Business Inquiry seem quite healthy. Yet, there is very wide variance in returns to capital across regions within a particular sector. One likely explanation for high private returns despite poor public capital is that thriving firms in Uganda capitalize on the country’s comparative advantage, and adapt their business model to cope with the binding constraints of poor public capital; they evolve—like camels in the desert—to survive in the presence of a key constraint. We find that a key determinant of profitability of firms in manufacturing in Uganda is the cost of energy. High returns to capital and low returns to semi and low skilled labor are consistent with the syndrome of an “under-investing State.” Congestion in traffic around Kampala, and self-provision of electricity nationwide are also symptoms consistent with Uganda having an under-investing State. More detailed findings of the growth diagnostic are:

* Uganda does not seem to have a binding problem discovering new export opportunities. Structural transformation is underway. Unlike many other countries, Uganda has not struggled to discover new products and services to export. These are

---

12 N.B. Here we mean machinery and equipment rather than buildings. Unfortunately, the share among these has been heavily skewed towards property development in Kampala.
mostly narrowly drawn from Uganda’s agricultural and natural resource base, most remain quite ‘low-tech’, but encouragingly, some medium and high tech products have emerged since the mid-1990s. New growth theories suggest that initial product discovery is more likely a barrier to growth than improvements within products which follow from discovery. We suggest therefore that Government should not be seeking to identify new exports or value addition to traditional exports. Rather, Uganda should maintain facilities that promote product discovery, whilst working hard to find out what is preventing or could prevent expansion of these newly discovered products.

- **In contrast, there is dispersion in technical efficiency amongst firms in the same sector.** On average manufacturing firms are only 50 percent as productive as the most efficient firm, compared to a benchmark of 0.75 to 0.8 for a competitive economy. This result is the same even after adjusting for firm size. This combination of healthy product discovery coupled with low convergence within product lines suggests that firms don’t need help from their Government in identifying market opportunities, but that innovation is uneven, and knowledge about technology is either not common to the economy or is too expensive for many firms. Ugandan firms do not need to invent or innovate, there are plenty of technologies available globally for them to copy and adapt. However, they may need help from the Government or donors to access these technologies and to experiment with them. The most important factors in explaining differences in firm efficiency are education, whether the manager has experience of working in a foreign company, and whether the company exports.

- **Being both a landlocked, hilly, and agrarian country, Uganda's transport sector needs to be highly efficient for exporters to offset the competitive disadvantages of geography and topography.** We find it is not. In fact Uganda freight companies struggle to compete with their Kenyan neighbors. Uganda’s international freight transport rate\(^{13}\) is high even among landlocked countries. Poor rail services are a major cause of high external transport costs and of costly imbalances in external freight. Since around 90 percent of freight is carried by roads, rising road transport costs could put a brake on economic growth. Vehicle prices and vehicle operating costs are too high, with the latter driven by high fuel prices.

- **Ugandan firms face some considerable cost disadvantage; from Uganda being landlocked, and from high energy and indirect costs.** Despite getting more efficient in input use in response to increased competition from imports, Uganda’s firms face relatively high raw material costs, which may be due in part to high transport and storage costs. Ugandan manufacturing firms also face disproportionately high indirect costs relative to other countries, largely due to high energy bills. Yet energy access is low; electricity use by households in Uganda is stunningly low outside of Kampala (maps 6 and 7). Self-generation of power is the norm for large firms, and this is costly, especially at current world fuel prices. Firms that self-generate face high costs of generator fuel, and invest less as a result. Running a generator is between 2 and 6 times more expensive than obtaining electricity from the public grid. The costs savings for Uganda’s firms from being able to substitute self-generated electricity for public grid electricity are huge.

---

\(^{13}\) This is an extract from the World Bank DTIS report, Volume 1 Chapter 6. The freight transport rate is given by \((\text{freight credit} + \text{freight debit} + \text{other transportation services credit} + \text{other transportation services debit} + \text{insurance credit} + \text{insurance debit})/(\text{merchandise exports} + \text{merchandise imports})\), using IMF Balance of Payments Statistics.
At current petroleum prices, the potential savings from medium and large firms are even more significant. There is every reason to believe that private investment in physical capital is constrained by the high costs of poor infrastructure.

- **High petroleum prices also drive up indirect costs in Uganda.** The price of alternatives to modern fuel is rising much less slowly than the price of modern fuel, and use is most likely increasing. The environmental implications of this trend coupled by rapid population growth could undermine soil fertility in the long-run.

- **There is evidence of coordination failures in infrastructure.** Despite power shortages, viable (and subsidized) small-scale projects for rural power generation have not proceeded. Similarly, despite the efficiency gains on offer from better transport integration between major shippers, other transporters, maintenance and repair entities, inter-modal transport operators, ICD and bonded warehouse operators, nearly all physical distribution is centered on Kampala, even when this translates into additional transport costs and additional product delivery delays. Rural Uganda in badly served. Internal transport logistics would benefit greatly from up-country storage linked to transport facilities. Better connection between water, road and rail modes would improve external transportation, but again this has yet to emerge through the market.

- **There may also be coordination failures in post-primary education.** Despite a very rapid expansion in private secondary and tertiary education, graduates seem to be under-employed. Meanwhile firms report skills shortages, but tend not to train their staff in-house. What is particularly curious about this is that the labor market in Uganda is not restricted, and training is largely determined by market conditions, hence one would expect the skills market to clear.

- **The problem for Government is how to identify and determine what to do about these sorts of coordination gaps or market failures.** The solution is not direct public provision. Even if the Government could afford these, they would not have the detailed sector knowledge to identify and design appropriate interventions and these would usually offer rent-seeking opportunities. To intervene in the right way with complementary infrastructure, or with guarantees, Government needs to be wired in to the private sector's dialogue on needs. But officials need to be sufficiently distanced from the private sector that they are not "captured."

- **We find that financial intermediation could become a growth constraint if infrastructure gaps get fixed.** Uganda shows evidence of quite low credit demand, and even lower credit supply, at high lending rates, and with high interest rate spreads. Low credit demand could be symptomatic of low investment returns. However, Uganda has relatively high levels of private investment by manufacturing firms, mostly financed out of internal finance, which suggests intermediation problems in the banking sector. (Private firms would not be investing so much of their own money if investments yielded low returns). High interest rates on lending might suggest low savings, but not when interest rates on deposits are simultaneously very low, as they are in Uganda. Very low lending to deposit ratios by the banks also suggests that Uganda could be experiencing intermediation constraints. We therefore take this issue up in detail in Chapter 6.

---

14 N.B. These high levels of investment are a relatively high annual flow on a stock of capital that is low relative to other countries, and low relative to human capital. The reader should not mistake high levels of annual investment for a high capital stock per worker. Also, manufacturing has a low share of GDP.
Macro risks in Uganda are definitely not the binding constraint. There is no room for complacency on exchange rate and interest rate volatility, nor on inflation, and the challenge of managing expenditures is increasing. Taxes in general are not high, but the sector composition of the tax burden needs to be reviewed from the standpoint of growth. Taxes on transportation are disproportionately high. High tax rates on mobile telephony may now be limiting its spread. The challenge for officials is to match their highly effective vigilance on macro stability with deeper analysis of growth priorities. Stability remains a critical foundation for growth, but policies to maintain it should not result in missed opportunities for growth.\textsuperscript{15}

Proxies for corruption from WED data suggest that whereas petty corruption is rife, it is likely not the binding constraint for Ugandan manufacturing firms. Corruption is, however, disproportionately felt by medium-sized firms, foreign firms, and exporters, and it is widely perceived to be a serious problem in public service delivery and value for money in public spending. This suggests caution in scaling up public investments.

