Republic of Uganda

Report:
Harnessing the Demographic Dividend

Accelerating Socioeconomic Transformation in Uganda

July 2014

HARNESSING THE DEMOGRAPHIC DIVIDEND

Accelerating Socioeconomic Transformation in Uganda

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The National Planning Authority

Republic of Uganda

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Acronyms

AFIDEP	African Institute for Development Policy
COMESA	Common Market for Eastern and Southern Africa
CPR	Contraceptive Prevalence Rate
CTT	Core Technical Team
DD	Demographic Dividend
DHS	Demographic Health Survey
EAC	East African Community
EPRC	Economic Policy Research Centre
ERP	Economic Recovery Programme
FDI	Foreign Direct Investment
FP	Family Planning
GDP	Gross Domestic Product
GNP	Gross National Product
GOU	Government of Uganda
HDI	Human Development Index
HPP	Health Policy Project
ICPD	International Conference on Population and Development
ICT	Information Communication and Technology
ILO	International Labour Organisation
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant mortality rate
ITN	Insecticide Treated Nets
KILM	Key Indicators of the Labour Market
LE	Life Expectancy
MFPED	Ministry of Finance Planning and Economic Development
MMR	Maternal mortality rate
NDP	National Development Plan
NPA	National Planning Authority
NPHC	National Population and Housing Census
ORT	Oral Rehydration Therapy
PEAP	Poverty Eradication Action Plan
PPDARO	Population Development – Africa Regional Office
PPI	Period of Postpartum Infecundability
PRB	Population Reference Bureau
SAP	Structural Adjustment Programmes
SDI	Service Delivery
STEI	Science Technology Engineering and Innovation
TFR	Total fertility rate
U5MR	Under-five mortality rate
UBOS	Uganda Bureau of Statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFPA	United Nation Population Fund

UNHS	Uganda National Household Survey
USAID	United States Agency for International Development
VSHD	Venture Strategies of Health and Development
WEF	World Economic Forum

FOREWORD

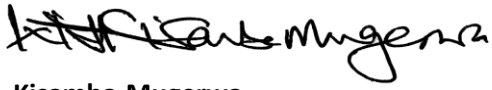
There is no more important resource in a country's development process than its human resource. It is with this central paradigm in mind that the National Planning Authority commissioned a study to explore the possibility and likelihood of Uganda experiencing and harnessing a demographic dividend. The idea of population as a crucial factor in development planning has already been espoused by the Authority and indeed the country.

Uganda Vision 2040 recognized the country's high fertility and resultant high population growth rate and unfavorable age structure as key hurdles in the realization of the vision. Uganda's population has been growing at rates of between 2.5 and 3.2 over the last 30 years mainly due to a high fertility rate of around 7 children per woman coupled with but rapidly declining mortality. The result has been a doubling of the population every 20 years and a high child dependency ratio. Currently Uganda's population is one of the youngest populations in the world, with children less than 15 years making up more than half. Coupled with young people, this means that more than three quarters of the population is aged less than 25 years.

Uganda population is projected to already be about 35 million and is further projected to double in the next 20 or so years whether fertility goes down or not. The country is therefore at a critical and defining moment. Borrowing a leaf from the experience of the East Asian countries like Malaysia, Thailand, it may be possible to turn this large youthful population into advantage. If that happens, the country will enjoy the benefits that accrue from a large population such as large markets and economies of scale in production, without suffering the burdens of the current dependency-riddled age structure.

According to Uganda Vision 2040 projections, Uganda's population will be about 70 million in 2040. This Vision therefore belongs to today's young people because it is those who are aged 25 and below today who will be the decision makers and implementers of the Vision years. Our duty as a nation today is to ensure that the seeds of the Vision targets are planted today. In this regard, Uganda Vision 2040 identified harnessing of the demographic dividend as one of the strategies for the attainment of those ambitious targets.

The task that the National Planning Authority is rolling out today, as part of the National Development Plan II preparation process, is to identify key interventions that will make a difference in the lives of today's young people to prepare them for the transformative roles that they are bound to play in the course of Uganda Vision 2040. What we shall achieve during the next five years will be identification of the key interventions, the road map for their implementation, the milestones for their achievement as well as the indicators for their measurement.



Kisamba-Mugerwa

Chairperson, National Planning Authority

Acknowledgement

The National Planning Authority (NPA), Republic of Uganda, with support from UNFPA, commissioned this report to assess Uganda's prospects of harnessing the demographic dividend in light of Vision 2040 and use the results of the study to inform the development of the Second National Development Plan (NPDII).

The NPA led the Core Technical Team (CTT), which comprised the Population Secretariat, Uganda Bureau of Statistics, Partners in Population and Development, and UNFPA. The CTT provided technical oversight of the project and validated and approved the report before submission to the Executive Director of NPA. The report was presented at a March 2014 workshop for representatives of key sectors involved in development of the NDPII and benefited from participants' feedback and advice.

The technical work of producing the report was led by Dr. Eliya Msiyaphazi Zulu of the African Institute for Development Policy (AFIDEP), who is supported by Ms. Eunice Mueni. Other members of the Technical Team were drawn from the NPA (Dr. John B. Ssekamate-Ssebuliba and Ms. Judith Mutabazi); the Economic Policy Research Centre, Makerere University (Dr. Tony Muhumuza); School of Public Health, Makerere University (Dr. Nazarius Mbona Tumwesigye); the Uganda Bureau of Statistics (Mr. Vincent Fred Ssennono and Mr. Mark Kajubi); and UNFPA (Ms. Florence Mpabulungi Tagoola; Dr. Tapiwa Jhamba, and Ms. Edith Akiror).

The report benefitted from technical input from the USAID-funded Health Policy Project, implemented by Futures Group, USA. Dr. Scott Moreland of the Futures Group provided hands-on training to the technical team in the application of the Futures Group's new Demographic Dividend modeling tool to illustrate potential impact of various policy scenarios that Uganda can adopt to harness the demographic dividend. He also reviewed and provided input on the interpretation of the modeling results.

Executive Summary

Population Change and Development in Uganda

Over the past three decades child mortality has declined steadily while fertility rates have remained high in Uganda. This imbalance has resulted in rapid population growth and a youthful population with a high child-dependency ratio. The population has grown from 9.5 million in 1969 to 35.3 million in 2013, and according to UN projections, will grow to 83 million by 2040. Because high fertility has persisted for a long time, the population of Uganda has inbuilt high momentum to continue growing for at least another century. For instance, if the current fertility level of 6.2 children per woman declines to the replacement level of about 2 births per woman by 2040, Uganda's population would continue to grow and would stabilise at about 170 million people around the year 2100. Therefore, Uganda is guaranteed to have a big population due to the high fertility rate and the concentration of young people who are yet to reach childbearing age. To turn this abundant population into valuable human resources for socioeconomic transformation and development, the country should focus on investments in high-level education, health, and economic reforms that will stimulate people's innovation, productivity, and purchasing power.

Due to the country's high fertility, Uganda has one of the most youthful populations in the world—just over half of its population consists of children under age 15. As noted in the 2008 National Population Policy and Vision 2040 (V2040), the high child-dependency ratio is a major barrier to social transformation and development in Uganda. A large average family size makes it difficult for families and the government to make the requisite investments in education and health that are needed to develop high-quality human capital and achieve higher incomes and socioeconomic development. Savings are low because parents spend most of their income to meet their children's basic needs and it is difficult for the economy to create enough high-quality jobs for the rapidly growing youthful labour force. The 2008 Population Policy calls for speedy demographic transition from high to low child mortality and fertility rates to reduce the dependency ratio and stimulate development. A speedy decline in fertility will change the structure of the Ugandan population from one dominated by dependent children to one dominated by working-age individuals over a period of 40–60 years. If Uganda can adopt appropriate policies and investments to ensure that the "surplus" labour force is innovative, skilled, healthy, and productive, such a structural shift can help accelerate economic growth and socioeconomic transformation.

Economic Outlook and Opportunities

Since the 1980s, Uganda has moved from a state of recovery and reconstruction towards steady economic growth and poverty reduction. The national economy grew at an average rate of 6.4% per year and gross domestic product (GDP) increased from UGX 11 trillion (USD 5.7 billion) to UGX 53 trillion (USD 20 billion) between 2002 and 2012. However, this economic growth has been faulted for not creating an adequate number of high-quality jobs and failing to reduce the high levels of unemployment and underemployment, especially among women and youth. This is because the growth has been fuelled by sectors that have low job-multiplier impact. Nevertheless, this impressive economic growth, combined with a favourable macroeconomic environment and other emerging economic opportunities including the recent discovery of oil and other mineral resources, increasing foreign direct investment, and growing regional integration and partnership with the East, provide a glimmer of hope that Uganda can achieve the development ideals outlined in Vision 2040. The vision provides a broad-based framework to address the strategic bottlenecks that have constrained Uganda's socioeconomic development and to optimise the unique opportunities that the country harbours to accelerate its socioeconomic transformation.

Opportunity to Earn the Demographic Dividend

Uganda's population dynamics and economic opportunities can be turned into a valuable demographic dividend if it adopts the policy road map followed by the East Asian Tigers and against which the country benchmarks itself in Vision 2040. The demographic dividend refers to the economic benefit a society enjoys when fertility and mortality decline rapidly and the ratio of working-age adults significantly increases relative to young dependents. Experience from the Asian Tigers shows that in order to earn the demographic dividend, countries should prioritise investments in human capital to ensure a healthy and well-educated population; accelerate economic growth and job creation to ensure that the "surplus" labour force is gainfully employed and has strong purchasing power; and enforce accountability and efficiency in the use of public resources and delivery of social services.

Study Objectives

The primary objectives of this study are to assess Uganda's prospects for harnessing the demographic dividend and to explore priority policy and programme options that the country can adopt to optimise the dividend in the light of the development aspirations expressed in Vision 2040. The specific objectives are to:

1. Review demographic and economic opportunities and challenges and assess their implications for attainment of Vision 2040.
2. Assess the prospects of harnessing the demographic dividend in Uganda.
3. Demonstrate policy options for optimising the chances of earning the demographic dividend in Uganda.

Methodology

The study is based on a review of the general literature on the demographic dividend and on population dynamics and economic change in Uganda. It also reviewed trends in national demographic and socioeconomic indicators derived from various national data sources including population censuses, household budget surveys, demographic and health surveys, and macroeconomic and planning data from the Uganda Bureau of Statistics and the UN Population Division. To demonstrate the potential benefits of the demographic dividend and illustrate the relative impact of various multisectoral policies and investments required to achieve those benefits, the study used the DemDiv modelling tool, developed by the USAID-supported Health Policy Project (HPP). The modelling was based on four policy scenarios described below.

Key Findings

The study showed that Uganda's demographic indicators and emerging economic opportunities can be turned into a sizable demographic dividend that can propel the country to achieving the socioeconomic transformation envisaged in Vision 2040.

Under the *Business as Usual Scenario*, where the prevailing lacklustre performance in both the economic and demographic environments was projected to continue, Uganda would achieve limited economic growth and development, and the per capita GDP would increase from USD 506 in 2011 to USD 927 in 2040. This level of economic growth falls far short of the USD 9,500 target defined in Vision 2040.

The *Economic Emphasis Scenario*, in which the country prioritises economic reforms and invests at the level articulated in Vision 2040 and enjoyed by the benchmark countries, projected that per capita GDP would increase to USD 6,084. This would be a sizable improvement from the 2010 income level, but still far short of the Vision 2040 target.

In the *Combined Economic and Demographic Emphasis Scenario (V2040)*, the country prioritises economic, social and demographic factors to achieve the socioeconomic transformation envisaged in Vision 2040, resulting in per capita GDP would increasing to USD 9,567. This is in line with the V2040 target and would move Uganda into the upper middle-income category as defined by the World Bank.

Policy Actions for Harnessing the Demographic Dividend in Uganda

Results of the modelling showed that fulfilment of Uganda's aspirations for socioeconomic transformation and transition to being an upper-middle income country by 2040 can be enhanced considerably if the country adopts policies that will harness a maximum demographic dividend. These include:

- Accelerating fertility decline by enhancing investments in family planning

- Making investments in female education Fast-tracking economic reforms to enhance economic productivity and job creation by prioritising the development of economic infrastructure and export-oriented industrialisation.
- Reforming the educational system to ensure a labour force that will be skilled, innovative, and globally competitive.
- Improving investments in health so the population and labour force are healthy.
- Enhancing governance, accountability, and efficiency in the use of public resources to instil investor confidence and ensure good value for money in all government investments and programmes.

These policy options allowed the Asian Tigers to achieve what many considered to be miraculous economic development between 1970 and 2000. Uganda's relatively impressive economic growth over the past decade, its emerging economic opportunities and abundant natural resources, the high levels of unmet need for family planning and growing desire for couples to have fewer children; and the elaborate definition of key development bottlenecks and potential solutions in Vision 2040 provide a solid foundation from which it can realise its full development potential. To move forward, Uganda should break from the business-as-usual culture, mobilise financial and technical resources, and cultivate public responsibility and ownership of the country's development destiny.

A starting point is facilitating a rapid, voluntary decline in fertility by ensuring universal access to family planning that is reinforced by female education. Experiences from the Asian Tigers and other African countries show that it is possible to increase contraceptive use and reduce fertility considerably over the coming decades. Uganda's commitment to the FP2020 programme that Uganda signed on to at the London Family Planning Summit in 2012 is a major positive step, but much more must be done to operationalise the political will and ensure universal access to high-quality contraception. The family planning programme should: optimise its capacity to address both demand and supply barriers to access and use of contraception; have strong community orientation and ownership, sustained funding, robust evidence and rights-based accountability frameworks; and include strong population and reproductive health coordination organs within government. The country also needs to increase the empowerment of women and female education to curb the high number of pregnancies among school dropouts and teenagers, which will help reduce overall fertility.

Uganda can also build on its impressive economic growth over the past decade and emerging economic opportunities, such as recently discovered oil, tourism and minerals development, to accelerate economic growth and job creation. Failure to create enough jobs for the growing youthful labour force could lead to political instability and a "demographic curse". The country must also reform its education system to ensure universal enrolment at the secondary and tertiary levels and improve the quality of education so the system produces skilled, innovative, and science-focused graduates who are equipped to steer industrialisation and maintain a competitive service sector. Reinforcing investments in the health sector will also ensure that the country has a healthy labour force that will live longer and contribute more to the socioeconomic transformation envisaged in Vision 2040. Vision 2040 articulates the country's economic challenges and opportunities very well. If Uganda lives up to its commitments and breaks away from the business-as-usual approach to address its challenges decisively, the country stands a good chance of transforming into a high middle-income economy by 2040 as defined in the Vision 2040 document.

1. Introduction

1.1. Population Change and Implications for Development

Uganda's population presents both challenges and opportunities for the country's development. Due to its high, slowly declining fertility rate and steadily declining child mortality over the past three decades, Uganda's population is very youthful, has a high child-dependency ratio, and is growing at a rapid rate. The population of Uganda grew from 9.5 million in 1969 to about 35.4 million in 2013, representing an annual growth rate of 3.2 per cent (UBOS, 2013a). According to UN population projections, the country's population will more than double—to around 83 million—by 2040, assuming that the current fertility rate of 6.2 births per woman declines to about 3.7 by 2040 (United Nations, 2013).

About half of Ugandan's population (52%) comprises children under age 15 (Population Secretariat, 2013). As noted in the 2008 National Population Policy and Vision 2040 (V2040), the high child-dependency ratio is a major challenge undermining social transformation and sustainable development in Uganda, with one working-age person (age 15–64) supporting 1.9 people in the dependent age groups. A large average family size makes it difficult for families and governments to make adequate investments in education and health, which are critical for socioeconomic and human capital development. Furthermore, parents and governments have limited savings because they spend most of their income on meeting the basic needs of their children. The 2008 National Population Policy calls for a speedy demographic transition from the current high rates of child mortality and fertility to low child mortality and fertility rates to reduce the dependency ratio and stimulate development.

If the birth rate declines steadily, Uganda's age structure will change, resulting in a population that has more working-age people relative to dependent children. This shift in the age structure could be a huge impetus for accelerating the socioeconomic transformation envisaged in Vision 2040 if Uganda can make requisite investments to increase economic growth and job creation and in human capital development to ensure that the large labour force will be healthy, well educated, skilled, and gainfully employed.

Another phenomenal change that Uganda's population is poised to experience is an increase in the proportion of Ugandans living in urban areas. United Nations projections show that the urban population will increase from the current level of 17 per cent to 37 per cent of the country's total population by 2050 (United Nations, 2012). Urbanisation has traditionally provided massive advantages to national socioeconomic transformation efforts in developed and emerging economies, and effective management of the urbanisation process can augment attainment of the Vision 2040 goals.

1.2. Economic Outlook and Opportunities

Since the 1980s, Uganda has moved from a state of recovery and reconstruction towards steady economic growth and poverty reduction. The national economy grew at an impressive average rate of 6.4 per cent per year, and GDP grew from UGX 11 trillion (USD 5.7 billion) to UGX 53 trillion (USD 20 billion) between 2002 and 2012 (UBOS, 2013a). However, this economic growth has been faulted for not creating an adequate number of high-quality jobs and failing to reduce the high levels of unemployment and underemployment, especially among women and youth, because it has been fuelled by the service and infrastructure development sectors that have low job-multiplier impact (Ssewanyana, 2009). Nevertheless, the steady economic growth, combined with a favourable macroeconomic environment and emerging economic opportunities including the recent discovery of oil and other mineral resources; increasing foreign direct investment; and growing regional integration and partnership with the East, have provided considerable hope that Uganda can achieve the development ideals outlined in Vision 2040.

1.3. Opportunity to Earn a Demographic Dividend in Uganda

Uganda's population dynamics and emerging economic opportunities can be turned into a valuable demographic dividend if the country adopts the policy road map followed by the East Asian Tigers. The demographic dividend refers to accelerated economic growth that arises when the birth rate declines rapidly and the ratio of working-age adults significantly increases relative to dependents (Bloom et al., 2003; Mason 2001). This change can accelerate economic growth through increased productivity of the "excess" labour force if the economy generates enough high-quality jobs, greater household savings, and lower costs for basic social services provided to a young population.

Analyses of the phenomenal socioeconomic development experienced by East Asian countries like Malaysia, South Korea, Thailand, Singapore, Hong Kong and Thailand show that the demographic dividend could account for one-quarter to one-third of the economic growth these countries experienced between 1970 and 2000 (Bloom and Williamson 1998; Mason 2001). In the 1960s, the levels of development and fertility in countries like Malaysia and South Korea were the same as Uganda. They took a drastically different development path from that of Uganda through sustained investments in family planning (FP), education, health, and export-oriented economic reforms that helped to accelerate economic growth and job creation. Evidence from other developing countries shows that Uganda could harness the demographic dividend if it makes similar commitments to human capital development and adopts and decisively implements economic reforms. Uganda's economic and demographic opportunities are well articulated in Vision 2040 and in a 2011 World Bank study that modelled the impact of demographic variables on per capita income levels. The World Bank study concluded that Uganda's economic future looks brighter under assumptions of demographic change characterised by substantial declines in fertility and child mortality (World Bank, 2011).

