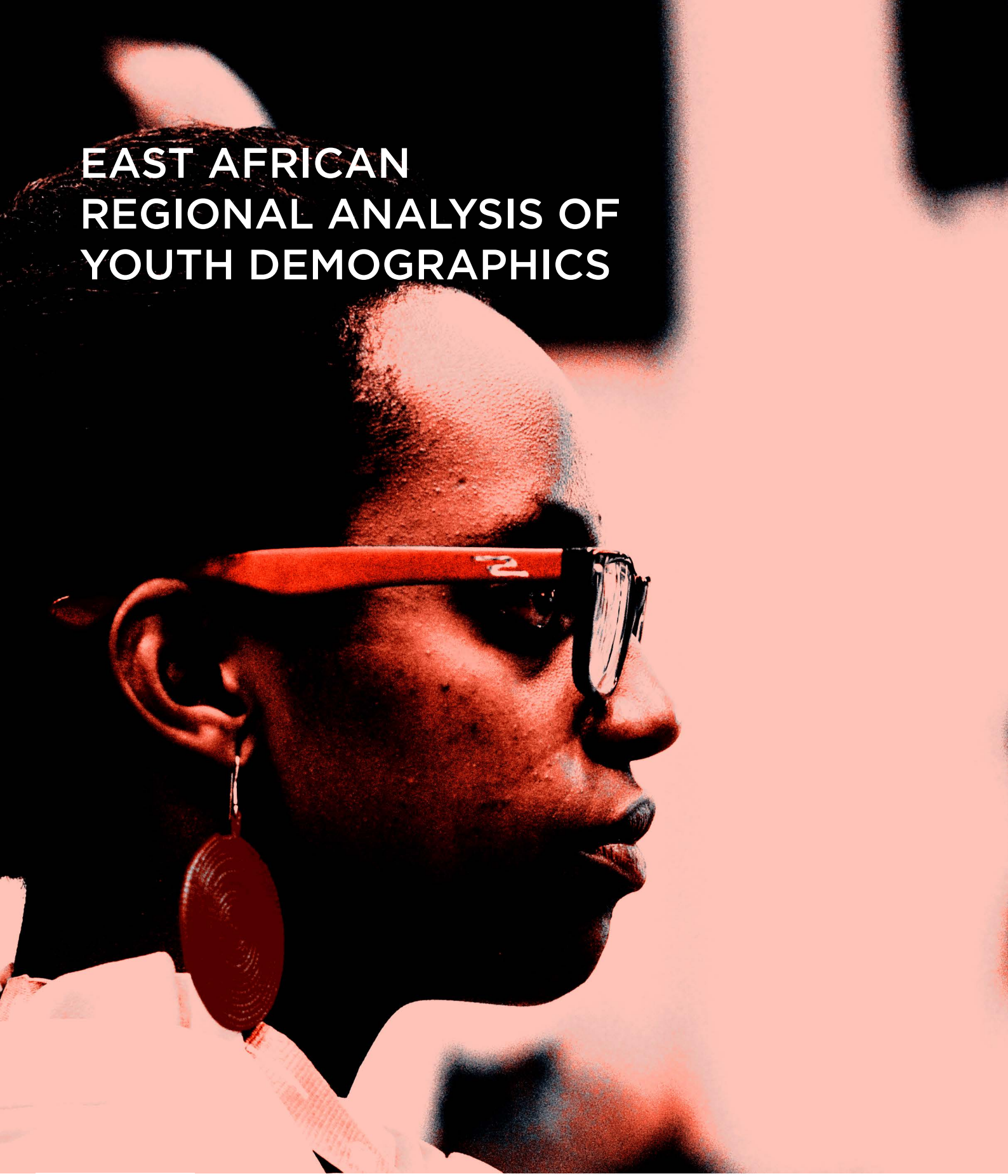
EAST AFRICAN REGIONAL ANALYSIS OF YOUTH DEMOGRAPHICS



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AFIDEP
African Institute for Development Policy
Bridging Development Research, Policy and Practice

UNIVERSITY OF Southampton

EAST AFRICAN REGIONAL ANALYSIS OF YOUTH DEMOGRAPHICS

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Abbreviations

AFIDEP	African Institute for Development Policy
AU	African Union
AUC	African Union Commission
CPR	Contraceptive Prevalence Rate
CSOs	Civil Society Organisations
DD	Demographic Dividend
DFID	UK Department for International Development
DHS	Demographic and Health Survey
EAC	East African Community
EARF	East Africa Research Fund
ECE	Early Childhood Education
FDI	Foreign Direct Investment
FP	Family Planning
GAF	Gender Analysis Framework
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
HDI	Human Development Index
HIV/AIDS	Human Immuno-deficiency Virus /Acquired Immuno-deficiency Syndrome
HPP	Health Policy Project
ICT	Information and Communication Technology
ILFS	Integrated Labour Force Survey
ILO	International Labour Organisation
IMR	Infant Mortality Rate
JAB	Joint Admissions Board
LSMS	Living Standards and Measurement Survey
mCPR	Modern Contraceptive Prevalence Rate
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Surveys
MMR	Maternal Mortality Ratio
NAYS	National Adolescents and Youth Survey
NBS	National Bureau of Statistics

NCDs	Non-Communicable Diseases
NEET	Not in Education, Employment or Training
NER	Net Enrolment Rate
NGOs	Non-governmental Organisations
NTA	National Transfer Accounts
NYS	National Youth Service
ReAYD	Regional Analysis of Youth Demographics
SDG	Sustainable development Goals
SRH	Sexual and Reproductive Health
SSA	Sub-Saharan Africa
SWTS	School to Work Transition Survey
TFR	Total Fertility Rate
TVET	Technical and Vocational Education and Training
U5MR	Under-Five Mortality Rate
UBEP	*Undugu* Basic Education Programme
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WEF	World Economic Forum
WHO	World Health Organization
YTCs	Youth Training Centres

Executive Summary

According to the United Nations (UN) projections, the world's population will reach 10 billion by 2055 and more than 95% of this growth will happen in low and middle - income countries. Of the 2.45 billion people expected to be added to the global population between 2017 and 2055, more than 1.4 billion (57%) will be added in Africa. Decades of very high fertility in Africa, coupled with rapidly declining child mortality have created a population age-structure dominated by young people under the age of 25. The demographics of the East African Community (EAC), particularly those of Kenya, Rwanda, Tanzania and Uganda, mirror those of Africa. Around 20% of the 127 million people in these four countries are between the ages of 15 and 24, and can be labelled as "youth" according to the United Nations definition. In the last population and housing censuses in the four countries conducted between 2009 and 2014, about 40% of the Rwandese population were children below the age of 15, and the corresponding percentages were 43% in Kenya, 45% in Tanzania, and 52% in Uganda. Such youthful population, if healthy, skilled, and gainfully employed, can be a catalyst for accelerated social and economic development. When the ratio of the working-age population to dependents increases, a window of opportunity opens for accelerated economic growth, a phenomenon called the demographic dividend (DD).

Economists have estimated that the demographic dividend contributed 25-33% to the Asian Tigers' economic growth in the 1980s. However, the demographic dividend is not automatic. Firstly, a slow pace of fertility decline is insufficient to open the window of opportunity to capture the demographic dividend since the ratio of the working-age population to young dependents will continue to be unfavourable. Secondly, even with rapid declines in fertility and child mortality, countries can squander the opportunity if they do not invest in human capital and create an enabling environment for savings, investments, and creation of jobs. For example, some economists have claimed that the demographic bonus has been squandered by Tunisia and South Africa since their windows of opportunity are about to close. Critically, there should be equitable access to jobs for young people that is devoid of any form of discrimination or favouritism. Rather than the youth becoming catalysts for transformational development, there is the real risk that, due to lack of strategic and timely action to invest in them in the EAC in particular and Africa in general, this youthful population may become a major burden or even a threat to the continent's security and economic development, with spill-over effects for the rest of the world.

This report summarises the findings of research on the socioeconomic implications of youth demographics in four East African Community (EAC) countries namely: Kenya, Rwanda, Tanzania, and Uganda. For the study, we used systematic mapping approaches to conduct a review of existing literature and data sources, and to develop a conceptual framework of the pathways through which youth demographics affect access to and demand for basic and critical services including schooling, housing, health care, and jobs. In addition, we employed modelling techniques including cohort component population projections and the DemDiv model (developed by the United States Agency for International Development-funded Health Policy Project implemented by Futures Group) to show, under different scenarios, the short, medium, and long-term implications of youth population dynamics on the countries' socioeconomic status up to 2050. Finally, we developed recommendations which bring together evidence from the literature, data review, and the scenario modelling to highlight the policy and implementation implications for each of the four countries and for the region, to benefit from the youth bulge.

Future Youth Demographics in EAC Countries

The results from the cohort component population projections show that in all the four countries, as indeed is the case for most African countries, there will be a significant increase in the total population for the next 30-50 years, irrespective of what population and social development policies the countries adopt. This is because the decades of high fertility have created a high population momentum, implying that even if total fertility reached replacement level (2.1 children per woman) in the next few years, there will still be large numbers of women added to the pool of reproductive women every year. Childbearing among these women will add to the population size for several decades. However, the pace of growth and the level at which the population will be stable can be influenced by policies that countries make today. Under the UN Medium Variant scenario[i], Rwanda's youth population (age 15-34) will increase from 4.2 million in 2015 to 7.1 million in 2050 and 7.7 million by 2065; in Kenya, the numbers will increase from 17 million in 2015 to 24 million and 35 million in 2050 and 2065 respectively; in Tanzania, the change will be from 17.9 million in 2015 to 47.4 million by 2050 and to 62.3 million by 2065; while for Uganda the youth population will increase from 23 million in 2015 to 38 million and 48 million by 2050 and 2065 respectively. Under the Accelerated Model[ii], the corresponding growth of youth population by 2065 will be 7.2 million in Rwanda, 30 million in Kenya, 48 million in Tanzania, and 42 million in Uganda. It should be noted that except for Rwanda, none of the other EAC countries will reach replacement level fertility by 2065 under the Medium Variant Scenario. Under the Accelerated Model, the most realistic scenario is that Rwanda and Kenya will reach replacement level fertility by 2065, but Uganda and Tanzania will have higher fertility. The consequences of the growth in population size and high dependency ratio will be pressure on basic services such as primary and secondary school places, health care, housing and infrastructure. Rapid population growth will also put pressure on land, water, and other natural resources and this could contribute to food insecurity and resource-based conflicts.

Demand for quality education and skills development:

Between 2015 and 2065, the secondary school age population in Tanzania will more than double from 4.8 to 14.2 million under the Medium Variant or to 9.7 million under the Accelerated Model. In Uganda, the secondary school age population will increase from 5.8 to 16.2 million under the Medium Variant or to 13.4 million under Accelerated Model. On the other hand, because of significant drops in fertility in Kenya and

[i] The UN Medium Variant Scenario assumes that increases in contraceptive use and education will result in lower fertility in patterns similar to the experience of other countries that have gone through the demographic transition.

[ii] The Accelerated Model assumes that countries intensify efforts to lower fertility significantly by 2065 including significantly reducing early childbearing, unmet need for modern contraception, and child mortality.

Rwanda, there will be declines in the school-age population by 2050 in both countries. All of the EAC countries will need to significantly invest in increasing the number of places for primary and secondary schools while at the same time improving the quality of education and skills training.

Demand for modern methods of contraception: Using the UN Medium Variant population projections, we estimated the total demand for contraception among sexually active female youth (married and unmarried) in the four EAC countries. The results indicate that the demand for contraception among female youth will increase significantly. For example, in Rwanda, among the female youth 15-19 years, the demand for contraception will grow more than 8-fold by 2065, from 35,000 women in 2015 to over 331,000. In Uganda, among young females aged 30-34, the demand will rise almost four times from 805,000 women in 2015 to 3.9 million by 2065.

Employment and "NEETs": Unemployment among youth is a widespread problem in Africa and EAC is no exception. For example, in Uganda, youth unemployment is around 21% among women and 11% among men, while in Tanzania, roughly 14% of those 15-24 years old are unemployed, with females having 1.5 times higher unemployment rates than males. Furthermore, many are in vulnerable employment, thus they are unlikely to have access to benefits or social protection programmes. The share of young people who are not in education, employment or training (NEET) provides a broad measure of the untapped potential of young people who could contribute to national development through work. The International Labour Organisation (ILO) argues that this group deserves attention since the youth are neither improving their future employability through investments in skills nor gaining experience through employment. If the levels of employment, school enrolment, and training remain the same, the projected number of NEETS in the four East African countries will increase from 9.8 million to nearly 23 million by 2050 (Kenya, from 4.9 to 9.1 million; Tanzania,3.1 to 9.2; Uganda, 1.5 to 4 million; and Rwanda 310,000 -532,000).

Modelling the Potential Impact of the Demographic Dividend in EAC

The DemDiv modelling tool was used in the four EAC countries to estimate the impact on development indicators of adopting different investment scenarios as follow:

i) Business as Usual: Characterised by maintaining the status quo across all sectors.

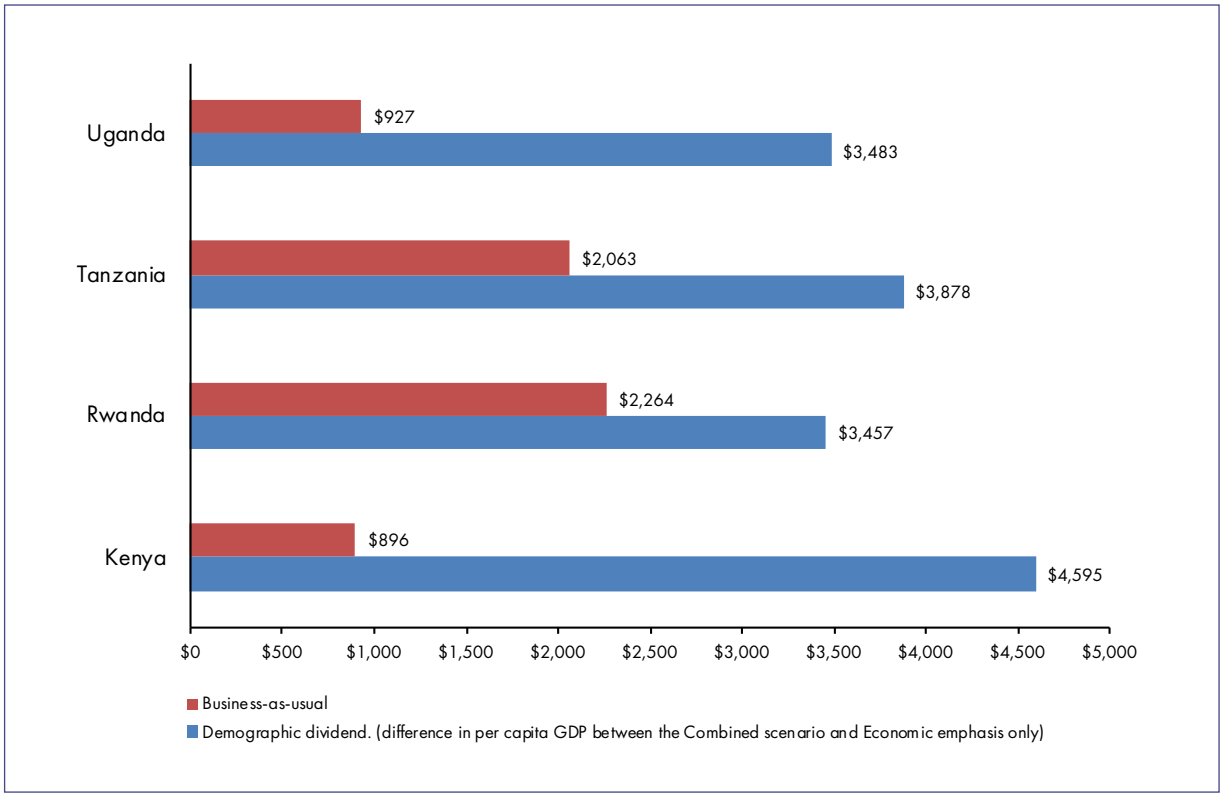
ii) Economic Emphasis: Economic reforms to enhance productive efficiency and accelerate economic growth, job creation, and poverty reduction.

iii) Social Emphasis: Combining economic reforms as in (ii) above and investing in education to achieve universal secondary education and at least two years post-secondary education.

iv) Combined Emphasis: Concurrently emphasising economic reforms and education and prioritising family planning to achieve contraceptive prevalence rate of at least 64% by 2050-55.

The results show that under the "Business as Usual" Scenario, rapid population growth will continue to put serious pressure on development and a youth bulge will not be achieved over the next few decades. Under this scenario, human development will remain low and the countries will remain stuck at low-income levels (see Figure i).

Figure i: Demographic Dividend versus Status Quo by 2050



On the other hand, under the Combined Investment Scenario, the four countries could quickly witness a change in their age structures to have a youth bulge and subsequent working-age bulge that would reduce young age dependency and allow them to maximise the benefits of the demographic dividend. The four countries could harness sizeable demographic dividends if they invested in: comprehensive sexuality education and providing universal access to contraception and healthcare; access to basic quality education for all and significantly improved access to tertiary training and skills development; economic reforms that spur entrepreneurship and job creation, with equitable access to available jobs; and strengthening the rule of law, good governance and accountability.

Policy responses and recommendations

This report provides two sets of recommendations: to the governments of the EAC countries, and to DFID and other development partners and are in line with the African Union's roadmap for harnessing the demographic dividend which has identified four pillars: employment and entrepreneurship; education and skills development; health and wellbeing; and rights, governance, and youth empowerment.

Recommendations for priority investments by governments of EAC countries

Family planning and health

i. Child survival programmes such as immunisation programmes and efforts to eradicate malaria, to improve human capital and to accelerate fertility decline.

ii. Universal access to contraception to address the high unmet need, especially among those living in rural areas, urban slums, and among the youth.

iii. Prevention of new HIV infections among youth and treatment of those who are infected to improve human capital.

iv. Good nutrition and promoting active life-styles to prevent overweight/obesity epidemic among youth.

Education and skills development

i. Invest in school-construction projects to match the growth in population.

ii. Put in place measures to evaluate and improve learning outcomes aimed attaining quality education and training.

iii. Increase female participation in secondary and tertiary education.

iv. Involve employers in curriculum reforms for tertiary and Technical and Vocational Education and Training (TVET) institutions to ensure that appropriate transferable skills form part of the training.

Economic reforms that promote job creation

i. Create an enabling environment for the creation of jobs, youth entrepreneurship, and encourage savings for pensions.

ii. Promote innovation hubs and facilitate the financial inclusion of youth to stem unemployment in the EAC.

iii. Provide decent livelihood opportunities to prevent crime and insecurity among the youth and discourage the brain drain of young people moving to other countries in search of jobs.

iv. Develop agribusiness and encourage greater youth participation in the sector.

v. Eliminate any form of discrimination in access to available jobs, particularly in the formal sector to promote equity.

Women's and girls' empowerment

i. Empower girls to participate in secondary and tertiary education and in science, technology, and mathematics.

ii. Outlaw practices that affect women's empowerment such as child marriages and gender-based violence and ensure these are enforced.

Environment and climate

i. Work with youth to raise awareness of environmental issues and good stewardship of natural resources.

ii. Urban planning should take into consideration both natural growth and rural-to-urban migration. Rural development schemes that offer attractive livelihood opportunities for youth can help to manage rapid urbanisation.

Governance and accountability

i. Improve governance and accountability to improve security and shared prosperity.

ii. Include youth in decision-making spaces especially on matters that affect them.

Recommendations to DFID and Development partners

To support countries in the region to benefit from the demographic dividend, strategic technical and financial support from development partners should focus on the following areas:

i. In-depth policy prioritisation analysis: Development partners should provide the technical support for in-depth prioritisation analysis of population and development policies. In particular there is need to provide such guidance at sub-national level as significant differences on population and development outcomes exist across regions and within countries.

ii. Systems thinking and integrated planning capacity: Supporting capacity development for planning officials and programme designers on systems thinking and integrated planning. Systems thinking is an approach to problem solving that views "problems" as part of a wider dynamic system. It demands deeper understanding of linkages, relationships, interactions and behaviours among the elements that characterise the entire system.

iii. Cost-benefit analysis: Provide technical expertise and support for cost-benefit analyses of interventions aimed at harnessing the demographic dividend.

iv. Sustainable funding for demographic dividend interventions: The Combined Emphasis Scenario which provides the best options for harnessing a sizeable demographic divided can be a daunting undertaking given the multiple linkages across social and economic development sectors. Development partners should support innovative funding aimed at providing sustainable funds for interventions to harness the demographic dividend.

v. Coordination and accountability systems: Provide support for the development/enhancement and implementation of strong coordination and accountability systems for population and development. Examples include the creation of strong national councils for population or councils for population and development to coordinate the implementation of programmes on population and development-- including universal access to effective contraception.

vi. Role of the private sector and other stakeholders: Engage the private sector, civil society and other critical ministries like education, youth, labour, and industrial development in the agenda to harness the demographic dividend and integrate population dynamics in their existing policies and planning.


1

Introduction

The African Institute for Development Policy (AFIDEP), in partnership with the University of Southampton and local collaborators, conducted a desk-based analysis project in 2017 titled "Regional Analysis of Youth Demographics" (ReAYD) which was funded by the East African Research Fund of the United Kingdom (UK) Department for International Development (DFID). The main purpose of the project was to understand the implications of the present and future changes to the demography of youth (15-24 years) in the East Africa Community (EAC) on basic services, labour force, and socio-economic development. The East African Community is a regional inter-governmental partnership between five countries (Burundi, Kenya, Rwanda, Uganda, and the United Republic of Tanzania). It was originally conceived in 1967 by three founder states (Kenya, Uganda, and Tanzania), and formally established in 2000 by a treaty. The pillars of integration, which are at various stages of implementation, include a customs union, common market, monetary union, and ultimately political federation.

The Terms of Reference of the ReAYD project specified that the project should focus on four EAC countries: Kenya, Rwanda, Tanzania and Uganda. The project was implemented through the following work packages (WP):

WP 1: Systematic mapping of existing literature to develop a conceptual framework of the pathways through which youth demographics affect access to and demand for basic and critical services including schooling, housing, healthcare, and jobs;

WP 2: Scenario modelling using secondary data sources to show, under different scenarios, the short, medium, and long-term implications of youth population dynamics on the countries' economic development;

WP 3: Developing recommendations which bring together evidence from the literature and scenario modelling to highlight the policy and implementation implications of youth demographics for each of the four countries and for the region;

WP 4: Use data visualisation to communicate the findings to policymakers and youth in the region including web-accessible interactive maps, infographics, and videos.

The detailed methodology applied in this study are provided in Appendix 1 and Appendix 2.

2

Rationale and Problem Statement

According to population projections by the United Nations (UN), the world will reach 10 billion people by 2055 and more than 95% of this growth will happen in low and middle-income countries.[1] Of the 2.45 billion people expected to be added to the global population by 2055, more than 1.4 billion (57%) will be added in Africa and by 2063, there will be more than 3.2 billion people living in Africa (see Figure 1). Decades of very high fertility in Africa, coupled with rapidly declining child mortality, have led to high population growth rates (currently averaging 2.5% per annum). As a result, the age-structure of many African countries has a high percentage of people under the age of 25 (average of 60% in 2015, compared with 41% globally).[1] Such youthful population, if healthy, skilled, and gainfully employed can be a catalyst for accelerated social and economic development. When fertility and childhood mortality fall sharply so that the ratio of dependents to economically active people decreases, a window of opportunity opens for accelerated economic growth, a phenomenon called the demographic dividend. In theory, countries benefit since resources that would have been used for building extra schools, hospitals and other services can be invested in human capital to increase productivity or saved, while productive adults facilitate increased Gross Domestic Product (GDP).

The Youth Bulge and the Demographic Dividend

A youth bulge is a temporary demographic phenomenon which occurs when child mortality declines and fertility falls rapidly so that the previous cohort of births is larger than subsequent cohorts. As the large cohorts of births move into the working ages (15-64 years), we get a bulge in the population pyramid.

If the youth are skilled and productively employed, the youth bulge can lead to the **demographic dividend**, a temporary economic benefit which can span five or more decades. The benefits of the demographic dividend include:

- Higher consumption per capita.
- Increase in savings.
- More resources for infrastructure and increase in productivity.
- Potential for a second, larger demographic dividend.

The first demographic dividend eventually wanes because falling birth rates mean that there is a reduction in the number of people joining the labour force. Also, higher living standards can lead to longer life expectancy and an ageing population which increases old-age dependency.

As the first demographic dividend is waning, a **second demographic dividend**, potentially larger and lasting longer, can happen if appropriate actions and policies are in place to encourage savings and asset accumulation for older ages and investing in higher labour productivity.

The second demographic dividend can lead to a permanent increase in living standards.

There are a number of **caveats**.

a) A youth bulge requires both child mortality and fertility to decline sharply. A fall in child mortality alone is not sufficient to achieve a youth bulge.

- If fertility remains high, subsequent cohorts will continue to grow and the ratio of young dependents to working ages will continue to be unfavourable.
- The slow decline in fertility maintains high young-age dependency age structures whose effect on economic growth is modest or negative.
- Sustained fall in fertility to replacement level fertility (2.1) is the best option for maximising the benefits of the demographic dividend.

b) Converting the youth bulge into a demographic dividend is not automatic. A country can "squander away" this opportunity if:

- Youth are under-educated or unskilled leading to low productivity.
- There is high youth unemployment or under-employment.
- Youth who are not economically productive become disenchanted and cause civil unrest.