Improving investment rules and regulations will help business growth, but the costs of finance and infrastructure are more binding than other business costs. Contract enforcement indicators are good. Property rights do not seem to be a disproportionate problem for Uganda. The costs of starting and closing a business in Uganda are high, at around 118 percent of GNI per capita, compared with 215 percent for Sub-Saharan Africa, and only 64 percent in the Middle East and North Africa, and barely 7 percent in OECD countries.

Priorities for a growth strategy for Uganda. The findings from the macro and agriculture stock takes and the growth diagnostic suggest priorities for a growth strategy for Uganda. These are split between strategic approaches and specific actions. The specific actions, which are listed at the end of the report, are then split between those which need to be taken in the short term (now) and those that need to start in the medium term (soon).

Strategic

1. Maintain stable, market-friendly, and private sector oriented policies. These have been the impetus for and are now the foundation of Uganda’s enviable growth record. The gains to farmers from exchange rate and price liberalization in agriculture, the return of Asian businesses to manufacturing, the arrival of FDI, the expansion in telecommunications, and the revival of a failing banking system are just a few of the dramatic improvements Uganda’s economy has enjoyed as a result of reforms. Although further reforms are no longer the highest priority for growth, the gains to date must not be undone in the quest for higher growth.\textsuperscript{15} It is crucial in developing a more pro-active strategy for growth and export diversification that Government defines the role of the state carefully, taking account of the need to ensure Uganda’s competitiveness, the importance of price signals to private investors, the need to address market failures, and

\textsuperscript{15} Global experience shows that fiscal consolidation in many countries has come at the expense of infrastructure, and that this strategy has been self-defeating (World Bank/IMF Development Committee 2006).
with full recognition of the risks of rent-seeking and!government failure. Past joint ventures in Uganda have led to costly mistakes, and these should be avoided.\textsuperscript{16}

2. Don’t neglect traditional agriculture whilst seeking to promote structural transformation, new exports, and value addition. The longer term aim should be to help the private sector to discover new and higher-value exports. Meanwhile there remain opportunities for short-term growth and poverty reduction through agriculture. Most immediately, addressing coffee wilt disease and banana bacterial wilt would inject significant productivity gains in coffee and matooke, two of the most important crops for smallholders. The rehabilitation of agriculture in the North could generate a significant increase in consumer demand, and a quick rebound in grain production. There is also significant short-term potential in simsim for export from the North. Longer-term there are prospects for cotton, livestock and hides and skins in the Northern Region. Elsewhere in the country, despite the more limited scope for opening up new land, substantial productivity gains are still possible from intensification through a faster roll out of the NAADS program.

3. \textbf{Generate a rapid demographic transition with increased urbanization.} Uganda must seek to bring down the high fertility rate quickly by implementing proven programs which will address the proximate determinants of fertility.\textsuperscript{17} Priorities are girls’ education in the North, and better availability of modern contraceptive methods\textsuperscript{18} so that mothers can space births safely, and attain their desired number of children. Meanwhile Government needs to plan for a doubling of the workforce in 15 years, for increased urbanization, and for job-creating growth. Productivity growth in agriculture and off-farm enterprises in the North can supply short-term respite. But in the medium term more jobs \textit{off-farm} in industry and services, will be needed to absorb the labor force whilst maintaining demand for food products. Otherwise, unless there is an increase in export demand or demand from processing industries, real food prices could decline faster than the rise in farm productivity. These off-farm jobs are most likely to occur in rural towns and especially around Greater Kampala. Uganda could see a more rapid acceleration in the rate of urbanization than in the past, and Government should start to plan how to provide the infrastructure requirements (water, roads, power) for larger urban areas.

4. \textbf{Reduce transport costs.} Given Uganda’s high dependence on transportation (a landlocked, rural, hilly country with a large trade deficit), it is through reducing transport costs that Uganda could generate the biggest short-term growth dividend for the economy. A structural determinant of high transport costs for the Uganda as a whole is the imbalance of inbound and outbound traffic on air and land freight routes.\textsuperscript{19} Land transport costs are high mainly because cheaper rail transportation in Uganda cannot meet freight demand. Water transport is underdeveloped due to a combination of poor regulations, public ownership, and under-investment. Consequently, there is little inter-

\textsuperscript{16}Republic of Uganda (2001/02), “Background to the Budget: Enhancing Economic Growth and Structural Transformation.”
\textsuperscript{17} The Bank has initiated a study on population growth with MOFED as part of the CEM follow-up.
\textsuperscript{18} Access fell between 200-2005 (DHS). Uganda’s maternal health indicators are not improving, and remain amongst the worst in the world. This remains a stain on Uganda’s otherwise impressive development.
\textsuperscript{19} For land transport, imports greatly exceed exports, for air the opposite is true. This results in the exporter paying the full cost of air cargo, and the importer paying the brunt of land transport costs.
modal transport—most freight simply moves by truck. High fuel costs account for most of the high road freight costs. Another cost driver is that the trucking fleet is mostly old and fuel-inefficient. High effective taxes on trucks and parts, poorly administered VAT on transport services, and high interest rates on commercial lending also contribute to high inland road transport costs. Nevertheless, exporters face still higher freight rates per ton kilometer by land than domestic traders, with the highest costs being incurred on the Kenya leg of the journey.

5. **Address coordination gaps in transport and power sectors.** Internal transport logistics would benefit greatly from up-country storage linked to transport facilities, but none have opened up. Better connection between water, road and rail modes would improve external transportation, but has yet to emerge. Coordination gaps or policy failures seem to abound in the energy sector: viable proposals from private generation companies for up-country mini-hydro schemes have not started—despite the availability of public sector guarantees and capital subsidies—whilst Uganda’s industry complains about the lack of power in the country.

6. **Scale up infrastructure investments targeting exports and structural transformation.** A wide spectrum of infrastructure constraints on growth need to be addressed in the short and medium term. Uganda needs to increase exports to grow. In turn, export and trade facilitation need transport infrastructure improvements to reduce transport costs and increase Uganda’s competitiveness on regional and world markets. This will require improvements to Mombassa Port, lower fuel costs, better railways, improvement in cold storage in selected points within the country (i.e., not just in Entebbe), better transport logistics and improvements in transport bottlenecks around Kampala. Less volatile prices in agriculture could be assured from better storage, more reliable export demand, and buoyant demand from agro-processing industries for export. Uganda needs to transform the structure of the economy into one of processed agricultural products for export. This is not feasible with the current poor level of electricity supply. Neither is it feasible for Uganda to expand ICT use in the country or to develop call-centers for service exports until the electricity sector is working, and until the country develops a national telecommunications infrastructure backbone linked to an international backbone.  