1.4 Pathways for Earning the Demographic Dividend

Achieving rapid fertility decline and creating an age structure with more working-age adults than dependent children is necessary but not sufficient to harness the demographic dividend. Indeed, the demographic dividend is not automatic; countries must earn it by implementing policies that will not only accelerate rapid decline in fertility, but also ensure that the resulting surplus labour force is well educated, skilled, healthy, and economically engaged. High-quality human resources are essential for optimising productivity and the associated socioeconomic benefits that a country can harness from the demographic transition. Even more critically, the economy must have the capacity to generate enough high-quality jobs for the surplus labour force to harness the demographic dividend. Finally, to instill confidence in both local and foreign investors, good governance, foresight, and economic infrastructure such as energy, communications and transport must be present to ensure business efficiency. Creating a visionary culture of national responsibility and accountability in the use of public resources and delivery of social services will increase the resources available for investment in the development of human capital and infrastructure needed to stimulate economic productivity.

Appropriate country-specific economic and governance reforms should be adopted to attract local savings and foreign direct investment that will stimulate sectors and industries of comparative advantage in accelerating economic growth and creating high-quality jobs for the rapidly growing labour force. Tunisia and South Africa are good examples of how countries can miss out on harnessing the full demographic dividend if the demographic transition is not accompanied by sustained, job-oriented economic reforms.

The effects of the demographic dividend operate in two major phases. The first demographic dividend refers to the increase in economic output as a result of the increase in the number of workers. The second demographic dividend refers to the increase in output that is created by the enhanced human capital investments per child and increased savings and investments that households and governments make as a result of reduced costs of caring for children. The availability of high-quality human capital and more financial resources help enhance capital formation and the development of economic infrastructure, which are critical for igniting further economic growth.

An examination of the two components of the demographic dividend for East and South Asia show that the first demographic dividend accounted for 0.59 percentage points per year of the actual growth in GDP per effective consumer between 1970 and 2000, while the second dividend accounted for 1.31 percentage points per year of growth (Mason, 2005).

Pathways for Harnessing the Demographic Dividend

The First Demographic Dividend

1. Bigger labour force following rapid fertility decline can increase overall economic productivity if the labour force is gainfully employed.

2. Reduced fertility enables women to spend more years in school, participate in formal economic activities, and enhance overall economic productivity.

3. Reduced fertility lowers the total costs of caring for dependent children (nutrition, health, education), so parents have more disposable income that they can use to enhance the level of human capital investment per child (which would help improve productivity when the children grow into working adults).

The Second Demographic Dividend

4. Due to the reduced expenditure on children as a result of lower fertility, increased household incomes resulting from the greater participation of women in the labour force, and the improved health and longevity of workers, savings for old age security increase, providing a greater impetus for further investment and capital formation.

5. Low fertility enables governments improve the quality of health and education services and accumulate savings that can be diverted to capital formation and the development of economic infrastructure, which are critical for attracting direct foreign investment.

The comprehensive reforms that countries must enact and implement to harness the demographic dividend can be categorised into the following five pillars:

Policy Pillars/wheels for Harnessing the Demographic Dividend

1. **Accelerating demographic transition** through investments that facilitate rapid fertility decline, enhance child survival, and improve education and general empowerment of women
2. Enhancing **investments in high-level education** to develop a well-educated, skilled, and innovative labour force
3. Enhancing **investments in health** to nurture a healthy and productive labour force
4. **Economic reforms to accelerate economic growth and job creation** for the rapidly expanding labour force
5. **Fiscal policies and governance reforms** to enhance savings, attract foreign direct investment (FDI), and ensure efficiency and accountability in the use of public resources

All five policy pillars/wheels are interrelated; they reinforce each other and should be implemented concurrently to drive the country towards the economic prosperity that can accrue from the demographic dividend (see Figure 1.1). If any of the wheels breaks down or is dysfunctional, all the other wheels will be slowed down, thereby limiting the extent to which a country can harness the demographic dividend. Furthermore, the demographic dividend is not an event that happens or is achieved in a given year—it's an accumulation of economic gains that accrue over many years as the

population age structure changes to include more working-age people and the requisite investments are made in human capital development and job-oriented economic reforms.

Figure 1.1: Five Policy Wheels for Creating and Earning the Demographic Dividend

Source: Harnessing the Demographic Dividend: A PRB ENGAGE Presentation, 2013a

1.5 Vision 2040 – Road Map to Upper Middle-Income Status

Uganda's socioeconomic transformation blueprint, Vision 2040, was approved by the Cabinet in 2007 to provide the first long-term road map for transforming the country from a "predominantly peasant and low income country to a competitive, modern and prosperous upper middle income country" by 2040. V2040 provides a broad-based framework for addressing the strategic bottlenecks that have constrained Uganda's socioeconomic development, and optimising the country's unique opportunities to accelerate its socioeconomic transformation. The key targets for V2040 include attainment of a per capita GNP of USD 9,500 from the 2011 level of USD 506, translating to an average economic growth rate of 8.2 per cent (NPA, 2013).

The key opportunities include oil and gas, tourism, minerals, information and communication technology (ICT) business, an abundant labour force, globalisation and regional economic integration, geographical location, trade, water resources, industrialisation, and agriculture. Key economic fundamentals that must be addressed for the country to achieve the envisaged socioeconomic transformation include economic infrastructure (energy, transport, water, oil and gas, and ICT); science, technology, engineering, and innovation (STEI); land use and management and urbanisation; human resources; and peace, security, and defence. V2040 underscores the importance of strengthening accountability and governance and developing a national value system to promote patriotism, enhance national identity, and create shared responsibility in developing the country.

Uganda's Key Development Bottlenecks – Vision 2040

1. Low competitiveness of goods and services
2. Weak public sector management and administration
3. Ideological disorientation of citizenry: weak patriotism, poor work ethic, negative attitudes and mind-set
4. Low industrialisation and value addition
5. Corruption
6. Limited government investment in strategic and emerging industries
7. Slow accumulation of modern infrastructure
8. Inadequate human resources: poorly educated and unskilled labour force
9. Low levels of savings and inadequate revenue collection
10. Unfavourable demographic profile: high population growth and child-dependency burden

Uganda's Vision 2040 benchmarks the country's development path to upper-middle income countries, specifically to the experience of four countries: Malaysia and South Korea in East Asia and Mauritius and South Africa in Africa.

V2040 highlights the potential role of the demographic dividend in realising the envisaged socioeconomic transformation. Rapid population growth and a high child-dependency burden are among the top ten development bottlenecks outlined in V2040 (see text box). To address this challenge, V2040 advocates for a reduction in fertility through increased access to reproductive health services, keeping all school-age children (particularly girls) in school, and improving the health service delivery system. It notes that one of the key outcomes of the decline in fertility would be a decline in the dependency ratio. V2040 also explains that Uganda can benefit from the demographic dividend in the same way that the Asian Tigers did.

1.6 Study Objectives

The African Regional Conference on Population and Development was held in Addis Ababa, Ethiopia, from September 30 to October 4, 2013, and participants at the conference adopted a common position for the implementation of The International Conference on Population and Development (ICPD) beyond 2014 for Africa's development transformation. The theme of the conference was "Harnessing the Demographic Dividend: The Future We Want for Africa," and attendees endorsed and adopted the "Addis Ababa Declaration on Population and Development in Africa Beyond 2014." The declaration mapped out a shared, forward-looking plan that will enable the continent to accelerate progress towards the goals of ICPD.

In response to commitments 21 and 22 of the Addis Ababa declaration and as part of the process to develop the Second National Development Plan (NDP II), the National Planning Authority (NPA) and its partners (UNFPA, Population Secretariat, UBOS and Partners in Population Development–Africa Regional Office [PPDARO]) commissioned this study to undertake a secondary literature review, conduct further/in-depth analysis of UDHS, UNHS, and census projections and other data sets to

help Uganda understand the demographic dividend, create appropriate policies, and identify actions to harness the dividend. The study was designed to inform the development of the NDP II for 2014–2019, under the theme "Strengthening Uganda's competitiveness for wealth creation, employment, and inclusive growth." National development plans are developed by the NPA, and they provide five-year road maps for operationalising Vision 2040. Sectoral and local government development plans feed into the national development plans.

The primary objectives of this study are to assess Uganda's prospects for harnessing the demographic dividend, and to demonstrate priority policy and programme options that the country should adopt to optimise its dividend in light of the development aspirations expressed in Vision 2040. The specific objectives of the study are to:

1. Review demographic and economic opportunities and challenges and assess their implications for attainment of V2040.
2. Assess the prospects of harnessing the demographic dividend in Uganda.
3. Demonstrate policy options for optimising the chances of earning the demographic dividend in Uganda.

This study builds on a 2011 report by the World Bank, "Demography and Economic Growth in Uganda," which examined various economic scenarios in light of fertility trends. The study analysed the economic opportunities and contexts and how these are linked to the country's current and future demographic realities. The basic conclusion of the study was similar to the conclusion of this study—Uganda is well on course to achieve a marked socioeconomic transformation and this process will be accelerated if the country addresses the economic and demographic bottlenecks that affect its development path. The main difference between this report and the World Bank report is that the current modelling sought to examine the relative impact of various levels of action or non-action on the prospects of harnessing the demographic dividend using a model that was designed specifically to address this issue. Additionally, the World Bank report used the UN fertility scenarios to model the potential impact of demographic change on growth in per capita income, while this study used integrated scenarios that demonstrated what the country would need to do on the economic and demographic sides to achieve the economic targets set out in Vision 2040.

1.7 Methodology

The study employed a combination of methodologies including collation and interpretation of secondary data and indicators, further analysis of existing data to fill particular evidence gaps, and developing scenarios to model to demonstrate the potential impact of various policy options in harnessing the demographic dividend. Additionally, the study involved a detailed desk review of literature on the demographic dividend and best practices that have helped various countries address implementation hurdles in each of the five policy wheels. A combination of these methodologies provided an overall assessment of Uganda's chances of harnessing the demographic dividend and recommendations were made on the policy options the country should adopt to optimise the dividend.

To demonstrate the potential benefits of the demographic dividend and identify the multisectoral policies and investments required to achieve those benefits in Uganda, the study team used the DemDiv modelling tool, developed by the USAID-supported Health Policy Project (HPP) led by Futures Group (Moreland et al., 2014). DemDiv is structured as a two-part model that projects demographic and economic changes using equations to estimate employment and investment, along with an estimation of GDP and GDP per capita. The model is scenario- and projection-based, comparing several different possibilities for future development against each other to show the varying benefits of different combinations of investments. In particular, the model allows users to design multiple scenarios showing how the combined power of policy investments in FP, health, education, and the economy can generate a demographic dividend, which could play a key role in accelerating socioeconomic development in Uganda as envisioned in the Vision 2040.

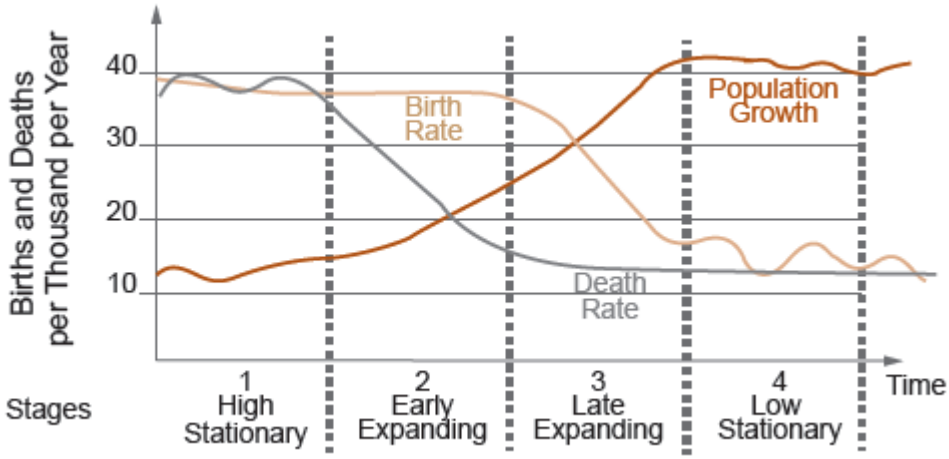
2 Demographic Change and Socioeconomic Development in Uganda

2.1. The Demographic Transition in Uganda

A review of the history of population change and its linkages to economic development shows that countries typically passes through four stages of transition from high birth and death rates to low birth and death rates as they transform from an agrarian economic systems to an industrialised-urbanised economic structures of the nature envisaged in Vision 2040 (Figure 2.1).

The first stage is characterised by high birth and death rates and low population growth rates. The death rate is high because of high levels of disease, famine, lack of clean water and sanitation, and poor health care. In response to the high death rates, couples have many children to ensure that some will survive to adulthood. The high fertility regime is also characterised by dependence on subsistence farming; high demand for child labour; universal and early marriage; low levels of school enrolment, especially for girls; and low demand for and use of contraception.

Figure 2.1: Phases of the Demographic Transition



Source: http://geographyfieldwork.com/ DemographicTransition.htm

The second stage is characterised by a rapid increase in the rate of population growth. This occurs as a result of a sharp decrease in the death rates due to improvements in nutrition, sanitation, and public heath that lead to reductions in infant and childhood morbidity. In this stage the birth rate remains high because fertility is entrenched in cultural and economic values that take time to change.

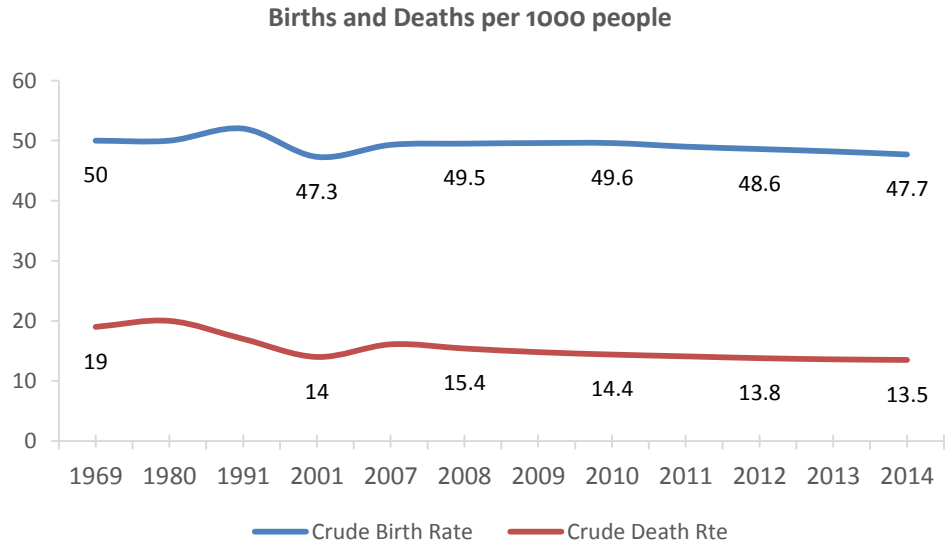
In the third stage, the birth rate starts to fall due to a range of factors including increased access to female education and employment, urbanisation, reduced child mortality, and declining importance of child labour. During this stage, the population growth rate remains high but begins to decline.

The fourth stage is characterised by stable population growth due to low birth and death rates. Improved control of diseases and reliable availability of food keep the death rate at low level. Reasons for the low birth rate include increased access to contraception for women, which allow

families more choice in the number of children they would like to have, and increased opportunities for women's employment. Most of the developed countries are in stage four of the demographic transition. During the course of the demographic transition, the average number of births per woman declines from seven or more to the replacement level of two or fewer.

A review of Uganda's mortality and fertility data shows that it is in the second stage of the demographic transition, with falling mortality rates and persistently high birth rates (Figure 2.2). According to the Demographic and Health Surveys (DHS), under-five mortality decreased from 180.4 deaths per 1,000 live births in 1988 to 90 in 2011, while infant mortality rates declined from 101.2 deaths per 1,000 live births to 54 during the same period (UBOS and ICF, 2012).

Figure 2.2: Past Trends and Current Levels of Crude Birth and Death Rates

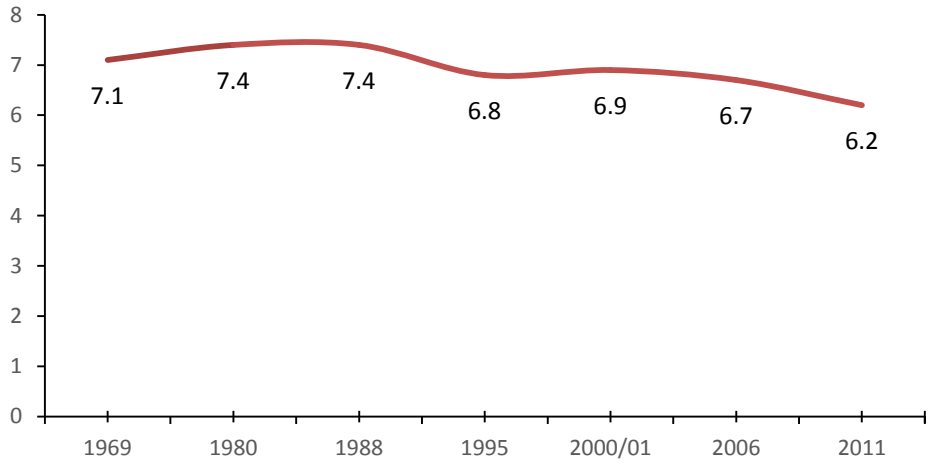


Source: NPHC 2002; Uganda Bureau of Statistics, 2007

Fertility Trends

The total fertility rate has remained almost stagnant for most of the last four decades and only recently started declining slowly. The fertility rate increased from 7.1 births per woman in 1969 to 7.4 in 1988 and declined to 6.2 in 2011 (Figure 2.3) (UBOS and ICF, 2012). There are substantial socioeconomic and geographical differentials in fertility rates in Uganda. According to the 2011 DHS data, the total fertility rate in urban areas was 3.8 while it was 6.5 in rural areas. The Eastern region had the highest fertility rate (7.5) followed closely by East Central and West Nile, and Kampala had the lowest of all regions (3.3). The fertility rate for women with at least secondary education was 4.8; for those without education it was 6.9. Even bigger differentials are seen in wealth status, with the poorest 20 per cent of women having 7.9 children while the richest 20 per cent have 4 children (UBOS and ICF, 2012).

Figure 2.3: Trends in Total Fertility Rates (1969–2011)



Source: UDHS and NPHC (1969, 1980)

Drivers of High Fertility in Uganda

The slow decline in fertility has been attributed to the persistence of cultural beliefs that favour having many children; early marriages and high school dropout rates for girls; and low demand for, supply, and use of contraception. According to the 2011 Uganda DHS the ideal number of children in 2011 was 4.8 for all women and 5.7 for all men (UBOS and ICF, 2012). The wanted fertility rate, which measures age-specific fertility rates for births that were desired, is 4.5. Therefore, Ugandan women have 1.7 more children than the number they would like to have, meaning that actual fertility would be about two children lower if all unwanted births were avoided through effective means of contraception. The gap between the actual and wanted fertility rates is smallest among the urban bases (3.8 versus 3.2) and the richest 20 per cent (4.0 versus 3.3) and highest among the poorest 20 per cent (7.9 versus 5.6), those living in East Central (6.8 versus 4.4), and those living in rural areas (8.2 versus 4.8) (UBOS and ICF, 2012).