Figure 1: Africa's share of the world population, 2015-2063. UN Medium Variant Scenario, 2017 Revision and share of Gross Domestic Product in 2015

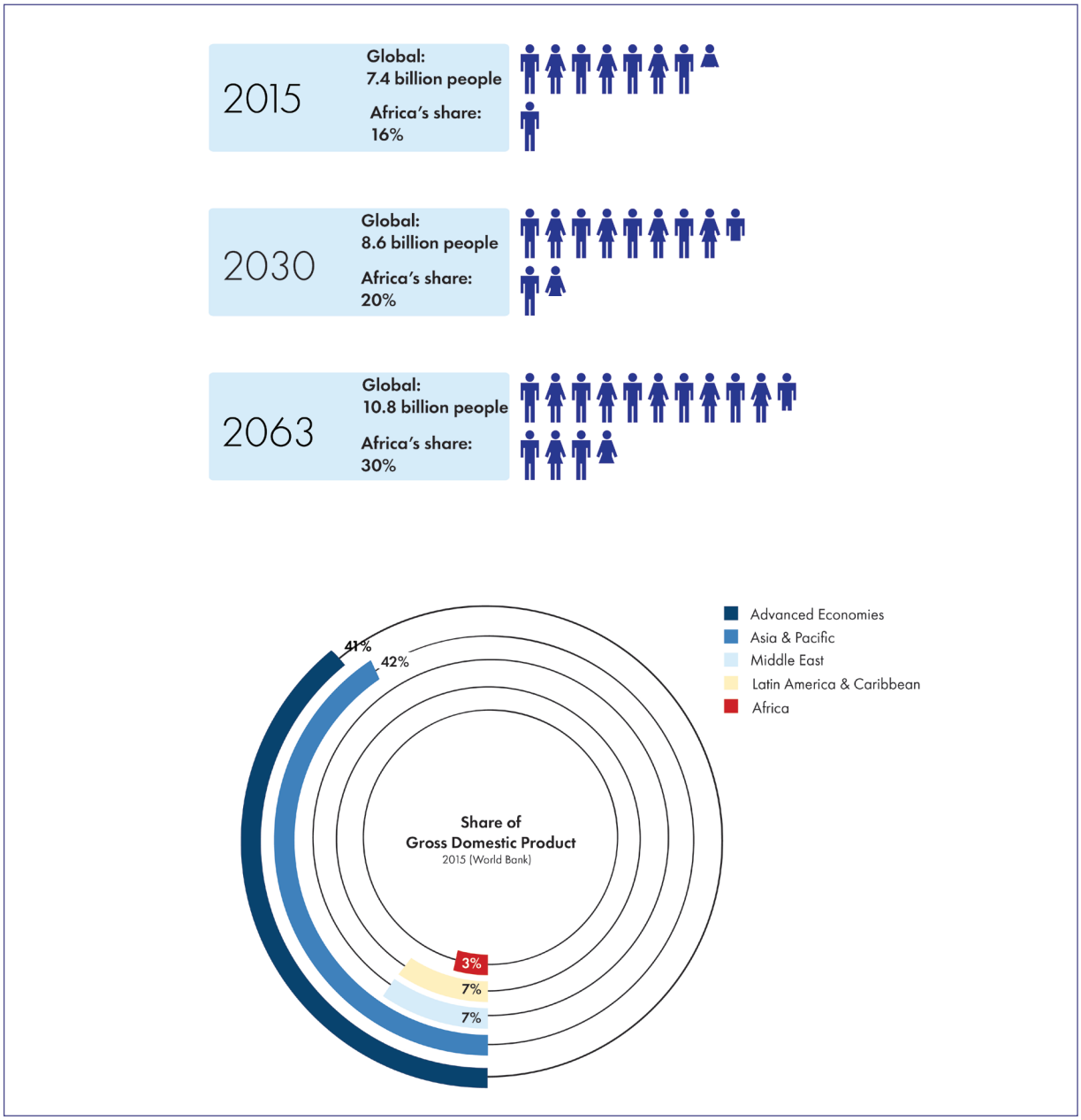
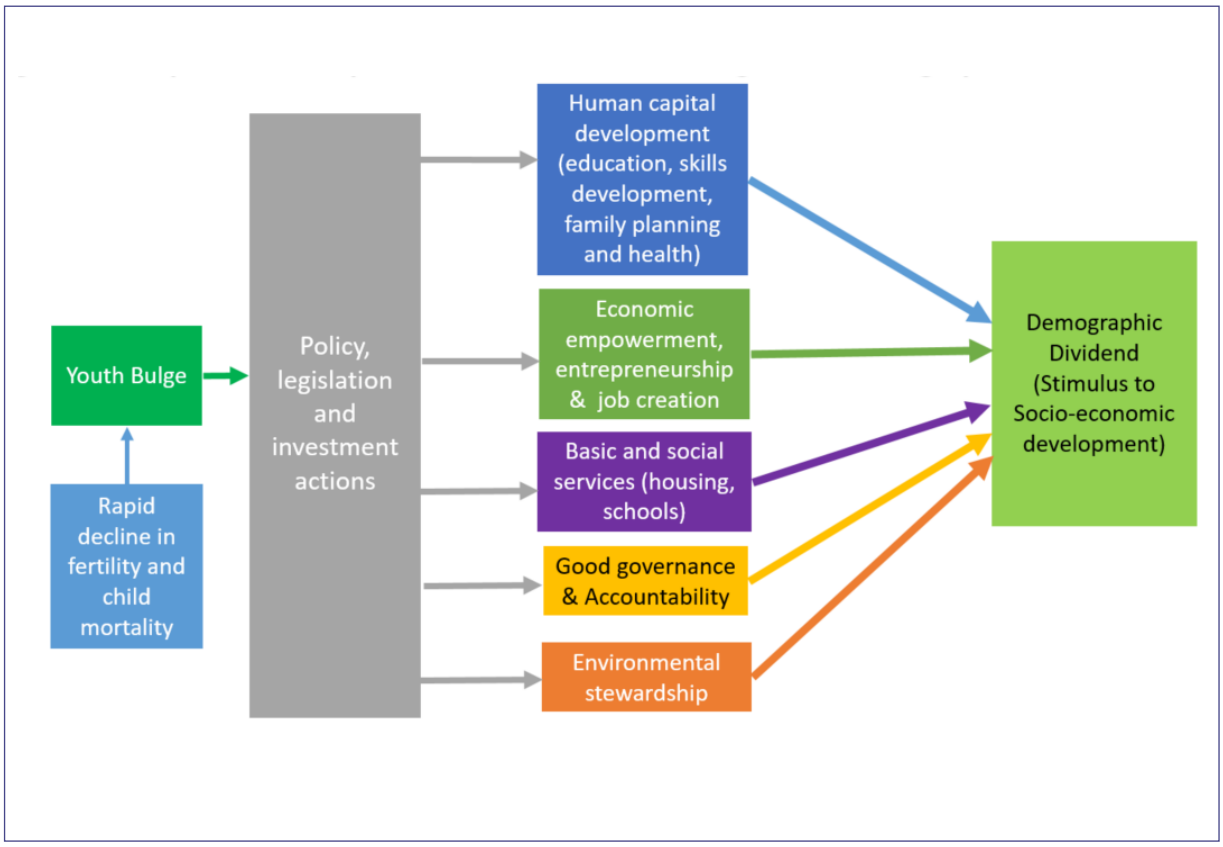


Figure 2 is a simplified diagram demonstrating the potential relationship between population dynamics and economic development. The first demographic dividend can last up to 50 years. If during the first demographic dividend people are encouraged to invest or save for older ages, a second demographic dividend, which is longer and more durable, can occur. Economists have estimated that the demographic dividend contributed 25-33% to the economies of South-East Asian countries (South Korea, Taiwan, Singapore) in the 1980s.[2, 3]

Over the past five years, the African Union (AU) and multilateral agencies have led the agenda on harnessing the demographic dividend in Africa. This agenda has brought some optimism among many African leaders and led to demands for national analyses on the prospects of harnessing the demographic dividend. However, there is lack of understanding on what investments to make and what policies are needed to move from this optimism to action. For example, the necessity of significantly investing in family planning to accelerate fertility decline as a pre-condition for harnessing a sizeable demographic dividend is being underplayed both at the AU level and in most countries. Secondly, even though the four EAC countries have youth policies, these show lack of awareness of the short and long-term implications of the youth demographics on basic and critical services. Instead of reaping a demographic dividend, African countries may find that the youthful population is a bane especially if they adopt "business-as-usual" actions. In the less benign situation, the window of opportunity may pass by without countries realising the economic benefit from the demographic age-structure as is the case of South Africa and Tunisia.[4, 5] In the worst-case scenario, the large youthful population could translate into an army of discontented unemployed youth who might

Figure 2: Simplified Conceptual Framework: Youth Bulge and the Demographic Dividend



increase social risks and tensions.[6] Other consequences of this worst-case scenario include effects on the environment, unplanned urbanisation, and poverty (see Figure 2). Each of the EAC countries must today confront two major challenges: (1) Address the doubling or even tripling by 2050 of their working-age population; and (2) Better prepare for the future of their upcoming young generations.

3

Demography of the Four EAC Countries

This section looks at the population characteristics of the four countries. It first outlines the demographic profiles, comparing the population age structures with other Asian countries that have benefited from the demographic dividend. The projected population growth in different regions of the world is presented next, followed by the concept of the youth bulge and how it is created. Finally, we present the policy options that have been shown to increase the magnitude of the demographic dividend earned in countries that have gone through the demographic transition.

3.1. Demographic Profiles

The demographic characteristics of the four countries are shown in Table 1. Roughly, the four countries make up over 10% of the continent's population. Approximately 20% of the population of these countries (i.e. about 25.5 million) are youth aged 15-24, the official United Nations definition of youth. This definition varies: the EAC uses 15-34 years; Rwanda uses 16-30 years; Tanzania 15-35 years; Kenya uses 18-34 years; and Uganda uses 15-30 years. In the report, we use the UN and EAC age-ranges so that data are comparable with other youth studies.

The average number of children that an East African woman can expect to have during her lifetime (total fertility rate [TFR]) ranges from 3.9 in Kenya to 5.4 in Uganda (see Table 1) compared with averages of 4.4 for Africa and between 1.6 and 2.3 for the rest of the world. Although fertility rates are still high in EAC, there has been some decline since 1990. Between 1990 and 2015, TFRs declined by 45% in Kenya; 33% in Rwanda; 27% in Uganda; and 13% in Tanzania. Much of the decline in fertility is attributed to the significant increase in the use of modern contraceptives by married women, which was made possible through public family planning programmes. Modern contraceptive prevalence rate (mCPR), which is the percentage of married women who are using modern contraception, is highest in Kenya and there have been large increases in all the four countries.

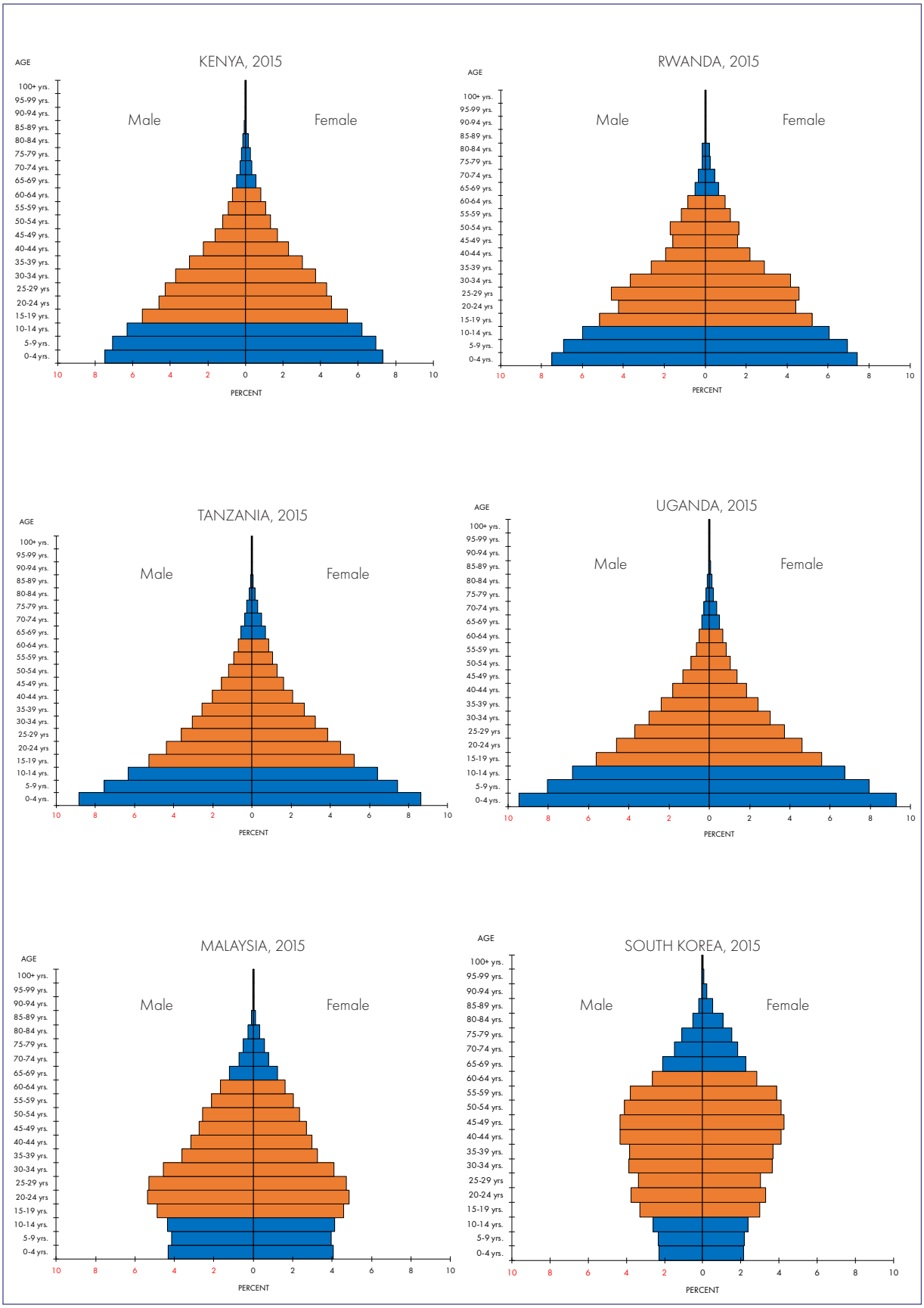
Currently, the population age-structures of the four countries are typical of most African countries, with a large base of young people (see Figure 3). In comparison, the population pyramids of Malaysia and South Korea show that the two countries are well advanced in their demographic transitions, reflecting a much more favourable ratio of working-age population to dependents. These two countries had the same population pyramids and roughly similar total fertility rates as the EAC countries in the 1960s. While Malaysia's and South Korea's total fertility rates dropped from about six children in 1960 to below two children in 2015, fertility rates for the EAC countries during this period only dropped by about one to two children.

Table 1: Demographic profiles of EAC countries

Country	Total population in millions (2015)[a]	Youth, 15-24 years as a % of total population (2015)	Children, 0 -14 years as a % of total population (2015)	Total fertility rate		Percentage of married women (15-49 years) using modern contraceptives		Under-five mortality-deaths/1000 live births	
				Early 1990s[c]	2014-16[c]	Early 1990s	2014-16	Early 1990s	2014-16
Kenya	44.2	20%	42%	6.7	3.9	27	53	90	52
Rwanda	11.3	20%	40%	6.2	4.2	13	48	151	50
Tanzania	53.9	19%	45%	6.2	5.2	7	32	141	67
Uganda	35.5	21%	47%	7.4	5.4	3	35	177	64
Africa	**1256**[b]	**19%**	**41%**	**5.7**	**4.4**	**10**	**33**	**167**	**75**

Sources: (a) National Population and Housing Census projection Reports (Kenya, 2012), Rwanda (2014), Tanzania (2015), Uganda (2016); (b) United Nations, 2017 Revision, World Population Prospects; (c) Demographic and Health Surveys/ Multiple Indicator Surveys.

Figure 3: Population pyramids of Kenya, Rwanda, Tanzania, and Uganda compared with Malaysia and South Korea, 2015



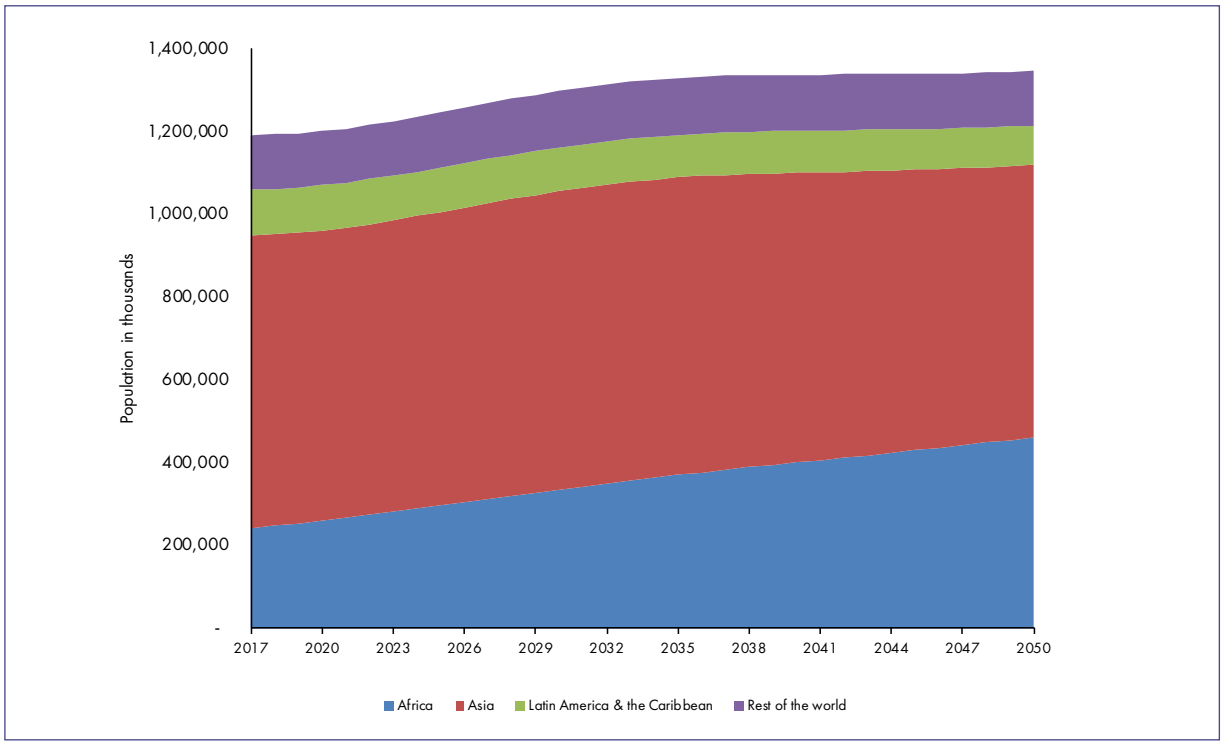
The population pyramids capture the total population of a country by 5-year age groups (y-axis). The pyramid depicts the percentage contribution of each five-year age group to the total population (x-axis).

Table 2: Comparison of select socio-economic and demographic indicators for EAC countries, Malaysia and South Korea

Indicator	2015 (or latest available year)					
	Kenya	Rwanda	Tanzania	Uganda	Malaysia	S. Korea
Per Capita GDP ($)	1350	721	872	674	10,829	27,108
Total Fertility Rate	3.9	4.2	5.4	5.4	1.98	1.3
Under five mortality (deaths/1000 births)	52	50	67	64	5	4
Net Secondary School Enrolment Rate (%)	44	23 (2013)	24.7	24	68.8	96.6
Gross Tertiary Enrolment Rate (%)	5	7.5 (2013)	5.2	5.4	37	93.2

Sources: World Bank WDI; UN World Population Prospects, The 2017 Revision; Demographic and Health Surveys/ Multiple Indicator Surveys.

Figure 4: Growth of global youth population (15-24 years), by regions of the world. UN Medium Variant scenario, 2017 Revision



3.2. Pathways to a youth bulge

Except for Africa, the youth population in the rest of the regions of the world will be declining by 2100, all things being equal (see Figure 4). In fact, the youth population has started declining already in Europe and Latin America and the Caribbean such that the populations of these regions are ageing. The economic impact of an ageing population can potentially be negative if there are insufficient investments and savings to support pensions and other social safety nets for older people.

The transition to lower fertility in Africa is happening at a slower pace than the experience of the other regions of the world. Only Mauritius, Seychelles and Réunion in Africa have fertility below the world average of 2.6 children per woman.

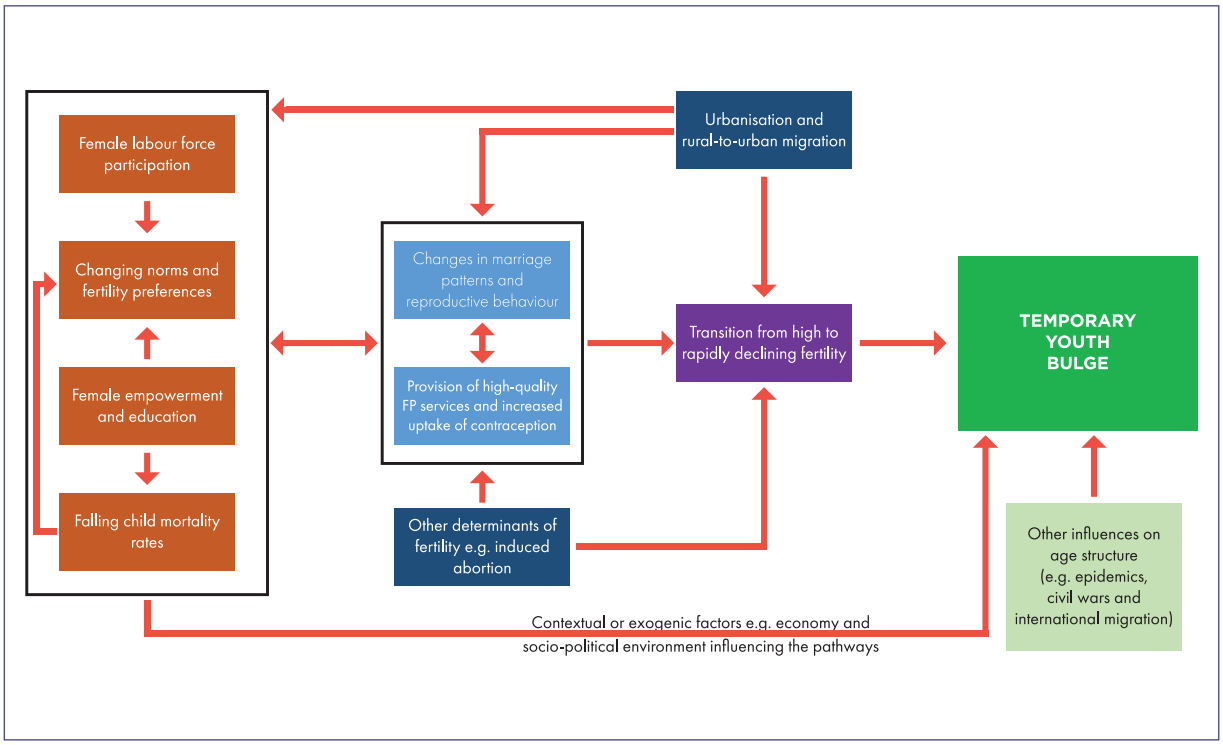
Figure 5 summaries the pathways to a youth bulge focusing on key determinants to fertility reduction. Low levels of socioeconomic development, low female education and early marriage, high child mortality and weak family planning programmes are the factors that have traditionally kept fertility high in Africa[7]. Earlier studies and recent reviews show that in general, fertility rate declines with the increased level of social and economic development.[8-10]This is driven by changing norms and perspective on the importance of many children. In agrarian societies, many children are preferred as a source of labour, with minimal cost on human development. However, as societies move away from agriculture to industrialised societies due to economic improvement, the need for large families dissipates, and the cost of investment in human capital development (including education and skills development) increases, thus changing the perspectives on family size norms. A growing stream of evidence also shows that factors that improve the socio-economic wellbeing of women, including education and labour force participation, have been shown to contribute to lower child mortality and fertility rate.[11-13]

When child mortality is high, couples adopt "insurance" or "replacement" strategies to compensate for child losses. When child mortality rates start falling, couples adjust their fertility downwards.[14,15]

With increases in female education and mCPR, fertility has started falling in Africa, but at the same time, couples are abandoning traditional practices such as long periods of postpartum abstinence and breastfeeding which have depressing effects on fertility.[16-18]

The impact of urbanisation on changes in fertility is thought to operate through changes in female education and empowerment, marriage patterns and fertility desires, and uptake of contraceptive use. Rural-urban differences in fertility rates exist in most African countries and the challenges in tackling high rural fertility remain invariably the same across Africa: poor access to family planning services; lack of progress in educational attainment, lack of basic infrastructure and poor road networks and transport systems, and the vicious cycle of poverty. The future of fertility transition in most parts of Africa inevitably requires concerted efforts and programme interventions to reduce fertility in rural and remote regions.[16] For instance, the use of the community-based distribution of contraceptives in the difficult to reach areas in Ethiopia, Rwanda and Malawi is credited for the observed rapid increase in contraceptive uptake and subsequent fertility decline in these countries.[19, 20]

Figure 5: Pathways to the youth bulge in East Africa



The role of female education in reducing fertility is thought to operate through a number of pathways including, delayed entry into marriage, participation in wage employment which lowers desired fertility size, confidence to use modern health services and contraception, and empowerment which increases women's autonomy and decision-making within a household or a community (see Figure 6).[21] Evidence from 22 countries in Sub-Saharan Africa (SSA) shows that increasing women's education across different socio-economic groups is very effective in reducing overall fertility levels.[22]

However, a few years of schooling are not sufficient for meaningful fertility reduction. For the most recent Demographic and Health Surveys (DHS) conducted in SSA between 2000 and 2016, the results show that primary education is associated with only 7.3% lower fertility when compared with women with no education. Secondary and tertiary education, on the other hand, are associated with 35.3% and 54.2% lower fertility respectively than that of women with no education. The variation in relative differences in fertility rates by education for SSA as a whole and across different countries is illustrated in Appendix 3 (authors own analyses). In Rwanda, increase in educational attainment during the last decade explained much of the fertility decline, along with significant increase in contraceptive use, improvement in living conditions and progressive shifts towards non-agricultural employment.[23, 24]

In summary, exposure to modern school-based education has overriding strong independent effect on uptake of modern contraception and reducing fertility when controlled for other factors such as residence, income and religion.[25]

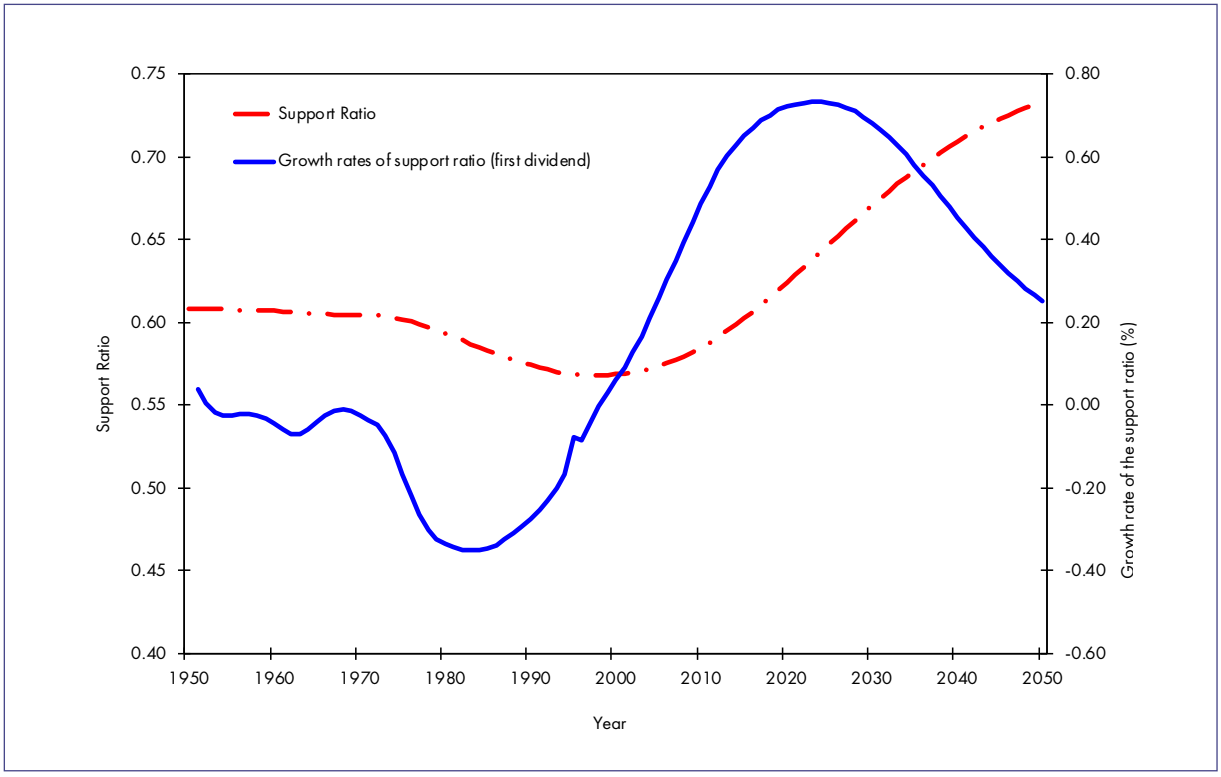
Wealth status has a similar effect on fertility to female education. Our analyses using DHS data from SSA show that fertility among women in the poorest wealth quintile is twice as high as women in the wealthiest quintile (Appendix 3). A larger proportion of the poorest women do not use contraception even when they want to avoid additional childbearing because family planning services are too far, they are afraid of side effects of contraceptives, or their preferred method is out-of-stock[7]. The benefits of effective contraceptive use go beyond fertility reduction. Modern contraception is estimated to successfully avert 33% of all maternal deaths in Africa annually.[26]

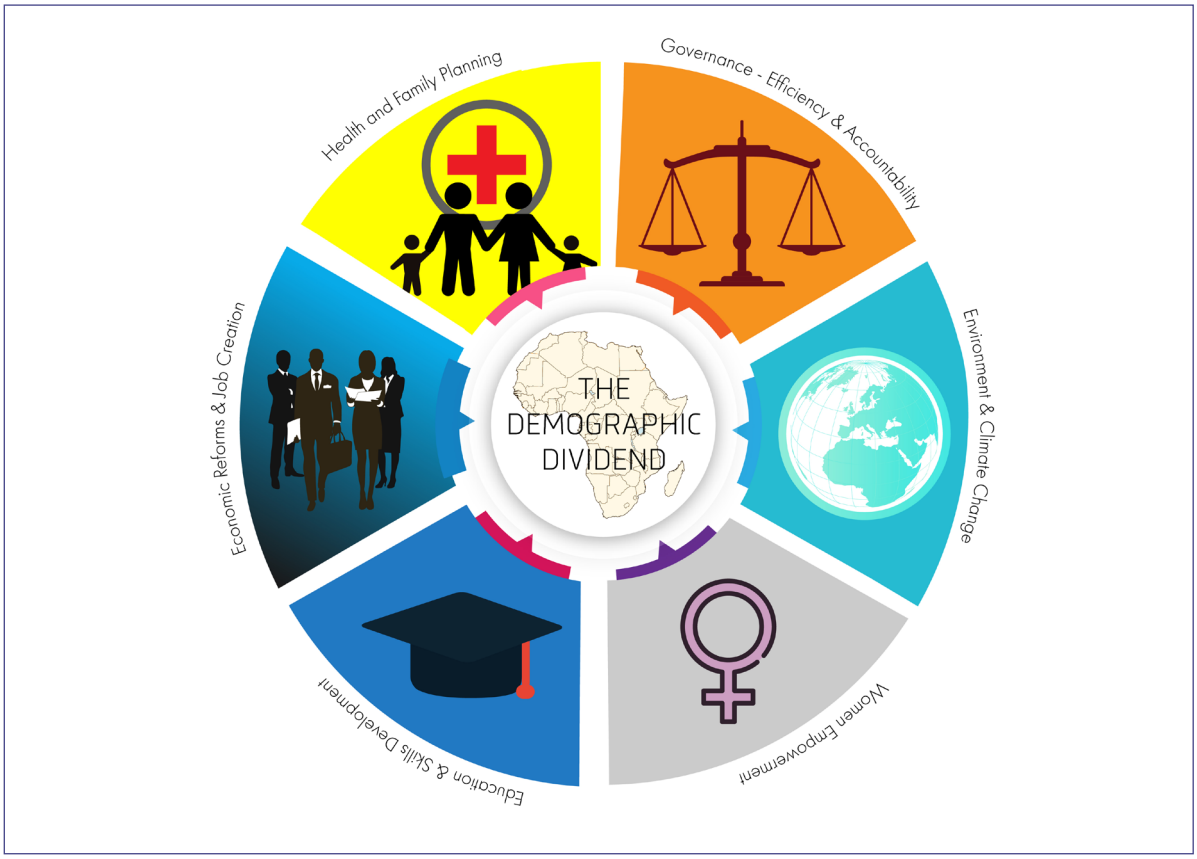
The timing of when a country attains a youth bulge depends on the pace of fertility decline and improvements in child survival. The conversion of a youth bulge to a demographic dividend is not automatic since countries can squander this opportunity if the youth are uneducated and do not have equitable access to decent jobs.[4] The creation of jobs to meet the demands of large youth populations requires both local and foreign domestic investment, enabling environments for entrepreneurship, and good governance and accountability.[27] Governance and accountability are particularly important in ensuring that youth have equitable access to available jobs, particularly in the formal sector.

