

HARNESSING THE DEMOGRAPHIC DIVIDEND:

The Future We Want for Zambia



2015



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For more information contact:
National Planning Department
Ministry of Finance
P.O. Box 50062
Lusaka, Zambia
www.mofnp.gov.zm



Foreword

Zambia's Demographic Dividend study assessed the economic and human development potential of our country in the short, medium and long-term using a comprehensive approach. It generated relevant policy and programme information to guide a well-blended policy-mix required to propel Zambia towards achieving its Vision 2030 aspiration of becoming a prosperous middle income country.

Government acknowledges that targeted and strategic actions are required to unlock the potential of the next generation of technocrats, innovators, entrepreneurs, change agents and leaders, considering the youthful population of Zambia aged 15-35 and children aged 0-14 accounts for 36.7% and 45% of our total population respectively. We note that investment in education is critical to ensure our young people acquire the skills and knowledge relevant to the current economy and job market. Equally, Government underscores the required priority investments in health, including sexual and reproductive health, which are needed not only to trigger a demographic transition through declining fertility rates; but also to ensure young people make a healthy transition from adolescence into adulthood. The resulting change in age structure, characterised by a larger working population "labour force surplus" and fewer dependents, will give Zambia a time limited opportunity for rapid economic growth and stability; one which Government and its stakeholders must seize and act upon. Therefore, concurrent strategic investments in economic policies that create decent jobs and provide environmentally safe economic opportunities; as well as good governance and accountability systems cannot be over-emphasized.

With the right policies and investments, Zambia can indeed harness a "demographic dividend," resulting from declining mortality and fertility rates, strong institutional capacities, healthy and skilled human capital, improved decent jobs prospects and an inclusive governance system; all within an enabling environment that ensures citizens claim their rights to education, health, development, and live free from violence and discrimination. This will allow us have inclusive socio-economic development, where no Zambian is marginalised in benefitting from development.

However, it is critical to underscore that the demographic dividend for Zambia will neither be automatic nor guaranteed but needs to be earned. We therefore need to collectively use the opportunity of the next national development planning cycle to begin this historic journey.

Future generations will appreciate efforts as the three arm of the state - executive, parliamentary and judiciary - and as a people, if we make the right decisions and investments today.

I urge all state and non-state actors in Zambia to take into account recommendations of the study in all our development efforts.

It is with conviction that through our joint efforts as a country, we will be able to achieve the desired results of the Demographic Dividend Report.



Edgar Chagwa Lungu
President of the Republic of Zambia

Acknowledgements

The Government of the Republic of Zambia, commissioned the National Demographic Dividend Study in collaboration with the United Nations Population Fund (UNFPA) in 2014. The objective of the study was to assess Zambia's prospects of harnessing the demographic dividend in consideration of the country's economic transformation blueprint - the Vision 2030 aspiration of becoming a prosperous middle income country. The study was undertaken using a rigorous methodology that was driven by evidence and included participatory and consultative processes with various Government line ministries and stakeholders. On behalf of the Government of the Republic of Zambia, I wish to extend my sincere appreciation to all Government Ministries, Cooperating Partners, the Academia and Civil Society Organizations that contributed to the production of this well informed Demographic Dividend Report. I wish to pay special tribute to a Core Technical Team which comprised representatives from the Ministry of Finance, Central Statistical Office, Ministry of Education, Ministry of Health, Ministry of Community Development, Mother and Child Health, Ministry of Justice, University of Zambia, Zambia Institute for Policy Analysis and Research, and United Nations Population Fund (UNFPA), for their significant inputs to this process, which included technical oversight, validation and approval of the study before submission to Cabinet.

I also wish to acknowledge the financial support provided by UNFPA from its regional and national offices which enabled the technical consultants, African Institute for Development Policy (AFIDEP), working closely with a local team of experts, to conduct the study and produce this important report.

Finally, I wish to thank Government officials who in many ways, under the guidance of the Secretary to the Treasury contributed immensely to the production of the Demographic Dividend Report.