One factor affecting the slow decline in fertility is that in 2011 only 26 per cent of Uganda's married women between ages 15 and 49 use modern contraception, an increase from 17.9 per cent in 2006 (Table 2.1) (UBOS and ICF, 2012). Among all women of reproductive age, only 20.7 per cent were using contraception in 2011. In addition, 34.4 per cent of married women who want to postpone or avoid pregnancy are not using an effective family planning method, and are categorised as having unmet need for family planning (UBOS and ICF, 2012).

Further, the low level of education is contributing to high fertility. Although primary school enrolment rates for both boys and girls are high in Uganda, more than half of them drop out of school (54%), with only 58% progressing to secondary school. The net secondary school enrolment rate is very low (21%) and 20 per cent of these students drop out of school (UBOS, 2013b). The negative correlation between women's education and birth rates is well documented, and increasing school attendance and progression for girls is considered to be one of the most effective means to reduce fertility (Basu, 2002; World Bank, 2013a). Educating girls and keeping them in school longer delays the onset of childbearing and marriage. The latest DHS data show that girls are starting childbearing early (age 18.9) and getting married even earlier (age 18.1) (UBOS and ICF, 2012).

Disaggregating these numbers by education level shows a difference of two years in age at first birth between women with secondary education and those with none.

Promoting the general empowerment of women should, therefore, be at the centre of efforts to facilitate fertility decline. Empowered women have greater autonomy to make informed decisions that positively influence their reproductive health. This entails investing in their education and participation in economic activities. Low levels of schooling are often linked to early marriage and high fertility, which undermine social capital and reduce women's labour force participation rates. A recent study showed that Ugandan women are disproportionately represented in lower-paid jobs and small-scale agriculture, and women are more likely to be engaged in marketing and selling food crops while men dominate the sales of export cash crops, such as coffee—even though women contribute a large share of the labour for coffee production (Wedig, 2012).

If Uganda is to experience rapid demographic transition and harness a demographic dividend of the magnitude enjoyed by the Asian Tigers like Malaysia, the country must do much more to address the cultural, socioeconomic, psychosocial, and contraceptive supply bottlenecks that are preventing a decline in fertility. South Korea and Malaysia reduced their fertility rates from 6.3 to 1.5 and from 6 to 2.5, respectively, between 1960 and 2000 (United Nations, 2013). This is equivalent to South Korea reducing fertility by about five children per woman and Malaysia reducing it by about four children per woman in 40 years. The government of Uganda should therefore prioritise investments in FP at the national and subnational levels; address barriers to demand for, access to, and use of FP among married and unmarried couples; delay the onset of childbearing by promoting school progression beyond primary schools; and provide FP to adolescents who are sexually active. Furthermore, interventions to reduce child mortality should be reinforced because fertility decline is only possible when parents are assured that their children will survive.

Table 2.1: Trends in Fertility and Fertility Preferences and Determinants

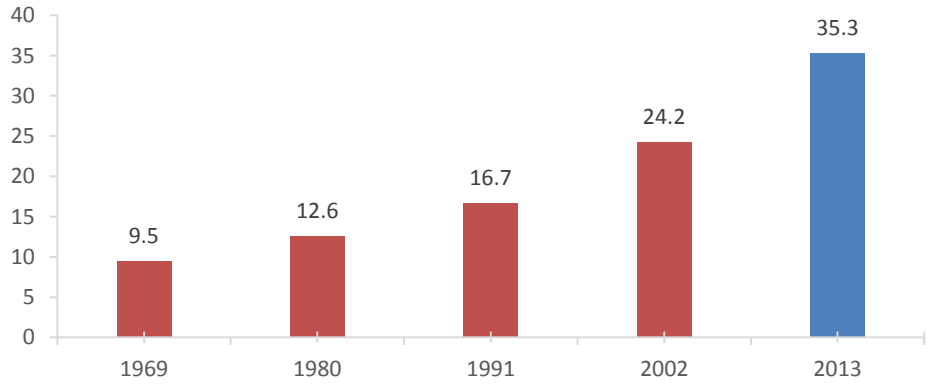
Indicator	1988	1995	2000/01	2006	2011
Fertility rate	7.4	6.8	6.9	6.7	6.2
Wanted fertility		5.6	5.3	5.1	4.5
Modern contraceptive prevalence rate	2.5	7.8	18.2	17.9	26
Unmet need for family planning	53.7	29	24.4	40.6	34.3
Median age at first birth	18.5	18.6	18.7	18.7	18.9
Median age at first marriage	17.1	17.4	17.8	17.8	18.1

Source: UDHS and NPHC (1969, 1980)

2.2. Past and Projected Population Growth

The consequence of the gap between mortality and fertility levels is the high population growth rate. Uganda's population growth rate estimates show increases from 3.32 per cent in 2007 to 3.5 per cent in 2011 (UBOS, 2007). The high growth rate has resulted in rapid population growth, with a doubling time of 22 years between 1980 and 2002 (Population Secretariat, 2013). The population increased from 9.5 million in 1969 to 24.2 million in 2002, and 35.4 million in 2013 (Figure 2.4) (UBOS, 2013). Currently, more than a million people are added to the population every year.

Figure 2.4: Population Growth Trends in Uganda Census Years (projection in 2013)

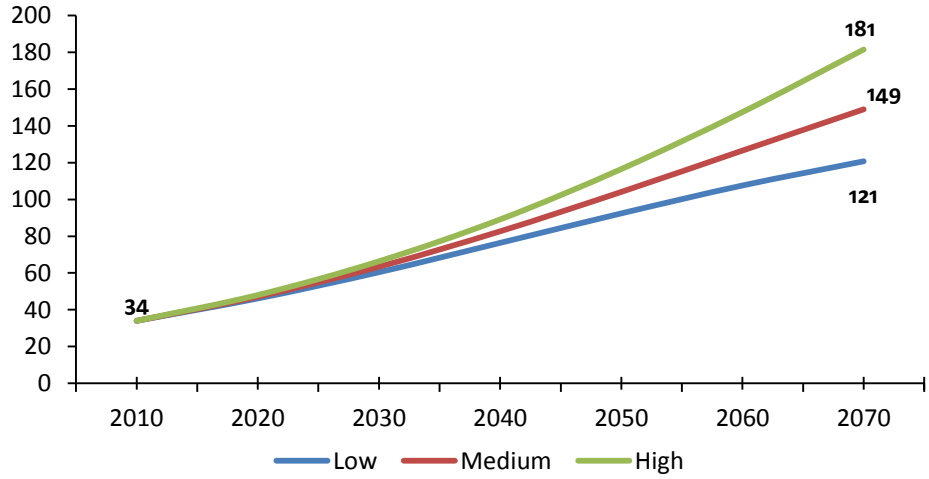


Source: Uganda Bureau of Statistics, 2013

Projected Population Growth

The 2012 UN population projections indicate that Uganda's population could grow to 76 million by 2040 and 121 million by 2070 following the low projection variant (Figure 2.5) (United Nations, 2013). However, if the country follows the high projection variant, the population would grow to 89 million by 2040 and 181 million by 2070. Under the medium projection variant, the respective numbers would be 83 million and 149 million.

Figure 2.5: UN Population Projections for Uganda (Millions)



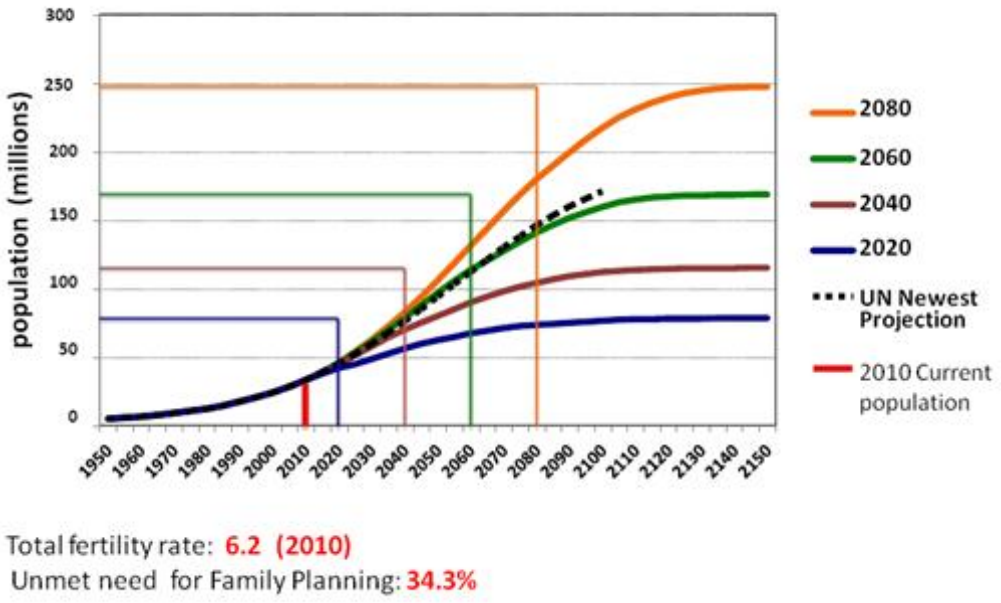
Source: United Nations (2013)

The main determinant of future population growth is how fertility will evolve in the future. The UN medium fertility variant assumes that the current level of fertility of 6.2 in Uganda will decline to 3.51 by 2040, 3.03 by 2050, and 2.4 by 2070 (United Nations, 2013). The low fertility variant is half a child lower than the medium variant, while the high variant is half a child higher than the medium variant. Therefore, projected fertility under the low variant would be 3.01 by 2040 while for the high variant it would be 4.01.

Population Momentum

Due to high levels of fertility, young people dominate Uganda's population. A youthful population creates high population momentum, which refers to the tendency for populations to continue growing for several generations after reaching replacement level fertility (approximately 2.1 births per woman). This is due to the high concentration of young people who are yet to enter their childbearing ages when replacement level fertility is reached. Figure 2.6 shows that if Uganda attained its replacement level fertility by 2020, its population would continue to grow from 32 million in 2010 and stabilise at around 70 million in 2080 (VSHD and AFIDEP, 2013). If the 2011 fertility level of 6.2 children per woman declined to the replacement level by 2040, Uganda's population would continue to grow and would stabilise at about 170 million people in 2100. However, if replacement level fertility is attained in 2060, the population would stabilise at 165 million around 2120; if replacement level fertility is attained in 2080, the population would stabilise at about 250 million around 2140. Therefore, the year when Uganda reaches replacement level fertility will affect both the timing of and level at which the population size will peak before it stabilises.

Figure 2.6: Projected Effect of Population Momentum on Population Size



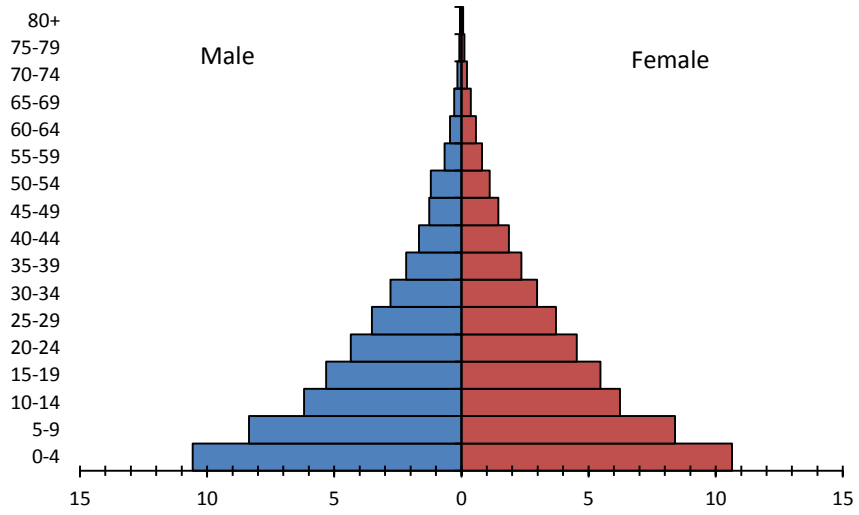
Source: AFIDEP and VSHD, 2012

Therefore, Uganda is guaranteed to have a large population due to its high fertility and the concentration of young people who are yet to enter their childbearing ages. To turn this abundant population into valuable human resources for socioeconomic transformation and development, the country should focus on investments in high-level education, health, and economic reforms that will stimulate people's innovation, productivity, and purchasing power.

2.3 Population Structure

Figure 2.7 shows the age-sex distribution of Uganda's population, based on the 2011 UBOS population projection data. Large youth populations like Uganda's create a huge dependency burden for both families and governments because resources are mostly spent on making provisions for people who are not in the labour force and, therefore, are not contributing to economic productivity. However the young population age structure presents an opportunity for economic development. If the birth rate declines rapidly, Uganda's age structure will change, resulting in a population with more working-age people than children. In this situation, if the appropriate investments are made, economic growth can be accelerated through the demographic dividend.

Figure 2.7: Uganda's Population Pyramid, 2011



Source: UBOS, 2007

2.4 Urbanisation

Another phenomenal change that Uganda's population is poised to experience is an increase in the proportion of Ugandans living in urban areas. The majority of the Ugandan population lives in rural areas, and although urbanisation is increasing rapidly, at 5 per cent per annum (UBOS, 2006a), only 18.1 per cent of the country's population lived in urban areas in mid-2013 (Figure 2.8). The actual

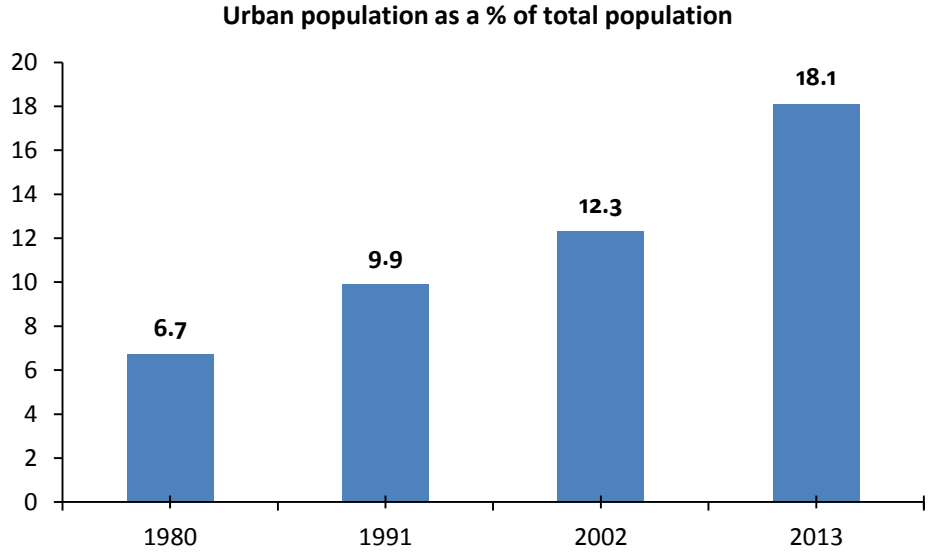
urban population in Uganda increased from less than one million people in 1980 to about three million people in 2002, and to 6.4 million in 2013 (UBOS, 2013a).

UN projections show that the proportion of the urban population will increase from the current level of 17 per cent to 37 per cent by 2050 (United Nations, 2012). Urbanisation has traditionally provided massive advantages to steer national socioeconomic transformation efforts in developed and emerging economies, and effective management of the urbanisation process can augment the attainment of the Vision 2040 goals.

Due to poor planning, rapid growth of the urban population, low investment in urban economic infrastructure, and the inability of urban economies to generate high-quality jobs, cities like Kampala are dysfunctional. The majority of urban residents live in abject poverty, do not have access to basic social services, and lack stable livelihoods. UN-Habitat estimates that about 60 per cent of the urban population in Uganda lack basic amenities such as decent housing, sanitation, and a safe water supply, and are therefore likely to live in slum settlements (UN-Habitat, 2013). It also found that Uganda is among the developing countries with the fastest annual slum growth rate (averaging 5.32%) (UN Habitat, 2012).

According to the 2008 National Slum Upgrading Strategy and Action Plan, which seeks to improve the lives of at least one million people by 2020, poverty is a major driver of slum development in Uganda. This strategy shows that the incidence of income poverty in urban areas increased from 9.6 per cent in 2000 to 12.2 per cent in 2006, with poverty levels remaining the same at 14 per cent over the two survey years (ROU 2008, UBOS 2006b).

Figure 2.8: Growth of Urban Population in Uganda

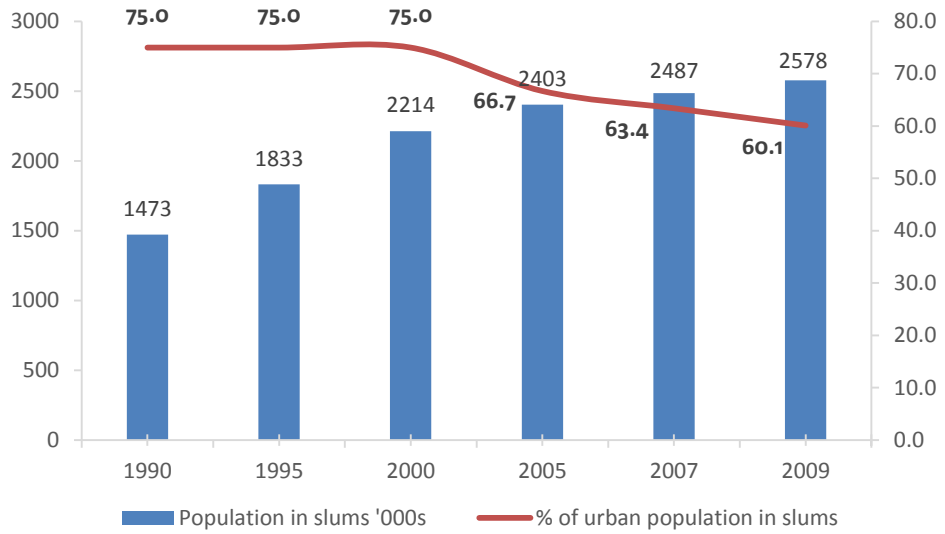


Source: National Population and Housing Census, 2002 (2013 is projected)

To address the growing incidence of urban poverty clustered in slum settlements, efforts to achieve socioeconomic transformation in Uganda should include prioritisation of the development of urban economic infrastructure, including energy, communication, and mass transportation systems, and

the provision of high-quality basic social services, amenities, and livelihoods for the rapidly growing urban population. The national slum upgrading strategy is a step in the right direction, but more needs to be done, including implementing the strategy.

Figure 2.9: Proportion of Urban Population Living in Slums



Source: UN-Habitat, 2012 State of the World's Cities Report 2012/2013:

3 Challenges and Opportunities for Improving Human Capital Development in Uganda

3.1 Quality of Education and Skill Development in Uganda

For Uganda to harness the demographic dividend, its labour force must be well educated and have high-quality skills that will make the country competitive in the global market. While good progress has been made in improving primary school enrolment, there are major concerns that the quality of education is deteriorating, partly due to excessive pressure on the limited educational resources (including teachers) as the population of school-age children has increased. Most teachers are also ill-trained and ill-equipped to deliver modern and high-quality education. For instance, a 2013 service delivery indicator (SDI) study showed that only 19 per cent of public school teachers showed mastery of the curriculum they teach and that only 14 per cent of classes in public schools used textbooks (World Bank, et al. 2013b). The SDI study also showed that, on average, teachers scored 65 per cent and 58 per cent, respectively, on the mathematics and English tests that were based on the curricula they taught. According to the World Bank Development Indicators, Uganda has a very high pupil-teacher ratio of 48, compared to 19 in South Korea and 12 in Malaysia (World Bank, 2013b).