Debates at many population conferences indicate that experts are divided on the actual timing when countries begin to reap the demographic dividend with some arguing that even small declines in fertility have a positive benefit, while others are more pessimistic. However, all agree that the support ratio, which is a ratio of effective producers (workers) to consumers (young and old dependents), needs to increase to achieve a sizeable benefit in economic growth. Furthermore, economists who have used the National Transfer Accounts (NTA) demographic dividend modelling approach suggested that a one percentage point increase in the support ratio leads to a one percentage point increase in the standard of living in the population, all other things being equal.[28] The first demographic dividend is thought to be positive when the ratio of producers to consumers is rising; as this ratio peaks, the dividend equals zero; and as it begins to decline, the dividend becomes negative, implying that the demographic change acts as a brake on economic growth rather than an impetus for economic growth.[4] Figure 6 illustrates estimates of Senegal's support ratio and first demographic dividend between 1950 and 2050.

The support ratio (red series) significantly decreased in the 1980s and 1990s when the child dependency burden in Senegal was at its highest as a result of past high fertility. However, as child dependency begins to decline slowly after the turn of the century to coincide with the drops in fertility and mortality, the support ratio begins to increase rapidly and is projected to continue doing so for several decades even as the rate of change slows down after 2030. As a result of the positive increase in the support ratio from the 1990s, this analysis demonstrates that in fact Senegal has been benefitting from the first demographic dividend (rate of change of the support ratio in the blue series) over the last two decades and the opportunity to maximise the demographic dividend will peak between 2020 and 2030 before the rate of change slows down as the growth of those in the working ages slows down. However, first demographic dividend will still be positive at the end of the projection period in 2050.

Figure 6: Estimated changes in Senegal's Support Ratio and First Demographic Dividend, 1950-2050 (CREFAT, 2015)





3.3. Priority Policy Areas Necessary to Harness a Sizeable Demographic Dividend

Countries in the EAC do not currently have a youth bulge but there is a window of opportunity if the EAC invests in universal access to family planning and human capital development. Thus, for the EAC countries to reap the demographic dividend, pre-requisite policy changes and programme actions leading to significant investments and therefore improvements in the following areas are required:

- Health and family planning.
- Education and skills development for all.
- Women's empowerment.
- Job creation and equitable access to available jobs (focusing on the youth).
- Good governance.

These policy priority areas are aligned to the AU roadmap (2017) on harnessing the demographic dividend through investments in youth. It is notable that the AU roadmap subsumes family planning within the health pillar. However, the importance of achieving rapid fertility decline should merit greater emphasis on family planning and advocacy for universal access to modern contraception as a pathway to faster demographic transition in the EAC.

4

Youth Challenges in the EAC

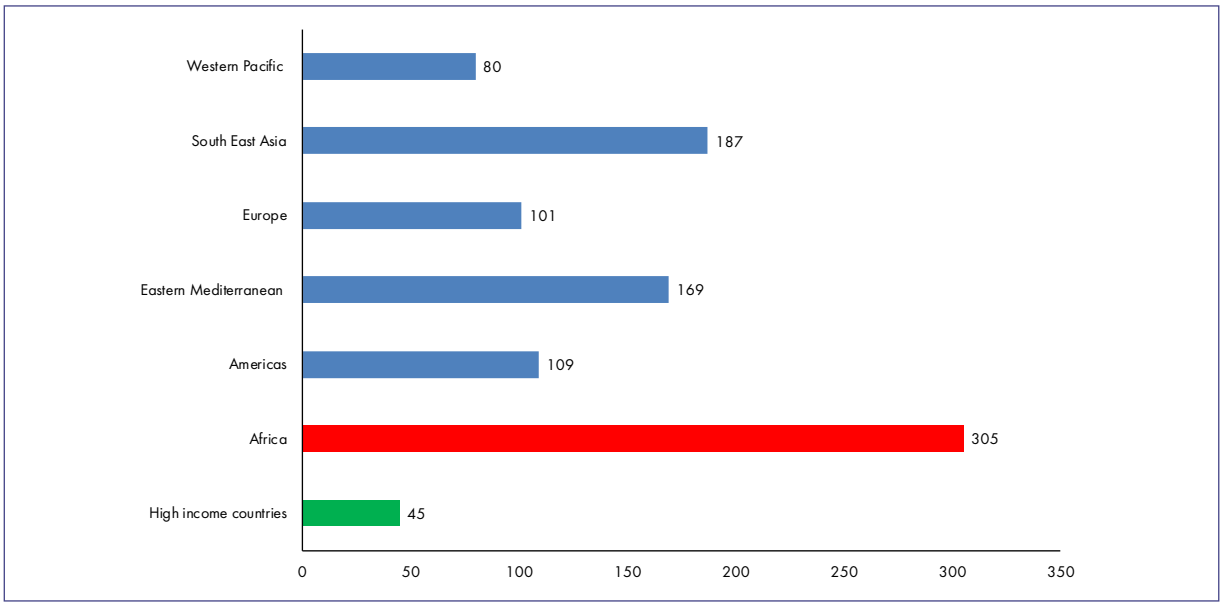
Youth in Rwanda, Tanzania, Kenya and Uganda face similar social and economic challenges: high birth rates, poverty, unemployment and underemployment and health problems. However, the patterns and severity of these challenges vary by country and sub-country. This section focuses on health, education, employment, and migration and urbanisation challenges facing the youth. Efforts have been made to identify existing policies as well as the policy gaps in each of the sectors discussed.

4.1 Health Challenges for Youth

Youth in Africa face many daunting challenges to their health and wellbeing including the burden of infectious diseases such as HIV/AIDS and malaria, and non-communicable conditions including the impact of childhood malnutrition, depression and preventable injuries and accidents. As a result, it is not surprising that the continent has the highest death rate among adolescents and youth (10-24 years old) (see Figure 7 from Patton et al. 2016).[29] Among adolescents aged 10-19, the mortality has been increasing instead of decreasing. During the period 2011-2015, there were 6.4 adolescent deaths per 100 population in Africa compared 6.1 and 5.4 per 100 for the periods 2005-2010 and 2000-2005 respectively.[30]

Another major challenge is early childbearing which has implications for total achieved fertility, maternal mortality and morbidity, child survival, and women's empowerment. The age-specific fertility rates for the four countries (Figure 8 overleaf) show that Rwandese youth (15-24 years) have a lower fertility compared to the other three countries, but older Rwandese women have a higher fertility than their Kenyan counterparts so that the total fertility for Rwanda is higher than Kenya's. Child marriages contribute significantly to the high adolescent childbearing in the EAC. The most recent DHS in the four countries show that among females aged 20-24, 40% in Uganda, 31% in Tanzania, 23% in Kenya and 7% in Rwanda were married by their 18th birthday.

Figure 7: Deaths per 10,000 youth population (10-24 years) (see Patton et al. 2016)



In the EAC, HIV/AIDS, diarrhoeal diseases, malaria, lower respiratory tract infections and tuberculosis are the main causes of death.[31] Factors contributing to poor health outcomes for youth in the EAC include: the high cost of health services, lack of youth-friendly services, lack of relevant health information and harmful cultural practices such as female genital mutilation (FGM) and early marriages.

Among women aged 15-24, HIV infection ranges from 1.3% in Rwanda to 4.9% in Uganda, while among older female youth, 25-34 years, 4.2% in Rwanda are infected, compared with 10% in Kenya and Uganda. Among men, HIV prevalence for 15-24-year-olds is between 0.6% and 2%, while among men 25-34 years, the prevalence is between 2% and 7%.

Poor access to sexual and reproductive health services is another factor which contributes to high adolescent fertility in EAC. Young people, especially those who are not married, have a high unmet need for contraception (see Figure 9 overleaf). (Women with unmet need are those who are want to stop or delay childbearing but are not using any method of contraception.) Even though all the four countries acknowledge this to be a problem in their family planning or SRH policies, actual provision of contraception among unmarried youth has been relatively unsuccessful because of cultural and religious sensitivities and objections.

Other health challenges for the youth in EAC are the rising prevalence of people who are overweight or obese, which may lead to increases in non-communicable diseases such as hypertension and diabetes.[32] For

Figure 8: Age-specific fertility rates for four EAC countries, DHS/MIS 2014-2016

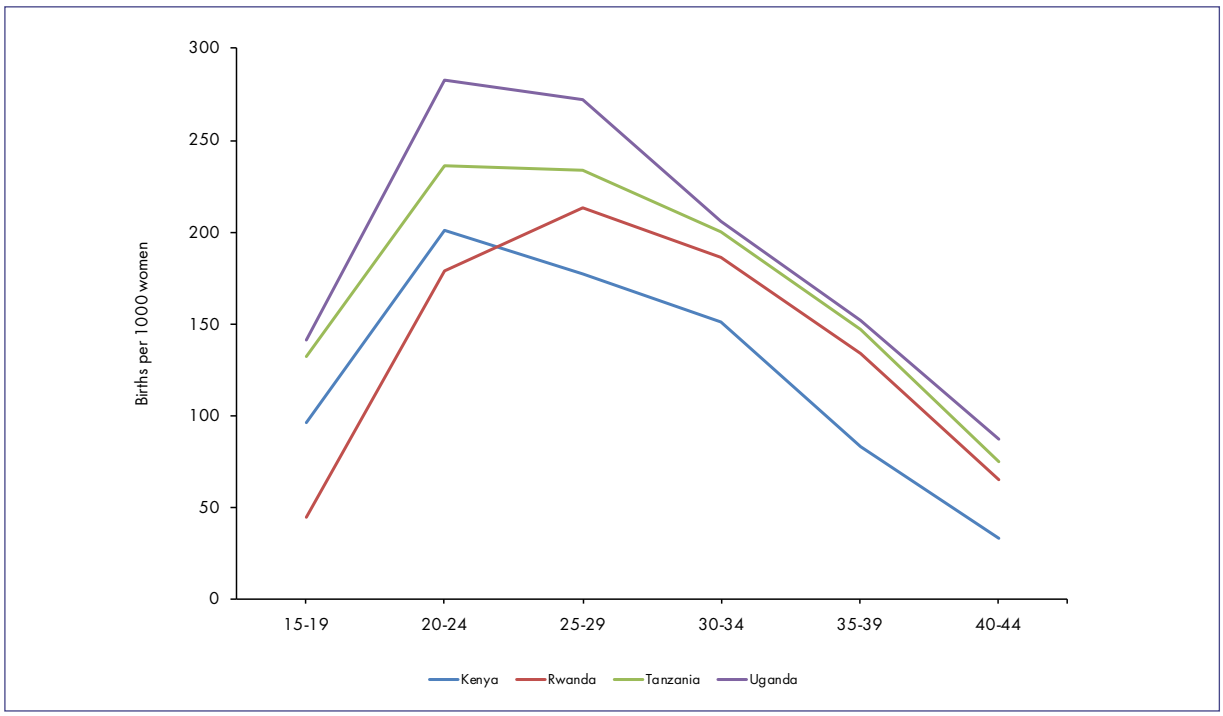
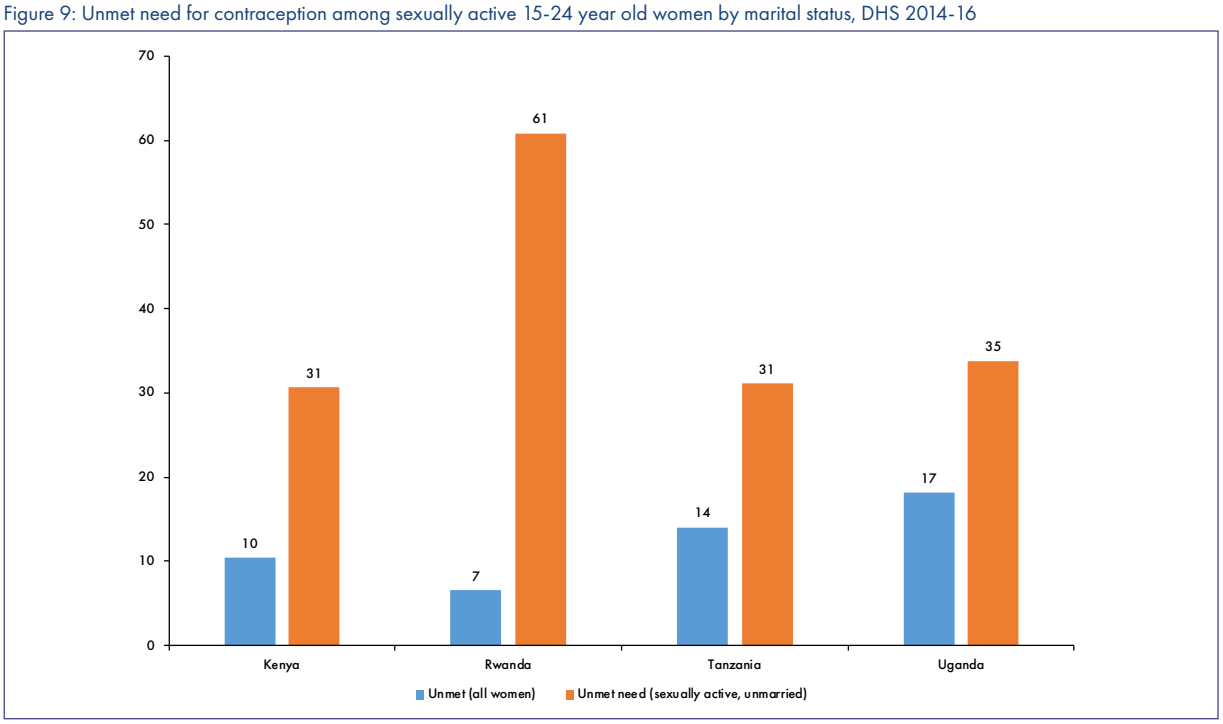


Figure 9: Unmet need for contraception among sexually active 15-24 year old women by marital status, DHS 2014-16



example, a recent analysis of national data across Africa show that 9% of females aged 15-19 in Kenya and Tanzania were overweight, as were 11% and 12% of their counterparts in Rwanda and Uganda respectively.[33]

Based on the EAC Social Development Policy, drug and substance abuse is also a major problem confronting the youth in the EAC. Studies show that most drug abusers are deprived and poor, in and out-of-school adolescents, street children, unemployed, and those in unstable families.[34]

The use of and trafficking in illicit drugs not only affects the welfare and health of the users, but is also considered a waste of their productivity and potential.

Policy responses to the health challenges

The governments of Kenya, Rwanda, Tanzania and Uganda and the EAC have recognised youth as a key sub-group with needs that require to be addressed in order for these countries to achieve sustainable and inclusive socio-economic development. To this end, these countries have all developed national youth policies aimed at addressing the needs of the youth (Rwanda 2015, Uganda 2016, Tanzania 2007 and Kenya 2016). There is also a raft of other policies with specific outcomes targeting the youth. Table 3 highlights health-related policies targeting the youth in the EAC.

Table 3: Health policies and their objectives targeting youth in the EAC

	Kenya	Rwanda	Tanzania	Uganda
Adolescent SRH Policy	Increase access to ASRH and drug and substance abuse information; Promote HIV testing and counselling; Reduce early and unintended pregnancies.	Expand access and utilisation of SRH products among adolescents; Integrate adolescent health services into the existing health care delivery system.	National Adolescent Health Strategy 2011-2015 advocates for adolescent and youth friendly SRH services.	Enhance opportunities for adolescents to access health services; Promote the concept of adolescent health among policy makers and leaders so as to increase resource commitment.
Reproductive Health Policy	Ensure youth have full access to SRH information and services that are youth friendly; Ensure integration of HIV/AIDS information into RH services.	Increase access and utilisation of ASRH services and information; Encourage adolescents to adopt positive behaviours in RH.	Tanzania One Plan 2 (2016 - 2020) aims at increasing outlets offering comprehensive SRH, life skills, information, education and counselling services and youth friendly services.	National Policy Guidelines and Service Standards for SRHR (2006) identifies adolescents as priority group for the provision of access to contraceptives.
HIV & AIDS Policy	The National AIDS Control Council 2015 -2019 Strategic Plan aims to facilitate development and implementation of an operational plan for HIV prevention among adolescents and young women.	Provide access towards VCT and PMTCT; Support the launch of prevention programmes for the most vulnerable groups by promoting the EABC approach (Education, Abstinence, Be Faithful, and Condom use).	Incorporate SRH in the school curricula; Strengthen counselling services for drug users; Ensure youth are given correct information including HIV prevention strategies.	Promote HIV counselling and Testing; Ensure access to services for unaccompanied youth between the ages of 12 and 18 who seek AIDS-related services and encouraged them to be accompanied in future.
Population Policy	Promote provision of quality integrated youth friendly population education and RH services and advocate for Family Life Education for both in and out of school youth.	No population policy	Promote public awareness of SRHR for adolescents, men and women, and expand quality RH services and counselling for adolescents.	Advocate for affordability, availability and accessibility of quality health services; Promote the strengthening of youth-friendly SRH services; Advocate for linking of RH and HIV/AIDS programmes.
Youth Policy	Enhance provision of youth-friendly health services by removing all legal, regulatory, structural, medical and attitudinal barriers; Improve access to VCT services for all youth.	Advocate for the provision of youth-friendly health services; Strengthen national capacities to eradicate demand, supply and trafficking of drugs; Advocate for community-based care and positive living for the youth infected with HIV/AIDS.	Advocate for the provision of youth-friendly health services; Strengthen national capacities to eradicate demand, supply and trafficking in drugs.	Advocate for the provision of youth-friendly health services by removing all legal, regulatory, structural, medical and attitudinal barriers; Development of a strict drug control policy.

4.2 Education

Developing high-quality education and training, particularly at secondary and higher levels, in addition to building skills in technical and vocational institutions are a priority in developing globally competitive human capital and thus attracting foreign direct investments that contribute to job creation for the youth. Consequently, education features as one of the main drivers of the development agenda in these EAC countries. For example, Uganda's 2nd National Development Plan (NDP II), Rwanda's Vision 2020, Kenya's Vision 2030 and Tanzania's Vision 2025, all prioritise education as a key pillar for socio-economic development. Primary school net enrolment rates in 2016 in the four countries is almost universal (see Table 4) and gender parity has also been achieved at the primary school level. However, the enrolment rates at secondary school and tertiary level are not as impressive. Generally, girls lag behind when it comes to access to secondary and tertiary level education, compared to their male counterparts.

Despite the observed improvements in enrolment rates, major challenges persist in the education system which curtail the countries' capacity to

educate and train a skilled and competitive workforce. The quality of education in the region is very low, characterised by a mismatch between the skills that graduates have to offer and the needs of the labour market, exacerbating the unemployment rates among young people, especially young women.[35-37] There are very low completion rates at primary level, with an even lower percentage transitioning to secondary level. For example, in Tanzania, only 47.3% of those enrolled in class one reached class 7 in 2016, and only 70% of these transitioned to Form 1.[38] This implies that a high number of pupils are lost from the education system, and partly explains why just about one third are enrolled in secondary schools.

1 million. Given that formal education delivery channels are unable to reach all school-age children, Kenya's policy for alternative provision of basic education provides guidance on how to enhance alternative basic education provisions for the youth and older populations using flexible approaches to attain education for all. The Undugu Basic Education Programme (UBEP) in Kenya, offers alternative education by providing literacy and vocational skills to youths from slums and low-income families not enrolled in formal schools. In all four countries there are also efforts by the governments to formulate and implement policies that support the education of people with disabilities including the youth.

Table 4: Enrolment rates in primary, secondary and tertiary institutions in the four countries (%)

	Primary School Net enrolment ratio (circa 2016)		Secondary School Net Enrolment ratio (circa 2016)		Tertiary Education Gross Enrolment ratio (circa/2016)	
	Males	Females	Males	Females	Males	Females
Kenya	81.7	83.0	35.4	39.8	5	3
Rwanda	97.3	98.0	35	38	9	7
Tanzania	92.1	93.2	34	31	5	2
Uganda	89.6	94.6	24	22	5	4

Sources: Population Reference Bureau -World Population Data (2017); Ministry of Education, 2016. Education and Sports Sector Fact Sheet 2002 – 2016. Republic of Uganda, Education Management Information System (EMIS) 2002-2016
Ministry of Education. (2016). 2016 Education Statistics Yearbook. Ministry of Education, Republic of Rwanda. Kigali, Rwanda.
Kenya National Bureau of Statistics, 2017. Economic Survey 2017; KNBS Kenya Integrated Household Budget Survey 2015/18.
United Republic of Tanzania. (2017)., Pre-primary and Secondary Education Statistics in Brief, 2016. Dar es Salaam, Tanzania

A good number of children complete primary school without acquiring basic reading and numeracy skills. For example in 2013, only 63%, 50% and 40% of school children aged 10 -16 had acquired basic literacy and numeracy skills at grade 2 in Kenya, Tanzania and Uganda, respectively.[39] In 2016, only 68% of the children who sat the final year exam in Tanzania - for both primary and lower secondary school - passed, with pass rates being lowest in mathematics and science-related subjects.[38]

The education curricula are being revised to ensure that they are tailored to the needs of the job market, which consequently would improve the employability prospects of graduates. For example, in 2014, Rwanda reviewed its secondary school curriculum to promote and accommodate skills development. Similarly, Uganda's Ministry of Education and Sports has approved a curriculum for ICT training for Secondary Schools, which has been adopted by a few schools. These schools are supported under various programmes, including the School Net and ConnectEd projects. In Kenya, the education sector is in the process of being over-hauled with a new competency-based curriculum focused on skills building being implemented progressively from 2018. It is expected that Kenya's new curriculum will better prepare the students for the job market, equipping them with relevant skills that are in line with demand in the labour market, including 21st century skills.

Policy and programme responses to education challenges

The policy and programmatic responses to the challenges of education include programmes to ensure that more girls from rural areas access quality and practical education. For example, vocational training is offered in Youth Training Centres (YTCs) in Rwanda. These centres cater for about 2,000 young people out of a total target population of approximately

There are efforts in the four countries to expand access to tertiary and secondary education, especially for girls, so as to increase educational attainment for all, while eliminating the existing gender gap. Tanzania's National Higher Education Policy, Kenya's Policy Framework for Education and Uganda's National Strategy for Girls' Education support measures on affirmative action to increase women's access to university education.[40-42] Since 2001, the Joint Admissions Board (JAB) (now Kenya University and Colleges Central Placement Services), the body that manages student admissions to Kenyan public universities, lowered the university entry mark for girls by one point. Equally, in Uganda, female university entrants are awarded a bonus of 1.5 points on top of their individual examination scores. The University of Dar es Salaam in Tanzania admits female entrants with lower cut-off points (at 1.0 or 1.5 points) thus increasing the number of females being admitted into university. The Government of Rwanda provides financial assistance to the majority of full-time students attending public institutions through a means-tested loan scheme, while there are opportunities for subsidised support or loans provided by public institutions like the Higher Education Loans Board in Kenya.

Table 5 highlights the objectives of education and related policies that have a bearing on education and skills development for youth in the four countries.

Table 5: Education policies and their objectives targeting youth in the EAC

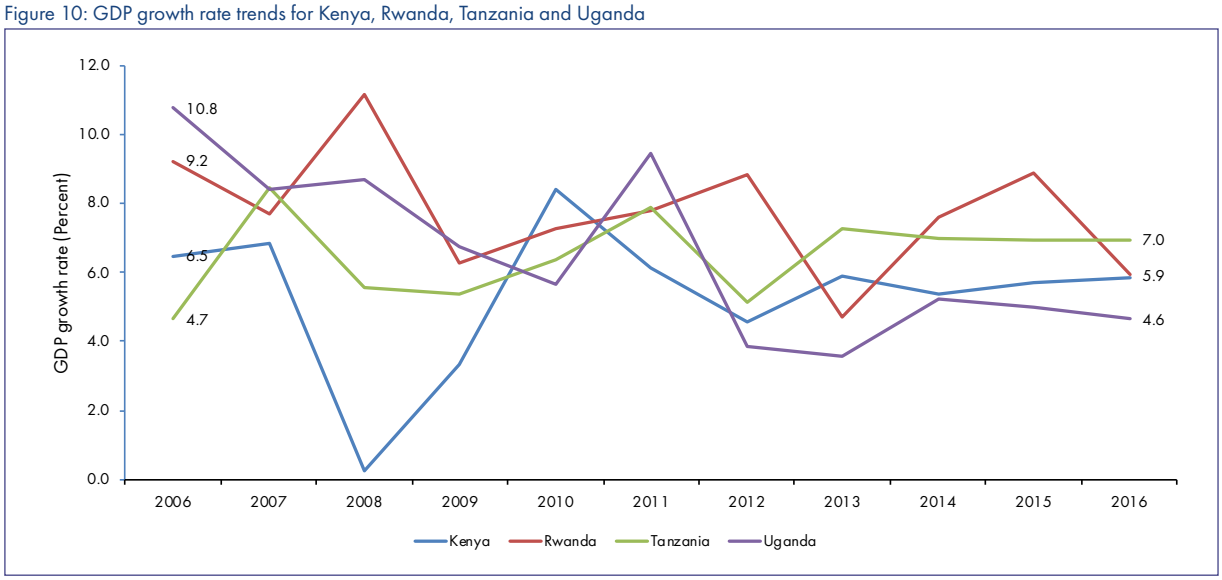
	Kenya	Rwanda	Tanzania	Uganda
Education Policy	Ensure access to secondary education for all children; Revise the curriculum and make ICT central to it; Ensure the re-entry of girls who drop out of school due to pregnancy and early marriage; Sensitise parents, stakeholders and communities to discard socio-cultural practices that prohibit effective participation of girls and boys in secondary school education, and enforce legislation against the violation of the children's rights; Provide school-feeding in distressed areas; Increase number of mobile schools linked to mother schools and other social services; Provide education to out-of-school youth and adults through non-formal approaches.	Encourage continuing education and distance learning in all types of training (formal, non-formal and informal); Encourage greater parental participation in the efforts to educate their children; Establish a technical school in each province; Offer pedagogical training to students; Emphasise development of skills such as entrepreneurial skills at all levels of education.	Provide quality education through curriculum review; Promote vocational training and education; Re-introduce trade schools in the education system; Introduce and formalise establishment of polytechnics in the education system; Strengthen non-formal education and integrate it with formal education; Establish girl's secondary schools.	Revised Education Sector Strategic Plan 2017-2020 aims at increasing and improving equitable access to quality and relevant education; and increasing effectiveness and efficiency in delivery of education.
TVET Policy	Develop a TVET training curriculum; Establish and equip TVET centres of specialisation with state of the art training facilities; Expand geographical provision of TVET centres at all levels; Ensure that vocational education is offered in schools; Reform apprenticeship system to allow TVET graduates to work and study; Integrate informal economy workers and provide them with skills.	Enhance the status and attractiveness of TVET to young people; Promote a curriculum reflecting changes in technology and the workplace and developed in collaboration with industry; Ensure students develop employability skills including ICT skills; Encourage employers' active involvement in TVET at different levels of the system.	Strengthen teaching of science and technology in technical secondary schools; Introduce an appropriate and cost effective vocational education package to replace the diversified course package; Impart technical skills to youth to enable them go into self-employment; Facilitate development of a culture of job creation and self-employment through TVET; Make available mentorship and entrepreneurship skills to persons involved in small businesses; Reserve specific vacancies for qualified women in technical training institutions.	BTVET Strategic Plan 2011-2020 "Skilling Uganda" aims to create employability skills and competencies relevant in the labour market for all including primary and secondary school leavers; Aims to strengthen the role of the business community and employers in BTVET planning and decision making and strengthen employer-based training; Establish Labour Market Information System.
Youth Policy	Advocate for affordable and accessible quality primary, secondary and University education; promote non-formal education; promote skills development through vocational training; Enforce a re-admission policy for girls who drop out of school due to pregnancy	Tailor the formal education curriculum to the needs of the job market; Promote job oriented non-formal skills training for out of school youths; Collaborate with training institutions to match labour market, skills demand and skills formation.	Have a mechanism to provide a conducive environment for access to further studies; Strengthen vocational guidance and counselling; Introduce entrepreneurial education in higher learning institution.	Advocate for a national employment policy that addresses and responds to the concerns of the youth; Advocate for creation of a youth trust bank; Promote enterprise education; Offer loan schemes for youth in tertiary institutions; Support micro-credit financial institutions that extend credit facilities to the youth.