7. **Manage public infrastructure better.** It would not be prudent to scale up publicly financed infrastructure without improving the way the existing stock of public infrastructure is managed. First Government needs to recognize that it is, and it will continue to be, a major financier of infrastructure in Uganda. Second, there need to be better budgetary processes for capturing and monitoring infrastructure investment and maintenance spending, and better systems for prioritization. Third, the performance of parastatals needs to be improved, and fourth, Government needs to tighten the criteria for selecting investments, and the institutional structures for managing public private partnerships (PPPs) and private finance.

8. **Initiate improvements in financial intermediation through market-friendly measures.** Don’t repeat the financial sector mistakes of the past. Liberalization and privatization of the banking sector were necessary but insufficient. The emphasis now should be less on financial stability (although this is still the foundation) and more on deepening intermediation. State provision of credit or direct coercion on interest rates

---

will not fill Uganda’s intermediation gap. A specific set of well crafted market-strengthening reforms, covering the credit reference bureau, the payment system, and leasing will help—and is set out at the end of this report.

9. **Prioritize and sequence the growth strategy.** Governments have a limited capacity to deliver in any country, and Governments in poor countries like Uganda have more to deliver than most. This makes prioritization crucial to successful implementation. There has been a tendency in Uganda to develop catch-all strategies, which though they are comprehensively conceived and well written, get implemented very slowly. The PEAP, the MTCS, and the PMA are three cases in point. Their strategic directions and even their detailed designs are laudable, but prioritization is lacking and implementation is slow. We suggest that Government should seek in future to regularly identify the likely binding constraint to growth in each sector then assess how these fit together, how they interact, and how action to remove them should be phased along a critical path. If the sequence of investments is not dealt with, success in removing one constraint will not have the desired effect. For instance, if energy shortages were overcome before transport barriers, it seems unlikely that Uganda would be much more successful in exporting processed agricultural products. In contrast, if transport costs were lowered without a more productive energy sector, Uganda could soldier on with higher-returns to traditional exports, but without structural transformation. Whereas it is not the purpose of this report to develop an investment plan for Government, Annex 1 to this volume presents an illustrative summary table of infrastructure constraints linked to areas of growth laid out in the report. Our recommendation is to move first on fixing the energy crisis, then on lowering transport costs, whilst moving quickly on getting cheaper energy supply to key processing zones.

10. **Link Education policies to labor market demand.** Skills gaps do not appear to be the binding constraints on economic growth at this point in Uganda’s development. It is of course critical to improve the quality of learning in UPE and in secondary schools, however, we recommend that to avoid a further increase in youth underemployment, Government should proceed cautiously to phase the roll-out of post-primary education, placing special attention to the economy’s future skill requirements. The exception, arguably, should be to target secondary education for girls to hasten a decline in Uganda’s very high fertility rate.

71. The next sections go into more depth on priorities for infrastructure and financial sectors, since these were considered constraints to growth. Summaries are presented of Chapters 6 and 7 of Volume II.

---

21 The PEAP also has some internal inconsistencies, which are discussed in Chapter 4.
MANAGING UGANDA’S INFRASTRUCTURE NEEDS AND ASSETS

72. Uganda’s growth has relied heavily on road transport to date. Future growth will increasingly rely on power and telecoms. The power sector will need to expand if Uganda is to industrialize, and telecommunications infrastructure will need to expand if Uganda is to capitalize on potential as a service hub and service exporter. Household, firm and farm-level evidence suggests power and transport infrastructure are most likely to be the binding constraints for growth. The provision of infrastructure services is lagging behind neighboring countries, and is some way below what is needed to improve international competitiveness for landlocked Uganda.

73. Access to infrastructure services has increased in Uganda, but still fares poorly when compared with averages for Africa and with countries with a similar income. Electricity and transport, while they are key areas for productivity and growth, have improved at a slow pace.

- **Electricity**: The electricity sector has the poorest performance of all infrastructure sub-sectors in Uganda. The electricity network covers less than 9 percent of the population overall and less than 3 percent in rural areas. Increasing unmet demand—a current shortage in generation of close to 200 MW—compounded by an insufficient transmission network and dilapidated distribution meters, leave Uganda’s power system on the edge of collapse.

- **Road transport**: There have been significant quality improvements in national and district roads, but the quality of rural roads remains a concern. Non-motorized transport predominates, with even main roads carrying substantial pedestrian and bicycle traffic. Taxes need to be rationalized and oil dealer margins should be regulated to reduce road transport operation costs. Improving the quality of the roads, strengthening maintenance, and increasing the focus on upgrading trunk roads and accessibility in Kampala are important priorities. Improvements in the national (trunk) road network would offer high social returns and productivity improvements, given their strategic functions, relative high usage (they carry most of Uganda’s traffic). Improved connectivity for rural communities has generated good social returns to date. However, upgrading the national road network is increasingly becoming a critical aspect for Uganda to keep growing at a fast and steady pace. The need to upgrade trunk roads is reinforced by the precarious state of Uganda’s railway network.

- **Railways and the petroleum pipeline**: Promoting competition among different transport modes is vital not only to reduce transport cost and further ‘connect’ Uganda for trade, but also to reduce risks associated with fuel supply. A pre-requisite for capitalizing on these transactions was to set up the appropriate regulatory framework for railways. This has now been done. The fuel pipeline is a high priority investment in economic terms, but the project fell between the ministries for transport and energy, and development agencies have so far not shown interest. If available, GoU should utilize concessionary aid or its own funds to finance construction of the pipeline. It is crucial that no monopoly rights be granted for oil transport. Progress in railways and fuel pipeline development is overdue.

- **Telecommunications**: Telecommunications has been the most promising infrastructure sector. Yet Uganda’s telecoms sector remains below the international average on some
key performance indicators. Growth priorities in telecoms include satisfying the growing demand for modern fiber optic networks, developing international connectivity, and lowering very high internet connection tariffs. IT-based service exports, such as call-centers, will not materialize unless the basic infrastructure is improved. In the short-run whilst waiting for access to a coastal fiber optic cable, Uganda should seek to purchase more satellite volume for internet access.

- **Water:** Water supply had a significant improvement in recent years, but water resource development (irrigation and water for production) is lagging behind.

74. **Despite various privatization reforms and the development of PPPs, public spending still finances the lion’s share of infrastructure in Uganda.** The private sector contributed an equivalent of 1.1 percent of GDP to annual infrastructure spending in 2003. By contrast, the public sector (on- and off-budget) provided 80 percent of total infrastructure spending—amounting to 5.2 percent of GDP. Close to 40 percent (2.1 GDP percent) of Uganda’s total public spending in infrastructure is disbursed through parastatals.

75. **Infrastructure has gained importance in the national budget in the last five years.** Transport, mostly driven by road infrastructure, and energy—essentially electricity—have the highest shares of infrastructure spending. In practice, donors who fund up to 65 percent of the infrastructure sector, drive the allocation of on-budget spending and hence the infrastructure agenda. The largest (and sustained) increase in infrastructure spending since 1997 was driven by donors, and specifically responds to the inception of the Poverty Action Plan Fund (PAF). PAF earmarked funds crowded out non-earmarked budgetary spending in the critical water and road infrastructure sub-sectors.