Enrolment in secondary school was also very low, mainly due to high dropout rates during primary school and the low rate of progression between the primary and secondary levels. Although the primary school enrolment rate is high, mainly due to free primary education, more than half of the pupils drop out before completing primary school. According to the national household surveys, school dropout rates declined marginally from 57 per cent in 2008 to 54 per cent in 2010 (UBOS, 2013b). In 2009, only 58 per cent of girls and 60 per cent of boys who finished primary school progressed to the secondary level. As such, secondary school enrolment rates are very low (21.7%) and the problem is compounded by a high dropout rate of one-fifth of those enrolled. The UN report further showed that the school life expectancy for a six-year-old child was 12 years, equivalent to completing secondary school and one year of tertiary education.

The high dropout rate and low secondary school enrolment rates are partly due to the high cost of secondary education, especially in private schools. Liberalisation of the education sector in Uganda saw a proliferation of private schools in the country. Although universal secondary education was introduced in 2007 to increase the enrolment rates, the quality of education offered in the public schools is poor, so many parents opt to put their children in private schools. The private schools are very expensive, and only a few parents can afford to send their children to these schools. In addition, due to the small number of tertiary institutions in the country, a small proportion of secondary school graduates proceed to university and other tertiary institutions, where men outnumber women by a large margin.

According to the World Bank Development Indicators, the gross enrolment rate in tertiary education in Uganda was only 9 per cent in 2011, compared to 100 per cent in South Korea and 35 per cent in Malaysia (World Bank, 2013). In addition, the ratio of female to male enrolment in both public and private tertiary institutions is very low (26%) compared to countries like South Korea (75%) and Malaysia (120%). Most Ugandans who drop out of school at the primary and secondary levels have limited opportunities for post-school skill development, so the majority end up in petty business.

Even those who graduate from tertiary institutions do not necessarily have the skills needed in the job market, which reduces their employability. This has created a vast skills gap, which results from a mismatch between school curricula and job market needs. One reason for this gap in Uganda is that the curriculum is very exam-oriented, resulting in a mismatch between school curricula and the demands of the economy. Therefore, most companies rely on foreigners to provide high-level management and technical expertise. This shortfall will lead to lost economic opportunities for millions of Ugandan workers.

These education data show that the majority of Ugandans do not have the necessary education, and skills needed to be relevant and contribute positively to economic productivity in the modern, competitive, and prosperous economy that is envisaged in Vision 2040.

3.2. Health Status of Uganda's Population

Over the last decade there has been general improvement in health indicators in Uganda, but several key health issues remain and contribute to the country's critical development challenges. These include high levels of child malnutrition, high prevalence of malaria and HIV/AIDS, and high rates of maternal morbidity and mortality. Considerable evidence shows that malnutrition affects cognitive development and physical work capacity, and exposes people to several adult-onset chronic diseases (Pelletier and Frongillo, 2003). To harness the demographic dividend, improvement of child nutrition should be prioritised to ensure that children reach their full cognitive potential and excel in school.

Uganda's child nutrition status has improved over the years, but malnutrition levels remain high. The prevalence of underweight children declined from 18 per cent in 1988 to 14 per cent in 2011, while the proportion of children whose growth was stunted decreased from 38 per cent in 1995 to 34 per cent in 2011 (UBOS and ICF, 2012). There is also low coverage of the most important child survival interventions, including immunisation, sleeping under treated mosquito nets, and prompt and effective management of common childhood infections like diarrhoea and respiratory infections. In 2011, only 40.3 per cent of children below age five had received all required vaccinations before the age of two. In addition, only 42 per cent slept under a treated mosquito net (UBOS and ICF, 2012). Enhancing the coverage and quality of these child survival interventions will go a long way in reducing child mortality and facilitating a decline in fertility, as well as ensuring that Uganda's future labour force is healthy and well educated. Uganda has realised impressive reductions in child mortality, with under-five mortality decreasing from 180.4 to 90 deaths per 1,000 births between 1988 and 2011, while the infant mortality rate declined from 101.2 to 54 deaths per 1,000 live births during the same period. The interventions responsible for this decline include vaccination campaigns, administration of nutritional supplements, and oral rehydration therapy (ORT) regimens. However, these mortality rates remain high by international standards and the government should do more to reinforce the quality, effectiveness, and reach of interventions for improving child survival.

Generally, there is poor access to water and sanitation in Uganda (UBOS and ICF, 2012). Although the proportion of households with toilet facilities increased from 80 per cent in 1995 to 90 per cent in 2011, only 4 per cent of households use improved toilets that are not shared with other households. In addition, about 15 per cent of the population does not have access to an improved source of water (including springs and wells). Poor sanitation is a major cause of diarrhoea and intestinal worms among children. An analysis of the causes of child mortality in Uganda showed that children in households that used a composting toilet were 9.2 per cent more likely to die compared to those in households that used covered pit latrines (World Bank, 2011). Also, children whose household drinking water came from unprotected wells or springs were 1.83 per cent more likely to die before reaching age five than those whose drinking water came from a river, lake/dam or rainwater. This was more pronounced in rural areas.

Although Uganda has the lowest maternal mortality in the East African Community (EAC) region (438 deaths per 100,000 live births in 2011), the level is high by international standards and indicates that the country is not on track to achieve MDG 5, concerning maternal mortality. The country's maternal mortality ratio declined by almost 100 deaths per 100,000 live births in the last decade. In addition, while hundreds of women die in childbirth or due to pregnancy complications, many more experience morbidity that can drastically affect their quality of life. Evidence has shown that for every woman who dies in childbirth, 20 more endure injury, infection, disease, and debilitating disabilities such as obstetric fistula or other injuries to the vaginal tract (Murray and Lopez, 2000; Prutal et al., 2000). The loss of women from the labour force due to death or debilitating conditions has a negative impact on the country's economy, creating a serious pitfall in development. Research reveals that women's incomes go towards food, education, medicine, and other family needs—a direct investment in the family's well-being (Jowett, 2000). Statistics demonstrate that the total value of women's unpaid house and farm work is equal to one-third of the gross national product (Ronsmans and Graham, 2006).

The prevalence of malaria and HIV/AIDS is very high in Uganda, and malaria and respiratory infections are the most common causes of morbidity. A 2010 study found that HIV/AIDS, malaria, and lower-respiratory infections were the highest contributors to premature death and disability in the country (Institute for Health Metrics and Evaluation, 2010). From 2008/9 to 2011/12, the prevalence of malaria among those who sought care at health facilities was in the range of 38 per cent to 36 per cent. Although Uganda has been effective in reducing HIV infections and the prevalence of HIV has decreased considerably, the country has the highest HIV prevalence in the EAC region (EAC, 2013). The disease burden can be one of the key causes of low productivity in the labour force, so access to both preventive and curative health care services should be improved to reduce the working time lost to illnesses.

The incidence of emerging noncommunicable diseases including cancers, diabetes, and heart-related diseases is on the rise. These chronic diseases are promoted by lifestyle changes, such as increased consumption of fatty foods and alcohol, heavy smoking, and infrequent exercise. The prevalence of HIV/AIDS has also exacerbated the rise of cancer cases in Uganda (Kanavos, 2006). A 2010 study found that only 13 per cent of people diagnosed with any cancer in Uganda survived, except for breast cancer, which had a 46 per cent survival rate (Sankaranarayanan, and Swaminathan, et al., 2010). Cancer diagnosis and treatment services are underdeveloped in Uganda, emphasising the

urgent need for government investments in diagnostic and treatment services. Another recent study showed that 22 per cent of the Ugandan population has high blood pressure, 0.4 per cent has diabetes and 2.9 per cent has high blood sugar (Maher, Waswa, et al., 2010). A study in Eastern Uganda connected the prevalence of high blood pressure to increasing obesity (Mayega et al., 2013). Reducing noncommunicable chronic disease should be prioritised to improve the health status and economic productivity of Uganda's labour force.

To harness the demographic dividend, Uganda's labour force should be healthy because poor health undermines labour productivity. Better health outcomes will increase GDP over the long run, generating a fiscal dividend that could be reinvested to further advance workforce skills and public health. To ensure that the next generation of the labour force will bear a minimal disease burden and ensure a competitive labour force, Uganda must invest in improving public health and general health care services for its populace.

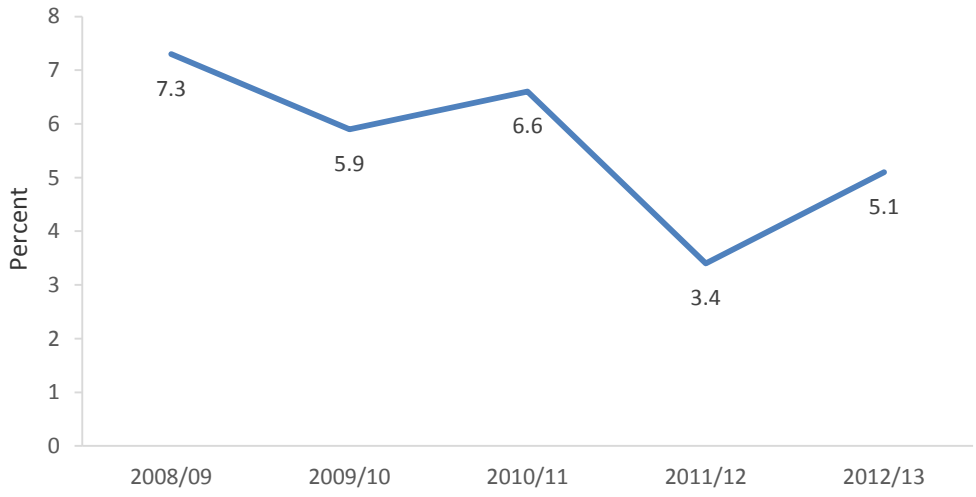
4. Economic Opportunities and Governance in Uganda

4.1. Promising Economic Trends and Fundamentals

The steady growth of the Ugandan economy over the past decade provides a glimmer of hope that the country can decisively address its development bottlenecks and achieve the socioeconomic transformation envisaged in Vision 2040. Since the 1980s, the country has moved from being labelled a failed state in a perpetual state of recovery and reconstruction to a promising country with well-defined aspirations to transform itself into a middle-income country in 30 years in Vision 2040. Vision 2040 takes account of failed efforts to decisively address poverty and transform Uganda through many short-term strategies including the Structural Adjustment Programmes (SAPs), Economic Recovery Programme (ERP) and the Poverty Eradication Action Plan (PEAP).

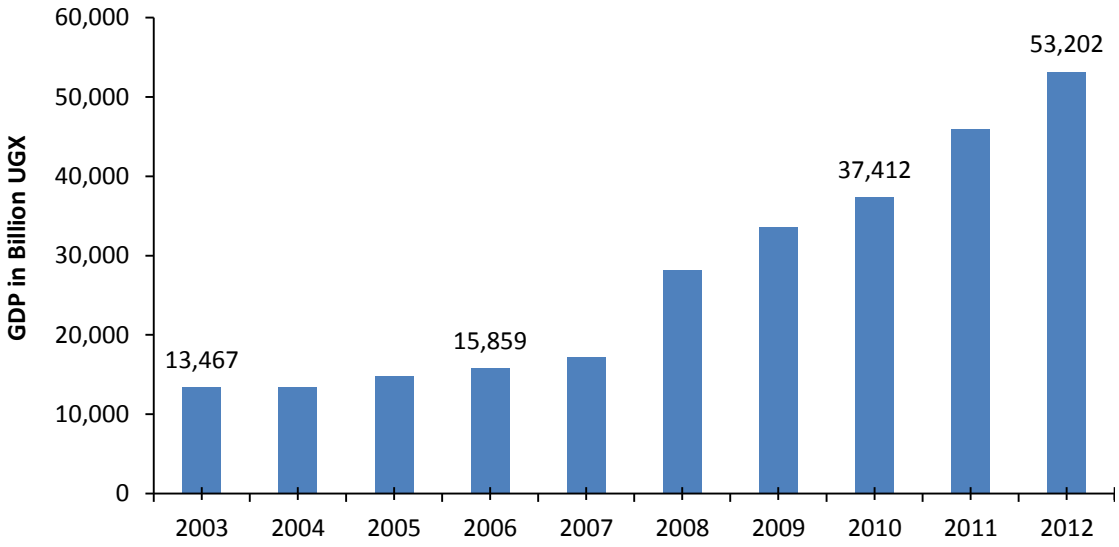
Uganda has recently discovered massive deposits of natural resources such as oil and natural gas, which could help generate the financial resources needed for the economic transformation envisaged in the vision. The country is also attracting increased direct foreign investment, particularly for infrastructure development. As a result, Uganda has posted strong economic growth, averaging 6.4 per cent per year since 2002 (GOU, 2013). GDP grew from UGX 11 trillion (USD 5.7 billion) in 2002 to UGX 53 trillion (USD 20 billion) in 2012 (UBOS, 2013a) (Figure 4.1 and 4.2). A stable macroeconomic environment, strong export growth, high foreign direct investment, and increased private investment have contributed to this growth.

Figure 4.1: GDP Percentage Growth at Constant 2002 Prices, 2008/09–2012/13



Source: UBOS 2008; 2013a

Figure 4.2: GDP at Constant Prices (Billion Uganda Shillings)



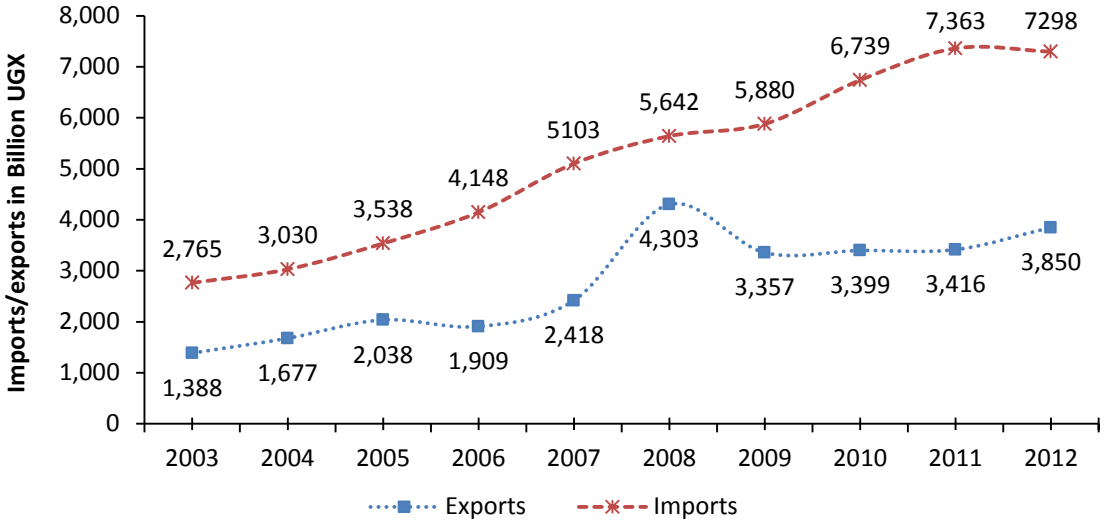
Source: UBOS 2008; 2013a

4.2. Restructuring Uganda's Economic Growth to Create More Jobs

Uganda's economic growth has been characterised by some structural change, with a steadily declining share of agriculture and increasing shares of industry and services. The contribution of services and industrial sectors to GDP averaged 46 per cent and 24 per cent, respectively, during the past decade, while the agriculture sector averaged 20 per cent (UBOS 2008; 2013a). However, the agriculture sector employs more than 65 per cent of the workforce, implying that the majority of the population is stuck in a sector characterised by low productivity and low value addition, while the fast growing sectors are not creating many jobs (UBOS, 2013a). This is the primary reason Uganda's economic growth has not been associated with the creation of adequate numbers of high-quality jobs or reductions in unemployment and underemployment.

In the last two decades the volume of exports increased from about UGX 1.7 trillion (USD 880.6 million) in the early 2000s to UGX 3.9 trillion (USD 2.02 billion) in 2013 (Figure 4.3). However, the trade deficit has widened over time to about UGX 3.4 trillion (USD 1.35 billion) in 2013. This trend is not surprising given that growth in the manufacturing sector has not been substantial enough to sustain the increasing local demand for manufactured goods.

Figure 4.3: Volume of Imports and Exports, 2002–2013 (UGX billions)

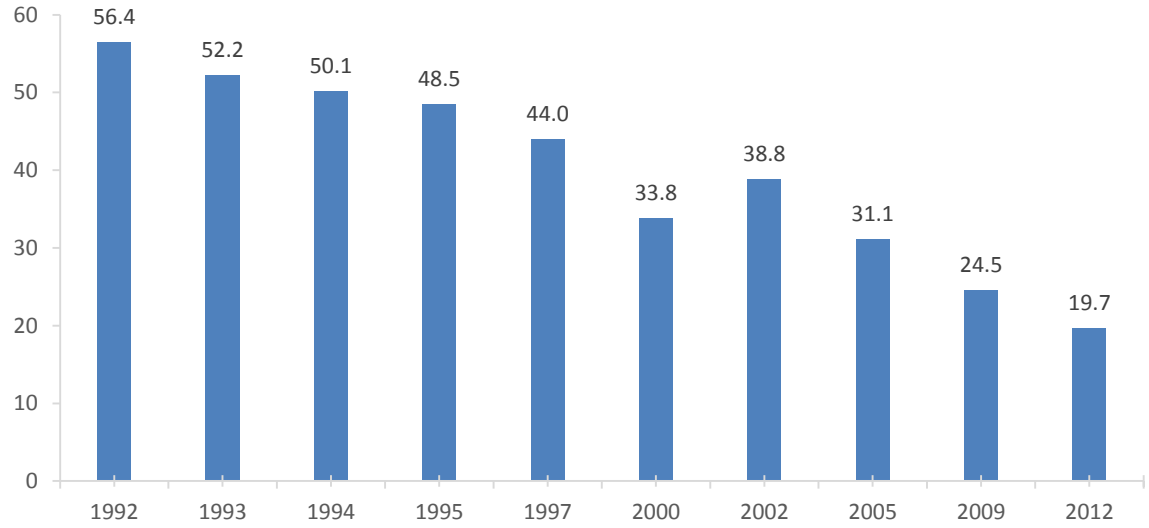


Source: UBOS 2008; 2013a

The size of Uganda's labour force increased from 10.6 million in 2005/06 to 13.4 million in 2009/10, and 16.3 million in 2012/13 (UBOS, 2013a; 2013b). The latest UBOS statistical definition of the labour force excludes individuals engaged in production for home consumption, translating into a 50 per cent reduction in the labour force estimates from the previous statistics. This implies that the country faces a challenge to gainfully employ almost half of the population that does not contribute gainfully to GDP. Additionally, more than 90 per cent of the remaining labour force works in the informal sector, which is characterised by undocumented activities (and therefore makes limited contributions to revenue), and low and unstable income streams. In 2012/13, the proportion of underemployed individuals stood at about 16 per cent overall, and 17 per cent among youth. With the expectation that the population size will continue to increase, the economy will have to expand to accommodate the growing population. Integrating the underemployed and youth into the labour force will require a strong, cautious, and deliberate economic policy mix.