ICT Policy	Integrate IT subjects at all education levels; Promote the development of integrated e-learning curriculum to support ICT in education; Promote distance education and virtual institutions, particularly in higher education and training; Create opportunities for providing assistance for the disadvantaged, people with special needs, women and the youth to acquire IT skills.	Integrate ICT subjects in curriculum and teaching methods at all levels of education; Promote use of Open Distance and e-Learning (ODeL); Ensuring the availability of infrastructure that is critical to successfully integrate ICTs at all levels of education.	Create supportive environment for collaboration with the private sector in development of ICT skills while encouraging lifelong learning through the use of ICT; Ensure effective use of ICT in teaching and learning throughout the formal and informal education system.	Encourage educational institutions to automate their management systems; Include computer literacy module in the curriculum at all levels of education; Establish an accreditation council to ensure quality IT education and training; Encourage IT companies to play a significant role in IT education through internship and Industrial training schemes.
Employment Policy	The National Employment Authority Act 2016 provides a legal framework to establish an authority that will assume the functions of the National Employment Bureau, whose mandate is to maintain a database for all jobless youth to facilitate their employment.	Improve access, quality and relevance of education in all higher institutions; Develop education modules relevant to the labour market; Train and recruit highly qualified teachers; Encourage private investments in the education sector; Promote pre-employment internship courses; sensitise the population on the role and importance of TVET.	Facilitate and encourage more investments in quality and quantity in education and skills training programmes; Youth skills enhanced to participate in formulating, developing and implementing employment creation programmes.	Provide support to young people, especially women to make transition from informal to formal employment through improved access to training and business development services; Provides tax rebates to young entrepreneurs.

4.3 Economy, Employment and Job Creation

The economies of the four EAC countries-- Kenya, Rwanda, Tanzania and Uganda-- have registered fairly good growth rates since 2000. The average growth rates for Kenya, Rwanda, Tanzania and Uganda economies between 2006 and 2016 were 4.6%, 7.9%, 6.6%, and 6.4%, respectively (Figure 10). The region was rated the fastest growing in Africa in 2017, averaging at 5.6 % with North Africa coming a distant second at 3.3%.[43] This growth is driven by strong domestic demand (private consumption) and high public infrastructure spending. The growth is projected to increase to 5.9% in 2018. However it is notable that this growth has not been accompanied by a significant improvement in the living standards of East Africans.

Figure 10: GDP growth rate trends for Kenya, Rwanda, Tanzania and Uganda



Data Source: World Bank (2016) World Bank national accounts data, and OECD National Accounts data files.

Unemployment and underemployment in the EAC

One of the transmission mechanisms that act as a link between economic growth and poverty reduction is job creation and the equitable access to available jobs. Economic growth measured by growth in GDP but not accompanied by commensurate growth in decent work opportunities does not have the desired impact on the reduction of poverty. Unemployment (considered a form of labour underutilisation) is a serious problem in the region, an indication that the economic growth in the region over the past decade has not been accompanied by significant job opportunities to match the rapidly rising young labour force. For instance, in Rwanda, labour underutilisation was estimated at 58% (65% among women) in the 2017 labour force survey.[44] Youth unemployment rates are generally higher than the national averages with the exception of Uganda[iii] (Table 6). Youth unemployment ranges from 6.5% in Uganda to 23% in Kenya. In comparison, the unemployment rate for the general public ranges from 7.4% in Kenya to 17.8 in Rwanda[iv]. In addition, unemployment rates for female youth and in in the general population exceed that of males in all countries. The reasons for these differences include: unequal access to education and training opportunities, which restricts women to sectors with low productivity and low wages; unequal gender relations in the households; and women's reproductive and caregiver roles that are perceived to affect their productivity and as a result, favouring men at the workplace.

It is important to note that the unemployment rate is just one component of the labour underutilisation measure. In fact, underemployment is a major factor contributing to labour underutilisation in all the countries. For instance, in Rwanda, the combined rate of unemployment and time-related underemployment is 41% more than the unemployment rate. In Kenya, while the unemployment rate for the general population is 7.4%, underemployment is estimated at 20%, and in Uganda, unemployment only accounts for 27% of the labour force underutilisation. [45-47]

of the formal labour market to absorb most of the youth seeking jobs has inadvertently led to the mushrooming of the informal sector where youth try to eke out a living. Part of the problem faced by the young job seekers is that many are not equipped with the requisite skills and competencies as a result of dropping out of school and the poor quality of education received. According to the preliminary Kenya National Adolescents and Youth Survey (NAYS) report published in 2015, factors impeding access of the youth to employment and income generation opportunities include corruption, lack of capital, and lack of knowledge and relevant skills.

In Rwanda, the 2017 Labour Force Survey identified the lack of required skills and competencies among the youth as the main factor contributing to the high rate of youth unemployment.[49] Tanzania's Integrated Labour Force (ILFS) (2014) on the other hand estimated that 11.8% of those employed are underemployed and do not earn sufficient wages to meet basic needs. Most of the underemployed are youths working in the subsistence agriculture sector without social protection programmes.

Youth employment challenges in Uganda are similar to those of their peers in the region. Labour underutilisation presents the biggest challenge to young people, due to irregular employment (either in self-employment or paid employment with contract duration less than 12 months), unemployment and the inactive non-students. Although only 27% of the overall workforce is underutilised, the figure among young people is more than double, at 67.9%, according to the 2015 School to Work Transition Survey (SWTS). Labour underutilisation is rampant in the informal sector, in which agriculture constitutes most of the informal jobs. In the 2015 SWTS, 57.2% of them were engaged in the agricultural sector. It is estimated that about 71% of young men and women working in this sector are 'vulnerable'. They are unpaid family helpers with inadequate earnings, working under difficult conditions that undermine workers' fundamental rights.[50]

Table 6: Youth (aged 15-24)[v] unemployment rates in the EAC (%)

	Kenya	Rwanda	Tanzania	Uganda
Total Population	7.4	17.8	10.3	9.4
Male	5.3	15.2	8.2	8.0
Female	9.6	21.0	12.3	11.0
Youth (Age15 -24)	22.7	23.0	13.7	6.5
Male	17.1	20.4	8.9	5.5
Female	20.9	26.0	14.5	7.4

Source: KNBS Kenya Integrated Household Budget Survey, 2015/16; NISR Rwanda Labour Force Survey 2017; NBS Tanzania Integrated Labour Force Survey, 2014; UBOS Uganda National Household Survey, 2012/13 & UBOS 2016 Labour Market Transition of Young People in Uganda

Policy and programme responses to youth employment challenges

To illustrate the seriousness of youth unemployment in the region, out of over 750,000 youths who attempt to enter the job market annually in Kenya, only 15% manage to get jobs in the formal sector.[48] The inability

The endemic youth unemployment problem has in recent years prompted governments in the region to implement a series of programmes and develop policies to address the problem, like the revamped National Youth Service (NYS) Programme in Kenya. In Tanzania the main policy intervention to deal with unemployment among young people is the Youth

[iii] For Uganda, the data for the general unemployment and the youth unemployment come from two different surveys and may account for this anomaly.

[iv] Note that countries in the EAC have adopted contextualised definitions to report their unemployment rates and hence these are not strictly comparable.

[v] Youth unemployment rate for Rwanda is in reference to age 16-24

Development Policy, which among other things: encourages individuals to create their own enterprises in the formal economy; advocates for equal opportunities for males and females; promotes equity and equality in employment; and provides access to labour market information. However, this policy does not specifically address current employment challenges among the youth. The reality is that most youth programmes are often under-funded and poorly coordinated. Policymakers should have a serious commitment and cultivate political will to implement the programmes to ensure that they are effective in addressing the problem of youth unemployment.

Actions to grow jobs in the EAC

The starting point in job creation is improving the sectors where the majority of the young people are employed. The agriculture sectors are the primary employer in the four countries, but the least productive due to low investments, low-quality inputs and low adoption of improved production technologies. As such, wages in this sector are lower than wages in industry and services sector. Building agricultural value chains will not only create jobs but also increase the manufacturing base, itself a high job multiplier sector. More investments in the ICT sector, which is very attractive to young people, will not only create a huge potential for jobs, but automation will also improve operation and delivery of services which again attracts increased investments from the private sector, thus further creating more jobs.

Another avenue for job creation is entrepreneurship. However, while entrepreneurship rates in SSA are high, the majority of entrepreneurs are driven by necessity rather than an opportunity, and thus have low productivity with low growth potential. The lack of skills impacts the rate of productive start-ups in the region. A study on entrepreneurship in Swaziland showed that a gap in entrepreneurial skills and training programmes was an important hindrance for youth business start-ups, alongside the lack of the initial capital, and this was more prevalent among young people compared to adults.[51] Evidence shows that if equipped with the right skills, mentorship, social networks, technology and finance, young entrepreneurs could drive the region's economic growth and social progress.

The private sector is the engine for job creation in any economy. Therefore, governments should provide a conducive environment for the private sector to operate, including good infrastructure, building power plants, electricity grids, roads, railways and ports, favourable taxation policies and low business registration red-tape. In most countries in the region, attracting foreign direct investment is very difficult because of inhospitable business climates characterised by corruption, and high transactions costs and deficient infrastructure. The Ease of Doing Business[49] and Global Competitiveness Index[52] rank countries in the region relatively low (see table 7), an indication that a lot needs to be done to improve the investment climate so as to attract the private sector and thus create the jobs needed by the growing workforce.

Table 7: Ranking EAC countries on economic competitiveness

Country	Ease of Doing Business 2018 Rank	Global Competitiveness Index Rank
Kenya	80	91
Rwanda	41	58
Tanzania	137	113
Uganda	122	114

Table 8: Employment and related policies and their objectives targeting youth in the EAC

	Kenya	Rwanda	Tanzania	Uganda
TVET policy	Reform apprenticeship system to allow TVET graduates to work and study; Integrate informal economy workers and provide them with skills.	Encourage employers' active involvement in TVET at different levels of the system.	Impart technical skills to Youths to enable them go into self-employment; Facilitate growth for the culture of job creation and self-employment through TVET; Make available mentorship and entrepreneurship skills to persons involved in small businesses; Reserve specific vacancies for qualified women in technical training institutions	BTVET Strategic Plan 2011-2020 "Skilling Uganda" aims to strengthen the role of the business community and employers in BTVET planning and decision making and strengthen employer-based training; Establish Labour Market Information System

Education Policy	Promote and sustain entrepreneurial and technological innovations amongst the youth; Unleash and re-direct the potential of the youth towards productive economic activities; Impart marketable skills and technical know-how that respond to contemporary labour market demands by the industry, informal sector and for self-employment.	Emphasise development skills such as entrepreneurial skills at all levels of education.	Facilitate the culture of education for-job-creation and self-employment through increased availability of opportunities for vocational training; Establish special educational financial support schemes for girls and women.	Revised Education Sector Strategic Plan 2017-2020 aims at Institutionalising internship and apprenticeship; Re-tooling unemployed graduates to fit into the existing job market; Talent identification and nurturing to prepare learners for early career development; Supporting research and technology incubation facilities at universities.
Youth Policy	Create an environment that will lead the youth to pursue self-help initiatives for self-employment; Provide training in entrepreneurial skills; Establish micro-finance programmes to cater for the financial needs of the youth.	Training hands-on skills for youth to gain the labour market oriented skills; Support and encourage youth to acquire employable skills and change attitudes towards work; Ensure that youth have access to finance, entrepreneurship and business development through youth group saving.	Create an enabling environment for establishment of employment opportunities; Promote the culture of entrepreneurship by creating an enabling environment for youth enterprise development; Measures to promote the informal sector.	Advocate for a national employment policy that addresses and responds to the concerns of the youth; Advocate for creation of a youth trust bank; Enterprise education; Offer loan schemes for youth in tertiary Institutes; Support micro credit financial institutions that extend credit facilities to the youth.
Employment Policy	The National Employment Authority Act 2016 provides a legal framework for the state to take affirmative measures to ensure the youth and marginalised groups access opportunities for employment and economic empowerment. It establishes an authority that will assume the functions of the National Employment Bureau, whose mandate is to maintain a database for all jobless youth to facilitate their employment.	Foster integration of youth and other job seekers in the labour market; Encourage and provide opportunities to potential entrepreneurs especially the youth to develop and create their own enterprises; Evaluation of entrepreneurship or management capacities of project developers; Consultancy follow-ups during the first three years of activity; Provision of on the job training adapted to the needs of the labour market.	Identify and address youth specific needs to enhance employability and effective participation in the labour market; Create an enabling environment whereby inputs i.e. Skills training, infrastructure to enhance youth employment; Government to instil into youths the importance of work, conduct workshops on the role of self-employment, informal sector and entrepreneurship.	Provide support to young people, especially women to make transition from informal to formal employment through improved access to training, business development services; Provide tax rebates to young entrepreneurs.

4.4 Urbanisation

Urbanisation is increasingly being acknowledged as one of the defining issues of the twenty-first century. According to the United Nations Population Division, more than half of the world's population now lives in towns and cities and that figure is projected to rise to 75% by 2050[53], with most of this urban growth concentrated in Africa and Asia. Although migration is a significant contributor to urban growth and to the urbanisation process, as people move in search of social and economic opportunities, the rapid increase in Africa's urban population has largely been driven by high natural increase (i.e. the difference between births and deaths) within urban populations rather than by in-migration. Natural increase accounts for about 75% of the urban growth in Africa, compared to about 50% in Asia.[54] As Table 9 shows, the four countries are urbanising rapidly, with urban population growth rates ranging from 4.3% in Kenya to 6.4% in Rwanda.[53] As such, the population living in urban areas is projected to increase tremendously in the next three decades. For example, the urban population will double in Uganda from 16% in 2015 to 32% in 2050, while it will increase from 29% in Rwanda to 53% over the same period.

Despite the many benefits associated with urbanisation, which is seen as an engine for economic development, the majority of urban residents in the four countries live in abject poverty, do not have access to basic social services, lack stable livelihoods and have high unemployment rates.[55,56] The 2017 World Bank report on African cities describes them as crowded and disconnected, with infrastructure development not able to keep pace with the concentration of people, which happens in small and fragmented neighbourhoods that lack proper transportation and offer limited job and investment opportunities.[55] According to the UN-Habitat, more than half of the population in urban areas in EAC lives in slum conditions (see Table 3).[57] While the population living in slum conditions declined between 2005 and 2014 in three EAC countries, in Kenya, this population has remained relatively unchanged since the turn of the century and increased between 2010 and 2014. In Rwanda, there are signs of a beneficial urbanisation process. In its 2017 economic update for Rwanda, the World Bank notes that urbanisation has been accompanied by poverty reduction, particularly in high population density and well connected areas.[58]

Factors that pull youth to urban areas and cities include prospects of employment, better healthcare, and the lure of urban lifestyles.[59] Although young people may flock into urban areas to escape real or perceived worsening rural economic conditions, the youth in urban places face unique challenges such as higher unemployment rates than their rural counterparts and precarious living conditions as housing is a major problem in African cities with the growth in decent housing fast outpaced by rapid growth in urban populations.

Policy and programme responses to challenges of urbanisation

Several policy interventions have been instituted in various countries to address the challenges of urbanisation and increase their economic viability. Most of the long-term development visions identify urbanisation as key to national development. For example, Rwanda's vision 2020 identifies urbanisation in addition to off-farm job creation as drivers of economic growth and national development. Uganda's housing policy (2016) highlights rapid urbanisation as one of the key challenges hence management of urban development is a national priority. The policy acknowledges that rapid and often unplanned urban growth creates challenges related to congestion and poor housing conditions, where basic utilities such as clean water and sanitation are insufficient, resulting in environmental degradation. The Kenya housing policy promotes intensified training of youth in requisite skills and construction technologies through youth polytechnics and youth groups in order to increase the production of housing units through the use of innovative but cheaper conventional building materials and technology. Further, Rwanda's human settlements policy, Uganda's land use policy and Kenya's urban development policy encourage participation of youth in land use decision making, facilitation to access housing loans and inclusion in urban planning and development. Despite young people being the drivers of urbanisation in all these countries, urbanisation and housing policies do not explicitly mention young people or their role as the mechanics of the urbanisation engine.

Table 9: Selected current and projected urbanisation indicators in the four countries (%)

Country	Proportion of population Urban (%)		Urban population growth rate	Proportion of Urban population living in Slum Conditions (%)		
	2015	2050		2005	2010	2014
Kenya	25.6	43.9	4.3	54.8	54.7	56.0
Rwanda	28.8	52.6	6.4	71.6	65.1	53.4
Tanzania	31.6	53.0	5.4	66.4	63.5	50.7
Uganda	16.1	32.1	5.4	66.7	60.1	53.6

Source: World Urbanization prospects, 2014 Prospects: UN Habitat, 2016

5

Future Scenarios

This section presents results from the population projections and highlights implications of these demographic changes on meeting key social and economic needs of youth in the EAC. The results show that the four EAC countries are decades away from transitioning to age structures with a youth bulge that will facilitate maximising the demographic dividend. Only Rwanda and Kenya may achieve such age structures by 2065.

The last part of this chapter demonstrates that meeting reproductive health needs, demand for secondary education and jobs by the youth will be a colossal task for the EAC as a result of the expected rapid rise in the youth population. The results demonstrate that continuing with business as usual will lead to significant increases in the unmet need for contraception, out of school and unemployed youth.

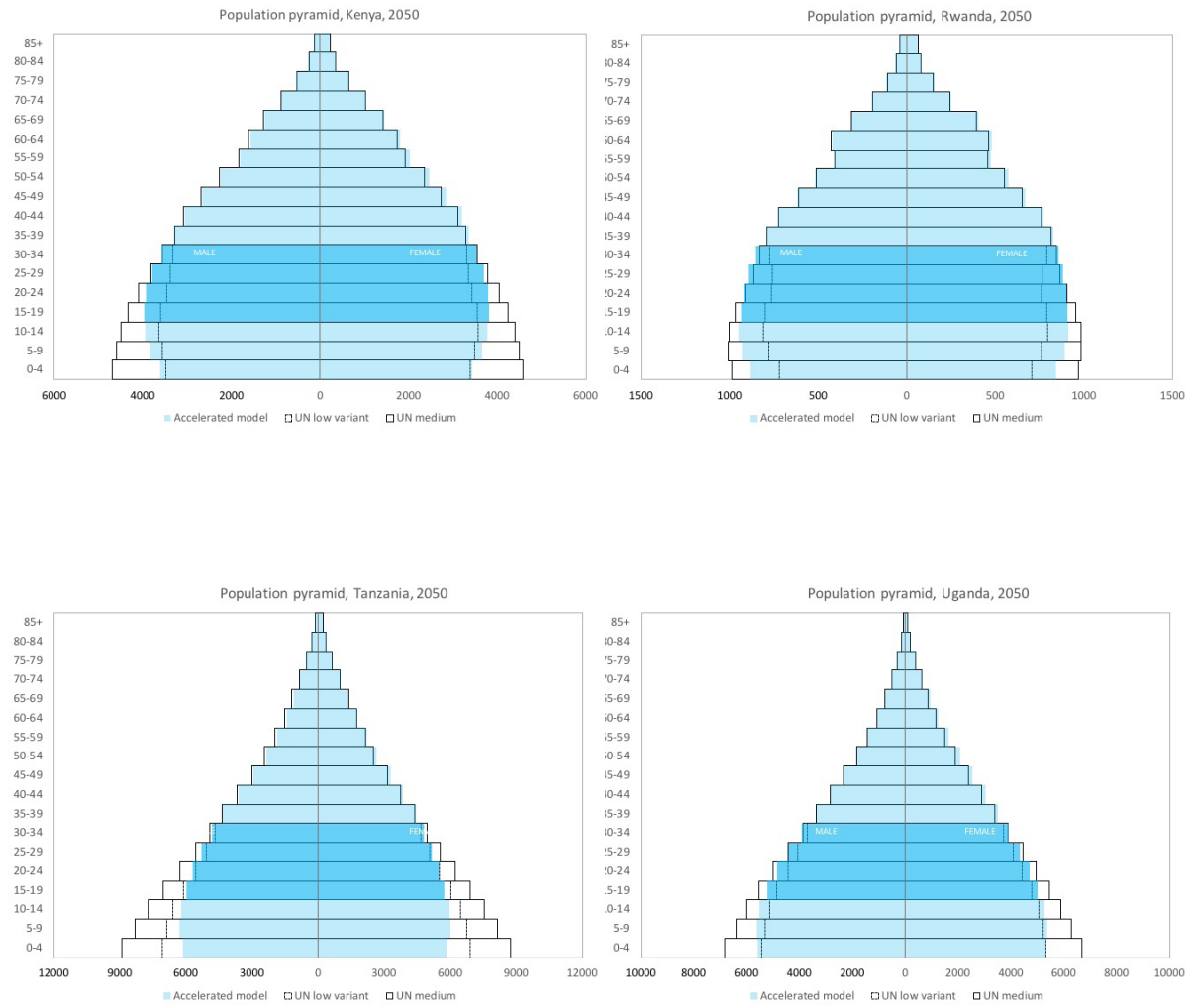
5.1 Population projections

The population projections using the UN Medium Variant and our Accelerated Model are shown in Table 10. We have not shown the results for the UN Low Variant Scenario because of similarity with the Accelerated Model (but these are shown in Appendix 4). In all four countries, as indeed is the case for most African countries, there will be a significant increase in the population for the next 30-50 years, ***irrespective*** of what population and social development policies the countries adopt. This is because the decades of high fertility have created a high population momentum, implying that even if total fertility reached replacement level (2.1 children per woman) in the next few years, there will still be large numbers of women added to the pool of women in reproductive ages every year. Childbearing among these women will add to the population size for several decades. However, the pace of growth and the level at which the population will be stable can be influenced by policies that countries make today. Figure 11 shows the projected population pyramids to 2050 (see projections for 2065 in Appendix 2) for the four countries according to the three scenarios. The pyramids show that only Kenya and Rwanda are likely to see the start of a youth bulge under the Accelerated Model by 2050 and that Rwanda may likely achieve the start of the youth bulge even under the UN Medium Variant (Business-as-Usual) Model.

Table 10: Results - scenario modelling

		Medium Variant Scenario			Accelerated Model		
		2015	2030	2065	2015	2030	2065
Kenya	Total population ('000s)	47236	66960	114980	47236	66299	103359
	Total fertility rate	4.10	3.26	2.30	4.10	3.20	2.00
	Under-five mortality (per thousand live births)	55	37	21	56	27	4
	Net number of migrants ('000s)	- 50	- 50	- 42			
	Youth population (15-24 years)	**9509**	**13344**	**18202**	**9510**	**13346**	**14494**
	Youth population (15-34 years)	**17090**	**24035**	**35369**	**17091**	**24074**	**29867**
	Total dependency ratio (ratio of population aged 0-14 and 65+ per 100 population 15-64)	78.3	62.9	53.7	78.3	61.0	49.1
	Total dependency ratio (ratio of population aged 0-19 and 65+ per 100 population 20-64)	121.5	95.4	75.3	121.5	93	66
Rwanda	Total population ('000s)	11630	16024	25257	11630	16032	24870
	Total fertility rate	4.20	3.20	2.00	4.20	3.20	2.00
	Under-five mortality (per thousand live births)	64	40	21	58	28	4
	Net number of migrants ('000s)	- 79	- 45	- 38			
	Youth population (15-24 years)	2213	3254	3890	2213	3236	3522
	Youth population (15-34 years)	4188	5739	7691	4188	5718	7182
	Total dependency ratio (ratio of population aged 0-14 and 65+ per 100 population 15-64)	77.3	62.1	50.0	77.3	62.5	49.6
	Total dependency ratio (ratio of population aged 0-19 and 65+ per 100 population 20-64)	117.4	95.5	69.5	117.4	95.8	66.8
Uganda	Total population ('000s)	40145	63842	141153	40145	63245	130645
	Total fertility rate	5.91	4.62	2.80	5.91	4.50	2.80
	Under-five mortality (per thousand live births)	92	62	27	94	45	7
	Net number of migrants ('000s)	- 150	- 150	- 128			
	Youth population (15-24 years)	13296	20934	25806	8187	13374	21742
	Youth population (15-34 years)	22668	37588	48111	13582	22774	42408
	Total dependency ratio (ratio of population aged 0-14 and 65+ per 100 population 15-64)	101.6	84.1	57.8	101.6	81.2	54.9
	Total dependency ratio (ratio of population aged 0-19 and 65+ per 100 population 20-64)	160.3	131.9	85.3	160.3	128.3	77.6
Tanzania	Total population ('000s)	53880	83702	186861	53880	80745	151383
	Total fertility rate	5.24	4.34	2.98	5.24	4.00	2.50
	Under-five mortality (per thousand live births)	63	43	22	63	30	4
	Net number of migrants ('000s)	- 200	- 200	- 170			
	Youth population (15-24 years)	**10444**	**17012**	**33714**	10444	16986	24104
	Youth population (15-34 years)	**17881**	**28936**	**62270**	17881	28951	47737
	Total dependency ratio (ratio of population aged 0-14 and 65+ per 100 population 15-64)	93.4	80.5	61.5	93.4	75.2	52.1
	Total dependency ratio (ratio of population aged 0-19 and 65+ per 100 population 20-64)	142.7	125.0	90.2	142.7	118.5	72.7
Medium variant assumptions:	The UN Medium Variant scenario assumes that increases in contraceptive use and education will result in lower fertility in patterns similar to the experience of other countries that have gone through the demographic transition. The model appropriate for Sub-Saharan Africa is the Phase 2: where fertility has started going down, but not yet reached replacement level. This may be considered as a "Business as usual" scenario where fertility and population growth in the EAC continues to decline at paces that we have seen in the past few decades. Further details of the fertility and mortality assumptions can be obtained from : World Population Prospects, 2012 Revisions. Highlights and Advance Tables						
Accelerated Model Assumption:	Accelerated model" scenario where we assumed that countries intensify efforts to lower fertility significantly by 2065. We assume reduction in youth childbearing (50% reduction to 2050, a further 50% to 2065 and 25% reduction thereafter). We also assume that couples who have unmet need for contraception for spacing and limiting births have access leading to 25% reduction in age-specific fertility rates among 25-34 and 20% among those 35+ to 2050, and further reductions at the same rate to 2065). We assume both male and female mortality in the age group 0-14 years to decline by 60% each by 2035, 2050 and 2065. We assume that decline in adult mortality would be slower for males but significantly faster for females (75% decline in mortality attributed to maternal related and other causes). The effect of migration at the population level is assumed to be small and we applied the East African age-specific migration schedule to UN net migration rates.						