76. **Even for infrastructure services under the responsibility of parastatals, the national budget is the most important investor in new physical infrastructure.** Parastatals should be strengthened in their role as independent and commercially oriented service providers supported by clear allocation of responsibilities and a transparent relation with the government.

77. **Uganda’s infrastructure needs greatly exceed both the existing level of investments and the public sector’s ‘fiscal space’**. Given its income per capita, Uganda is already giving considerable priority to infrastructure development. Public budgetary spending in infrastructure has significantly increased, particularly in (feeder) roads and water supply, and institutional reforms have been initiated to enhance infrastructure through more autonomous parastatals and public-private partnerships. Yet, at an annual average of US$21 per capita, infrastructure spending is extremely low given the current state of Uganda’s infrastructure services.

78. **Government needs to create space in the national budget to meet its infrastructure priorities.** We have earlier suggested that infrastructure investments are a higher priority for growth at the margin than investments in post-primary education. Government should seek efficiency savings in education and health sectors to finance service improvements in these sectors. Efficiency savings should be sought in infrastructure spending too—by asking, does infrastructure spending currently go on the right things for growth, and is there “value for money” in existing spending? A second approach to creating additional finance for infrastructure would be to improve the investment and maintenance performance of infrastructure parastatals. A third would be to seek private finance, and a fourth would be to scale up infrastructure investments with external resources. We discuss each below.
79. **To generate better efficiency in existing infrastructure spending, public investment planning and budgeting needs to be strengthened.** Allocative efficiency between infrastructure sectors is weakened by the absence of a systematic approach to evaluating inter-sectoral trade-offs. As a result, intra-sectoral budget ceilings for line ministries are set in rather an ad hoc fashion, reflecting political but not necessarily economic growth priorities. Allocative efficiency is hampered by weak strategic frameworks and, in some sectors, overlapping responsibilities. At the project level, guidelines for project appraisal exist, but implementation capacity varies by sector. Weak institutional linkages contribute to inefficient budgeting processes. Weak budget monitoring encourages waste and corruption.

80. **For infrastructure services delegated to parastatals, there is room to significantly improve transparency and elucidate funding responsibilities.** Government should clearly define priorities, and transfer responsibility for investment selection and implementation. Investment is suffering because most spending by parastatals goes to operations and maintenance. Parastatals should be in full control of the services they are providing, should be granted responsibility and authority to make allocative decisions, and be held accountable for reaching investment targets.

81. **A fast-track debt restructuring of parastatals is needed to strengthen their ability to deliver infrastructure.** Infrastructure parastatals provide services that are not only essential for promoting economic growth, but are also considered basic services essential to the population’s well-being. Uganda’s infrastructure parastatals carry heavy liabilities that amount to about 10 percent of GDP. Except in water, and to some extent telecoms, real investments by parastatals are on a downward trend. Parastatals continue to accumulate debts and arrears, and are overstating cash liquidity by deferring payments and, in most cases, taxes. Due to their inability to recover costs, Ugandan parastatals require government guarantees for borrowing. Better financial health and a better allocation of limited resources would make financial arrangements between parastatals and Government explicit and transparent. Fiscal prerogatives, which are mostly grants included in the estimation of financial (net) costs, amounted to close to 2 percent of the total annual budget in 2004. As part of the debt restructuring (and even if the full-fledged debt restructuring is postponed) it is recommended to carry on with debt swap arrangements as necessary.

82. **The proliferation of extra-budgetary funds poses a fiscal threat in Uganda given weaknesses in governance systems and capacity.** Special or extra-budgetary infrastructure funds have increasingly been started as a means to “protect” public funds from funding specific targets. We recommend a review of the functioning of some of these funds, and to make their accounts public. Given international experience, roads funds might be—regardless the drawbacks mentioned above—a suitable option for tackling road maintenance needs in Uganda.

83. **A third way to mobilize additional infrastructure finance would be to seek scaled up private finance.** Uganda is slowly attracting private participation, but does not yet receive a significant level in infrastructure sectors. Systematic investment planning by government is a pre-requisite for private participation in infrastructure. Investment planning needs to include an evaluation of the fiscal costs and benefits of private sector participation.

84. **Infrastructure PPPs in Uganda have left a number of risks in the public domain.** PPPs in the electricity sector involve substantial government support, and the sector is once more beginning to generate fiscal costs because of the energy crisis. The costs and benefits of the rural electrification scheme need to be reviewed. By comparison, the railway concession provides an
example of appropriate risk sharing between public and private sector. Adequate institutional structures will help reduce fiscal costs of future PPPs in infrastructure.

85. **Government should explore alternative means for infrastructure financing, including local currency financing, and should gauge what it would take to tap in local financial markets.** Infrastructure finance in local currency could lower financing costs by reducing uncertainty and risk premia. Access to domestic bank and capital market term financing for the private sector alleviates budget constraints and creates fiscal space for infrastructure investments.

86. **The potential for private local infrastructure term finance in Uganda is limited by the lack of a major long-term saver in the economy.** Limited bank lending to infrastructure reflects limited willingness of banks to take term maturity risks. The depth of Uganda’s capital markets is currently limited. Increased primary and secondary market activity in 2005 illustrates that Uganda’s capital market has development potential. While commitment to infrastructure financing would appear to balance the maturity of NSSF’s obligations, NSSF currently invests predominantly in short term deposits, bills and real estate. As by far the largest institutional investor, NSSF currently dominates the new issue market in Uganda. Despite its limited size, Uganda’s financial sector has the potential to make a meaningful contribution to infrastructure term finance. Uganda’s financial market has the capacity to more than cover the local currency component of investments in infrastructure.

87. Nevertheless, the fact remains that 80 percent of Uganda’s infrastructure expenditure is in the public domain. A scale up of public investment in the short-term is needed to overcome Uganda’s infrastructure bottlenecks to growth. This recommendation for front-loading infrastructure investments runs counter to the PEAP (Section 8.4), where postponement of public infrastructure investment is proposed. A forthcoming public expenditure review on fiscal policies for growth will deal directly with how to create “fiscal space” for infrastructure.

88. **There is scope for Uganda to finance additional infrastructure from foreign aid and concessional borrowing and enhance medium term competitiveness and growth.** The margin for doing this whilst preserving the sustainability of public finances is a the topic of the forthcoming Public Expenditure Review for 2006/7 and of future joint work with the authorities and the IMF. Chapter 8 of Volume II to this report sets out the macroeconomic analysis and considerations which lead to our conclusion. Given Uganda’s initial shortage of public infrastructure, and given that public capital complements private investment, we conclude that there are potentially large medium-term welfare gains from aid-funded increases in public investment, despite short-run Dutch disease effects. However, capturing these benefits will require faster implementation of infrastructure projects to reduce the gestation lags before the economy benefits from such investments. It will also be important to ensure that any scaled up public investment is not eroded by escalating unit costs.

89. **In light of the potential gains on offer from scaled up public infrastructure, Government should not let short-term concerns about managing aid become a justification for turning it down.** Government is right to be wary about possible Dutch disease effects from absorbing and spending aid. There is always a risk a priori that external inflows—whether private or public—could appreciate the real exchange rate and reduce export competitiveness. Yet there is no empirical evidence of Dutch disease effects in Uganda to date. Furthermore, medium-term supply-side considerations must be taken into account in determining the impact of external flows on growth, not just the short-term demand-side effects. Using simulations from a
detailed supply-side model, we conclude that spending additional aid on infrastructure projects with high productivity benefits to the domestic economy would be an effective way of mitigating possible Dutch disease effects from aid. Since these have high import content, the short-term negative Dutch disease effects would be limited.