Despite the economic growth in the past decade, many Ugandans live in poverty and confront face social and economic inequities. The percentage of Ugandans living below the poverty level decreased significantly from 56.4 per cent in 1992 to 19.7 per cent in 2012, as shown in Figure 4.4 (GOU, 2014). Although the proportion living below poverty level generally declined, the absolute numbers increased due to the larger population size. In addition, income inequality increased dramatically, with the Gini coefficient rising from 0.37 in 1992/3 to 0.43 in 2009/10 (UBOS, 2013a). Inequality is highest in the urban areas. Increasing levels of income inequality could perpetuate intergenerational transmission of poverty, so it is imperative that all sections of the population participate productively in the economy, and are guaranteed of economic security. One of the Vision 2040 targets is to reduce the proportion of people living below the poverty line to 5 per cent by 2040.

Figure 4.4: Poverty Headcount Ratio at National Poverty Line (% of population)



Source: UBOS 2006b, 2013a; GOU, 2014
Note: The poverty headcount ratio is the percentage of the population living on less than USD 2.00 a day at 2005 international prices.

Youth unemployment in Uganda stands at more than 65 per cent and the rate of underemployment is high, despite a 10 per cent unemployment rate. According to a UNESCO report on youth and skills, working below the poverty line is a much more widespread phenomenon than not working at all (UNESCO, 2012).

The fastest growing sectors have low job-multiplier effects and most jobs have been created in the low-value informal sector. Although the agriculture sector contributes 20 per cent to GDP and there are limited investments to modernise and enhance its productivity, the sector employs more than 65 per cent of the Ugandan population, implying that the growth in the other sectors has not created a substantial number of jobs (UBOS, 2013a). These observed growth trends have left the majority of the population in low-productivity and low-value-added jobs. About 85 per cent of wage earners are casual workers. With the large and expanding informal sector, the government faces the challenge of widening the tax base to match the investments necessary to realise the country's development agenda. In addition, although direct foreign investment has increased, it mostly goes to sectors with low job-multiplier effects such as infrastructure and the extractive industry. The country needs to reinforce its recent economic growth by defining and prioritising sectors and industries that have a comparative advantage in generating economic growth and creating numerous high-quality jobs for the labour force. A starting point would be modernising the agriculture sector to enhance its productivity.

Based on the experience of the Asian Tigers and many developed countries, it is logical to industrialise from the agricultural base that provides livelihoods for most families and has higher job-multiplier effects than many of the fast-growing industries. Improving the rural infrastructure including electrification, communication, and transport systems will be critical to achieve this. Without the capacity to create an adequate number of high-quality jobs for the rapidly growing

labour force, the country could face political and social instability from the unemployed or underemployed youthful working-age population.

4.3. Fiscal Policies and Governance

Uganda has limited local savings due to low income, and limited FDI due to poor business infrastructure and overall economic competitiveness. According to the World Bank's World Development Indicators, Uganda's national gross saving as a percentage of GDP has fluctuated over time, averaging 14 per cent between 1990 and 2010. However, there are positive signs: FDI increased tenfold between 2000 and 2011 from USD 140 million to USD 1720 million (World Bank, 2013b).

The country will need to generate the critical infrastructure necessary to facilitate industrial-based economic growth, including energy supply, communication, and transportation, as poor economic infrastructure makes businesses less efficient and products costly. Enforcing accountability in the use of public, financial, and other resources and in service delivery is central to attracting investment, but also in accumulating finances to invest in human capital and infrastructure development. The country has witnessed high levels of corruption which hamper service delivery by increasing transaction costs and affecting the quality of investments. According to Transparency International, the corruption perception index score for Uganda has remained between 20 and 30 (0 represents the worst corruption levels, 100 represents little or no corruption), indicating that corruption is rampant in the country. Vision 2040 recognises corruption as one of the major barriers to Uganda's development because it "increases the costs of doing business and negatively affects service delivery."

For Uganda to attract more investments and enforce accountability in the use of public resources and service delivery, it will need to create an enabling economic and political environment.

5. Prospects and Potential Contribution of the Demographic Dividend in Uganda

5.1 Opportunities for Harnessing the Demographic Dividend in Uganda

Uganda's demographic profile and economic opportunities can be used to steer the country to economic prosperity if appropriate policies are implemented. The high fertility rate presents an opportunity to benefit from a large working-age population if fertility declines rapidly. When the current youthful population enters the labour force it will create a large working population relative to the number of dependents, thus releasing resources for investment in economic development and family welfare. This shift in the age structure will be a huge impetus for accelerating the socioeconomic transformation envisaged in Vision 2040 if Uganda can make requisite investments in human capital development to ensure that the large labour force will be healthy, well educated, and highly skilled. Furthermore, the country will need to adopt economic reforms that will help generate enough high-quality jobs for the labour force.

On the economic front, the government has acknowledged the need to fast-track development by producing Vision 2040, the overarching framework aimed at graduating the country from a low to upper-middle income status. The vision focuses on specific areas of maximum opportunity where investment would accelerate economic gains, including the abundant and young labour force. In addition, V2040 recognises harnessing the demographic dividend as a strategy to benefit from the country's abundant human resources. If the aspirations of this strategic document are supported by sound, deliberate, and productive investments across sectors, the country will experience impressive strides in development. The government has already showed a commitment to invest heavily in infrastructure and energy. Budget allocations to infrastructure rose from 8 per cent in 2007/08 to 11 per cent in 2011/12 (GOU, 2007; 2011), while planned funding for energy grew from 6 per cent to 14 per cent during the same period.

These investments are undoubtedly salient ingredients to ensure a successful competitive modern economy. There is empirical evidence that well-designed infrastructure investments can stimulate economic growth and productivity, and provide significant positive spillovers. The recent discovery of oil and natural gas poses opportunities to substantially increase the country's resource base to generate the investments necessary to stimulate the economy and ensure strong and sustained growth. It is important to note that the non-renewability of the resources provides strong justification for deliberate and sizeable investments in productive sectors to minimise reliance on the revenues accruing from them.

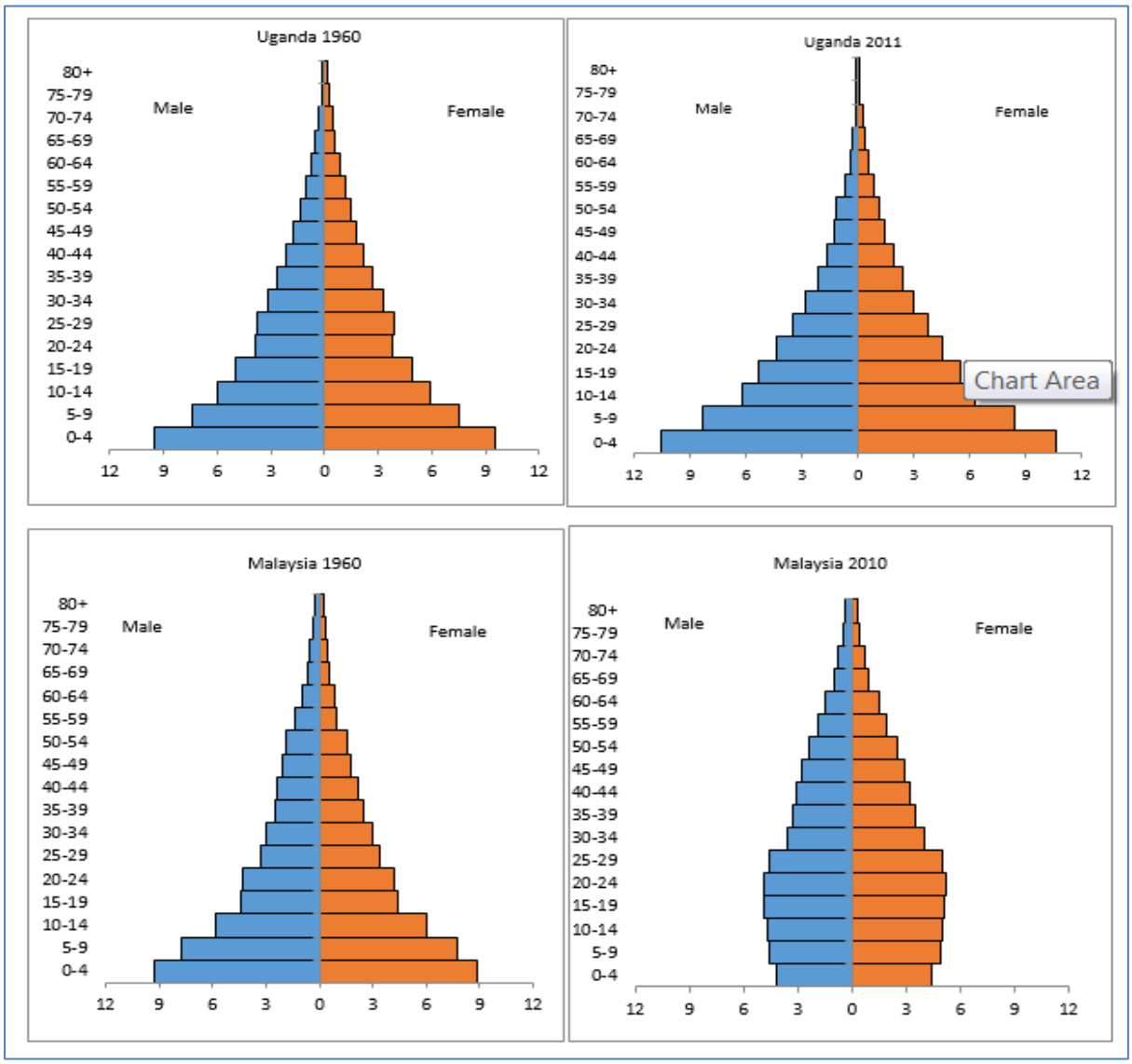
The progress towards regional economic integration into the EAC and Common Market for Eastern and Southern Africa (COMESA) is another opportunity that Uganda can harness to accelerate its economic transition. This can be done by expanding the size of the market for Uganda's products. Exposure to firm competition in the regional market will enhance efficiency and the quality of exports. Access to markets for high-value products could also provide an opportunity to transform the agriculture sector. These benefits, while not yet optimal, are already manifested in the increased amount of Uganda's exports to the East African Community. A study by the Economic Policy Research Centre (EPRC) showed that EAC integration will result in average GDP growth, improving by

up to 0.3 percentage points over the period 2008–2021, and a 0.8 per cent decline in the trade deficit during the same period (Shinyekwa and Mawejje, 2013). However, the benefits of integration can only be optimised if the economy provides the appropriate legal, policy, and institutional framework to guide different sectors to effectively engage in the wider market. The country also requires investment in a vibrant human resource base. Uganda has enjoyed relative political stability since late 1980s which, if it continues, presents a favourable environment for both internal and foreign investments. Whether Uganda can harness these opportunities will depend, in part, on the economic policies the country adopts over the medium and long term.

Uganda can achieve its Vision 2040 goals and harness the demographic dividend, but the demographic transition must be accelerated. This can be accomplished by implementing policy options that will result in rapid fertility decline and of the creation of an economic environment that will attract investments and help create jobs for the rapidly growing labour force.

Figure 5.1 and Table 5.1 show changes in population age structures and socioeconomic and demographic indictors for Uganda and Malaysia (one of the benchmark countries for Vision 2040) between 1960 and 2011. The population structures were similar in 1960 when the average number of births per woman was 6 in Malaysia and 7.1 in Uganda and less than 7 per cent of married women were using contraception in both countries. While the 2011 age structure for Uganda is similar to the one for 1960, Malaysia's 2011 age structure is totally different due to the rapid decline in fertility and mortality rates the country has experienced since the 1960s. Malaysia also achieved significant improvements in education: it is close to achieving universal secondary education and one-third of the population has completed tertiary education. All these changes made massive contributions to Malaysia's accelerated economic growth, which has resulted in a GDP per capita of USD 8,754 in 2010 according to the World Bank. These trends show the extent of the challenge that Uganda faces in attempting to harness its demographic dividend and achieve the socioeconomic transformation envisaged in Vision 2040. At the same time, the fact that Malaysia had similar indicators to Uganda 40 years ago suggests that Uganda can emulate Malaysia's development path if it can adopt similar development policies.

Figure 5.1: Comparison of Population Structures for Malaysia and Uganda, 1960–2011



Source: UN World Population Prospects, 2012; UBOS 2007

Table 5.1: Comparison of Trends in Various Economic and Demographic Indicators, Uganda and Malaysia

Indicator	1960		2010	
	Malaysia	Uganda	Malaysia	Uganda
GDP per capita	299.11	62.34	8,754.24	506
Total fertility rate	6.0	7.1	2.0	6.2
Under-five mortality	85	220	9	151
Net secondary school enrolment rate	35	10	96	23
Gross tertiary institution enrolment rate	4	0.54	37	4

Sources: UN World Population Prospects, 2012; UDHS 2004; Malaysian Population and Family Survey, 2004

5.2 Policy Scenarios and the Potential Impact of the Demographic Dividend in Uganda

The modelling was based on three policy scenarios that were selected to demonstrate the net and combined effects on economic growth of focusing on investments in economic and social development reforms. Targets for these policy scenarios were mostly derived from the average indicators for the four countries that Vision 2040 benchmarks Uganda against, namely South Korea, Malaysia, Mauritius, and South Africa.[1] A summary of the policy scenarios is presented in Table 5.2.

Business-as-Usual Scenario

This scenario represented a case where the status quo, characterised by the persistence of high child-dependency ratios and poor economic performance, continues. The country would continue to perform below its potential and there would be no definitive action to address the widely acknowledged development bottlenecks and break away from the business-as-usual culture characterised by weak implementation of the country's development policies. On the economic and education indicators, it was assumed that the country will only manage to achieve 30 per cent of the progress needed to attain the current average global competitiveness and education indicators for the benchmark countries. On the family planning front, it was assumed that Uganda's slow progress in increasing contraceptive use over the past decade would continue.

Economic Emphasis Scenario

This scenario represented a case where the country is more aggressive in addressing the economic bottlenecks that have curtailed socioeconomic development and put in place policies, systems, and resources to fully implement the economic ideals defined in Vision 2040. The current averages for the high-middle-income benchmark countries that Vision 2040 benchmarks the country against were used for most of the global competitiveness indicators. This scenario represents the best economic scenario for Uganda in terms of reforming the economy to enhance productive efficiency and accelerate economic growth, job creation, and poverty reduction. In this scenario the education and family planning indicators were held constant at the Business-as-Usual Scenario levels to illustrate the net impact of firm action to transform the Ugandan economy to middle-income status in light of the government's strategies outlined in Vision 2040.

Combined Economic and Demographic Emphasis Scenario (V2040)

This scenario provided the best policy scenarios for attaining the socioeconomic transformation envisaged in Vision 2040 by setting both the economic indicators and family planning and education indicators at the levels exhibited by the benchmark countries and upper-middle-income countries in general. It should be noted that while Vision 2040's income target is in line with the upper-middle-income countries, the target level of fertility of 4 children per woman is much higher than the 2.0 average fertility rate for the benchmark countries. Given the challenges that high child-dependency

[1] Note that although South Africa has achieved a fertility transition and high level of income, it has not benefitted much from the demographic dividend because the fertility transition was not accompanied by requisite investments in human capital development and economic empowerment of the majority black population. The country exhibits one of the highest rates of unemployment and income disparities of all the high middle-income countries. Tunisia is another African country that has achieved the fertility transition but not benefitted much from the demographic dividend because of poor investments in job creation and human capital development.

burdens present for development, it would be difficult for Uganda to achieve the upper-middle-income levels envisaged in Vision 2040 while targeting a fertility rate of 4 children per woman by 2040.

This scenario represents determined commitment and action to develop high-quality human capital in Uganda along the lines of what the Asian Tigers and benchmark countries achieved. The central part of this scenario is the empowerment of women and their partners to avoid unplanned pregnancies through universal access to effective methods of contraception. The second component involves an overhaul of the educational system by increased years of schooling completed and the quality of education, which are critical for enhancing the level of skills and innovation of the labour force. Increasing completed years of schooling also helps to keep girls in school, prevent early childbearing, and reduce fertility. For the education indicators, we adopted the average education levels for the benchmark countries with universal secondary education and a large proportion of the school-going population having tertiary education. The contraceptive prevalence rate was set at 67.1 per cent, representing an average annual increase of 1.6 percentage points per year. This quadruples the rate of increase in contraceptive use that was achieved between 2000 and 2011 and it represents 150 per cent of the average annual increase achieved between 2006 and 2011.

Table 5.2: Summary of Characteristics of Policy Scenarios for Demographic Dividend Modeling for Uganda

Policy Scenario	Key Characteristics
1. Business-as-Usual	▪ Status quo characterised by slow progress in economic reforms, human capital development and reduction in fertility to 2040 ▪ Targets for economic Indicators and education indicators are higher than baseline indicators by 30 per cent of the progress needed to attain the current average economic indicators for the four benchmark countries ▪ Use of family planning to grow at an average 0.53 percentage points per year, which is higher than the average of 0.4 percentage points achieved over the last decade but lower than the 1.06 percentage points per year achieved between 2006 and 2011; this is to cater for a possible reversal in progress that has been observed in some African countries like Kenya
2. Economic Emphasis	▪ Emphasised enhancement of Uganda's global competitiveness, productive efficiency, and governance as outlined in Vision 2040 ▪ Target economic indicators for 2040 were average economic indicators for the four Vision 2040 benchmark countries ,as shown in Table 5.3 ▪ Education and family planning indicators were held at the same level as the Business-as-Usual scenario to examine the net effect of economic indicators.
3. Combined Economic Family Planning and Education Emphasis (V2040)	▪ Emphasised an integrated development model that concurrently emphasises investments and reforms in economic indicators as well as prioritisation of family planning and education to prevent unplanned births and build high-quality human capital ▪ Economic indicators held to the same level as the Economic Emphasis scenario average for the Vision 2040 benchmark countries ▪ Target indicators for education were set at the average level for the Vision 2040 benchmark countries ▪ Contraceptive prevalence rate to increase to 67.14 per cent by 2040, representing an average annual increase of 1.60 percentage points or a 50 per cent increase in the family planning effort recorded between 2006 and 2011

The specific indicators that the DemDiv model uses to operationalise the five wheels that open and propel the window of opportunity for harnessing the demographic dividend are described below. For each variable, there is a description of the baseline value and the basis for the values used in the four policy scenarios. The variables are discussed in greater detail in Appendix 1.

5.3 Baseline and Projected Demographic and Economic Indicators

The baseline and target economic, demographic, and education indicators for each policy scenario are summarised in Table 5.3. The rationale and assumptions behind the choice of the indicators are explained below.

Economic Indicators

The economic model captured a number of indicators to reflect the general economic situation and the extent to which the country has an enabling environment and infrastructure to promote job creation, economic productivity, and investments. These indicators were used as inputs to project the performance of the economy on a set of outputs, particularly GDP, GDP per capita, per capita investment, capital formation and employment.