Figure 11: Projected population pyramids by 2050 for the four EAC countries under varying scenarios

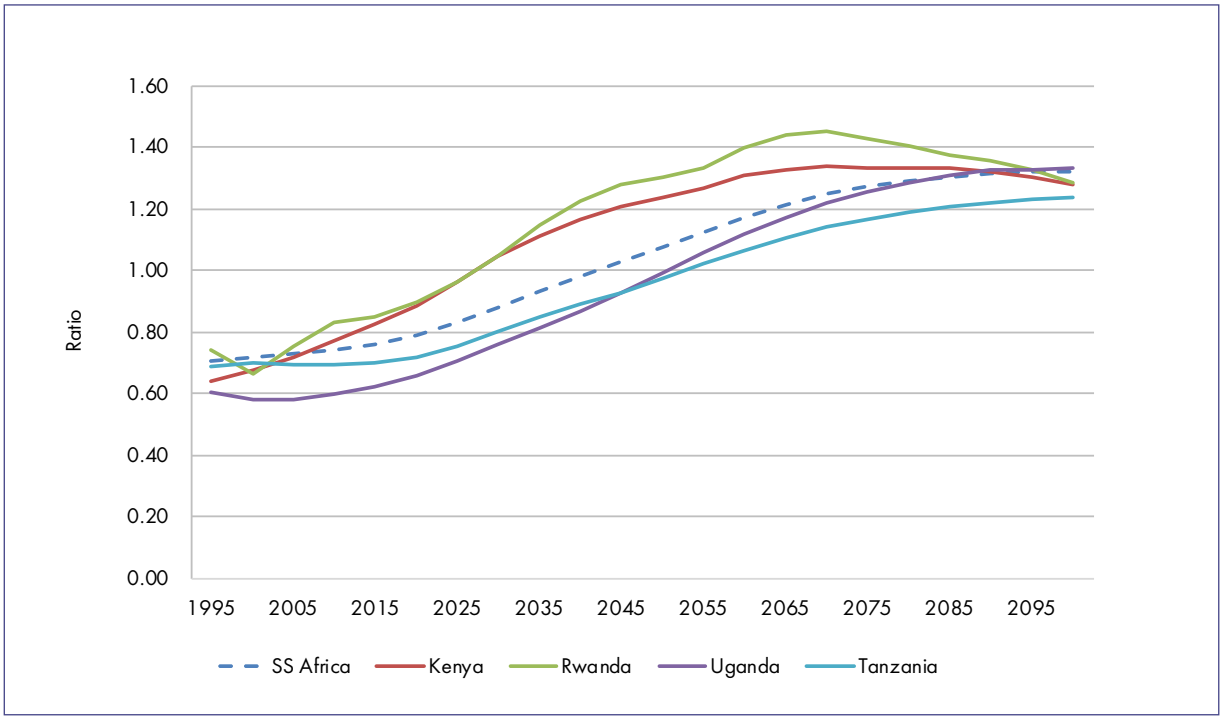


5.2. Timing of the first Demographic Dividend

Demographers often estimate a theoretical support ratio by assuming that most of those in the age-ranges of 15-64 are effective producers and that those 0-14 years and over 65s are effective consumers. There is no agreement among scholars on the specific threshold of the support ratio when the demographic dividend window opens. AFIDEP uses a support ratio of around 100 producers to 65 dependents (i.e. a ratio of 1.5) as being one where households and countries might begin to see benefits of lower fertility and be able to save. Using this threshold, only Rwanda and Kenya would have a ratio higher than 1.5 under the Medium Variant Scenario by 2065. Although most reports assume that the age-range of producers is 15-64 years, in reality, most African people under 20 years are still dependents so that the alternative total dependency ratio (0-19 years and 65+ to 20-64 years) is more realistic. Under the Medium Variant Scenario, and using this age-range, none of the countries would have a total support ratio above 1.5 by 2065 (see Figure 12). Under the Accelerated Model, Kenya and Rwanda would be on the borderline (not shown).

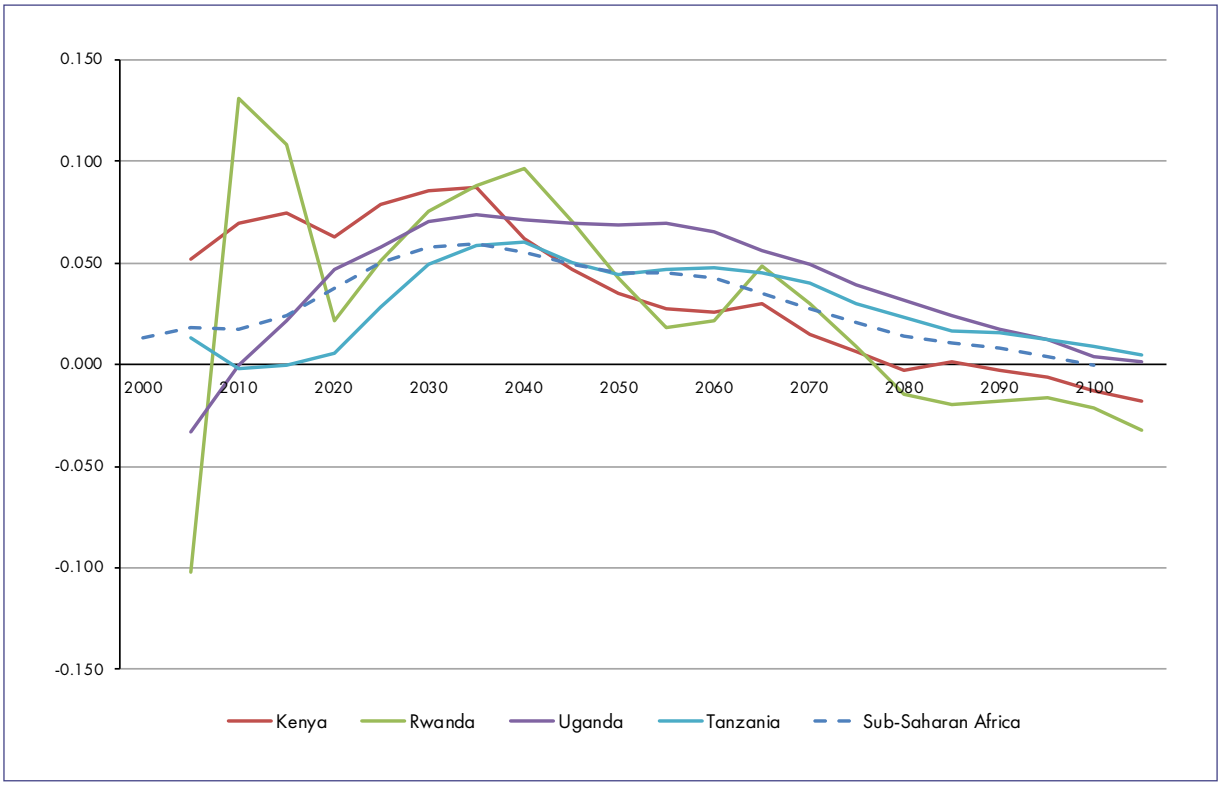
Another useful tool is the rate of change of the theoretical support ratio (see Figure 13). While the rate of change of the theoretical support ratio is positive, the window of opportunity to reap the demographic dividend is open. However, once the rate of change of the support turns negative, the dividend becomes negative, implying that the demographic change acts as a brake on economic growth rather than an impetus for economic growth.[4] The results in Figure 13 show that under this theoretical change in the support ratio, the window to harness the demographic dividend is currently open in the EAC countries although this development has only occurred in the recent past. Kenya and Rwanda that entered this window a little earlier than Uganda and Tanzania are also projected to exit the phase of positive demographic dividend by 2080, while given their much younger age structures, Uganda and Tanzania may still benefit from the dividend up to 2100.

Figure 12: Theoretical support ratio of producers (20-64 years) to young and old dependents (0-19 and 65+)



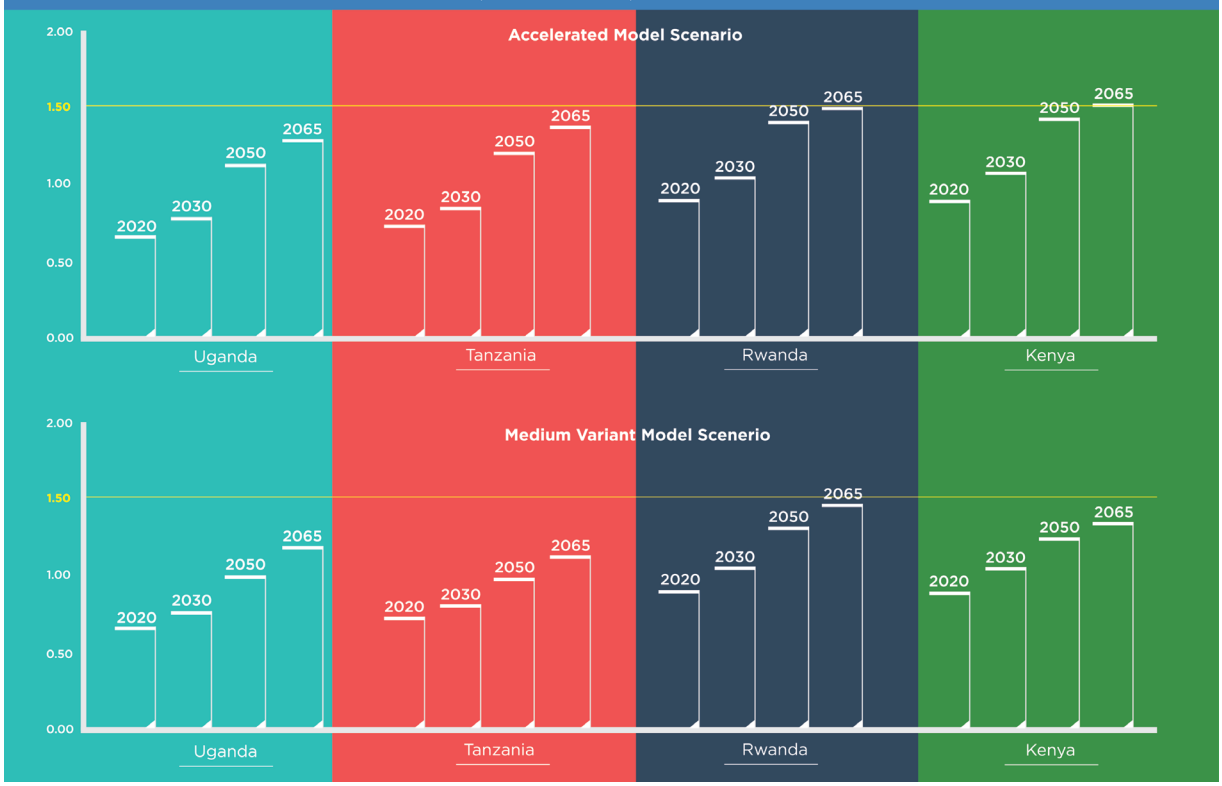
Hence Figure 13 shows that the window of opportunity for the EAC countries is from **now** until 2100, when the number of effective producers relative to consumers will be an unfavourable ratio. In comparison, Asian countries such as South Korea, Malaysia and Vietnam that experienced a much more rapid transition to low fertility are now at the stage where their window for harnessing the first demographic dividend is closing. This is also true for African countries such as Tunisia and South Africa, whose window opened in the 1970s. Tunisia's window will close by 2020 and South Africa's by 2050 when its support ratio gets unfavourable (See Appendix 5). More important, however, is to note that unless countries invest in programmes to improve the human capital and to create jobs for the current youth, these windows of opportunity will remain aspirational.

Figure 13: Rate of change in the theoretical support ratio (producers 20-64 years to dependents 0-19 and 65+ years)



Support Ratio

The Support Ratio, as defined in this study, is the ratio of the population in the age-ranges 20-64 years (theoretical producers) to the population 0 - 19 years and over 65 (consumers). Our analyses recommend a support ratio of 1.5 as the threshold to optimise the first demographic dividend. A support ratio of 1.5 translates into 100 producers to 65 dependents.



Policy Priorities

As the EAC countries transition to have significantly more people in the working ages, they'll need to:

Recommendation

Accelerate job creation and facilitate equal opportunity to available jobs

Recommendation

Promote female labour force participation especially in the formal sector

Recommendation

Strengthen conditions favourable to job creation, savings and investment including promoting financial inclusion of youth and women, and promoting micro and small enterprise

Recommendation

Invest in human capital, including vocational and technical training

Recommendation

Invest in improving access to effective modern contraceptive methods and SRH services

Recommendation

Expand access to quality education and reduce dropout rates especially for girls

Recommendation

Improve maternal and child health by strengthening provision of basic health care services

Policy Priorities

All the countries, but in particular Uganda and Tanzania, need to quicken the pace of their demographic transition

5.3. Future demands for services

The consequences of rapid population growth and a high dependency ratio will be pressure on basic services such as primary and secondary school places, health care, housing and infrastructure. Rapid population growth also puts pressure on land, water, and other natural resources and this contributes to Africa's food insecurity and resource-based conflicts.[60, 61] According to the World Bank, Rwanda and Uganda are among the top ten most densely populated countries in Africa and the pressure on land will increase with the projected population growth.

Demand for quality education and skills development

The population of secondary school pupils in the four countries is set to increase significantly. In Tanzania and Uganda, the number of secondary school children will more than double between 2015 and 2065 under both scenarios (see Figure 14).

The net enrolment rate (NER) for secondary school education is generally low. For example, in Tanzania NER for secondary schools was only 25% in 2015 (74% for primary school). If the enrolment rates increased to the current average levels of upper-middle-income countries, then the primary school net enrolment rates would increase to 95% while the secondary school net enrolment would increase to 79%. Such increases would require an expansion of tertiary education and technical and vocational training to absorb the young people who would graduate from the expanded secondary school stream.

Since the beginning of the millennium, the four EAC countries have all implemented some form of Free Primary Education that significantly increased enrolments at a primary school level. All indications are that they have now turned their focus to policy and programme actions to achieve a universal secondary education. However it is critical that attention be given to improving the quality of delivery and relevance of curricula to impart 21 st century skills and to provide learning opportunities for out-of-school youth. This is in line with the objective of Sustainable Development Goals (SDG) 4: "to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". Research by AFIDEP and the MasterCard Foundation identified a number of challenges with secondary school education in EAC including:

- Low quality of education delivery;
- Out-dated curricula that do not equip graduates with the necessary skills required by the labour market; and
- Insufficient teaching of transferable skills (higher-order cognitive skills and non-cognitive skills that individuals use to be successful across different situations in work and life that employers find attractive). [62]

Above all, significantly more resources will be required to implement the education reforms to improve human capital and harness the demographic dividend in the EAC.

Figure 14: Estimated number of secondary school places under two scenarios, 2015-2065 in thousands

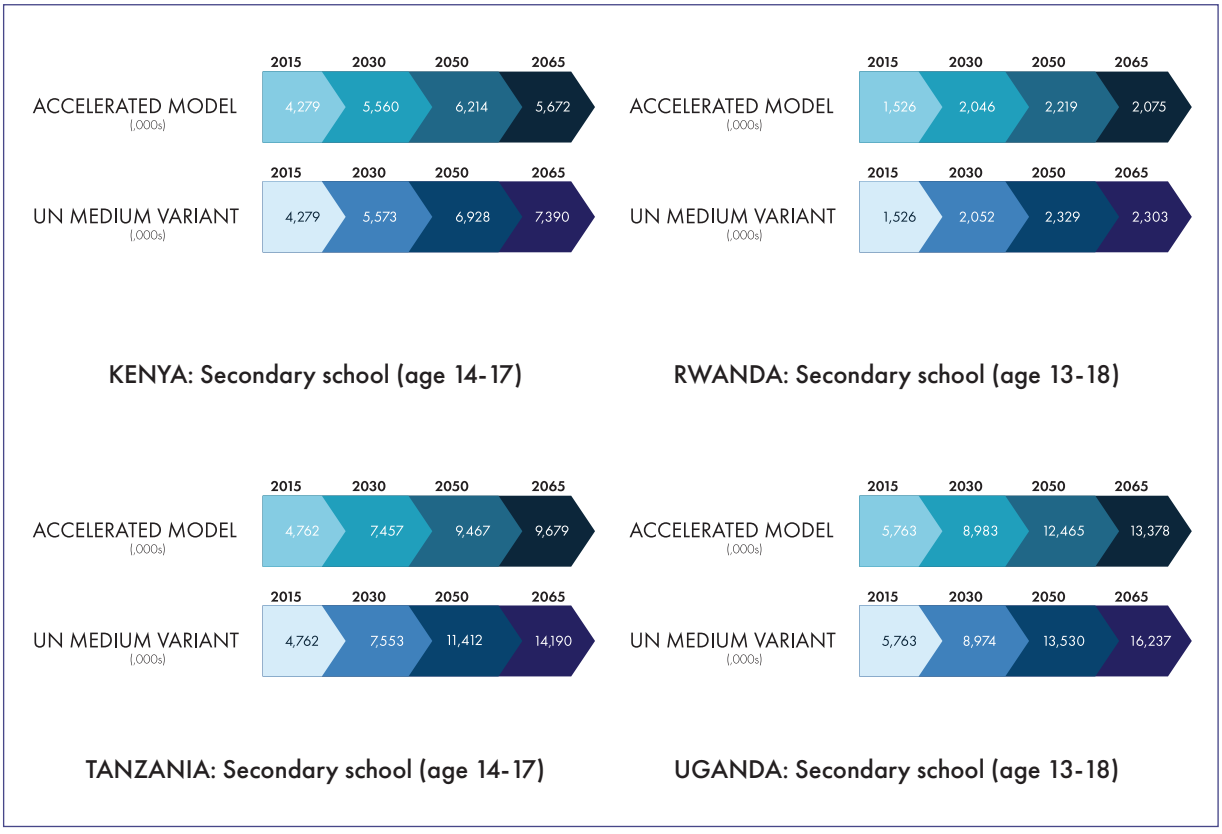
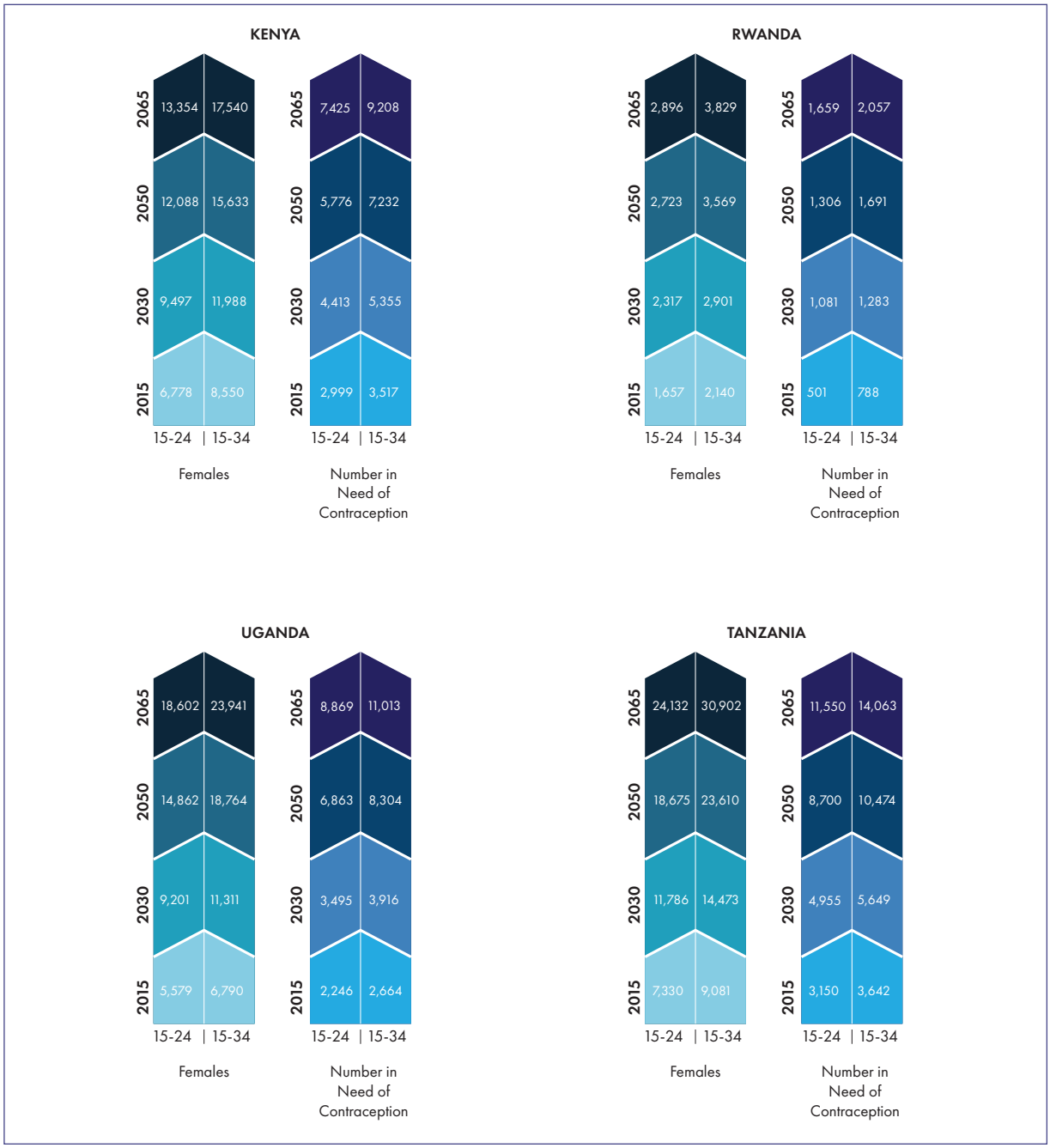


Figure 15: Number of youth, 15-34 years in need of modern contraception, 2015-2065 in thousands



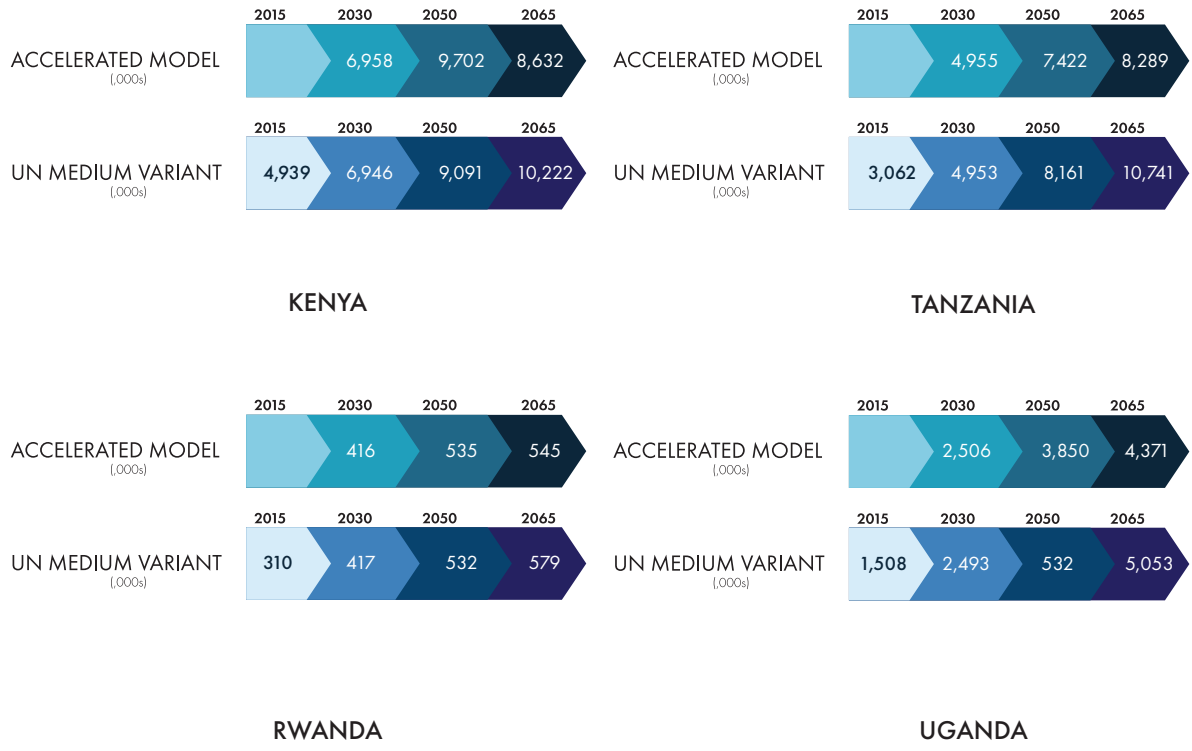
Demand for modern methods of contraception

Using the UN Medium Variant population projections, we estimated the total demand for contraception among sexually active female youth (married and unmarried) in the four EAC countries. Total demand is the sum of women who are using contraception and those who have unmet need for contraception. We used global DHS data to estimate the total demand for contraception under different TFR levels between now and 2065. The results indicate that the demand for contraception among female youth will increase significantly (see Figure 15).

For example, in Rwanda, among the female youth 15-19 years, the demand for contraception will grow more than 8-fold by 2065, from 35,000 women in 2015 to over 331,000. In Uganda, among young females aged 30-34, the demand will rise almost four times from 805,000 women in 2015 to 3.9 million by 2065. Recent DHS surveys in the EAC show that between 7% (Rwanda) and 18% (Uganda) of young women aged 15-24 who are sexually active were not using any form of contraceptive despite wanting to avoid pregnancy. The number was even higher when married women in this age group were selected, with unmet need for contraception ranging from a low of 31% in Kenya and Tanzania to as high as 61% in Rwanda.

Recent studies have reinforced the well-documented benefits of the use of modern contraceptives. If all unmet need for modern contraception were satisfied in developing regions, there would be approximately a three-quarters decline in unintended pregnancies (from the current 89 million to 22 million per year), unplanned births (from 30 million to 7 million per

Figure 16: Projected numbers of youth Not in Education, Employment or Training [NEET] in thousands



Note: For these projections the youth ages for Kenya and Rwanda are 15-34, 15-35 for Tanzania, and 15-29 for Uganda.

year) and induced abortions (from 48 million to 12 million per year). Fully addressing the unmet need for modern contraception could also result in 76,000 fewer maternal deaths each year.[63,64]

The Guttmacher Institute estimates that in low-income countries, it costs $10 to provide adequate contraception per woman per annum and that each dollar invested reduces the costs of meeting healthcare as a result of unintended pregnancies, unsafe abortion, HIV in pregnancy care, and unplanned births by $1.47.[65]

Youth "Not in Education, Employment or Training"

Section 4.3 detailed the challenge of youth unemployment and underemployment that is widespread within the EAC. For example, in Uganda, youth unemployment is around 21% among women and 11% among men, while in Tanzania, roughly 14% of those 15-24 years are unemployed, with females having 1.5 times higher unemployment than males. Even among those employed, underemployment is more common among youth compared with older workers. Labour underemployment refers to working part-time when people are available to work full-time, implying that people are not earning sufficient wages and are thus likely to be among the working poor. Most of the underemployed youths are in the agricultural sector, often working for subsistence. Furthermore, many are in vulnerable employment, thus they are unlikely to have access to benefits or social protection programmes.

The share of young people who are not in education, employment or training (NEET) provides a broad measure of the untapped potential of young people who could contribute to national development. The International Labour Organisation argues that young people in this group deserve attention since they are neither improving their future employability through investments in skills nor gaining experience through employment. If the levels of employment, school enrolment, and training remain the same, the projected number of youth NEET in the four East African countries will increase from 9.8 million to nearly 23 million by 2050 (Kenya, from 4.9 to 9.1 million; Tanzania,3.1 to 9.2; Uganda, 1.5 to 4 million; and Rwanda 310,000 -532,000). Figure 16 provides more detail on these projections by age.

6

Modelling the Potential Impact of the Demographic Dividend in East Africa

This section presents modelling results showing the potential impact of the demographic dividend for each of the four EAC countries over a period of four decades. Following interest by the respective governments, modelling using the DemDiv modelling tool has been conducted for each of the four countries over the last four years. The modelling results emphasise the need for concerted integrated investments and policy actions across sectors if at all the East African countries are to benefit from the demographic dividend.

If the countries continue on a Business - as - Usual pathway, then rapid population growth will continue to put serious pressure on development and a youth bulge will not be achieved over the next few decades. Under this scenario, human development will remain low, economic growth will stagnate and the countries will remain stuck at low-income levels. On the other hand, under a Combined Investment Scenario in which the countries significantly enhance access to modern contraception, universal secondary education is attained and economic competitiveness and governance are significantly enhanced, the four countries could quickly witness a change in their age structures to have a youth bulge and subsequent working-age bulge that would reduce young age dependency and allow them to maximise the benefits of the demographic dividend. This would facilitate their move from low-income status to upper-middle income or high-income status within four decades. The priority areas in which these countries must make strategic investments to earn the demographic dividend are:

- Comprehensive sexuality education and facilitating universal access to contraception and healthcare.
- Access to basic quality education for all and significantly improved access to tertiary training and skills development
- Economic reforms that spur entrepreneurship and job creation
- Strengthening the rule of law, good governance and accountability
- Female empowerment in all spheres

In the final part of this section, we highlight the possible outcome of failure to invest in the areas above.