90. **There are two provisos:** public investments must yield productivity benefits that benefit poor people, and infrastructure investments must become more efficient and effective in implementation. The national welfare benefits of externally financed infrastructure projects are biggest when productivity is improved in non-traded sectors (e.g., electricity, transport, telecommunications and banking services). However, in this scenario, rural households do not reap a proportionate income gain to the rest of the economy—and so in practice inequality could widen as infrastructure constraints are removed for the benefit of the national economy. Investing in rural growth centers and seeking to employ construction workers for public works from the local District economy (rather than through national contractors) could help to stimulate rural demand and so offset inequality. As mentioned at the outset of this report, developing infrastructure that increases export demand and encourages agro-processing for export should also help offset inequality. Second, gestation lags, i.e., delays in implementation of infrastructure projects such that the onset of productivity benefits to the economy is delayed would prolong short-term Dutch disease effects, and if severe, could mean the external finance causes as much pain as gain to the economy. It is therefore not only important that Government targets the right infrastructure projects, and gets value for money to keep down unit costs, but that these projects get executed swiftly, in line with contractual obligations. More work is needed on how to speed up implementation rates in infrastructure and how to keep unit costs reasonable.

**MAKING THE FINANCIAL SECTOR WORK HARDER FOR GROWTH**

91. **Uganda’s financial sector is intermediation rather than savings constrained.** Rather than suffering from a lack of funding, the financial system seems reluctant to channel these funds to the private sector. While there is a pass-through from Treasury Bill rates to lending rates, there does not seem to be a crowding out effect, as private sector lending volume does not react to changes in Treasury Bill rates. This suggests structural impediments in the financial system, and in the banking environment at large.

92. **The financial system remains quite shallow.** The domestic savings rate is still relatively low, with foreign aid and private flows financing large parts of gross capital formation. But a lack of savings is not the binding constraint on the financial system, because lending from deposits is low. Despite rising savings, the balance sheets of Ugandan banks are increasingly dominated by foreign assets and government paper, while private lending—though increasing—has lost importance as a share of assets. Portfolio adjustments in reaction to interest rate changes mostly involve switching between foreign assets and government papers, and it appears that lending volumes are not influenced by changes in interest rates. Hence, while Uganda’s domestic savings rate is very low, and there are limited resources in the banking system, the binding constraint seems to be the lack of intermediation, not a lack of savings.

93. **Interest rate spreads and margins are high—typical characteristics of underdeveloped, inefficient and non-competitive financial systems.** Compared to comparator countries, Uganda has very high interest rate spreads and margins (see Figure 7 on page 22) reflecting high overhead costs, but also providing banks with high profits. Most of the variation in spreads and margins over time and across banks is driven by time-invariant bank
characteristics rather than changes in market structure or macroeconomic policies. While the deposit market has become more concentrated mostly due to the UCBL privatization to Stanbic, there has in recent years been no significant change in concentration in the lending market. Although the recent years' transformation of the Ugandan banking system has not significantly impacted loan market concentration, it has had a marked impact on the efficiency and structure of payment transmission services. The role of cost-efficient technology in increasing outreach should be explored so as to reduce the trade-off between outreach and costs. Given the limited impact of changes in market structure on margins and spreads, it would be difficult to make a case for a specific market structure. While certainly not providing an immediate remedy for the problems of small banking systems, regional integration is an area to be further explored.

94. **Outreach in the use of banking services is at levels comparable with that in other countries at the same level of economic and financial development.** Uganda has made considerable progress in expanding the outreach of financial institutions and improving access to financial services. The privatization of UCBL—rather than resulting in any branch closings—has led to opening of new branches and an expansion of outreach, but competitive concerns remain. Tier 1 and Tier 3 institutions are key players in the provision of services. The legal reforms enacted in 2003 and the transformation of MFIs into tier 3 institutions (MDIs) have been key elements of Uganda’s sustainable outreach expansion and have placed Uganda at the forefront of microfinance development in the Africa region. While the MDI Act and its regulations follow international best practice and even add value to these standards, the licensing of the first four applicants has tested and raised issues on the adequacy of the law and regulations. A recent government initiative to expand rural financial services through the SACCO system has laudable goals but faces serious implementation issues and risks. The limited reach of formal and informal financial institutions (or the extent of branch networks and other distribution channels) in Uganda may be the main obstacle to obtaining credit. Leasing is still limited and hampered by tax provisions and there is no factoring.

95. **Unmet demand for credit is much lower than is commonly believed.** “Effective demand” for credit is estimated to be just about 21 percent of rural households. While recent data shows that the lack of access to credit is not a major barrier to households in Uganda, a higher proportion of households were constrained in rural areas (18.7 percent) than in urban areas (15 percent). In spite of relatively extensive bank branch networks, only 8 percent of rural households hold bank accounts, leaving most of rural households outside the payments system. High transaction costs and risk-reward consideration constrain bank presence in rural areas. Only growers of a few commodities suitable for industrialization (such as tobacco, sugar, cotton, and sunflower) have access to formal credit.

96. **The market for term finance is particularly thin and needs to be developed, starting with pension reform.** The single most important measure to support the development of the market for term finance in Uganda will be pension reform. A three-pronged approach, covering funding, investment and governance, is needed for an effective restructuring of the NSSF. Establishing a larger private fund management capacity in Uganda in the context of the pension reform agenda will be crucial for the development of long-term finance. On many fronts the Bank of Uganda has taken the initiative in developing the domestic financial markets and has successfully implemented a number of reforms that have aimed at creating the enabling environment for the money and bond markets. An additional contribution towards stimulating greater liquidity on the bill and bond markets could be made by reducing volatility in the short-term money market.
97. The potential for commercial banks to reach “down market” seems not to have been exploited in Uganda. At least two of the four of the newly-licensed MDIs (UMU and FINCA) claim to have an important rural presence, and lend to rural households.

98. Reforms have to focus on structural impediments in the financial sector and business environment at large. These include deficient transportation, communication and power infrastructure; contractual and informational frameworks; fostering competition by broadening access to the payment system and credit reference bureau; fostering access for disadvantaged groups through leasing and factoring legislation and regulatory reform; and pension reform as key to unlocking long-term finance.

99. High costs of doing business and diseconomies of small size help explain the high costs of financial services, and high interest rate spreads. Deficient transportation, communications, and power all add to the operating costs of financial institutions.

100. Improvements in the contractual and informational framework will lower intermediation costs, broaden the borrower population, and foster competition. Specific actions in competition, such as broadening access to the payment system and the credit bureau beyond Tier 1 institutions and exploring alternative delivery channels to overcome diseconomies of scale are discussed. Specific policy actions such as enabling warehouse receipts and weather insurance, reforming the leasing legislation, fostering factoring, and the reform of specific regulatory requirements could enhance access to credit for specific borrower groups such as agricultural producers and SMEs. Finally, pension reform is central to developing long-term financial markets.