Baseline estimates of output variables were obtained from national statistics,[2] except for the ratio of capital stock to the working population, which was derived from the model dataset by Berlemann and Wesselhoft (2012). On the input, the share of imports to GDP was obtained from the UBOS Statistical Abstract, 2013. The rest of the economic indicators were sourced from the Global Competitiveness Index, a cross-country database compiled by the World Economic Forum (WEF). The database assesses the strengths and weaknesses of national economies by analysing the efficiency of various sectors and their contributions to productivity of the economy over time. Each indicator is presented on a scale of 1–7, with 7 as the best performance. The 2011 figures for Uganda were used as the baseline for economic variables. As noted above, it is assumed that under the Business-as-Usual Scenario the country will continue to perform below its full potential and attain about 30 per cent of the progress it requires to catch up with the economic indicators for the benchmark countries. Under the Economic Emphasis Scenario, the average of the economic indicators for the four countries that Uganda is benchmarking itself against in Vision 2040 (Malaysia, South Korea, Mauritius, and South Africa) were used as target indicators.

Labour Market Flexibility
Uganda's labour market flexibility baseline index (5.34) was higher than the average for the benchmark countries (4.95). We assumed that under the Business-as-Usual Scenario, the country would remain at the same level as the baseline, but in the Economic Emphasis Scenario there would be an increase of 10 per cent (to 5.874) from the baseline value.

ICT Use
ICT use is one area where Uganda has made considerable progress over the past decade, especially in the use of mobile phones. This sector is largely driven by private sector and can easily expand to the next level without considerable public sector intervention. For instance, the mobile money

[2] Data on GDP and capital formation were obtained from UBOS Statistical Abstracts, while employment data came from the revised estimates of the Uganda National Household Survey (2012/13).

service has grown remarkably over the past five years with minimal public sector investment. We therefore projected that progress in this area would continue even under the Business-as-Usual Scenario and the index would improve from 1.35 to 2.45, representing 30 per cent of the progress the country needs to reach the target of 5.0 that was set for the Economic Emphasis Scenario. This target was actually higher than the current average for the four benchmark countries (3.62) but, given the rapid change in the ICT sector both globally and in Uganda, is it very likely that the level of ICT application in Uganda in 29 years would surpass the current levels for the benchmark countries, particularly South Africa (2.67), Mauritius (2.90), and Malaysia (5.05). The target ICT index of 5.0 for Uganda for 2040 was modeled around the 2011 level for South Korea (5.87).

Financial Market Efficiency

Financial market efficiency is an area with huge potential for growth as the use of mobile phones in the banking sector increases and financial markets open up due to the solidification of regional integration. In recognition of the likely continuation of the growth that the sector has experienced over the past decade, it was projected that the financial market efficiency index would increase from 3.48 to 3.70 under the Business-as-Usual Scenario. This represents 30 per cent of the improvement the country would need to achieve to reach the average of 4.20 for the benchmark countries, which was the target for the Economic Emphasis Scenario.

Public Institutions

In order for Uganda to attract foreign investment and reduce the high cost of doing business, the country will need to take a firm step to operationalise the Vision 2040 commitment to strengthen accountability mechanisms and fight corruption. The model projected that the capacity of Uganda's public institutions to enforce accountability in service delivery and the use of public resources and to ensure the protection of lives, investments, and property would improve modestly under the Business-as-Usual Scenario— from 3.38 to 3.67—and would reach the average for the benchmark countries of 4.36 under the Economic Emphasis Scenario.

Share of Imports as a Percentage of GDP

High levels of imports (as a percentage of GDP) can undermine socioeconomic development, capital formation, and prospects for mass creation of jobs in the local economy. In the early 2000s, the import share averaged about 22 per cent of GDP and reached about 35 per cent in later years. In 2011, imports constituted 40.6 per cent of Uganda's GDP. Because the country is yet to establish a strong manufacturing sector and will continue to rely on imports to engineer its infrastructure, expected increase in consumption needs, and overall economic development, the level of imports as a percentage of GDP was projected to increase to about 50 per cent by 2040 under the Business-as-Usual Scenario. Under the Economic Emphasis Scenario, however, the share of imports was projected to decline to 30 per cent of GDP. This is consistent with Vision 2040's emphasis on transforming the sectoral composition of the GDP to be heavily dominated by the industrial and service sectors, and for manufactures exports as a share of total exports to increase from 4.2 per cent to 50 per cent between 2010 and 2040 (NPA, 2013).

Family Planning Indicators

In this category, we focus on three indicators: the contraceptive prevalence rate (CPR), the period of postpartum infecundability (PPI), and sterility. Family planning is a very important intervention for reducing fertility since it enables women and their partners to prevent unplanned births. According to the 2011 Uganda DHS, Ugandan women have an average of 6.2 children. The desired number of children is 4.8 for all women and the wanted fertility rate, which gives fertility rates only for births that were wanted, is 4.5. This means that on average, Ugandan women have 1.7 more births than they desire. Furthermore, the 2011 UDHS data show that 34.3 per cent of all women of reproductive age who would like to postpone their next birth (by at least two years) or stop childbearing altogether are not using a modern method of FP, and have unmet need for family planning. Ensuring that all women who are in need of FP have access to and are able to use effective contraception would, therefore, go a long way in reducing fertility in Uganda.

Contraceptive Prevalence Rate

This analysis used the proportion of all women using modern contraception as opposed to only married women or all methods because sexual activity and childbearing are increasingly taking place outside of marriage, modern contraceptives are more effective than traditional ones, and modern contraceptives are promoted by the FP programme in the country. The 2011 contraceptive use figure of 20.7 per cent was therefore adopted as the baseline for FP.

We also adopt the 2011 figures for the period of postpartum infecundability (11 months) and sterility (2.8%) as baselines for the analysis.

The use of FP has increased slowly in Uganda; the percentage of married women using contraception increased from 19.5 per cent in 2001 to 26 per cent in 2011, and 20.7 per cent of all women were using a modern method of contraception in 2011. Over the past decade, use of modern contraception among all women increased at an average rate of 0.42 percentage points per year. The rate of progress was much higher between 2006 and 2011 (1.06 percentage points) than between 2000 and 2006 (-0.22 percentage points per year).

In the Business-as-Usual Scenario, it was assumed that the level of effort to promote FP will be higher than the overall average for the past decade, but may be lower than the average for the past five years because of uncertainties related to the FP programme's overdependence on foreign funding. Such reversals have been observed in countries like Kenya. The model projected that contraceptive use would grow at an average 0.53 percentage points per year, resulting in a CPR of 36.01 per cent by 2040. This rate of increase represents 70 per cent of the level where the country would be if it followed the rate of progress between 2006 and 2011 up to 2040.

In the Economic Emphasis Scenario, the contraceptive use level was the same as in the Business-as-Usual Scenario.

In the Combined (V2040) Scenario it was assumed that the country would intensify its efforts to address all barriers to access and use of FP and create more demand for FP to attain the fertility level of the benchmark countries and Asian Tigers at the peak of their economic prosperity. Assuming that the country would make the positive efforts in repositioning FP that resulted in the

annual increase of 1.06 percentage points per year between 2006 and 2011 by about 50 per cent to achieve an average annual increment of 1.60 percentage points per year between 2011 and 2040, the contraceptive prevalence rate would increase to 67.14 per cent. Contraceptive use levels among married women for the benchmark countries were 32 per cent in Malaysia,[3] 60 per cent in Mauritius and South Africa, and 70 per cent in South Korea (PRB, 2013b). Uganda's CPR for 2040 under this scenario would also be close to that of Thailand (which has a CPR of 78%) if its programme efforts were further enhanced.

Postpartum Infecundability and Sterility

The Period of Postpartum Infecundability (PPI) is the duration after giving birth that a woman is not susceptible to pregnancy due to breastfeeding (lactational amenorrhea) and/or postpartum sexual abstinence. The 2011 value for PPI was 11 months. The assumption was that with increases in education, the period might decrease slightly, but there was increased campaigning for exclusive and continued breastfeeding up to two years. It was therefore assumed that PPI would not change in the next 29 years under any of the four policy scenarios.

Sterility is measured by the percentage of women in union who remain childless at the end of their reproductive years (ages 45–49). The percentage of women who were childless in the 45–49 age group was 2.8 in 2011. Although this measure was not expected to change much over time, it was assumed that there would be a small reduction, to 2.0 per cent, under the Economic Emphasis and the Combined (V2040) Scenario since the improvement in FP would likely enhance broader sexual and reproductive health services, which can help reduce infertility levels.

Education Indicators

Education is essential for harnessing the demographic dividend because it has wide-ranging effects on socioeconomic development. Female education, especially at the secondary level, plays a key role in lowering fertility by delaying marriage and the onset of childbearing. Better-educated women are also more likely to use contraception and use health care services for themselves and their children. Education also helps to increase the quality and productivity of the labour force. Years of schooling, the quality of education, and relevance of the curriculum in promoting innovation and entrepreneurship are very important for enhancing a country's chances of harnessing the demographic dividend. The DemDiv model allows for modification on two education indicators: expected years of schooling and the observed mean years of schooling for males and females.

The Expected Years of Education refers to the total number of years of schooling a six-year-old child today can expect to receive, assuming that the probability of her/him being enrolled in school at future ages is equal to the current enrolment rate at those ages. The expected years of schooling generated from the Uganda National Household Survey for 2009/10 was 11.3 for females and 12.8 years for males (UBOS, 2010). These were adopted as the baseline values for 2011 since educational statistics have not improved much in Uganda over the past decade.

[3] Malaysia has an unusually high proportion of married women using traditional methods of contraception (17%). So, with a CPR of 32 per cent for modern methods, the total CPR is 49 per cent. Malaysia has achieved low levels of fertility due to postponement of marriage, use of traditional methods, and possibly abortion – Tey Nai Peng, Sor Tho Ng, and Siew Yong Yew (2012), "Proximate Determinants of Fertility in Peninsular Malaysia," *Asia Pacific Journal of Public Health*, 24:295–505.

The Mean Number of Years of Schooling is the average number of years of schooling for the adult population ages 25 and above. This indicator has not improved at all in Uganda in the recent past; the mean years of schooling for women was 4.5 in 2005/6 and 3.8 in 2012/13, and for men it declined from 6.7 to 6.1 over the same period (UBOS, 2013b). The 2012/13 figures were used as the baseline for the analysis.

The large difference between expected years of schooling and actual years of schooling shows that school attendance rates were much better for the younger generations in Uganda than the older ones. However, the comparison with the current average education levels for the benchmark countries showed that Uganda is still quite far from attaining the education levels it needs to become a globally competitive economy. Furthermore, developing high-quality human capital requires more than just an increase in years of schooling. Improvements must also be made the quality of education and the capacity of the educational system to produce graduates who are equipped with the skills in innovation, technological sciences, and entrepreneurship that the country will need to have a globally competitive labour force.

For the Business-as-Usual Scenario, it was assumed that the country will only achieve 30 per cent of the progress necessary to attain the average expected years of schooling and mean years of schooling for the benchmark countries. These translate to 12.5 expected years of schooling for females and 13.8 for males, and 5.4 mean years of schooling for females and 7.3 years for males.

The levels of education in the Economic Emphasis Scenario were held constant and matched those in the Business-as-Usual Scenario.

In the Combined (V2040) Scenario, Uganda would prioritise human capital development and ensure that universal secondary education would be attained by 2040, with a substantial portion of the population attaining tertiary education. This is the level of education the country must achieve to attain the socioeconomic transformation envisaged in Vision 2040, which will be key for harnessing the demographic dividend. The average figures for the benchmark countries for both expected years of education (15.3 years for females and 16.0 years for males) and mean years of education (9.4 for females and 9.9 for males) were used as target values for this scenario.

Table 5.3: Baseline and Target Indicators for Policy Scenarios Used for Demographic Dividend Modeling for Uganda

POLICY SCENARIO	REF YEAR	INTERVENTION POLICY AREA												
		Education					*Family Planning*			*Economic*				
		Expected Years Female	*Expected Years Male*	*Mean Years Female*	*Mean Years Male*	*Mean Years (Male & Female)*	*CPR (All women, Modern)*	*PPI*	*Sterility*	*Labour Market Flexibility*	*ICT Use*	*Financial Market Efficiency*	*Public Institutions*	*Imports as % of GDP*
Baseline	2011	11.3	12.8	3.7	6.2	5.0	20.70	11.0	2.8	5.34	1.35	3.48	3.38	40.60
Business-as-Usual	2040	12.5	13.8	5.4	7.3	6.3	36.01	11.0	2.8	5.34	2.45	3.70	3.68	50.00
Economic Emphasis	2040	12.5	13.8	5.4	7.3	6.3	36.01	11.0	2.8	5.87	5.00	4.20	4.36	30.00
Combined Economic & FP/EDC Emphasis	2040	15.3	16.0	9.4	9.9	9.6	67.14	11.0	2.0	5.87	5.00	4.20	4.36	30.00
Data Source		Uganda National HH Survey 2009/10		Uganda National HH Survey 2009/10			DHS 2011			World Economic Forum, Global Competitiveness Report 2013–2014				

Other Baseline Indicators

Table 5.4 shows the other baseline indicators that were input into the DemDiv model. All data were drawn from national data sources and official reports.

One key input into the DemDiv model is the baseline data for level of employment and estimated growth in employment rates. This indicator is heavily influenced by the way in which various countries measure employment. The latest UBOS statistical definition excludes individuals engaged in production for home consumption, translating into a 50 per cent reduction in the labour force estimates of the previous statistics. As such, about 7.7 million people are estimated to be in wage employment. The previous national estimates provided by International Labour Organisation (ILO) data for 2011 showed that 12 million people were in wage employment.

Table 5.4: Initial Values of Calculated Variables in the Model

Indicator	Base Year Value (2010)	Data Source
Percentage married	62.5	UDHS 2011
Total fertility rate (TFR)	6.2	
Percentage of high-risk births	65.5%	
Infant mortality rate (IMR)	54	
Under-five mortality rate (U5MR)	90	
Maternal mortality rate (MMR)	438	
Female life expectancy	55.7	United Nations Population Division, 2005-2010
Capital formation per capita	80	Uganda Statistical Abstract 2013
Initial employment	7,700,000	Uganda National Household Survey 2012/13
Initial employment growth rate	3.0%	Average growth rate for 2006-2011 from KILM 8.0 data base (ILO)
GDP per capita	506	Uganda Statistical Abstract 2013
Ratio of capital stock to pop 15+	2,649	Model dataset (Berlemann & Wesselhoft)
Initial GDP growth rate	6%	Uganda Statistical Abstract 2013
Capital stock growth rate	6.3%	Computed from past investments
Female-male life expectancy difference	2.4	United Nations Population Division
Capital stock depreciation rate	4.0%	Computed
Primary education costs as % of GDP per capita	8%	World Bank, World Development Indicators. Data for 2012

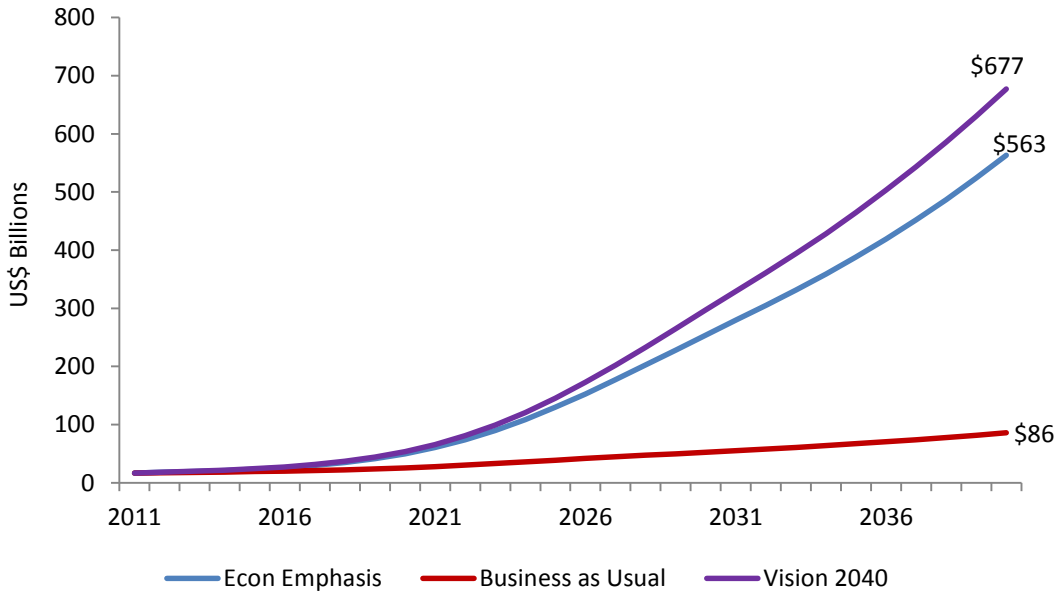
5.4 Modelling Results

5.4.1 Growth in GDP and Per Capita GDP

Figure 5.2 shows growth in GDP between 2011 and 2040 for each of the four demographic dividend policy scenarios for Uganda. GDP would grow from the current level of USD 17 billion to USD 86 billion for the Business-as-Usual Scenario. Under the Economic Emphasis Scenario, Uganda's GDP would increase to USD 563 billion. When the economic and demographic scenarios are both prioritised in the Combined (V2040) Scenario, GDP would increase to USD 677 billion.

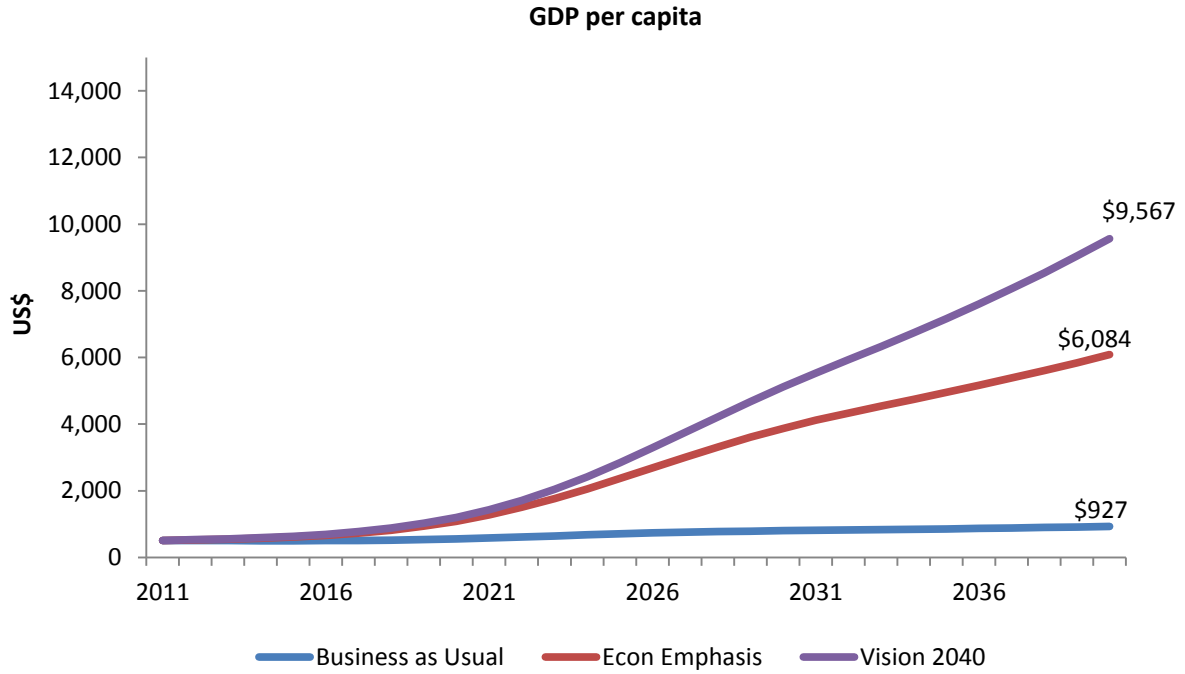
The demographic dividend impact realised by the Combined (V2040) Scenario represents a 20 per cent increase in GDP when compared to the Economic Emphasis Scenario, solely as a result of assumed investments in family planning and supporting investments in education, especially of girls. In other words, as a result of the additional investments in education and family planning, Uganda's GDP would increase by an additional 20.5 per cent beyond where it would be in 2040 if the country only focused on economic reforms and took the business-as-usual approach on family planning and education.