To demonstrate the potential benefits of the demographic dividend and identify the multi-sectoral policies and investments required to achieve those benefits in the four EAC countries, we used the modelling tool DemDiv. DemDiv was developed by the USAID-funded Health Policy Project at the Futures Group (now Palladium).[66] It is a scenario-based two-part model that projects demographic and economic changes up to 40 years, to estimate employment and investment, along with an estimation of gross domestic product (GDP) and GDP per capita as well as several other indicators of human development (including Human Development Index). In particular, the model allows the design of multiple scenarios showing how the combined power of policy investments in family planning (FP), education, and the economy can generate a demographic dividend. The scenarios in this report are based on the aspirations to meeting and surpassing benchmark countries, which include Malaysia, South Korea, South Africa and Mauritius. Full explanations of the rationales for these scenarios are reported in the countries' Demographic Dividend reports.[67-70]

Table 11: Key Characteristics of the Policy Scenarios used in the modelling[4]

Policy Scenario	Key characteristics
"Business as Usual" Scenario	• Status quo, characterised by persistence of high child dependency burden-sluggish economic growth will continue. • Countries will only manage to attain 20-30% of the progress they need in order to attain the current level of development indicators for the selected benchmarking countries which are Malaysia, South Korea, South Africa and Mauritius[vii].
Economic Emphasis Scenario	• This scenario represents the best economic outlook for the four EAC countries in terms of reforming their economies to enhance productive efficiency and accelerate economic growth, job creation, and poverty reduction. • Emphasises enhancement of global economic competitiveness[viii], and productive efficiency, and governance as outlined in their long-term visions[ix]. • Majority of the target economic indicators for 2055 are based on economic indicators for benchmark countries. • Education and family planning indicators held at the same level as the "Business as Usual" scenario.
Social Emphasis / Economic Emphasis and Education Scenario	• In Kenya Economic indicators held to the same level as the Economic Emphasis scenario. • Targets for Education indicators are set at the same level as Combined scenario. • Family planning indicators are held at the "Business as Usual" level[x].
Combined Scenario.	• An integrated development scenario that concurrently emphasises investments in economic reforms as well as prioritisation of family planning to prevent unplanned births and education to build high quality human capital. • Economic indicators held to the same level as the Economic Emphasis scenario. • Expected[xi] and mean[xii] years of schooling are set at the 2015 levels of the Asian countries (Malaysia, Indonesia and South Korea) – we assume universal access to secondary education and average of 2 years of post-secondary education. • Contraceptive prevalence rate increases to at least 64% by 2055.

The modelling policy scenarios and the input variables for the various policy interventions under each of the four scenarios for each country are summarised in a table in Appendix 6 for reference.

6.1 DEMDIV results

The results show that the demographic indicators and emerging economic opportunities in the four countries can be turned into a huge impetus for the socio-economic transformation envisaged in the long-term development

visions. The countries will achieve a favourable age structure change under the combined scenarios that lead to a working-age bulge and a sizeable reduction in child dependency. However, the countries should prioritise investments aimed at simultaneously creating a globally competitive economy and accelerating economic growth and job creation as well as accelerating the reduction in fertility through voluntary and rights-based interventions in education and family planning.

[vi] The assumptions for the DemDiv modelling in the four countries differ as these were being set through a participatory workshop process, with stakeholders in the workshop tweaking the basic assumptions to meet contextual interests. Nevertheless, the "Business as Usual", Economic Emphasis and Combined Scenarios take on the same line of assumptions across the four countries while the differences are more pronounced for the Social Emphasis scenario.

[vii] These four benchmark countries were selected because they collectively present various qualities that EAC and other African countries would like to emulate.

[viii] Global Competitiveness Index, a cross-country database compiled by the World Economic Forum (WEF). Competitiveness is defined as the set of institutions, policies and factors that determine the level of productivity of a country, and hence the level of prosperity that can be reached by the economy. There is general convergence between it and the World Bank's Ease of Doing Business index.

[ix] Vision 2025 for Tanzania; Vision 2030 for Rwanda, Vision 2030 for Kenya and Vision 2040 for Uganda

[x] Assumes CPR for Tanzania is 42%; For Kenya 39.4%;

[xi] Expected Years of Education refers to the total number of years of schooling a child who is of primary school entry age today can expect to receive over their lifetime, assuming that the probability of her/him being enrolled in school at future ages is equal to the current enrolment rate at those ages.

[xii] Average number of years of schooling for the adult population aged 25 and above.

KENYA

As Figure 17 shows, if Kenya follows the Combined Investment Scenario, its GDP per capita will increase to $11,288 by 2050, up from $ 907 in 2010, having graduated into an upper middle-income country by around 2034. By following an integrated investment approach, the country will also earn a demographic dividend of $4,595 by 2050, which is the additional per capita income earned in excess of the income earned if the country was to focus on Economic Emphasis Scenario only. The living standards will also improve markedly under the Integrated Investment approach, with HDI score increasing from 0.435 in 2010 to 0.7555, as shown in Figure 18.

Figure 17: Kenya - Projected Per capita GDP (in US$)

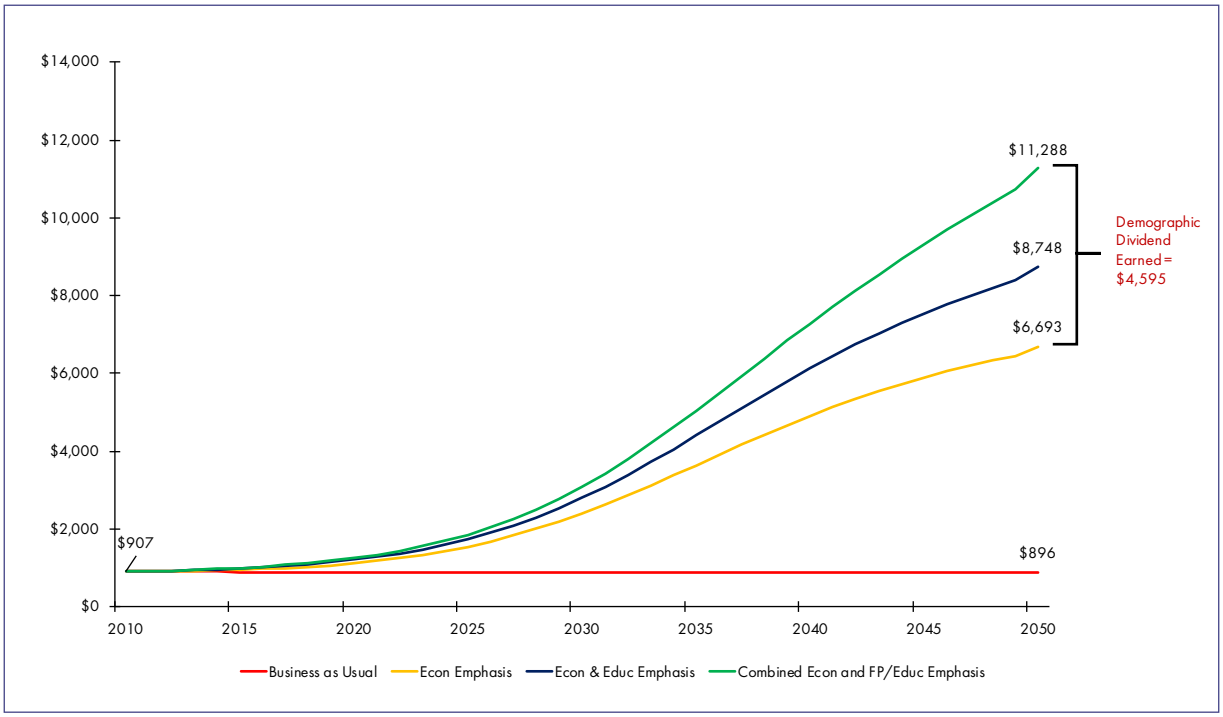
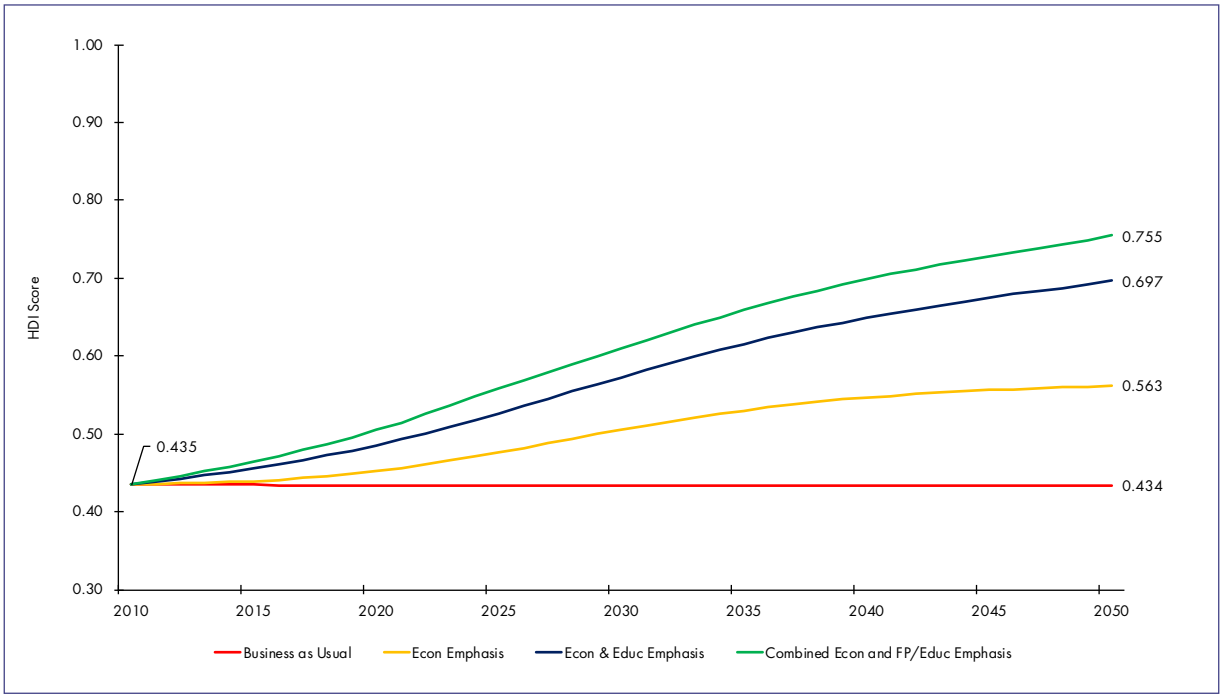


Figure 18: Kenya - Projected Human Development Index Score



RWANDA

In Rwanda, the level of economic growth that the Government envisages in Vision 2020 and initial discussions towards the formulation of Vision 2050 will only be achieved under the Combined Scenario, which would generate a GDP per capita of US$ 4,015 by 2035 and US$ 12,555 by 2050. The GDP per capita achieved under the Economic Scenario will be below target, at US$ 3,207 in 2035 and US$ 9,098 by 2050. The demographic dividend, which is the additional GDP per capita the country would earn by 2050 by investing in its human development, in addition to its investments in the economic sector, would amount to US$ 3,457 per capita (Figure 19). The Combined Scenario will result in an HDI score of 0.76 in 2050, with a ranking of 38 globally based on 2011 rankings (Figure 20). This is because of the greater investments in the economic sector under the Combined Scenario than under the Social Emphasis Scenario, with a higher economic output. Rwanda would thus graduate to being among the highly developed countries in the world by 2050 under this scenario.

Figure 19: Rwanda - Projected Per capita GDP (in US$)

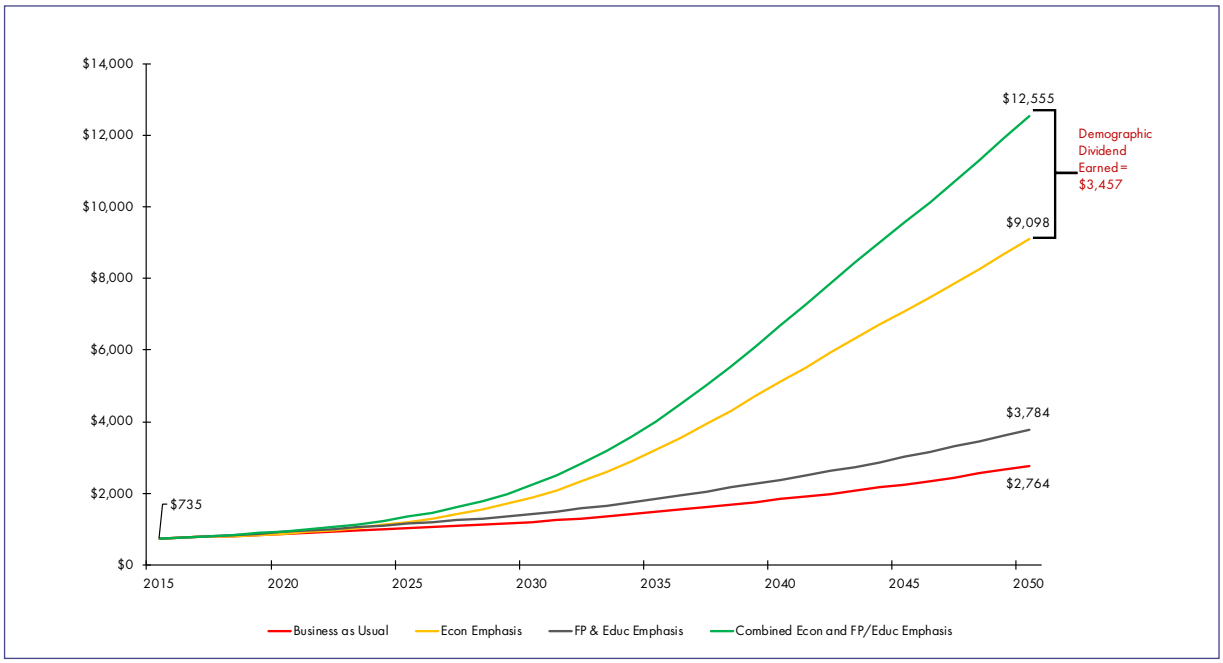
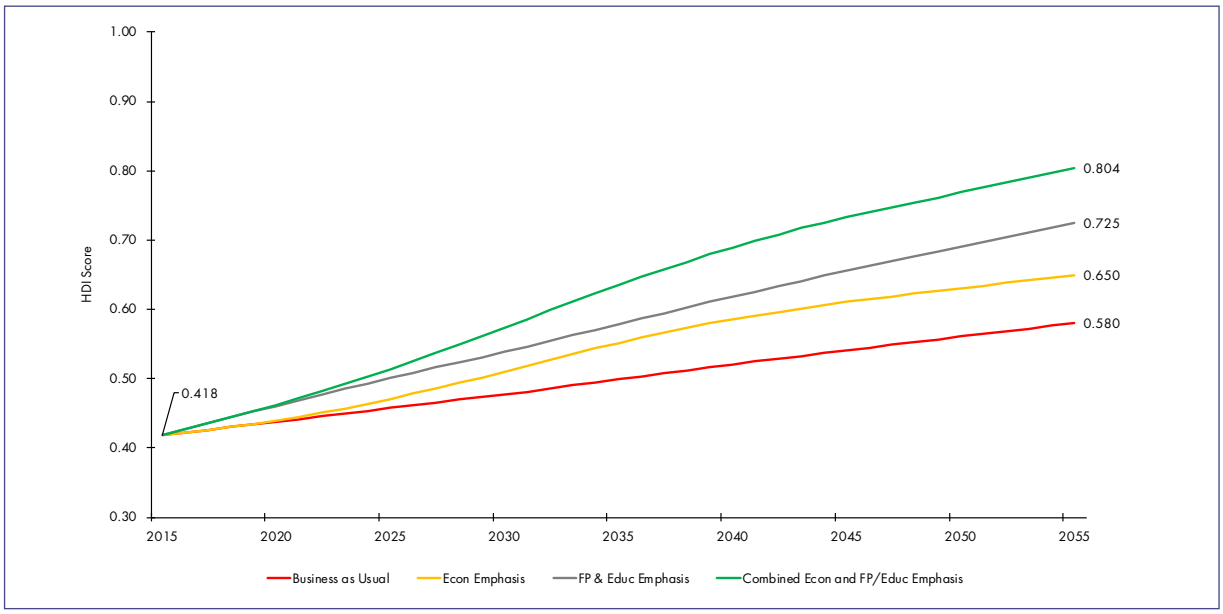


Figure 20: Rwanda - Projected Human Development Index



TANZANIA

The Combined Scenario in Tanzania will produce similar results with a youth bulge expected by 2055, and a dependency burden of only 58 dependents for every 100 persons of working age. The population will be much smaller at 129 million than under the Business as Usual Scenario, and the total fertility rate will be close to replacement level, at 2.4 births per woman. Per capita GDP will increase to USD 11,656.6. Thus, if Tanzania unleashes its full potential and simultaneously prioritises reforms and investments in economic, demographic and human capital development and facilitates a rapid fertility reduction, it will earn a much larger demographic dividend of USD 3,877.2 per person (Figure 21). Tanzanians will have high living standards with an HDI of 0.775 (Figure 22), and this will lead to a long life expectancy of 74 years by 2055.

Figure 21: Tanzania- Projected Per capita GDP

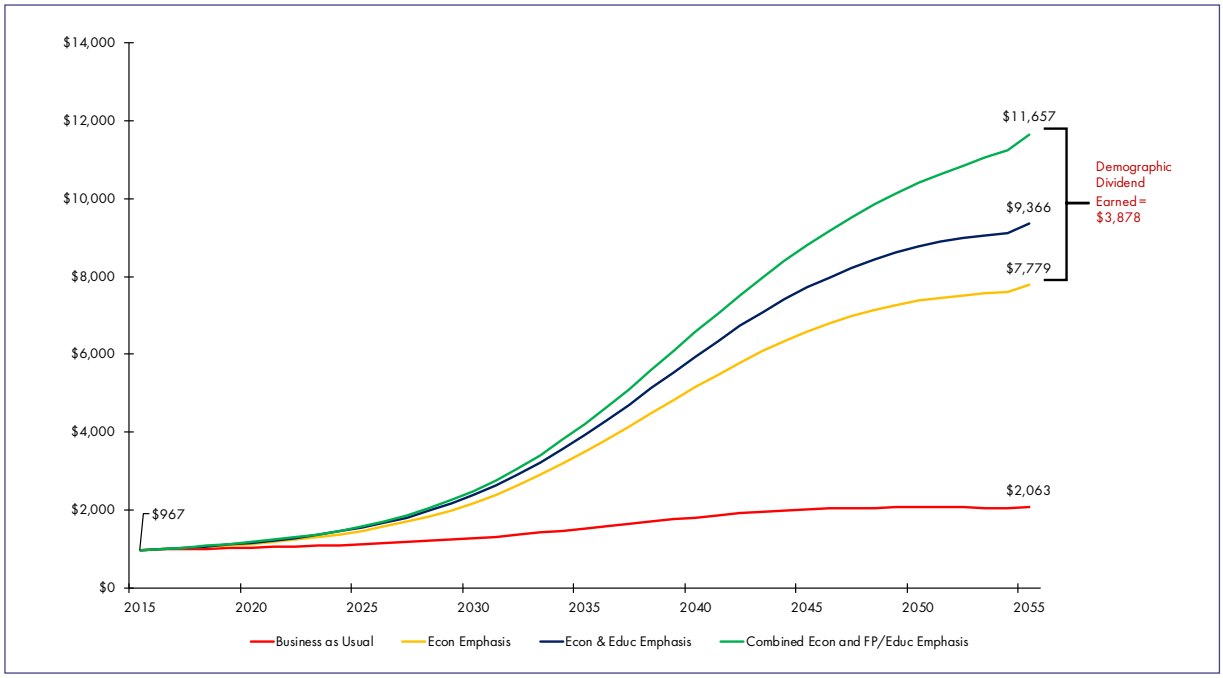
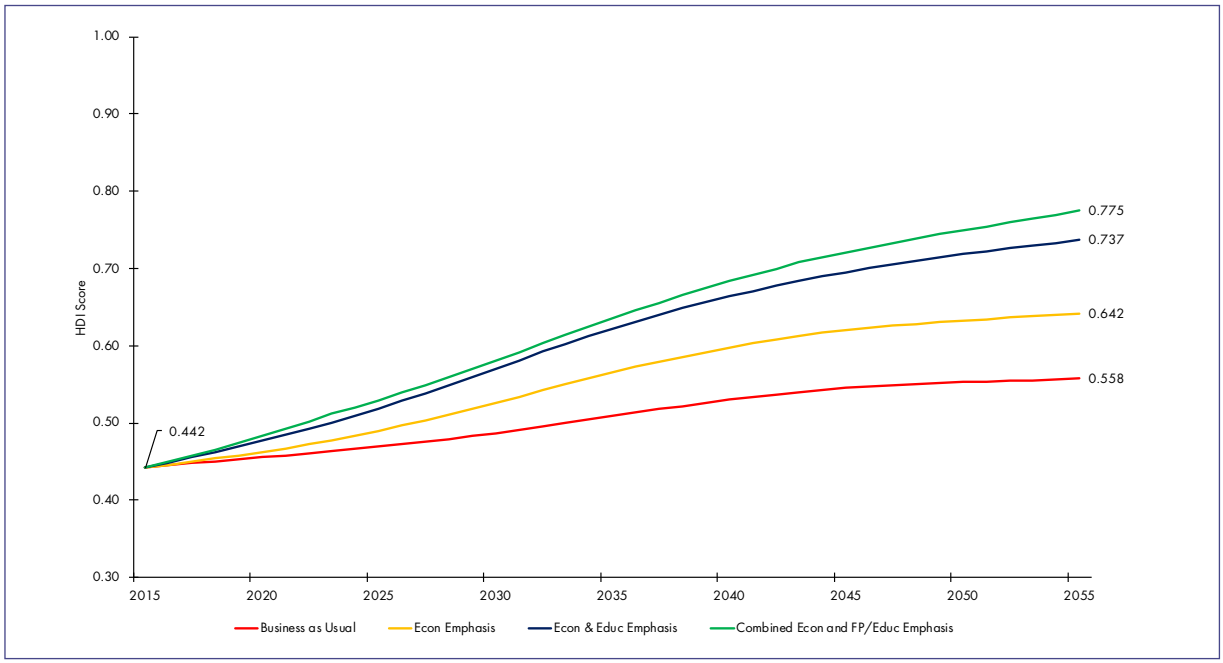


Figure 22: Tanzania- Projected Human Development Index



UGANDA

Under the Combined Scenario, Uganda's GDP per capita will increase to USD 9,567 by 2040, and the country will move into the upper middle-income category, earning a demographic dividend of USD 3,483 (Figure 23). This will be due to simultaneous prioritisation of economic, social and demographic factors to achieve the socioeconomic transformation envisaged in Vision 2040. By this time, the population will have a youth bulge, fertility will have declined to 2.2 children per woman, and there will only be 58 dependents for every 100 persons of working age. As such the living standards will be high, with an HDI of 0.74 by 2040 (Figure 24).

Figure 23: Uganda - Projected Per capita GDP

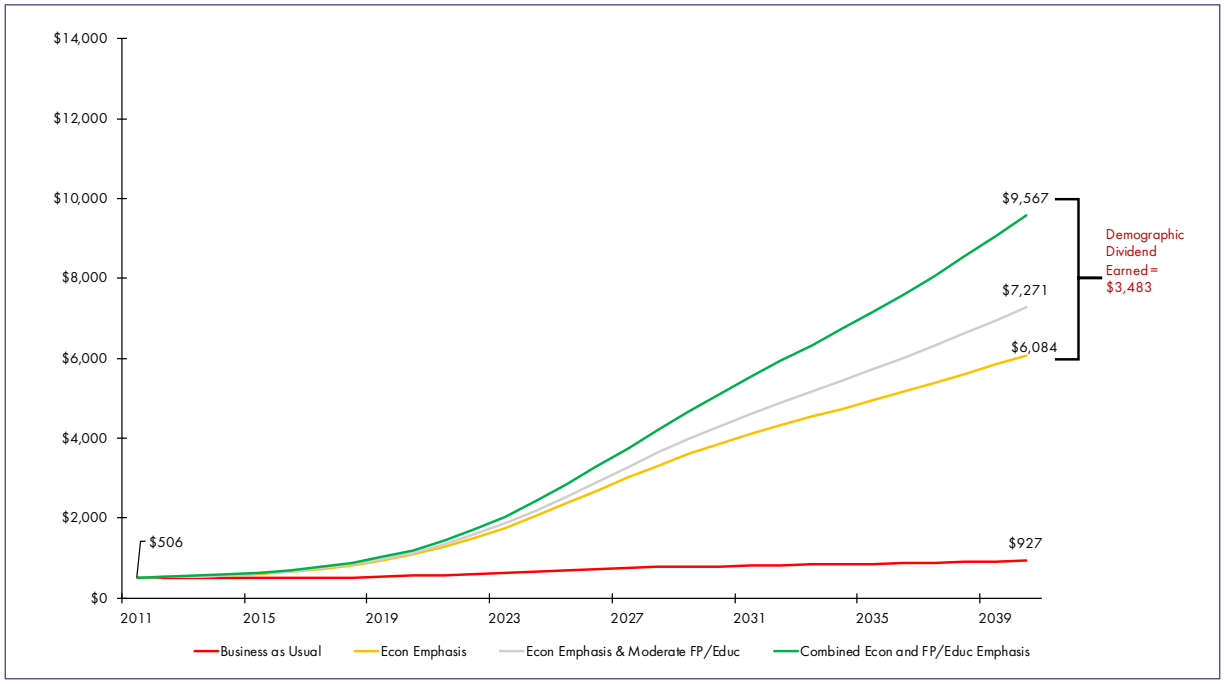
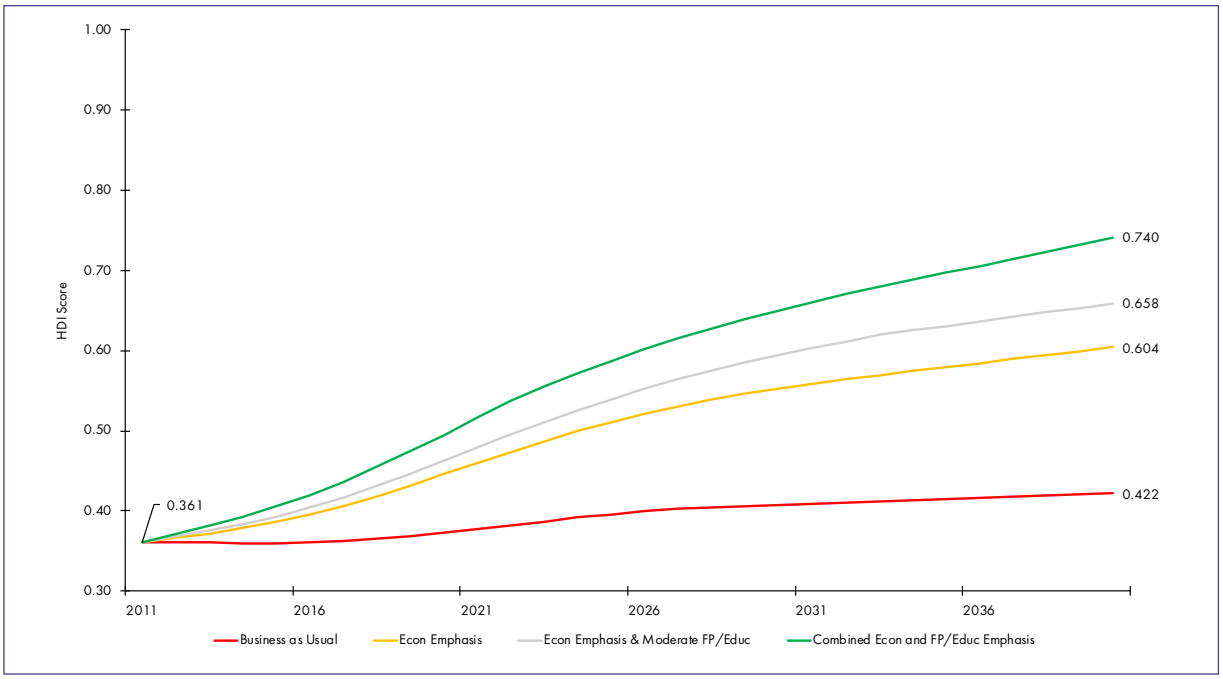


Figure 24: Uganda - Projected Human Development Index



6.2 Business-as-Usual Scenario: What are the risks of inaction?

The governments across Africa, including the EAC countries, are acutely aware of the rapid increase in their populations. They are also aware that changes in the population will have consequences for their development trajectories. As demonstrated by the modelling, if strategic investments are made in priority areas of social and economic development, then Kenya, Rwanda, Tanzania and Uganda could all capitalise on their population and development dynamics to graduate to prosperous upper-middle-income countries. On the other hand, if the countries choose the path of ***Business-as-Usual***, the price to be paid for the cost of inaction could be enormous and the countries will remain stuck at low-income levels, with low human development.

Whichever scenario you look at, the youth population aged 15 to 34 is set to almost double in Kenya and Rwanda and more than double in Uganda and Tanzania by 2050. Under the UN Medium Variant Scenario, Kenya and Rwanda's populations for this age group are projected to increase from 17 million and 4 million respectively in 2015 to 31 million and 7 million by 2050. In Uganda and Tanzania, youth aged 15 to 34 are expected to increase from 14 million and 18 million respectively in 2015 to 38 million and 47 million by 2050. Investing in youth should not wait for them to get to the defined youth ages but rather these investments should take on a life course approach where investments in human capital start at the earliest ages.