SPECIFIC RECOMMENDATIONS FOR A GROWTH STRATEGY

101. In line with the growth diagnostic approach of prioritizing on the most binding constraints, this section proposes top 10 immediate growth recommendations in a few narrow areas, based on the detailed analysis in Volume II. Annex 1 provides an attempt to identify some key interventions in the infrastructure sector. Paragraph 69 above set out strategic approaches for a growth strategy for Uganda. A full list of specific useful growth measures for action in the short-medium term is attached as Annex 2.

Specifics for Action Now:

- Generate a rapid demographic transition.

Agriculture:

1. Address the coffee wilt and banana bacterial wilt diseases.

2. Implement a recovery package to rehabilitate agriculture in the North.

3. Accelerate implementation of the NAADS program.

Infrastructure:

4. Scale up trunk road investments in Kampala, in selected other urban centers along the southern corridor (Mukono, Wakiso), on heavily trafficked trunk roads and by-passes, first by addressing the backlog of maintenance, then by increasing paving. Consider
accelerated road and rail transport investments in the corridor from Mbale and Jinja to Gulu once peace allows it (map 2).

5. Develop a strategy to **reduce the price of modern fuels, especially diesel**, relative to world prices, prioritizing a low cost solution to the Eldoret–Kampala oil pipeline coupled with competition for petroleum supply through the rail concession—avoid a monopoly on fuel transportation; look into the causes of **low vehicle traffic on rural roads** in this regard.

6. **Scale up investments in power generation, transmission and distribution**, overcoming coordination gaps associated with ERT, and the low investment record in the sector to date; develop a failsafe strategy for the energy sector in the run-up to and post Bujagali. Eventually expand supply to towns outside of Kampala to facilitate agro-processing and expand job creation with some regional balance. Reduce high system losses in transmission and distribution which are a drain on the power sector. Reduce high costs of electricity (among the most expensive in the world).

7. Carefully plan the location of **infrastructure-enhanced zones**, in dialogue with sub-sectors in agro processing and manufacturing industries.

8. Initiate serious negotiations with Kenya on **Mombassa Port** inefficiency and road and rail links from Kampala to Mombassa.

**Financial sector intermediation:**

9. Make the **credit reference bureau** operational as soon as possible to reduce informational asymmetries, improve lending decisions and foster competition.

10. Reform/introduce legislation for **leasing and factoring** to thus expand access to credit to small and medium enterprises.

102. **To re-cap, Uganda's economy has come a long way on 'policies and prices':** whilst preserving these gains, the priority for public policy now is to ensure a sufficient supply of high return infrastructure projects to increase the set of economic opportunities in the economy. That is, the public sector needs to identify and facilitate infrastructure projects which would induce private sector investments in new products, with the accent on developing export potential and creating jobs for a fast growing workforce. The fundamental economic strategy should remain intact, with a re-emphasis on investment and fine-tuning on the nature of public sector interaction with business. **Uganda needs investment and behavior change for growth.**
MAP 4: UGANDA'S POVERTY MAPS 2002 AND 1992

Rural Poverty Rate
Headcount Index - 2002

- Cities > 50,000

Percent of Rural HH Below Poverty Line
- < 35%
- 35% - 50%
- 50% - 65%
- 65% - 80%
- > 80%
- urban areas (no data)

Poverty map data for 2002 provided by ILRI / UBOS. variable RFGT_0 mapped at district level.

Rural Poverty Rate
Headcount Index - 1992

- Cities > 50,000

Percent of Rural HH Below Poverty Line
- < 35%
- 35% - 50%
- 50% - 65%
- 65% - 80%
- > 80%
- urban areas (no data)

Poverty map data for 1992 downloaded from CIESIN. variable RFGT_0 mapped at county level.
MAP 5: DISTRIBUTION OF FIRMS BY AGE AND DISTRICT

Distribution of Firms by Age and by District

Pre 1990

1990-1994

1995-1999

2000 and later

Percent of Firms Established by District

< 1%

1% - 2%

2% - 3%

3% - 5%

> 5%

Sources: Uganda Business Register.
MAP 6: UGANDA – ACCESS TO ELECTRICITY IN 1991 (POPULATION AND HOUSING Census)

Access to Electricity - 1991

- Cities > 60,000
- Existing Power Plants - Capacity (MW)
  - < 10
  - 10 - 50
  - 50 - 100
  - 100 - 450
- Existing Transmission Lines (kV)
  - 33.0
  - 33.1 - 132.0
- Percent of Households with Electricity for Lighting
  - < 5%
  - 5% - 10%
  - 10% - 15%
  - 15% - 18%
  - Data not available

MAP 7: UGANDA – ACCESS TO ELECTRICITY IN 2002 (POPULATION AND HOUSING CENSUS)

Access to Electricity - 2002

- Cities > 50,000

Existing Power Plants - Capacity (MW)
- < 10
- 10 - 50
- 50 - 100
- 100 - 450

Existing Transmission Lines (kV)
- 33.0
- 33.1 - 132.0

Percent of Households with Electricity for Lighting
- < 5%
- 5% - 10%
- 10% - 15%
- 15% - 18%

MAP 8: LOCATION OF EMPLOYMENT (BUSINESS REGISTER, 2002)

All Businesses by Total Employment

Distribution of Total Employment by District

Sources: Uganda Business Register, 2002.
MAP 9: LOCATION OF UGANDA’S TRADITIONAL EXPORT CROPS

Areas of Production of Important Export Crops

- Cities > 50,000
- Dams Used for Irrigation
  - Railroad
  - Roads

Dominant Crop in Area
- Coffee
- Cotton
- Sugarcane
- Other Crops

Sources: Crop Spatial Allocation Model, IFPRI, 2006. Values displayed are crops occupying greatest area within each cell. Dams from FAO Database of African Dams, 2006.
## ANNEX 1: INFRASTRUCTURE CONSTRAINTS AND GROWTH OPPORTUNITIES

<table>
<thead>
<tr>
<th></th>
<th>Feeder Roads</th>
<th>District Roads</th>
<th>Kampala Roads</th>
<th>Regional Roads</th>
<th>Trucking</th>
<th>Railway</th>
<th>Mombasa Port</th>
<th>Pipeline</th>
<th>Airport</th>
<th>Energy</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Basic Services</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Poverty reducing</td>
</tr>
<tr>
<td>Crops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Roads for inputs/Ag Services</td>
</tr>
<tr>
<td>Subsistence</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enhanced Value-added</td>
</tr>
<tr>
<td>National Markets</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes; for processing</td>
</tr>
<tr>
<td>Regional Exports</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes; for processing</td>
</tr>
<tr>
<td>International Exports</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>??</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes; for processing</td>
</tr>
<tr>
<td>Manufactures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>And for Cold Storage, etcetera</td>
</tr>
<tr>
<td>Local Market</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes; Regional Accords</td>
</tr>
<tr>
<td>International Market</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>??</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports of Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lack of rail competition constraint on reducing petroleum product prices and reducing vehicle operating/generator costs
103. The table above summarizes the information on infrastructure constraints identified in the report, and compares them to the potential source areas for growth that are laid out. It shows linkages between objectives and constraints, which, in turn identifies vectors of intervention that may have multiple impacts on different sources of growth. This information may be useful to decision-makers by showing how policy interventions support different growth and poverty reduction objectives.