Figure 5.2: Growth in GDP by Policy Scenario



The effects of the demographic dividend are more dramatic when growth in per capita GDP is examined, since the different scenarios would have different implications for population growth (Figure 5.3). The per capita GDP would marginally increase from the baseline level of USD 506 to USD 927 under the Business-as-Usual Scenario. Under the Economic Emphasis Scenario, which provides the primary engine for steering economic growth, per capita GDP would increase to USD 6,084.

Figure 5.3: Growth in Per Capita Gross Domestic Product by Policy Scenario (USD)



The maximum demographic dividend effects would accrue to the Ugandan economy if intense reforms and action are undertaken on both economic factors and demographic indicators. This would bring fertility down to around the replacement level (two births per woman) that the Asian Tigers currently have. In this case the per capita GDP would increase to USD 9,567 by 2040. Thus, concurrent prioritisation of and investment in family planning, education, and economic reforms would generate an extra USD 3,483 in the projected 2040 per capita GDP—this represents an increase of 52 per cent over the projected GDP if the Vision 2040 framework focused only on economic issues and ignored family planning and education.

5.4.2 Population Size and Structure

Figures 5.4, 5.5, 5.6, and 5.7 show the baseline and projected age-sex distribution of Uganda's population and key population and human capital features for each of the four policy scenarios.

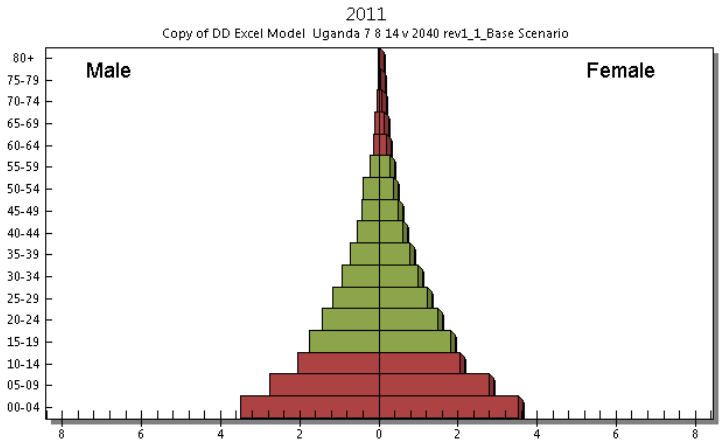
The Business-as-Usual Scenario would lead to a total fertility rate of 4.8 children per woman and a total population of 93 million people. The reduction in fertility from 6.2 to 4.8 would not do much to reduce the high child-dependency burden: 45 per cent of the total population would be below age 15. Mortality would continue to decline slowly, leading to an increase in life expectancy at birth from 55.7 to 63.1 years. The Human Development Index (HDI), a composite measure of countries' levels of social and economic development based on life expectancy at birth, mean years of schooling, expected years of schooling, and per capita gross national income, would increase from the current level of 0.361 to 0.422. At this level, Uganda would be ranked 144 out of 169 (with 169 being the worst) based on the 2010 global rankings.

As noted above, Uganda would be performing far below its potential under this scenario and the socioeconomic transformation envisaged in Vision 2040 would be a far-fetched dream. The country

would not attain middle-income status and its development prospects would be undermined by a high child-dependency burden.

Under the Economic Emphasis Scenario, life expectancy at birth would remain at the same level as Business-as-Usual Scenario (63.1) years and the HDI would increase to 0.604, representing a rank of 106, based on 2010 rankings. In this scenario, Uganda would graduate to middle-income status but income levels would fall far short of the Vision 2040 targets.

Figure 5.4: Baseline Population Pyramid and Key Features



Key Features

Population: 33 million

Population ages 15+: 16 million

Gap between population <15 and employment: 5 million

Population <15: 52%

Total fertility rate: 6.2

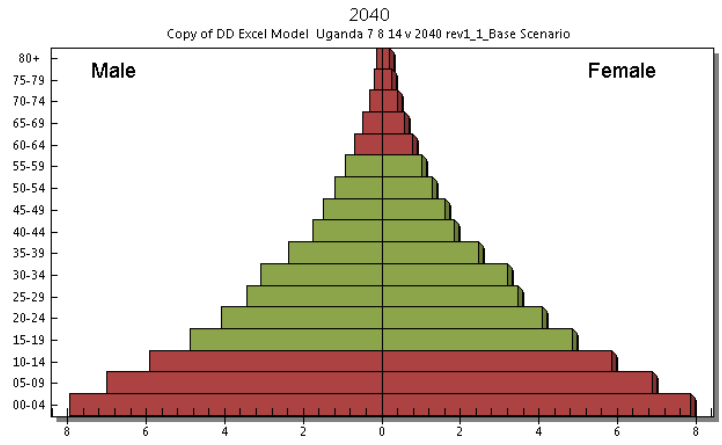
Per capita GDP: $506

Life expectancy at birth: 55.7 years

HDI: 0.414 (2010 Rank: 144)

Dependency ratio: 1.07

Figure 5.5: Population Pyramid and Key Features for the Business-as-Usual Policy Scenario



Key Features

Population: 93 million

Population ages 15+: 51 million

Gap between population <15 and employment: 23 million

Population <15: 45%

Total fertility rate: 4.8

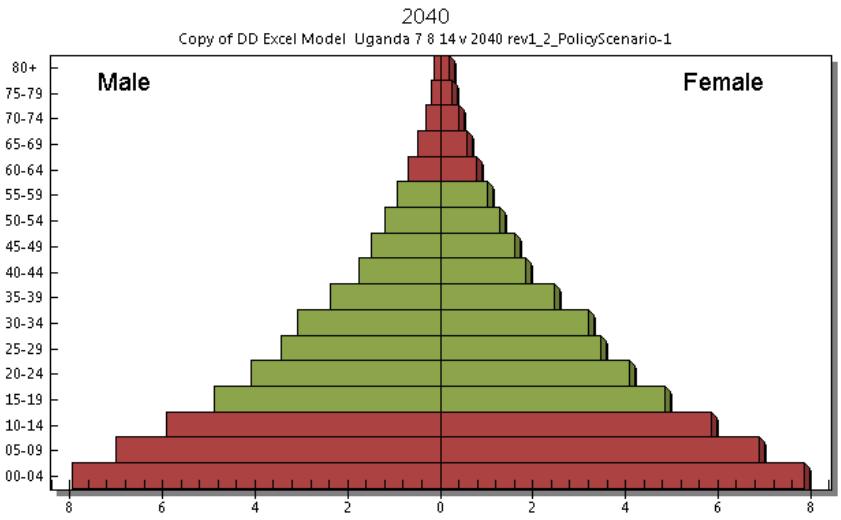
Per capita GDP: $927

Life expectancy at birth: 63.1 years

HDI: 0.422 (2010 Rank: 144)

Dependency ratio: 0.91

Figure 5.6: Population Pyramid and Key Features for the Economic Emphasis Policy Scenario



Key Features

Population: 93 million

Population ages 15+: 51 million

Gap between population <15 and employment: 15 million

Population <15: 45%

Total fertility rate: 4.8

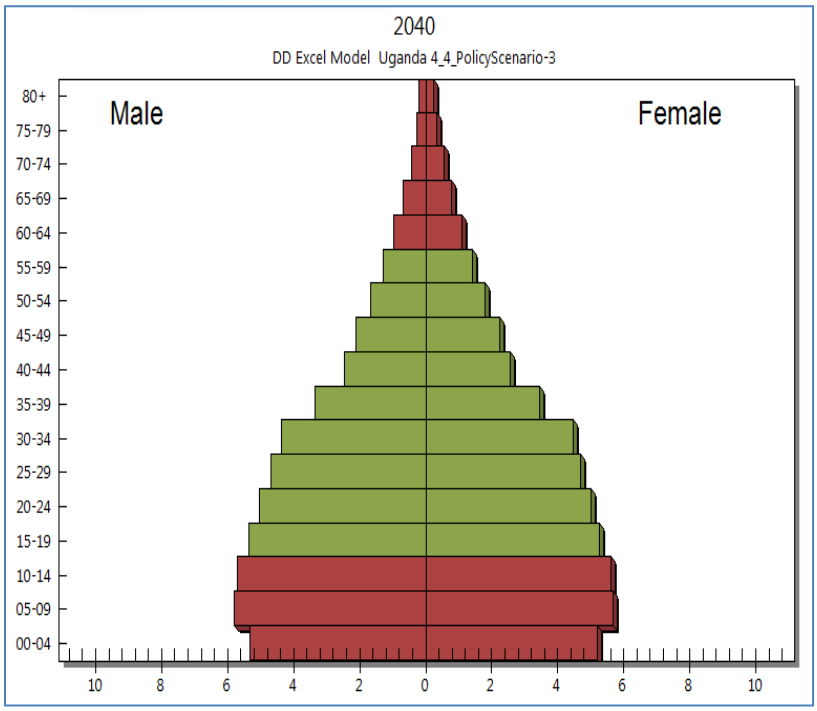
Per capita GDP: $6,084

Life expectancy at birth: 63.1 years

HDI: 0.604 (2010 Rank: 106)

Dependency ratio: 0.91

Figure 5.7: Population Pyramid and Key Features for the Combined Economic, Family Planning and Education Emphasis Policy Scenario



Key Features

Population: 71 million

Population ages 15+: 47 million

Gap between population <15 and Employment: 13 million

Population <15: 35%

Total fertility rate: 2.2

Per capita GDP: $9,567

Life expectancy at birth: 71.2 years

HDI: 0.736 (2010 Rank: 60)

Dependency ratio: 0.58

The Combined (V2040) Scenario that sought to emulate upper-middle-income countries on both the economic and demographic and human capital development fronts would result in a population of 71 million. The total fertility rate would be 2.2 children per woman and about one-third of the population (35%) would be below age 15. As the population pyramid shows, this scenario would result in a marked shift in the age structure of the population, with a marked increase in the

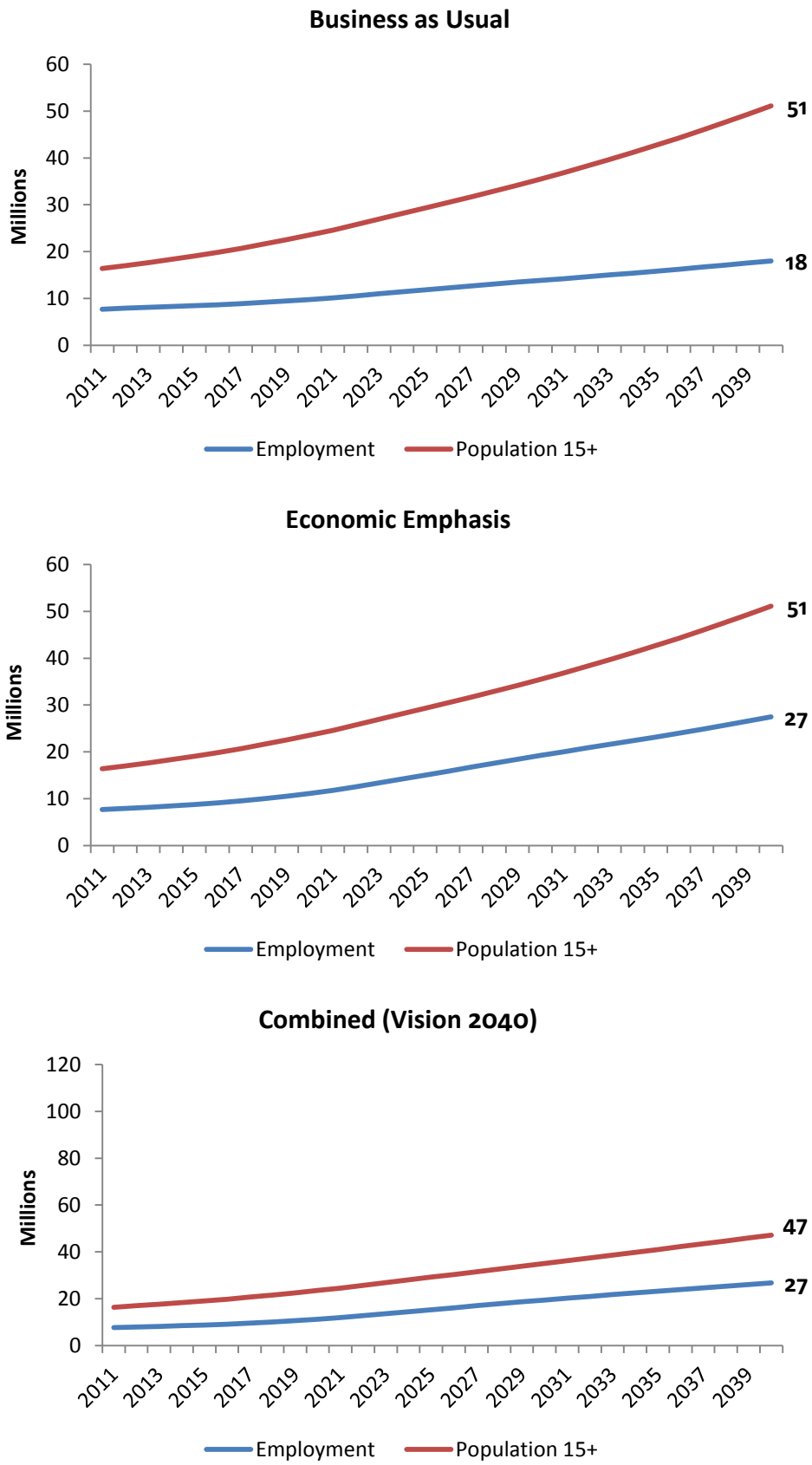
working-age population. Life expectancy at birth would increase to 71.2 years and the HDI would be 0.736—a rank of 60 according to the 2010 rankings.

5.4.3 Population Momentum and Job-Creation Challenge

The huge increase in the size of the population ages 15+, irrespective of which policy scenario the country follows, shows the weight of the challenge that Uganda will face in creating enough jobs for the rapidly growing labour force (Figure 5.8). The number of people aged 15+ will increase from 16 million in 2011 to 51 million under the Business-as-Usual Scenario and the Economic Emphasis Scenario, and to 47 million under the Combined (V2040) Scenario. The small difference in the size of the working-age population across the scenarios is due to the high population momentum that Uganda has accumulated as a result of persistently high fertility. It would take at least 15 years to see the effects of any fertility decline on the number of people entering the working-age range.

The gap between the population ages 15+ and the projected population that is in formal employment, based on the employment patterns in the DemDiv model, illustrates Uganda's phenomenal job-creation challenge. This gap would be 33 million under the Business-as-Usual Scenario; 24 million under the Economic Emphasis Scenario; and 20 million under the Combined (V2040) Scenario that sought to emulate upper-middle-income countries on both the economic and demographic and human capital development. So while the effects of the demographic dividend are realised through the increase in the working-age population relative to dependent children, it is important to note that high population momentum will place enormous pressure on the economy to create enough jobs for the large working-age population that will last for several decades.

Figure 5.8: Projected Gap between Total Population Aged 15+ and Employed Population, by Policy Scenario

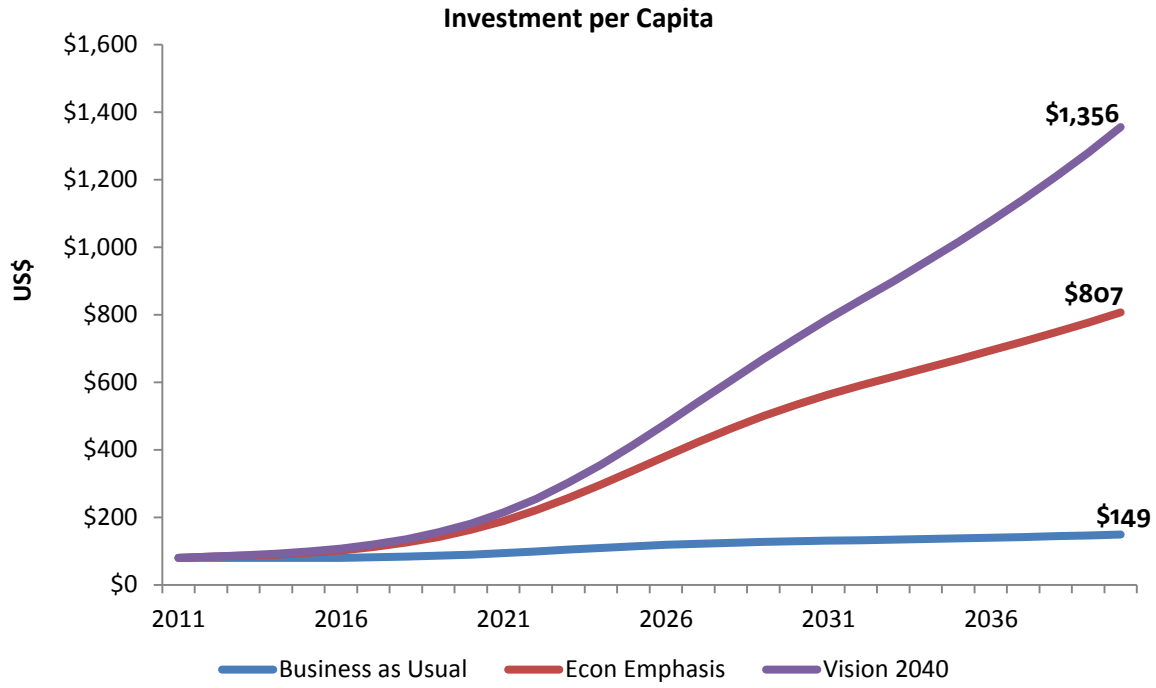


5.4.4 Capital Formation and the Second Demographic Dividend

As noted above, an increase in the labour force is not in itself sufficient for a country to harness the demographic dividend; investments in human capital development and job-oriented economic reforms can ensure that countries actually earn the demographic dividend. The size of the demographic dividend would, therefore, depend on the rate of fertility decline, the extent of investments in human capital, the extent to which countries identify and invest in sectors that generate numerous high-quality jobs, and the existence of an enabling environment that promotes local savings and attracts direct foreign investment. These conditions would enhance the development of economic infrastructure and capital formation, which are critical for harnessing the demographic dividend and fuelling further economic growth that would help Uganda graduate to upper-middle-income status.