As a consequence of the rapid increase in the youth population, there will be a significant increase in demand for schooling, jobs, healthcare and other basic services. With the EAC countries basically reliant on agriculture, the environmental stress as a result of rapid population growth will also be a key variable to pay attention to. Despite existing policies that have a focus on youth outcomes in the four countries, the situational analysis for this study highlights key areas of concern that will continue to lead to undesirable outcomes:

- Poor access to quality health services and in particular sexual and reproductive information and services for the youth. Access to modern contraception to fulfil the unmet need for family planning for young people, a key ingredient to facilitating the demographic transition, is also below optimal levels. Continued inadequate resource allocation to turn these around will lead to a persistently high burden of disease and high birth rates among the youth.
- Very low enrolment levels beyond primary school, low quality of education that result in poorly educated youth without relevant skills to make the countries globally competitive and reduce poverty among young people.
- Lack of decent employment opportunities for youth who have to subsist on meagre earnings from a mushrooming informal sector that has low wages and little to no social protection. This increases the youth dependency burden in addition to the already high child dependency burden the countries have to grapple with.
- Poor governance and insufficient accountability and performance management mechanisms that lead to the poor provision of basic services and below optimal value for money for public investments.
- While all the countries acknowledge the need for gender mainstreaming in programmes to ensure that historical and cultural factors that resulted in women being left behind are addressed, there are insufficient programmes for female empowerment. Hence the gender gaps in critical spheres such as informal employment and professional training remain wide.

As a result, the large pool of youth in East Africa is not the impetus for productivity that they could be. Their productive potential is under-exploited and though they form a large potential market, they have low per capita purchasing power.

The long-term consequences of Business as Usual is continued sluggish growth and the perpetuation of a cycle of poverty. Significantly, there is the real danger that these large masses of youth, due to disenchantment from failure to reach their aspirations and earn a decent living, could turn to vices such as crime leading to insecurity and could also become vulnerable to taking part in civil disobedience and creating political instability. A recent study on SSA has shown that an increase of 1% in the population of youth aged 15-19 increases the incidence of low-intensity civil conflict by 2 percentage points.[71]

Summary and Recommendations

Africa's population is projected to grow from the current 1.2 billion to over 3 billion by 2063 when nearly one in every three people in the world will be African. Decades of very high fertility in Africa, coupled with rapidly declining child mortality have created a youthful population age-structure. Kenya, Rwanda, Tanzania, and Uganda, contribute about 10% of the population in the continent. High fertility in the EAC is contributing to significant population growth which may impede economic development unless the countries address the rapid population growth and invest in the human capital of the current youth cohorts.

The prospects of harnessing a sizeable demographic dividend in EAC are low because the countries have high child dependency burden. But the recent transition to lower fertility in the region, coupled with falling childhood mortality rates, offer an opportunity for accelerated economic growth in the region. This will be achieved if the countries increase investment in i) sexual and reproductive health and family planning for all; ii) better quality education, skills development and healthcare to improve productivity; iii) creating an enabling economic environment for savings, investments, and new jobs; iv) good governance and accountability for equitable development and other areas which are captured in Figure 25.

The consequences of inaction or disinvestment are captured in Figure 26. They include being ensnared in a poverty trap, disenchanted youth, weak economic growth, weak GDP growth, and threats to the security of the region and beyond. Moreover, emerging evidence shows that high youth population growth and unemployment are associated with increased insecurity, social unrest and disorder, especially in urban areas.[72-74]

Figure 25: Priority investment areas to harness the demographic dividend

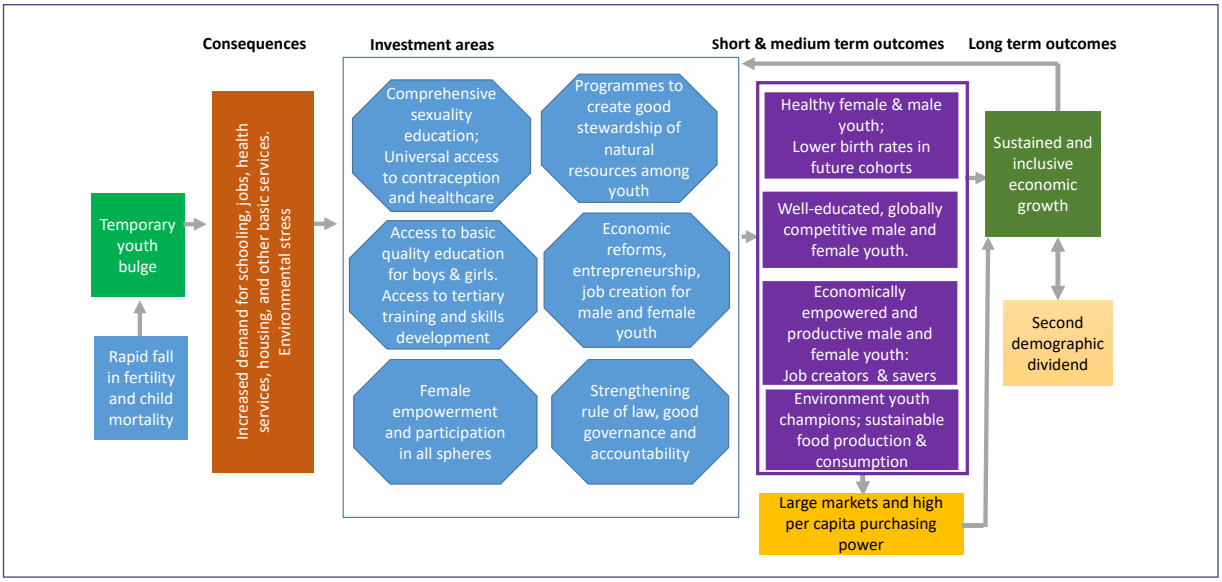
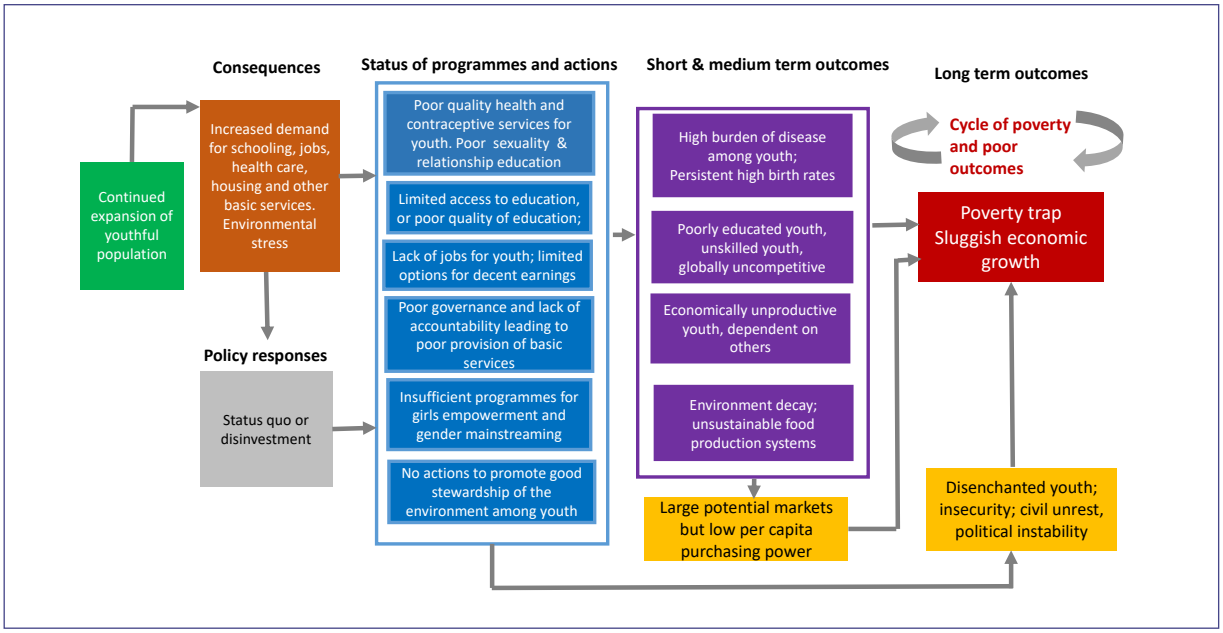


Figure 26: "Business-as-usual" or disinvestment in youth



We make two sets of recommendations: to the governments of the EAC countries, and to DFID and other development partners.

Recommendations to EAC governments: Priority Areas for Investment

The African Union's roadmap for harnessing the demographic divided has identified four pillars. These are: employment and entrepreneurship; education and skills development; health and wellbeing; and rights, governance, and youth empowerment. Based on our analyses, including the scenario modelling, and literature review, we make the recommendations below that align with the AU pillars.

Priority area	Description of investment	Examples of impact of investment or cost of inaction in priority area
Family planning and Health	Child survival to improve human capital and to accelerate fertility decline. Universal access to contraception to address the high unmet need especially among those living in rural areas, urban slums, and among youth. Prevent new HIV infections among youth and treat those who are infected to improve human capital. Healthy eating and life-style interventions to prevent overweight/obesity epidemic among youth.	It is estimated that if all unmet need for modern contraception were satisfied in developing regions, there would be approximately a three-quarters decline in unintended pregnancies (from the current 89 million to 22 million per year), unplanned births (from 30 million to 7 million per year) and induced abortions (from 48 million to 12 million per year). In Tanzania and Kenya for example, 3,000 and 5,000 maternal deaths respectively were averted in 2017 due to modern contraceptive use.[63] Because of high fertility, about half of the total health expenditures are spent in most sub-Saharan Africa countries on caring for the large numbers of pregnant women and young children among the population.[75] In 2005, the estimated loss in national income from heart disease, stroke and diabetes was $0.1 billion in Tanzania. These losses accumulate over time because each year, more people die. Estimates for 2015 are between 3 and 7 times those of 2005, and Tanzania was predicted to lose a cumulated $2.5 billion in national income between 2005 and 2015.[76]
Women and girls' empowerment	Empower girls to participate in secondary and tertiary education and in science, technology, and mathematics. Outlaw practices that affect women's empowerment such as child marriages and gender-based violence.	A study of girls' education in Kenya found that an adolescent girl's chance of giving birth as a teenager dropped by 7.3 per cent if she had at least a primary education and by 5.6 per cent if she had at least a secondary education.[82] There is evidence that shows that given similar financial resources, women spent more than men on child health, education, and nutrition.[82,84]
Education and skills	Invest in school-construction projects to match the growth in population. Improve the quality of education. Increase female participation in secondary and tertiary education. Female education also lowers fertility. Involve employers in curriculum reforms for tertiary and TVET colleges to ensure that appropriate transferrable skills form part of the training.	An additional year in the mean years of schooling attained for the 15-64 years age-group is associated with a 12% boost in manpower productivity.[77] Evidence from 7 countries (Botswana, Cape Verde, Namibia, Mauritius, South Africa and Swaziland) in Africa where the average number of children per woman is 3.5 or less show a benefit in the increase in education spending per pupil of between $166 and $1,000 between 1980 and 2008.[78] An additional year of schooling is associated with a 10 percent increase in wages.[79] In 2010, manpower productivity levels in sub-Saharan Africa could have been 40% higher if the region had achieved the global average for years of schooling among its adult population.[77]

Economic reforms that promote job creation	Create an enabling environment for the creation of jobs, youth entrepreneurship, and encouraging savings for pensions; promoting innovation hubs and facilitating the financial inclusion of youth are among critical options to stem unemployment in the EAC. Decent livelihood opportunities will also discourage the brain drain of young people moving to other countries in search of jobs. Crucially, a large pool of disaffected unemployed youth presents a significant security risk to individual countries and to the region. Crime, violence, and radicalisation are real possibilities when youth are marginalised. Develop agribusiness for youth.	If output per worker stays constant, a rise in the working-age share of the population from 1 worker per dependent to 2.5 workers per dependent would lead to a 43% percent rise in income per capita.[80] Though more than two-thirds of young Africans who work in rural areas work in the agriculture sector, it is the least productive sector in African economies. Investments in the agriculture sector provide perhaps the best opportunity for Africa to harness the demographic dividend.[81] Rapid growth in the youth population and high levels of unemployment are associated with increased insecurity, social unrest and disorder, especially in urban areas.[74,73,72]
Environment and climate	Work with youth to raising awareness of environmental issues and good stewardship of natural resource. Urban planning should take into consideration both natural growth and rural-to-urban migration; rural development schemes that offer attractive livelihood opportunities for youth can help to manage rapid urbanisation.	A study in Malawi estimating how rural population density impacts agricultural intensification and household wellbeing found that areas of higher population density are associated with smaller farm sizes, lower real agricultural wage rates, and higher real maize prices.[85] A modelling study covering 44 African studies that aimed to estimate the impact of population growth and climate changes on food security in Africa to 2050 concluded that projected rapid population growth will be the leading cause of food insecurity and widespread undernourishment across Africa.[86]
Governance and accountability	Improve governance and accountability to improve security and shared prosperity. Include youth in decision-making spaces especially on matters that affect them.	African youth are less likely than their elders to participate in civic activities: Less than half (47%) of 18 to 35 year-olds say they attended community meetings at least once during the previous year, while 40% joined others to raise an issue (vs. 57% and 47% for older citizens). Young women's participation also lags behind that of their male peers on these measures of civic activism (by 9 percentage points, on average), particularly in West Africa and North Africa (both by 14 percentage points).[87] About 86 percent of all countries that experienced a new outbreak of civil conflict between 1970 and 2000 had age structures with 60% or more of the population younger than 30 years of age. Although country age structures in many regions matured between 1970 and 1999, this "outbreak benchmark" remained virtually constant.[88]

Recommendations to DFID and Development partners

The development challenges arising from rapid population growth that have been identified by this study generally apply to SSA. The following set of broad recommendations therefore apply beyond the EAC region. To support countries in the region to benefit from the demographic dividend, strategic technical and financial support from development partners should focus on the following areas:

i. In-depth policy prioritisation analysis: African governments need guidance in policy prioritisation to help them decide what they can do immediately, in the medium, and long-term. Development partners should provide the technical support for such in-depth prioritisation analysis of population and development policies. In particular, there is need to provide such guidance at sub-national level as significant differences in population and development outcomes exist across regions and within countries.

ii. Systems thinking and integrated planning capacity: Supporting capacity development for planning officials and programme designers on systems thinking and integrated planning. Systems thinking is an approach to problem solving that views "problems" as part of a wider dynamic system. It demands deeper understanding of linkages, relationships, interactions and behaviours among the elements that characterise the entire system.[89] It has been commonly used in sectors where interventions and systems are complex such as health and environmental conservation. The intricate linkages between population and development demands such an approach.

iii. **Cost-benefit analysis**: Provide technical expertise and support for cost-benefit analyses of interventions aimed at harnessing the demographic dividend.

iv. **Sustainable funding for demographic dividend interventions**: The Combined Emphasis Scenario, which provides the best options for harnessing a sizeable demographic divided, can be a daunting undertaking given the multiple linkages across social and economic development sectors. Development partners should support innovative funding aimed at providing sustainable funds for interventions to harness the demographic dividend. An example of this is the Sahel Women Empowerment and Demographic Dividend project (SWEDD)[xiii] which is a partnership between the World Bank, UNFPA and governments of six countries in the Sahel region (Burkina Faso, Chad, Côte d'Ivoire, Mali, Mauritania and Niger). The project seeks to accelerate demographic transition to spur the demographic dividend and reduce gender inequality in the Sahel region. As part of the project, the governments are to secure loans from the World Bank which in turn are used to secure technical support for implementation of interventions by UNFPA and other partners.

v. **Coordination and accountability systems**: Provide support for the development/enhancement and implementation of strong coordination and accountability systems for population and development. Examples include the creation of strong national councils for population or councils for population and development to coordinate the implementation of programmes on population and development - including universal access to effective contraception.

vi. **Role of the Private Sector and other stakeholders**: Engage the private sector, civil society and other critical ministries like education, youth, labour, and industrial development to become more involved in the agenda to harness the demographic dividend and integrate population dynamics in their existing policies and planning. The demographic dividend agenda has mostly been in the realm of government officials working on population and health.

[11] *http://wcaro.unfpa.org/sites/default/files/pub-pdf/SWEDD_ENG.pdf*

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Appendices

APPENDIX 1: Methods

Work Package 1: Literature and Policy Review

1.1. What evidence exists concerning the social and economic impacts, opportunities, and policy responses of the demographic transitions occurring in Kenya, Tanzania, Rwanda, and Uganda?

1.2. What are the gaps, strengths and weaknesses of existing policies and interventions aimed at youth demographic trends, mobility, and labour force participation for males and females in EAC countries?

1.4. What are some of the youth-sensitive and gendered approaches that could transform the 'youth bulge' in EAC countries to sustained, equitable economic growth?

Literature Review

We used systematic mapping to review grey and published literature on the trends in demographic changes and their social and economic impacts in the four countries and Africa more broadly. We identified six main domains to guide our literature search: Demographic or population change, health, education, employment, legal framework, and urbanisation and mobility (see Figure 3). Youth and gender were cross-cutting issues that we took into consideration in our analyses and reviews. Furthermore, country-level analyses took into account contextual influences such as socio-political, economy and culture. A description of these domains for youth demographics is provided in Table I.

We searched in databases such as POPLINE, MEDLINE, PUBMED, and SCOPUS and agreed on the list of keywords for the searches. The main inclusion criterion was relevant literature on the four countries and other low-income and middle-income countries. The exclusion criteria were studies in the western world and studies too far back in time (i.e. pre-1990), except those that were vital to describing the demographic dividend. We also used a snowballing approach whereby literature was identified from the biographies of articles that had been identified through the search.

We used DFID's guidelines to assess the quality of the evidence which identified seven principles of assessing quality (conceptual framing, transparency, appropriateness, cultural sensitivity, validity, reliability, and cogency).[90] One researcher conducted an initial scan of the abstracts to determine if they should be reviewed or not, and following this initial assessment, two researchers reviewed the literature and used a spreadsheet to summarise the findings, the geographical location and year of publication, the study design, and types of studies. Each reviewer assessed the quality of the literature as "high" quality if it had four or more of the qualities listed above, "medium" if an article had two or three qualities; "low" if the literature had only one or no qualities listed above. Those labelled as "low" were not used in the review. Where there was disagreement on the quality threshold of a piece of literature, a third reviewer acted as a tiebreaker.

The original and final numbers of articles identified in the searches are shown in the figure below.

Table I:Domains of states and impacts of youth demographic change for the systematic mapping of literature and policies

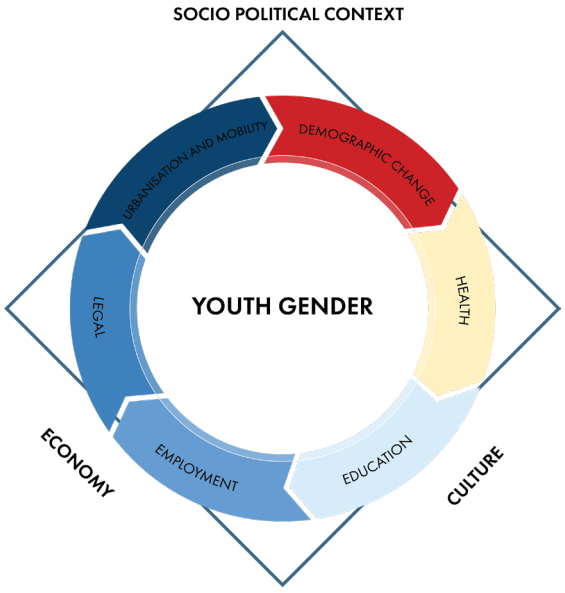
Domain	Description of indicators and impacts	Policy Landscape
Demographic change	Trends in infant mortality by sex, fertility, and adolescent fertility; Life expectancy, dependency ratio	Policies and programmes that address youth/ adolescent sexual and reproductive health needs including access to contraception.
Human capital	Trends in secondary and tertiary education by sex, transferrable skills, ICT and mobile phone use among youth. Health of youth (HIV/AIDS, abortion-related illnesses, suicides, substance abuse, and non-communicable diseases).	Policies and programmes to increase access to high-quality secondary and tertiary education. Policies and programmes to expand transferrable and ICT skills. Health in youth policies.
Urbanisation	Focusing on patterns of internal migration of youth between rural and urban areas and mobility to mega and secondary cities. Explore literature on sex-disaggregated migration patterns.	Policies and programmes that address youth livelihoods in both rural and urban areas; Planning for basic and critical social services such as housing, water, sewage disposal in cities and mega cities.
Labour force	Youth employment and underemployment, growth of informal sector, entrepreneurship, access to credit/financial inclusion	Policies and programmes that focus on job creation, underemployment, female participation in the labour force.
Interventions that work	Effective projects, actions, and interventions for sustainable development that are youth-sensitive.	
Barriers to youth development	For example, lack of investment in youth; gender and spatial inequity and other forms of vulnerability; lack of accountability and corruption.	Policies and programmes that tackle inequalities, youth poverty, corruption.
Knowledge gaps	Gaps in knowledge on impacts of youth demographic changes in EAC	

Policy Review

We used an Excel-based tool to organise our policy review which focused on relevant policies on the extent to which they address youth demographics, gender, youth employment, education, skills development, youth health, and so on. In total, about 54 policies were reviewed; 11 in Kenya, 9 in Uganda, 19 in Rwanda, 11 in Tanzania and 4 in EAC.

Developing a Conceptual Framework

We used a consultative process and the literature to develop a conceptual framework for understanding the causes and consequences of youth demographics. The research team met to develop a) pathways to a youth bulge; b) short- and long-term consequences of a youthful population; and c) policy responses. The conceptual framework was sent to four external experts for peer review: three sent comments.



Work Package 1: Literature and Policy Review

The key research questions for this work package are:

2.1.What are the short, medium, and long-term projected needs for basic and critical social services (housing, schooling, primary health care, water, and jobs) to cope with the future youth and working-age population trends in the four EAC countries?

2.2. What lessons can the EAC learn from countries that have reaped the demographic dividend such as those of South East Asia, and from African countries that have not earned a sizeable dividend?

2.3. What are the consequences of "business-as-usual"?

Data Review

We reviewed nationally-representative data sources in each of the four countries to identify sources for descriptive analysis, exploring inter-relations between demographic variables and social and economic variables, and scenario modelling. The major data sources that were identified include: national censuses, statistical yearbooks, United Nations databases (such as UN population projections, Human Development Index), the Demographic and Health Surveys (DHS), national economic surveys, official administrative data, the World Bank Living Standards and Measurement Survey (LSMS) programme, and the Multiple Indicator Cluster Surveys (MICS).

These data were assessed for quality using the following criteria:

a) Clear description of the study design and sampling process;

b) Implemented by a credible organisation such as global data survey implementers (for example ICF Macro who implement DHS surveys), a statistics office/bureau, or collected by a government department;

c) Quality of data – no obvious errors, consistent with previous data trends, and consistency between indicators (for example fertility rates and contraceptive use).

d) Cited in major global databases and reports (e.g. UN databases).

Scenario Modelling

We used the open cohort component (CC) projections, which considered net-migration at the national level and between urban and rural areas within each country. The target population was young males and females aged 15-24 and country-specific age-ranges that define "youth". The projection period is 2015-2065, to include short (2020), medium (2030) and long-term (2050) trends. Furthermore, 2063 was included to provide information for the AU's Agenda 2063. We derived a set of scenarios, making assumptions based on comparative historical fertility and mortality decline observed in South East Asian countries particularly South Korea, Singapore, Taiwan, and Malaysia where the demographic dividend has occurred. After a review of the results from different scenarios, we developed an **accelerated model** scenario which we compared to the UN Medium and Low Variant scenarios. The Accelerated Model assumes that greater investment in education, family planning and health services can shift the age-patterns of fertility which in turn accelerate overall fertility decline towards replacement level and increases the survival of the population across different age groups. For example, investment in adolescent sexual and reproductive health and services to delay the onset of childbearing and ensuring universal access to contraception for all those who need it can significantly accelerate fertility decline (see Appendix 2 for a fuller discussion). The UN Medium Variant Scenario can be considered as "Business- as-Usual" where fertility and mortality are assumed to keep on falling at rates that have been observed in other countries that are further along in the demographic transition. The Low Variant Scenario assumes that for most of the projection period, fertility is about one-birth lower than the Medium Variant Model. In terms of outputs, our Accelerated Model is very similar to the low variant scenario.

In addition to the open component cohort projections, we used the DemDiv modelling tool to engage stakeholders in EAC. DemDiv is a customisable projection model developed by the USAID-funded Health Policy Project (http://www.healthpolicyplus.com/demdiv.cfm). It is structured as a two-part model that projects and integrates demographic and economic changes. The model is scenario and projection-based, comparing several possibilities for future development against each other to estimate the varying economic benefits of different combinations of investments. In particular, the model allows for the design of multiple scenarios to show how the combined power of policy investments in family planning, health, education and the economy can generate a demographic dividend. With its policy-oriented design, DemDiv can be a powerful advocacy tool to garner support for investments in the youth and family planning (see further details on DemDiv in Appendix 2). The DemDiv workshops and reports for Kenya and Uganda predate this project, but we used the DemDiv process for Tanzania and Rwanda, with additional support from UNFPA and Pathfinder.

Gender

Throughout the project, we applied a gender lens and provided sex-disaggregated findings where data exist. The Johns Hopkins' Gender Analysis Framework (GAF)[91] helped us to apply the gender lens to our literature and policy reviews. The framework suggests using four main domains:

a) Access to assets – access to tangible (e.g. land, capital, tools) and intangible resources (knowledge, education, information);

b) Practices and Participation – separate roles that males and females have, differences in activities (e.g. economic, political, and social);

c) Beliefs and perceptions – belief systems that determine what

it means to be male or female and how this affects behaviour, participation, and decision-making by males and females;

d) Institutions, laws and policies – formal and informal rights.

Work Package 3 - Recommendations

Recommendations are grouped by stakeholder beneficiaries including the EAC governments and development partners. These are drawn from the literature review, our scenario modelling, experiences of the South East Asian countries and meetings with stakeholders in the four countries. A Policy uptake report will document the actions and dialogue following our dissemination activities.

Work Package 4 – Data Visualisation and Communications

Data visualisation products and a strategic communications policy uptake plan are to be deployed to disseminate the findings and recommendations of this project. The findings and recommendations are to be presented using a range of communication methods including animated charts or infographics which will target the youth in the region, photo-stories, narrative reports, and policy briefs.

The policy uptake approach aims to increase awareness of and commitment to multisectoral approaches in generating traction and action for harnessing the demographic dividend. The communications content emphasise and advance the dialogue about how the demographic dividend can improve outcomes for women and youth, including greater gender equality and youth empowerment, as a core component for achieving EACs and Africa's long-term socioeconomic transformation aspirations.

Our key audience will include:

- DFID advisers and development partners
- Policymakers (government officers and parliamentarians)
- Media (journalists who write on population and development issues)
- Youth, NGOs, CSOs and the general public

APPENDIX 2: Population Projections

Open Cohort Component (CC) Method

Input (base) data

The input data included national (country) and sub-national (urban and rural) levels. The base year for projection was 2015. In addition, we considered alternative (back) projections with 2000 as base year to validate the trends in the last 15 years. The input parameters for the open CC model include:

- Base year population disaggregated by age and sex
- Sex-specific life tables for the projection period (mortality)
- Age-specific fertility rates for the projection period
- Sex ratio at birth
- Age and sex specific net migration rates

Assumptions

We used the evidence from literature review (WP1) and relevant analysis of survey data to derive plausible assumptions regarding future changes in the components of population change. Fertility is the most sensitive indicator to determine the size of the 15-24 population after 2030. We considered the effect of female education and employment on actual and desired fertility. The effect of mortality is likely to be trivial for males in the youth ages, and of moderate effect for females due to pregnancy-related mortality. We expect migration to exert some influence on young people (15-24) at the national and sub-national level, depending on regional and national economic trends (e.g. employment opportunities, education attainment).

We explored the following DHS for making assumptions regarding future changes in fertility and infant and child mortality:

- Kenya (2003; 2008-09; 2014)
- Rwanda (2000; 2005; 2010; 2014-15)
- Tanzania (2004-05; 2010; 2015-16)
- Uganda (2000-01; 2006; 2011)

Fertility

We examined future trends in the level of fertility and potential shifts in age patterns of child bearing, considering the likely effect of changes in female education attainment and labour force participation on union formation. In addition, we examined fertility intentions among young people and the likely influence of increases in contraceptive use in delaying, spacing and limiting births.