The patterns revealed by the Table suggest a number of vectors of intervention.

104. Feeder and District Roads: The majority of Ugandans relies substantially on subsistence production. They do not trade much, they use few agricultural inputs (other than manure) and they have little or no access to basic services. Improving community and feeder roads could play an important role in improving access to local amenities, such as schools, health care and local markets, reducing the cost of inputs, such as improved seeds and fertilizers, and reducing the cost of transporting produce to markets. Rates of return to such road improvements can be as high as to improving paved roads. A problem exists, however, in that most rural Ugandans do not have access to motorized transport. The cost of vehicles and fuel is prohibitively high. Most transport to market is done by head-loading or by bicycle. Even the use of animal traction is low.

105. This implies that the returns to improved community roads in terms of increased marketing of crops may be slow in materializing. As agricultural services improve yields and as demand in urban areas grows, the incentives for small-scale and subsistence farmers to produce for the market will increase as will the need for them to seek more efficient modes of transport, first with animals and them perhaps with motorbikes. The ancillary benefits of improved local access to schools, local markets and water will be rapidly realized.

106. This means that maintaining community and feeder roads in rural Uganda could be a promising vector of intervention. However, in the early stages, it would seem likely that it would create more poverty reduction benefits through increased access to basic services than it would create substantial benefits in terms of growth in traded produce.

107. The Trunk Network, Kampala Roads and Regional Roads: Analysis of the road transport sector reveals that upgrading high-traffic roads to reasonable paved standards would yield high rates of return from reduced vehicle operating costs and reduced maintenance. However, given the size of the potential upgrading program, it will be important to prioritize the investments:

- It seems to be generally agreed that the roads in Kampala constitute a significant bottleneck, both for goods and agricultural products transiting the capital and for the high proportion of production and processing that takes place in Kampala. Removing these bottlenecks would seem to be a top priority.

- For the remaining trunk network of national roads, it would seem logical in the search for a growth dividend to prioritize those roads that connect important sources of agricultural and other production to the major market in Kampala and to export markets in neighboring countries further afield.

- The third important bottleneck seems to be on the corridor that runs from Kampala through Kenya to Mombasa and which carries much of Uganda's export and import traffic. The Government of Uganda can and should deal with the section within Uganda, but the section in Kenya is being dealt with by the Government of Kenya. It will be important for Uganda to ensure, through bilateral negotiations—and through
interventions with development partners, that this road is upgraded and maintained. Otherwise the potential benefits from the Ugandan road improvement program will not be fully realized.

108. It should be noted that governments are not always good at prioritizing, especially when doing so would appear to favor the capital over rural areas or to favor one region over another. However, it will not be possible to do everything at once so it is important that the Government is prepared to take the sound economic decisions that may not be very popular politically.

109. Trucking: The third vector of intervention suggested by the analysis that is summarized in the Table concerns the high cost of road transport in and to and from Uganda, stemming principally from high taxes on imported vehicles and the high cost of fuel. This situation raises the costs of locally produced goods and foodstuffs, makes imported goods and foodstuffs more expensive and disadvantages exports. Solving this problem would have an important impact on the Ugandan economy and on its growth prospects.

- The issue of taxation needs to be looked at in the context of Uganda’s public finances. Suffice it to say that it is curious to tax so heavily a sector that is so vital to all aspects of consumption (local and imported goods) and to export performance. It would be desirable for the Government of Uganda to examine whether alternative sources of revenue could be found that would permit the reduction of the taxes on freight vehicle imports. Not only would this reduce the capital costs, it would also serve to reduce operating costs by permitting the import of newer vehicles.

- The issue of high fuel prices is more complicated. To the extent that it is due to high taxes, the Government of Uganda is in a position to do something about it. The comment made above regarding high taxation on such a vital sector is also applicable here.

- To the extent that the high fuel price is due to high margins due to lack of competition, solving the problem becomes more difficult. It would appear that improved performance on the railways plus the extension of the pipeline to Kampala could be key factors in increasing competition. However, neither is guaranteed, neither will be easy (especially improving railway performance) and neither will be quick. The GoU would be wise not to count on either of these as quick fixes to improve competitiveness.

110. Finally, it might be noted that customs bonds can add up to 4 percent to the cost of an imported or exported commodity. Finding a way to use a risk-based approach to customs bonds, making them valid for several countries and speeding up their release should be a priority for the Government of Uganda in negotiations with its neighbors.

111. Rail Transport: Solving the efficiency problems of railways in eastern and southern Africa has not proved easy. So, while a more efficient rail connection would reduce the costs of many imports and bulk exports, experience suggests that improvements may not occur in the short-term, even with privatization. It will be important for Government to ensure, with its neighbors, that regulation is proactive and firm. Otherwise there is a risk that the benefits of privatization may not accrue to the governments and to businesses, rather benefiting the private investors and/or operators. Carrying out investment plan and meeting performance targets will be critical to achieving success. Nonetheless, since Government does not control the process, it would seem prudent to maintain expectations at a modest level.
112. **Mombasa Port**: Much the same can be said for expectations regarding performance improvements in the Port of Mombasa. Improving handling times for cargo transiting through Mombasa could pay major dividends for Ugandan shippers. However, improving the Port of Mombasa is the responsibility of the Kenyan Government and, thus, beyond the control of the Government of Uganda. Unless Kenya was willing to allow Ugandan participation of some sort in the governance structure of the port, which seems unlikely, Uganda is totally dependent on the Government of Kenya to solve the problem. This is not a good situation to be in, since it means that, whatever constraints the Government of Uganda removes, Mombasa could still be a bottleneck. Subsequent research should analyze the extent of this issue, by estimating the competitiveness gains that would accrue to the removal of each constraint so that their relative importance can be determined.

113. **Energy**: Alongside transport, energy features as the second—and equally important—main constraint. As can be seen from the Table, it acts as a pervasive constraint on virtually all growth opportunities. For manufacturing, the costs of power outages, brownouts and the need to maintain standby generation capacity—in a country where generators are imported and fuel is expensive—constitute a serious constraint on productive activities and substantially increase costs of production. For agriculture, the same factors can make agricultural value-added processing prohibitively expensive and can hinder attempts to put in place adequate cold storage facilities for new exports such as flowers, fruits and vegetables. Exports of services, such as call centers and teleports, relying on high speed telecommunications services, are also hampered by lack of reliable electricity provision.

114. Obviously solving the electricity supply problem is a paramount challenge. However, no respite can be expected for many years. This is not a good conclusion for a sector that has such a pervasive impact on many segments of the economy. The key question to ask is: can Government do anything more in the meantime to capture private generation projects that have been around for some time?