Figure 5.9 shows projections in per capita capital formation for the three policy scenarios. Fixed capital formation measures how much of the new value added in the economy is invested in fixed assets (*less* disposals of fixed assets) by the business sector and governments, rather than consumed. The results showed that the per capita capital formation would be USD 149 for the Business-as-Usual Scenario; USD 807 for the Economic Emphasis Scenario, and USD 1,356 for the Combined (V2040) Scenario. Therefore, making appropriate investments to maximise Uganda's chances of harnessing the demographic dividend between now and 2040 would lay the foundation for propelling it to greater economic prosperity beyond 2040.

Figure 5.9: Projected Per Capita Capital Formation by Policy Scenario (USD)



5.4.5 Summary of Results

Table 5.5.: Summary of Modeling Results per Policy Scenario

Indicator	Baseline (2011)	Business-as-Usual	Economic Emphasis	Combined (V2040)
Total Population (millions)	33	93	93	71
Population <15 (%)	52	45	45	35
Total fertility rate (number of children per woman)	6.2	4.8	4.8	2.2
Per capita GDP (USD)	506	927	6,084	9,567
Life expectancy at birth	55.7	63.1	63.1	71.2
Dependency ratio (population ages 15–64 divided by population <15 and 65+	1.07	0.91	0. 91	0.58
Gap between population ages 15+ and employment (i.e., unemployed population) (millions)	5	33	24	20
Capital formation (proportion of economic growth invested in fixed assets)	80	149	807	1,356

The findings for the study are summarised in Table 5.5. The Combined (V2040) Scenario that concurrently prioritised job-oriented economic reforms and investments in family planning and education to accelerate fertility decline and develop human capital would give Uganda the best chance of achieving the socioeconomic transformation envisaged in Vision 2040. This would help Uganda emulate the development path that the Asian Tigers and the other benchmark countries have achieved over the past thirty to forty years. The USD 9,567 per capita GDP that would result from this model almost exactly matches the USD 9,500 target in Vision 2040.

The difference between the Economic Emphasis Scenario and the Combined (Vision 2040) Scenario ($3,483) represents the demographic dividend that Uganda can harness by increasing its family planning and education investments. Under the Business-as-Usual Scenario and the Economic Emphasis Scenario the TFR would be 4.8, whereas under the Combined (V2040) Scenario the TFR is closer to 2. The latter is closer to the levels reached by the Asian Tiger benchmark countries.

Due to the high population momentum that Uganda has accumulated over the years, the working-age population will be very big for several decades. The large gap between the employed population and those ages 15+, even for the combined scenario, shows that the country will have to use extraordinary strategies to accelerate economic growth and generate enough high-quality jobs for its youthful population to prevent political instability that could arise from unusually high unemployment rates.

The next section highlights some of the policies that Uganda should prioritise to optimise its chances of harnessing the demographic dividend and its contribution to the realisation of Vision 2040.

6. Policy Options for Harnessing the Demographic Dividend in Uganda

6.1 Accelerating the Demographic Transition

For Uganda to open the window of opportunity for harnessing the demographic dividend, all efforts should be made to facilitate a rapid decline in its high and slowly declining fertility. The key challenges that the country faces in its efforts to reduce fertility include:

- High fertility that is declining slowly
- A high demand for many children
- High levels of unmet need for family planning
- Early initiation of childbearing and young age at marriage
- High school dropout rates for girls
- High child mortality

Political will exists to commit resources to family planning programmes, particularly through the FP2020 programme, but a lot must be done to accelerate fertility decline and set the country on the path to harnessing the demographic dividend. Some key policy and programme interventions Uganda should adopt to accelerate fertility decline are listed below.

Key Policy Options to Accelerate Fertility Reduction to Open the Demographic Dividend Window of Opportunity in Uganda

- Reinforce political will and investments in FP at the national and subnational levels, building on the commitment to FP2020
- Declare family planning a key development intervention—this would go a long way in ensuring other sectors (beyond health) contribute to promoting voluntary contraception and fertility decline
- Reinforce evidence-based advocacy, monitoring, and accountability mechanisms to ensure family planning is prioritised and commitments are operationalised
- Address barriers to demand, access, and use of FP among married and unmarried couples by strengthening the delivery of high-quality FP services through health facilities, community outreach programmes, and other outlets
- Intensify educational campaigns through the media and other formats to enable couples to realise the benefits of smaller family size for both their own economic well-being and national development
- Delay the onset of childbearing by promoting school progression and access to contraception for sexually active adolescents and young women
- Reinforce interventions to reduce child mortality through immunisations, integrated management of childhood illnesses, nutrition insecticide-treated bednets, etc.

6.2 Creating a Healthy Workforce

To harness the demographic dividend, Uganda's labour force should be healthy because poor health undermines labour productivity. The country should invest in improving public health and general health care services to ensure a high-quality labour force for the next generation. The key health challenges that the country faces to ensure a healthy population include:

- High levels of malnutrition among children, which is a major cause of poor cognitive development and poor health status in adulthood
- Low coverage of child survival interventions including immunisation, IMCI, ITNs, etc.
- Poor access to water and sanitation, which results in high morbidity/mortality
- High prevalence of malaria and HIV/AIDS, which are key causes of low productivity in the labour force
- Rise of noncommunicable diseases including cancers and lifestyle-related chronic diseases
- High levels of maternal morbidity and mortality which are a key causes of low economic productivity for women

Below are some key policy options that Uganda should reinforce to ensure a healthy and productive labour force that will increase the chances of harnessing the demographic dividend and attaining the development aspirations outlined in Vision 2040.

Policy Options for Improving the Health Status of the Labour Force in Uganda

- Increase political will and commitment to health, including increasing budgetary and financial investments in health to at least the Abuja declaration level of 15% of the national budget
- Address the health workforce crisis, especially in rural areas
- Ensure commodity security and efficient health infrastructure
- Prioritise child nutrition and coverage of other child survival interventions such as immunisation, ITNs, and IMCI
- Address cultural factors that inhibit demand and use of readily available services such as immunisation, maternity services, and other reproductive health services
- Reinforce public-private partnerships in health care delivery
- Support the development of health information systems and data use in decision making to improve the management and impact of health services

6.3 Enhancing Coverage and Quality of Education and Skill Development

For Uganda to harness the demographic dividend, its labour force must be well educated and have high-quality skills that will it make more productive and position the country to be competitive in the global market. The key challenges the country faces in improving the quality and competiveness of its labour force include:

- Poor-quality primary education; although the school enrolment is high
- High school dropout rates between primary and secondary levels
- High cost of secondary education, especially in private schools
- Low enrollment at the tertiary level, with big gender inequities
- Mismatch between school curriculum and job market needs
- Limited opportunities for post-school skill development

Listed below are some of the policy options Uganda should adopt in order to revamp its education system and invest in human capital so the country will be able harness the demographic dividend and propel the realisation of Vision 2040.

Education Reforms Needed for Uganda to Harness the Demographic Dividend

- Increase political will and commitment to education, and increase budgetary allocation to improve school infrastructure and related resources
- Make a strategic shift from universal primary education to universal secondary and higher education to develop high-level innovation and productive skills
- Address the underlying causes of the deteriorating quality of education at all three levels (primary, secondary, and tertiary); some factors to address include student-teacher ratios, expanding teaching materials, and reforming the curriculum to focus on market-oriented skills and innovation
- Reform education curricula and teaching methods to focus on innovation, skill development, science and technology, and entrepreneurship development
- Address the huge geographical inequities in education coverage and gender differences at the tertiary level

6.4 Accelerating Economic Growth and Job Creation

A key ingredient for Uganda to earn the demographic dividend is jobs. It is estimated that by 2020 1 million people will enter the working age population (>15) each year. The key issues the country must address to benefit from the demographic dividend include:

- Modest decline in the poverty level, despite sustained economic growth over the past decade
- Majority of people are underemployed
- Fastest growing sectors have low job-multiplier effects and most jobs have been created in the low-value informal sector
- High skill mismatch between what the market requires and what the educational system produces

Listed below are some of the key policy options that Uganda should adopt to harness the demographic dividend:

Policy Options for Accelerating Economic Growth and Job Creation

- Modernise agriculture to enhance productivity and develop value-addition industries
- Improve urban planning and provision of basic social services for the urban poor and enhance urban productive infrastructure (transport, communication, and energy) to make economic production effective and create a competitive environment to attract direct foreign investment, which is key for job creation
- Promote better-quality expenditure and investment in agriculture via improved budget processes that are aligned to well-articulated strategies
- Attract more private investment in export-oriented industries with high job-multiplier effects.
- Devise tax regimes that could provide positive incentives for direct foreign investment, with particular focus on employment-intensive enterprises
- Focus on promoting markets for the tradable goods sector

6.5 Fiscal Policies and Governance

For Uganda to attract more investments and enforce accountability in the use of public resources and service delivery, it will need to create an enabling economic and political environment. The country is currently grappling with several issues that may curtail its effort to harness the demographic dividend, including:

- Limited local savings and FDI
- Poor accountability in the use of public resources and service delivery
- Poor infrastructure in areas such as energy, transportation, and communication

Uganda can adopt the key policy options listed below to improve governance and accountability, which will help the country harness the demographic dividend:

Policy Options for Enhancing Governance and Accountability

- Reform macroeconomic policies and financial institutions to promote private savings and investment and attract FDI
- Implement industrial policies, strategies, and interventions to promote the growth of indigenous firms and entrepreneurship
- Adopt a zero tolerance policy on corruption and institute strong accountability institutions to ensure that the law is enforced and those responsible for corruption are held to account
- Improve efficiency and accountability in the delivery of public services by improving local technical capacity to conduct evidence-based priority setting; resource allocation; and programme design, implementation, and monitoring
- Investment in infrastructure (energy, transport, communication)
- Design innovative mechanisms for agriculture financing

7 Discussion and Conclusion

Uganda's socioeconomic transformation blueprint, Vision 2040, seeks to transform the country from a "predominantly peasant and low income country to a competitive, modern and prosperous upper middle income country" by 2040. The vision provides a broad-based framework for addressing the strategic bottlenecks that have constrained Uganda's socioeconomic development, including rapid population growth and a high child-dependency burden. The country's development path is benchmarked to upper-middle- income countries, specifically to the experience of four countries: Malaysia, South Korea, Mauritius, and South Africa. V2040 aims to increase per capita GDP to USD 9,500 from the 2010 level of USD 506.

The vision highlights the potential role of the demographic dividend in realising the envisaged socioeconomic transformation, as seen in the Asian Tigers and Ireland. It advocates for reducing fertility through increased access to reproductive health services, keeping all school-age children (particularly girls) in school, and improving the health service delivery system. V2040 notes that a key outcome of the decline in fertility would be a decline in the dependency ratio.

The national economy has grown at an average rate of 6.4 per cent per year, and GDP grew from UGX 11 trillion to UGX 53 trillion between 2002 and 2012. Despite this growth, the economy has not created an adequate number of high-quality jobs nor reduced the high levels of unemployment and underemployment, especially among women and youth. This is because the growth has been fuelled by the service and infrastructure development sectors, which have low job-multiplier impact. Nevertheless, the steady economic growth, combined with a favourable macroeconomic environment and other emerging economic opportunities—recently discovered oil and other mineral resources, increasing foreign direct investment, and growing regional integration and partnership with the East—have provided a glimmer of hope that Uganda can achieve the development ideals outlined in Vision 2040.

Uganda's past and current high levels of fertility, combined with a steadily declining child mortality rate, have created a youthful population with a high child-dependency burden. About half of the country's population (52%) comprises children below age 15. As noted in the 2008 National Population Policy and Vision 2040, the high child-dependency ratio is a major challenge undermining social transformation and sustainable development in Uganda, with one working-age person (aged 15–64) supporting 1.9 people in the dependent age groups. Nevertheless, these population dynamics can be turned into a valuable demographic dividend that can boost the country's chances of graduating to a middle-income status if the country implements appropriate policies and investments, as outlined in Vision 2040. To harness the demographic dividend, Uganda should adopt a people-centred integrated development framework that simultaneously allows all five wheels of the demographic dividend move and reinforce each other.

The analyses presented in this study show that Uganda can harness a sizable demographic dividend if it adopts policies and prioritises investments aimed at creating a globally competitive economy that would accelerate economic growth and job creation while accelerating a reduction in fertility through voluntary and rights-based interventions and education. Prioritising economic reforms to the level of the Vision 2040 benchmark countries would increase Uganda's per capita GDP from the 2011 level of USD 506 to USD 6,084.

If Uganda realises its full potential by prioritising reforms and investments in economic, demographic, and human capital development (reducing its fertility level to 2.0), the country would harness a demographic dividend of USD 3,484, leading to a per capita GDP of USD 9,567. The combined scenario that concurrently prioritises job-oriented economic reforms and investments in family planning and education would give Uganda the best chance of achieving the socioeconomic transformation envisaged in Vision 2040.

These findings are similar to those documented in the 2011 World Bank study that used a demographic-economic model to estimate the impact of demographic change on the growth of income and economic development in Uganda (World Bank, 2011). That study used the UN fertility scenarios (high fertility, medium fertility, low fertility, and constant fertility) and showed that per capita income would double under the high fertility scenario and nearly triple under the medium and low fertility scenarios. Under the constant fertility scenario, the change in income per capita would be marginal, increasing slightly from USD 1,200 to USD 1,225 by 2050. The study further showed that reduced fertility would result in better use of Uganda's economic opportunities, including oil wealth, which could provide enough resources to more than double public expenditure on human and physical capital (health, education, and infrastructure). Under medium fertility, the annual expenditure on education would increase by more than 11 times, while annual expenditure on roads would increase by 7 times in 2050, compared to 2009 levels. This is 60 per cent higher than under constant fertility. The results also show that poverty (proportion of the population living on less than USD 2 per day) would reduce by 30 per cent under the medium fertility scenario. The study concluded that Uganda would enjoy heightened economic growth if its age structure changed to reduce the high child-dependency burden and such changes were accompanied by increased investments in social services, infrastructure, and accountability.

A starting point for Uganda to harness the demographic dividend is facilitating a voluntary decline in fertility by enabling all women and men who would like to postpone or stop childbearing to access effective contraceptive methods and realise their reproductive goals. The fertility decline would reduce the high child-dependency ratio and create a labour force bulge in the population, which could accelerate economic productivity and growth if the labour force is gainfully employed.

Reduced fertility would offer women more time to work and contribute to economic productivity while enabling families and governments to increase investments per child in education and health, which will help build a high-quality labour force for the future. Reforming the educational system to ensure universal enrolment at the secondary and tertiary levels will not only help reduce fertility by delaying the onset of childbearing, but also ensure the country has a well-educated, skilled, industrious, and innovative labour force to boost economic productivity and development.

Enhancing investments in the health sector will also ensure that Uganda has a healthy labour force that will live longer and contribute more to development. Accelerating economic growth by paying particular attention to development of sectors with high growth and job creation potential will be critical for the country to harness the demographic dividend. The job creation challenge is exacerbated by the fact that Uganda's labour force will continue to grow for a long time due to its high population momentum.

The results of this analysis showed that an exclusive focus on economic reforms and investments will be insufficient for Uganda to reduce poverty and attain the socioeconomic transformation and upper-middle-income status envisaged in Vision 2040.

In conclusion, for Uganda to achieve the same level of development as the benchmark countries by 2040, it must prioritise concurrent investments in economic and social factors, particularly family planning and education. This is precisely what the Asian Tigers did over the forty-year period from 1970 to 2010. The government has prioritised economic policies—specifically infrastructure development and electrification of rural areas—in a bid to accelerate economic growth and reduce poverty. However, FP and education have received marginal attention and the Vision 2040 fertility target of 4.0 is incompatible with the other economic aspirations the country seeks to achieve. This should change if Uganda can harness the demographic dividend and enhance its development prospects. The country is well-positioned to emulate the development miracle that the Asian Tigers achieved. Further enhancement of the country's impressive economic growth over the past decade, by improving governance, optimising accountability in the use of natural resources, and simultaneously following through on its FP2020 and education commitments will give Uganda the best chance of breaking its development shackles and transforming into a middle-income country in the next three decades.

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Appendix

Appendix 1: Variables used in the DemDiv Model for Uganda

Policy Area/Indicator	Description of Indicator/Variable	Effects on Demographic Dividend
Demographic Model		
1. Family Planning	Contraceptive prevalence rate (proportion of women using modern contraception)	Reduces unplanned births and overall fertility; reduces child-dependency ratio
		Improves maternal and child health by reducing high-risk births; improves overall health of the labour force
2. Period of Postpartum Infecundability	Duration (in months) after giving birth when women are not ovulating, and are therefore not susceptible to conception, due to breastfeeding and/or postpartum sexual abstinence	Longer periods of postpartum sexual abstinence lower fertility, especially in populations where contraceptive use is low in the postpartum period
3. Sterility	The proportion of women who are not able to have children by the time they reach the end of their childbearing span (measured as the proportion of women ages 45–49 who are childless)	High levels of sterility can reduce fertility; this indicator is not likely to change that much, and does not have a big impact on fertility, except in contexts with high levels of sexually transmitted infections
4. Education	Number of years of schooling	Delays marriage and start of childbearing; lowers fertility
		Improves health seeking behavior and key for having a healthy workforce
		Improves skills, innovation and overall productivity of workers
Economic Model		
5. Labour Market Flexibility	Measurement (on a scale of 1–7) of labour market flexibility, including factors such as labour-employer relations, wage flexibility, hiring and firing practices and effects of taxation	Policies and reforms in the labour market help attract FDI and create an enabling environment for optimising productivity of the labour force
6. Information and Communication Technologies (ICT) Use	Measurement (on a scale of 1–7) of use and capacity of Internet and mobile phone infrastructure	ICT use is critical for enhancing innovation, productivity of the labour force, industrial growth, and overall competitiveness that is key for attracting FDI

7. Financial Market Efficiency	Measurement (on a scale of 1-7) of efficiency of financial markets, including factors such as availability and affordability of financial services, financing through local equity market, ease of access to loans and venture capital availability.	Efficient financial markets facilitate the movement of funds and investments and promote investments by local and foreign investors
8. Imports as a Percentage of GDP	Measurement (on a scale of 1- 7) of imports as percent of GDP. Total imports refer to the sum of total imports of merchandise and commercial services. The percentage is log-transformed. To make aggregation possible, the variable is converted to a 1-7 point scale. A min-max transformation is applied, which preserves the order of, and the relative distance between, country scores	As economies advance, they specialise in industries and sectors where they have a comparative advantage and import products that they are not well placed to produce; at the early stages of economic transformation and industrialisation, the level of imports increases and falls and this may fall as developing countries develop the capacity to produce the products they currently import
Governance and Accountability		
9. Public Institutions	Measurement (on a scale of 1-7) of public institution strength, including factors such as property rights, division of powers, corruption, regulatory burdens, transparency, waste in government spending and public safety.	Strong public institutions help enforce accountability in the use of public resources, service delivery, protection of public and private property and investments, and in ensuring public safety, all key ingredients for promoting investments and economic productivity

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