- Variant scenario 1a: Assume slower shift in age-specific fertility rates from 2020 onwards for the 10-14, 15-19 and 20-24 age groups
- Variant scenario 1b: Assume medium shift in age-specific fertility rates from 2020 onwards for the 10-14, 15-19 and 20-24 age groups
- Variant scenario 1c: Assume faster shift in age-specific fertility rates from 2020 onwards for the 10-14, 15-19 and 20-24 age groups

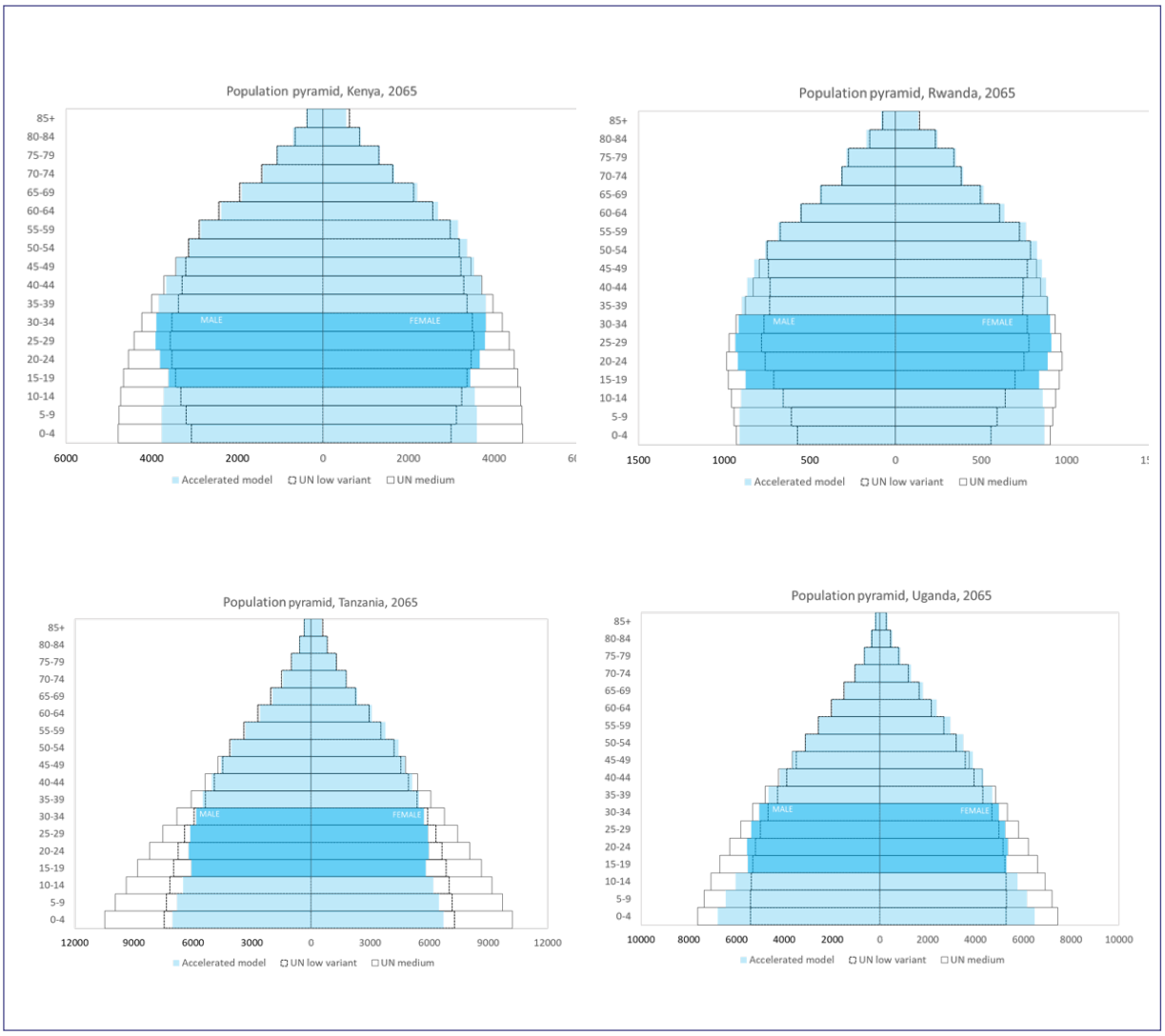
Mortality

We considered the likely influence of malaria, maternal mortality, HIV incidence (vertical transmission) and ARV coverage and potential mortality attributed to emerging non-communicable and chronic conditions. We assumed survival ratios across age groups to remain constant until 2030 and modest increase thereafter between 5-15% between 2030 and 2065.

Migration

We assumed constant age-specific net-migration rates at the national level until 2030 and thereafter assumed gradual increase taking into account of economic growth, improvement in secondary and tertiary education attainment rates. We extrapolated the trends in the proportion of urban population based on moving averages, also reflecting UN migration assumptions for projecting the growth of cities and urban areas.

Projected population pyramids by 2065 for the four EAC countries under varying scenarios



DEMDIV Modelling

In addition to the open component cohort projections, we applied the DemDiv modelling tool for our analyses.

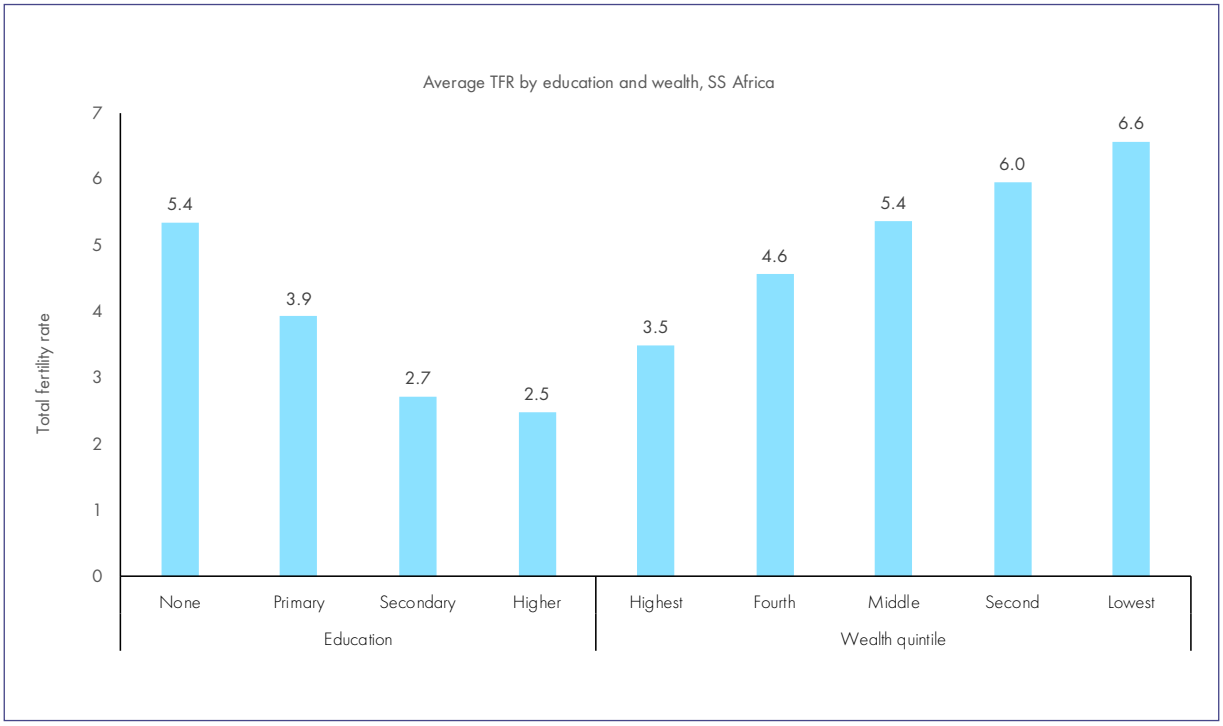
DemDiv is a customisable projection model developed by the USAID funded Health Policy Project (http://www.healthpolicyplus.com/demdiv.cfm). It is structured as a two-part model that projects and integrates demographic and economic changes. The model is scenario and projection-based, comparing several possibilities for future development against each other to estimate the varying economic benefits of different combinations of investments. In particular, the model allows for the design of multiple scenarios to show how the combined power of policy investments in family planning, health, education and the economy can generate a demographic dividend. With its policy-oriented design, *DemDiv* can be a powerful advocacy tool to garner support for investments in the youth to harness the full potential of the youth bulge since it can demonstrate the potential outcomes of various policy decisions that impact on socio-economic development.

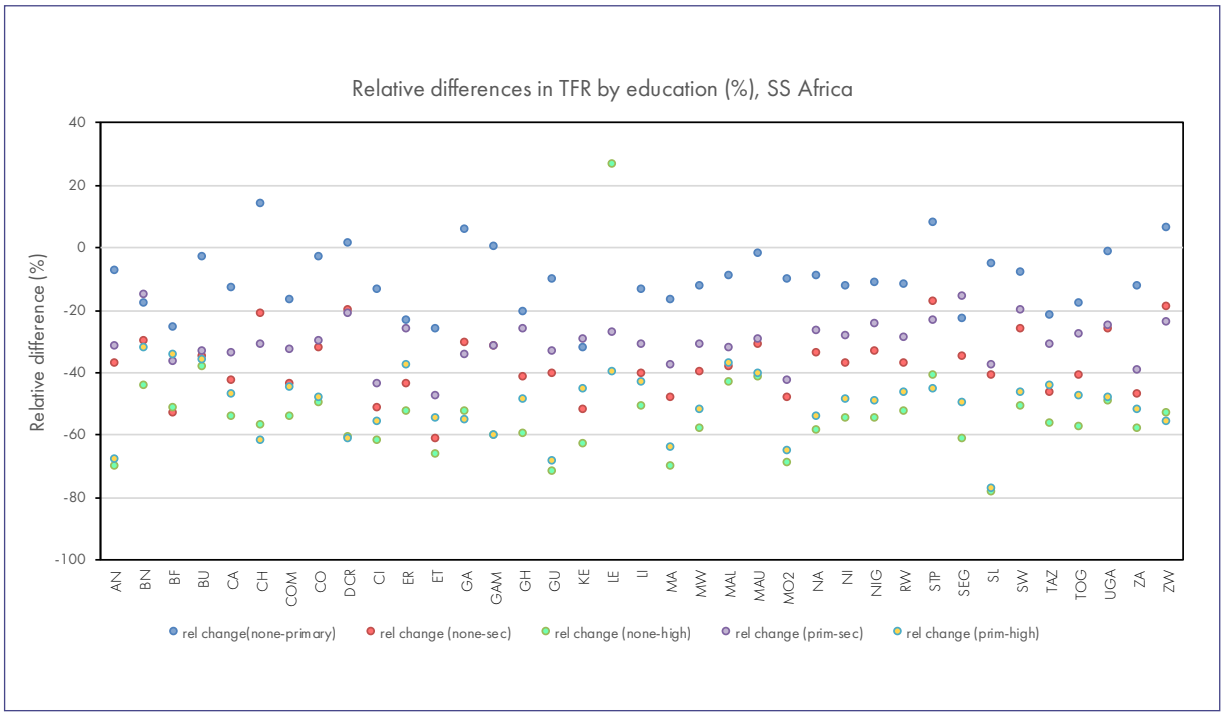
The *DemDiv* demographic sub-model addresses the linkages between the determinants of fertility (including contraceptive use, girls' education and marriage), fertility, and the impact of fertility on population size and structure. The economic sub-model uses results from the demographic sub-model and links these with factors that influence economic productivity to get key estimates on potential income through GDP per capita, and also examine the prospects of employment taking into account both population growth and economic productivity.

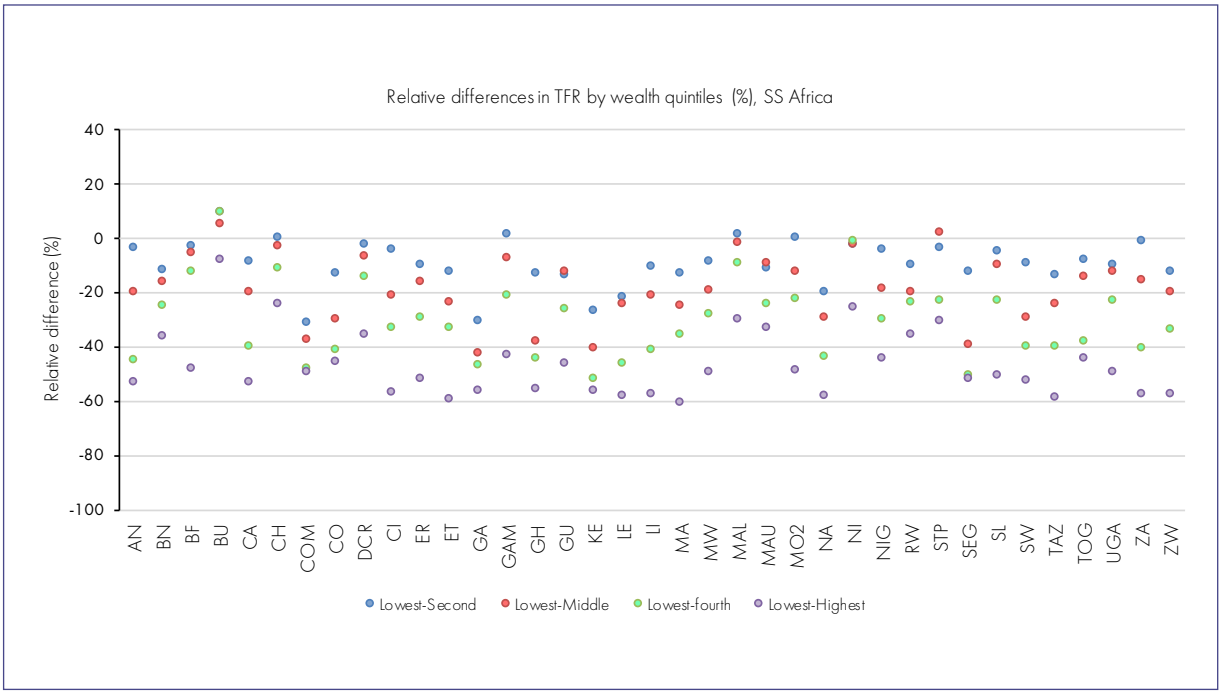
DemDiv has been applied in Kenya (2014), Uganda (2014), Tanzania (2014) and Rwanda (2017) but the assumptions used in the modelling have been varied and therefore the conclusions are more country specific and not directly comparative. We will apply the revised population projections from the open component cohort projections on DemDiv to derive multiple scenarios which highlight the potential trajectories and impact of policy and programme investments in education, family planning, health and economy on generating a demographic dividend. For each country, we will use a projection period of forty years, with 2015 as our baseline.

APPENDIX 3: Summary Results on the Association between Fertility and Education, and Fertility and Household Wealth

The data analysis was done using Demographic and Health Survey (DHS) data from sub-Saharan countries for surveys conducted between 2000and 2016.







APPENDIX 4: Key Findings from Population Projections

Demographic scenarios of youth population comparing the accelerated model with the UN medium and low variant projections

KENYA 2015-65 Scenario outputs	Baseline UN 2015	UN medium variant			UN low variant			Accelerated model		
		2030	2050	2065	2030	2050	2065	2030	2050	2065
Total population ('000s)	47236	66960	95467	114980	64307	85288	95671	66299	89559	103359
Youth population, 15-24 years ('000s)	9509	13344	16730	18202	13344	14046	13781	13346	15511	14494
Youth population, 15-34 years ('000s)	17090	24035	31457	35369	24035	27425	27876	24074	30112	29867
% youth population, 15-24 years	20	20	18	16	21	16	14	20	17	14
% youth population, 15-34 years	36	36	33	31	37	32	29	36	34	29
Child population, 0-14 years ('000s)	19530	23440	27273	28192	20786	21126	18915	22720	22302	21957
Child population, 0-19 years ('000s)	24694	30288	35858	37396	27634	28278	25710	29565	30077	28993
Adult population, 15-64 years ('000s)	26488	41116	61420	74809	41116	57388	64777	41174	60449	69339
Adult population, 20-64 years ('000s)	21323	34268	52835	65605	34268	50237	57981	34329	52673	62303
Old-age population, 65+ years ('000s)	1219	2404	6774	11979	2404	6774	11979	2405	6808	12064
DR1: dependency ratio (per 100 population)	78	63	55	54	56	49	48	61	48	49
DR2: dependency ratio (per 100 population)	122	95	81	75	88	70	65	93	70	66
Total fertility rate (children per woman)	3.8	3.3	2.6	2.3	2.6	2.1	1.8	3.2	2.1	2.0
Under-five mortality rate (per 1000 live births)	51	39	27	22	na	na	na	33	10	4
Net number of migrants ('000s)	-50	-50	-50	-43	na	na	na	-33	-10	-6

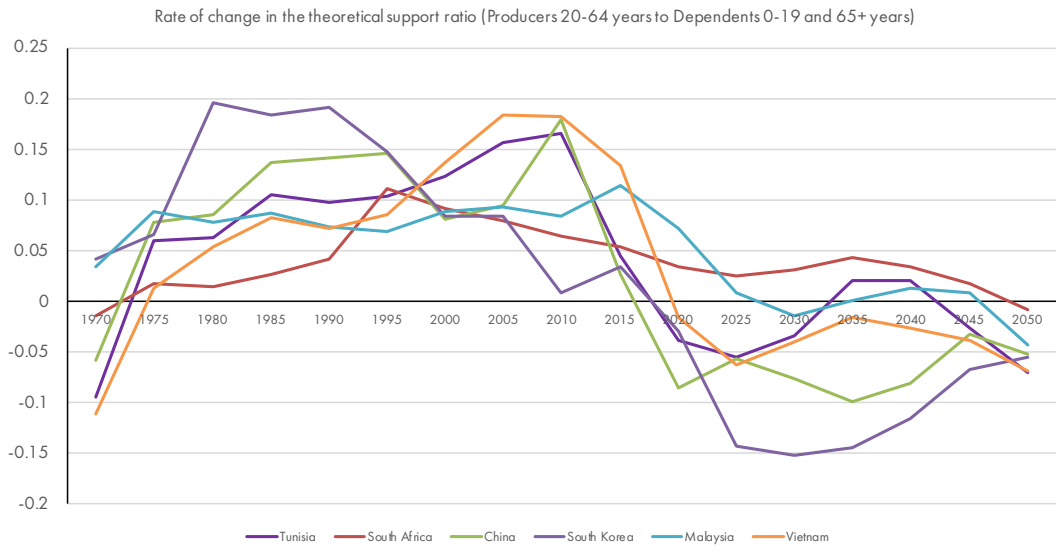
RWANDA, 2015-2065 Scenario outputs	Baseline UN 2015	UN medium variant			UN low variant			Accelerated model		
		2030	2050	2065	2030	2050	2065	2030	2050	2065
Total population ('000s)	11630	16024	21886	25257	15403	19580	21025	16032	21516	24870
Youth population, 15-24 years ('000s)	2213	3254	3733	3890	3254	3110	2917	3236	3662	3522
Youth population, 15-34 years ('000s)	4188	5739	7139	7691	5739	6199	6014	5718	7142	7182
% youth population, 15-24 years	19	20	17	15	21	16	14	20	17	14
% youth population, 15-34 years	36	36	33	30	37	32	29	36	33	29
Child population, 0-14 years ('000s)	4745	5410	5933	5584	4789	4567	3623	5430	5408	5318
Child population, 0-19 years ('000s)	5952	7098	7852	7516	6477	6153	5030	7108	7251	7031
Adult population, 15-64 years ('000s)	6558	9883	14303	16835	9883	13364	14564	9865	14421	16619
Adult population, 20-64 years ('000s)	5351	8195	12385	14902	8195	11778	13158	8188	12579	14906
Old-age population, 65+ years ('000s)	327	731	1649	2838	731	1649	2838	736	1687	2932
DR1: dependency ratio (per 100 population)	77	62	53	50	56	47	44	63	49	50
DR2: dependency ratio (per 100 population)	117	96	77	69	88	66	60	96	71	67
Total fertility rate (children per woman)	3.8	3.2	2.4	2.0	2.7	1.9	1.5	3.2	2.1	2.0
Under-five mortality rate (per 1000 live births)	55	43	29	22	na	na	na	34	10	4
Net number of migrants ('000s)	-45	-45	-45	-41	na	na	na	-33	-13	-6

TANZANIA 2015-65 Scenario outputs	Baseline UN 2015	UN medium variant			UN low variant			Accelerated model		
		2030	2050	2065	2030	2050	2065	2030	2050	2065
Total population ('000s)	53880	83702	138082	186861	80708	124629	158110	80745	120676	151383
Youth population, 15-24 years ('000s)	10444	17012	26439	33714	17012	23229	27245	16986	22898	24104
Youth population, 15-34 years ('000s)	17881	28936	47417	62270	28936	42727	51871	28951	42953	47737
% youth population, 15-24 years	19	20	19	18	21	19	17	21	19	16
% youth population, 15-34 years	33	35	34	33	36	34	33	36	36	32
Child population, 0-14 years ('000s)	24350	34568	49389	58941	31574	40627	43448	31931	36430	39782
Child population, 0-19 years ('000s)	30002	43734	63322	76396	40740	52799	57286	41065	48144	51680
Adult population, 15-64 years ('000s)	27854	46371	82047	115708	46371	77357	102450	46085	77719	99539
Adult population, 20-64 years ('000s)	22202	37205	68114	98253	37205	65185	88613	36951	66005	87641
Old-age population, 65+ years ('000s)	1676	2763	6646	12212	2763	6646	12212	2729	6526	12062
DR1: dependency ratio (per 100 population)	93	81	68	61	74	61	54	75	55	52
DR2: dependency ratio (per 100 population)	143	125	103	90	117	91	78	119	83	73
Total fertility rate (children per woman)	4.9	4.3	3.4	3.0	3.8	2.9	2.5	4.0	2.6	2.5
Under-five mortality rate (per 1000 live births)	58	45	29	23	na	na	na	38	11	4
Net number of migrants ('000s)	-200	-200	-200	-170	na	na	na	-133	-50	-25

UGANDA 2015-65 Scenario outputs	Baseline UN 2015	UN medium variant			UN low variant			Accelerated model		
		2030	2050	2065	2030	2050	2065	2030	2050	2065
Total population ('000s)	40145	63842	105698	141153	61606	95574	119662	63245	99980	130645
Youth population, 15-24 years ('000s)	8187	13296	20934	25806	13296	18520	20911	13374	19778	21742
Youth population, 15-34 years ('000s)	13582	22668	37588	48111	22668	34098	40276	22774	36335	42408
% youth population, 15-24 years	20	21	20	18	22	19	17	21	20	17
% youth population, 15-34 years	34	36	36	34	37	36	34	36	36	32
Child population, 0-14 years ('000s)	19361	27729	38102	43647	25492	31468	32084	26887	32669	37681
Child population, 0-19 years ('000s)	23848	34868	49076	56947	32632	41117	42640	34074	42867	48505
Adult population, 15-64 years ('000s)	19911	34675	63643	89469	34675	60153	79541	34895	63159	84366
Adult population, 20-64 years ('000s)	15424	27536	52669	76168	27536	50504	68985	27707	52960	73542
Old-age population, 65+ years ('000s)	873	1439	3953	8037	1439	3953	8037	1464	4153	8598
DR1: dependency ratio (per 100 population)	102	84	66	58	78	59	50	81	58	55
DR2: dependency ratio (per 100 population)	160	132	101	85	124	89	73	128	89	78
Total fertility rate (children per woman)	5.5	4.6	3.4	2.8	4.1	2.9	2.3	4.5	2.9	2.8
Under-five mortality rate (per 1000 live births)	90	67	39	29	na	na	na	55	16	7
Net number of migrants ('000s)	-150	-150	-150	-128	na	na	na	-100	-38	-19

DR1: population aged 0-14 plus 65+ divided by population aged 15-64
DR2: population aged 0-19 plus 65+ divided by population aged 20-64
na: not applicable

APPENDIX 5: The Demographic Window of Opportunity for Developing Countries in Advanced Demographic Transition



APPENDIX 6: DemDiv Demographic Dividend Modelling Policy Scenarios and Variables for Kenya, Rwanda, Tanzania, and Uganda

Policy Scenario Kenya	Ref Year	INTERVENTION POLICY AREA									
		Education				Family Planning	Economic				
		Expected Years		Mean Years of Schooling		Modern Contraceptive Prevalence Rate[11]	Labour Market Flexibility	ICT Use[12]	Financial Market Efficiency	Public Institutions	Imports as % of GDP
		Female	Male	Female	Male						
KENYA											
Baseline	2010	11.0	11.0	5.4	7.1	39.4	4.7	1.9	3.9	3.5	42.6
Business as Usual	2050	11.0	11.0	5.4	7.1	39.4	4.7	1.9	3.9	3.5	42.6
Economic Emphasis	2050	11.0	11.0	5.4	7.1	39.4	4.9	5.0	4.9	4.7	29.8
Economic & Education Emphasis	2050	16.0	16.0	11.0	11.3	39.4	4.9	5.0	4.9	4.7	29.8
Combined Economic & FP/ Education Emphasis	2050	16.0	16.0	11.0	11.3	70.0	4.9	5.0	4.9	4.7	29
Baseline Data Source		UN Stats Division Table 4e, Dec 20X12 update. Data for 2009/ Barro and Lee				DHS 2008-09	World Economic Forum, Global Competitiveness Report 2013-2014				
RWANDA											
Baseline	2015	11.0	11.0	3.3	4.4	47.5	5.2	1.2	3.8	5.5	35.0
Business as Usual	2055	12.0	12.0	5.0	5.9	52.4	5.4	2.0	4.0	5.6	35.0
Economic Emphasis	2055	12.0	12.0	5.0	5.9	52.4	6.1	5.3	5.0	6.1	35.0
FP & Education Emphasis	2055	14.0	14.0	12.0	12.0	72.2	5.4	2.0	4.0	5.6	35.0
Combined Economic & FP/ Education Emphasis	2055	14.0	14.0	12.0	12.0	72.2	5.4	2.0	4.0	5.6	35.0
Baseline Data Source		NISR Calculated from Census 2012				Rwanda Demographic and Health Survey,2014/15	World Economic Forum, Global Competitiveness Report 2015–2016/ NISR GDP publications 2016				

Policy Scenario	Ref Year	INTERVENTION POLICY AREA									
		Education				Family Planning	Economic				
		Expected Years		Mean Years of Schooling							
		Female	Male	Female	Male	Modern Contraceptive rate	Labour Market Flexibility	ICT Use	Financial Market Efficiency	Public Institution	Imports as % of GDP
TANZANIA											
Baseline	2015	8.3	9.3	5.4	6.2	32.0	4.5	1.1	3.1	3.5	21.4
Business as Usual	2055	10.1	10.8	7.1	7.4	41.6	4.7	2.1	3.5	3.7	24.6
Economic Emphasis	2055	10.1	10.8	7.1	7.4	41.6	5.00	4.5	4.4	4.2	32.2
Economic & Education Emphasis	2055	14.3	14.4	10.9	10.1	41.6	5.00	4.5	4.4	4.2	32.2
Combined Economic & FP/ Education Emphasis	2055	14.3	14.4	10.9	10.1	64.0	5.00	4.5	4.4	4.2	32.2
Baseline Data Source		UN Human Development Report, 2016				DHS 2014/15	World Economic Forum, Global Competitiveness Report 2015-2016, 2015 Data				
UGANDA											
Baseline	2011	11.3	12.8	3.7	6.2	20.7	5.3	1.4	3.5	3.4	40.6
Business as Usual	2040	12.5	13.8	5.4	7.3	36.0	5.3	2.5	3.7	3.7	50.0
Economic Emphasis	2040	12.5	13.8	5.4	7.3	36.0	5.9	5.0	4.2	4.4	30.0
Economic Emphasis & Moderate FP/ Education)	2040	13.3	14.4	6.5	8.0	45.0	5.9	5.0	4.2	4.4	30.0
Combined Economic & FP/ Education Emphasis	2040	15.3	16.0	9.4	9.9	67.1	5.9	5.0	4.2	4.4	30.0
Baseline Data Source		Uganda National HH Survey 2009/10 UNDP-Human Development Report-2016				DHSs 2011-2015/16	World Economic Forum, Global Competitiveness Report 2013-2016				

[11] *Married women only*

[12] *ICT use constitutes the number of fixed broadband internet subscriptions per 100 people, internet bandwidth (kb/s per user) and the active mobile broadband subscriptions per 100 persons. It measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries, with specific emphasis on its capacity to fully leverage information and communication technologies (ICTs) in daily activities and production processes for increased efficiency and enabling innovation for competitiveness.*

[13] *The component measures effective functioning of public institutions.*

EAST AFRICAN REGIONAL ANALYSIS OF YOUTH DEMOGRAPHICS