115. **Telecommunications**: Telecommunications reform in Uganda is relatively advanced, although it would be desirable to expand competition. Providing export services through telecommunications would appear to be an interesting future option for landlocked Uganda, since telecommunications are independent of location. There has been a huge movement in recent years to relocate call centers, help lines and a whole variety of backroom services to business offshore. With a reasonable stock of educated people, Uganda would a priori be in a good position to participate in this movement. However, substantial investment is needed to upgrade the telecommunications backbone both nationally, and with connection to the international backbone. It would be useful to locate participating firms in clusters that could have their own power generating facilities. Such an initiative would have the advantage of being totally within the control of the Government of Uganda and would likely require limited investment once the backbone connection is made. The private sector could be expected to play a substantial role.
ANNEX 2: SPECIFIC DETAILED RECOMMENDATIONS FOR A GROWTH STRATEGY

Specifics for Action Now:

Agriculture:

11. Address the coffee wilt and banana bacterial wilt disease.

12. Implement a recovery package to rehabilitate agriculture in the North.

13. Accelerate implementation of the NAADS program.

14. Place more attention on market demand for crops in the PMA. The growth strategy needs to stimulate domestic demand for agricultural products (for consumption, processing, foodstuffs) in addition to promoting export competitiveness.

15. Prioritize regional trade in grain, root crops, animal feeds and grain seed in agriculture programs, as well as "high value" products.

16. Research the factors behind the prolonged price decline between 2000 and 2002, the determinants of price volatility in general, and the determinants of fertilizer use.
   - Investigate the causes and possible solutions to storage market problems.
   - Analyze the economics of fertilizer use and the impact of risk on use of modern inputs.
   - Assess options for household risk management.

Infrastructure:

17. Initiate serious negotiations with Kenya on Mombassa Port inefficiency and road and rail links from Kampala to Mombassa.

18. Scale up road investments in Kampala, in selected other urban centers (Mukono, Wakiso), and on heavily trafficked trunk roads and by-passes, first by addressing the backlog of maintenance, then by increasing paving.

19. Accelerate modernization of the railway and ensure rail concessionaire is capable of petroleum importation to compete with pipeline.

20. Develop a strategy to reduce the price of modern fuels relative to world prices, prioritizing a low cost solution to the Eldoret-Kampala oil pipeline coupled with competition for petroleum supply through the rail concession—avoid a monopoly on fuel transportation.

21. Scale up investments in power generation, overcoming coordination gaps associated with ERT, and the low investment record in the sector to date.

22. Select productivity-enhancing infrastructure projects with high import content, and finance them on concessional terms.
23. Consider and carefully plan the location of infrastructure-enhanced zones, in dialogue with sub-sectors in agro processing and manufacturing industries.

To improve efficiency and value for money in infrastructure:

24. Realign the allocation of scarce public resources - including funds coming from Donors - with infrastructure priorities. Review the fiscal year 2007/08 budget for consistency with recommendations in this report.

25. Conduct an infrastructure efficiency study as part of the 2007/08 PER process.

26. Improve process and methods for infrastructure investment planning:
   - *At macro level*: introduce systematic approach to inter-sectoral trade-offs, including a bias on capital spending at the expense of operations and maintenance.
   - *At sector level*: develop stronger medium-term sector strategies and expenditure plans in infrastructure, particularly in non-road transportation, energy and power, and irrigation (water for production).
   - *At project level*: improve economic cost-benefit analysis of infrastructure projects.

27. Improve budget monitoring, contract enforcement, and ex post value for money analysis.

28. Improve coordination of infrastructure priorities between MoFPED, line ministries, local government, the private sector, and donors.

To Improve Performance of Parastatals:

29. Better transfer investment responsibilities to parastatals to help focus budget resources in maintenance and on selected investments.

30. Clarify the allocation of investment responsibilities between parastatals and the central government to focus budget resources in maintenance and selected investments.

31. Publish accounts of both parastatals and extra-budgetary accounts and record fiscal liabilities created by them.
To Encourage Private Finance for Infrastructure:

32. Government should only take risks under its control (such as macro, regulatory risk), private investors and their financers should take project risks.

33. Evaluate alternative means for infrastructure financing including by exploring local currency term financing, and address the bottlenecks for such financing.

To improve efficiency and competitiveness of financial intermediation:

34. Make credit bureau operational as soon as possible to reduce informational asymmetries, improve lending decisions and foster competition.

35. Expand access to the payment system and credit bureau to Tier 2 and Tier 3 institutions to broaden access to these services and increase competition.

36. Use "affirmative" regulatory policy to make banks share one ATM network for efficiency gains.

37. Reform/introduce legislation for leasing and factoring to thus expand access to credit to small and medium enterprises.

To improve access to finance in rural areas:

38. Introduce the legal framework for warehouse receipts to improve access to credit by grain producers (start now for completion soon). This will help improve grain storage (referred to in point 6).

39. Increase regulatory ceilings on MDI exposure to a single borrower (1 percent of core capital for individual loans, 5 percent for group loans) to allow MDIs to play a more substantial role in financing commercial agriculture.

40. Loosen fairly strict provisioning rules which trap Tier 1 and Tier 3 institutions into purely short-term business.

Specifics for Action Soon:

41. Scale up electricity connections to rural growth centers once base load generation for existing customers is adequate.

42. Improve efficiency of traditional fuel use by households, and efficiency of charcoal production.

43. Get access to fiber-optic cable connection and reduce the costs of external landline telecommunications.

44. Reduce the burden of corruption on exporters and medium-sized firms, targeting URA for anti-corruption effort.
45. Formalize a transparent and contestable aid-financed fund for reducing discovery costs for exporters, building on USAID's IDEAS project.

46. Work more formally, collaboratively, and transparently with export associations to identify coordination gaps and share latest technologies, whilst guarding against corruption.

47. Identify and target strategic skills and technology capabilities required for Uganda to become internationally competitive. These are likely to include skills in renewable power generation, storage and transport logistics, telecommunications and ICT, road maintenance, accounting and banking.

48. Rural infrastructure and improving market access are high priorities, but solutions need to be identified selectively to fit local conditions, and with consideration of the appropriate role for the state.

49. Implement reforms to increase competition within the banking sector (Chapter 7).

To improve efficiency and competitiveness of financial intermediation:

50. Address legal system deficiencies increasing banking risk.

51. Explore alternative delivery channels such as correspondent banking and using post offices as platform to overcome high fixed costs of service delivery.

52. Explore regional integration as a means to reduce diseconomies of scale stemming from the small Ugandan market place.

To improve access to finance in rural areas:

53. Consider cost-effective crop insurance, such as weather insurance, to reduce yield risk and thus mitigate the risk of lending to farmers.

54. Facilitate the expansion of agro-processing to crops such as oilseeds, maize and root crops and enhance marketing channels for these crops to broaden access to credit, and combine with measures to allow the use of these crops as collateral.

To improve efficiency and value for money in infrastructure:

55. Establish a regulatory body for railways and create competition between rail, road, and pipeline for fuel imports—do not allow a monopoly on fuel transport.

To Improve Performance of Parastatals:

56. Initiate debt restructuring and commercialization of parastatals.
To Encourage Private Finance for Infrastructure:

57. Establish a PPP unit in MoFPED that can help to assess adequacy of structure, evaluate risks, and budget for contingent liabilities of PPP proposals.

58. PPP proposals need to be subjected to the same cost-benefit analysis as publicly funded projects.

59. Reform NSSF and develop the capital market to improve access to long-term funds.
BIBLIOGRAPHY:


Gauthier, B. (2002), "Is Aid Leading to Dutch Disease in Uganda?" mimeo, World Bank.


PREM Notes:


58


World Bank (2006), Diagnostic Trade Integration Study (DTIS).