Alexander Chikwanda, MP

Minister of Finance



Table of Contents

Foreword	i
Acknowledgements	ii
Table of Contents	iii
List of Tables	v
List of Figures	vi
Acronyms	viii
Executive Summary	x
1 Introduction	1
2 Background	3
2.1 Pathways to Harnessing the Demographic Dividend	3
2.2 Vision 2030 and the Demographic Dividend	5
2.3 Study Objectives	6
3 Study Methodology and Approach	7
3.1 Review of Literature and Policy Documents	7
3.2 Collation and Analysis of Secondary Data and Indicators	7
3.3 Modelling the Potential Demographic Dividend for Zambia	7
3.4 Stakeholder Workshops	8
4 Population Dynamics – Past Trends and Future Prospects	9
4.1 The Demographic Transition	9
4.2 Child Mortality Trends	10
4.3 Fertility Trends	12
4.4 Past and Projected Population Growth	15
4.5 Population Structure	17
4.6 Urbanisation	18
5 Past Trends and Future Prospects: Human Capital Development	21
5.1 Education and Skill Development in Zambia	21
5.2 Health Status of Zambia’s Population	24
6 Economic Trends and Prospects	28
6.1 Promising Economic Trends and Fundamentals	28
6.2 Restructuring Zambia’s Economic Growth to Create More Jobs	29
6.3 Fiscal Policies and Governance	32
7 Prospects and Potential Contribution of the Demographic Dividend in Zambia	34
7.1 Opportunities for Harnessing the Demographic Dividend in Zambia	34
7.2 Policy Scenarios for Modelling the Potential Impact of the Demographic Dividend for Zambia	36
7.3 Baseline and Projected Economic and Demographic Indicators	38
7.4 Modelling Results	43

8	Policy Options for Harnessing the Demographic Dividend in Zambia	51
8.1	Accelerating the Demographic Transition	51
8.2	Creating a Healthy Workforce	52
8.3	Enhance Coverage and Quality of Education and Skill Development	53
8.4	Accelerating Economic Growth and Job Creation.....	54
8.5	Fiscal Policies, Governance and Accountability	55
9	Discussion and Conclusions	56
	References	59
	Appendix	62
	Appendix I: List of Core Technical Team members who attended the Demographic Dividend Workshop, Zambia	62
	Appendix II: List of Participants in the Multi-Sector Stakeholder Meeting to Review and Validate Study Findings	63
	Appendix III: Model Input Variables Used in the DemDiv Model for Zambia	64



List of Tables

Table 4.1: Comparison of Child Mortality in Zambia and Select countries in Africa and East Asia	11
Table 7.1: Comparison of Trends in Various Economic and Demographic Indicators, Zambia and Malaysia	36
Table 7.2: Summary of Characteristics of Policy Scenarios for Demographic Dividend Modelling for Zambia	37
Table 7.3: Baseline and Target Indicators for Policy Scenarios Used for Demographic Dividend Modelling for Zambia	42
Table 7.4: Baseline values for Model output indicators	43
Table 7.5: Summary of Modelling Results per Policy Scenario	50

List of Figures

Figure 2.1: Five Policy Wheels for Creating and Earning the Demographic Dividend	4
Figure 2.2: Comparison of Vision 2030 Pillars and the Demographic Dividend Wheels	5
Figure 4.1: Phases of the Demographic Transition	9
Figure 4.2: Trends in Crude Birth and Death Rates, Zambia, 1969-2014	10
Figure 4.3: Trends in Early Childhood Mortality Rates, Zambia, 1992-2013	10
Figure 4.4: Trends in Nutritional Status of Children below Five Years, Zambia, 1992-2013	12
Figure 4.5: Trends in Total Fertility Rates by Area of Residence, Zambia, 1992–2013	12
Figure 4.6: Gap between Total Wanted and Total Fertility Rates by Area of Residence and Household Wealth, Zambia, 2013	13
Figure 4.7: Proportion of Married Women (15-49) with Met Need and Unmet Need for Family Planning, Zambia, 2013	14
Figure 4.8: Proportion of Women Age 15-19 who have Begun Child Bearing, Zambia, 1992-2013	15
Figure 4.9: Trends in Median Age at First Birth and Marriage for Women Aged 20-49, Zambia, 1992-2013	15
Figure 4.10: Population Growth in Zambia, 1963-2014	16
Figure 4.11: Population Projections for Zambia, 2010-2100	17
Figure 4.12: Projected Effect of Population Momentum on Population Size, Zambia	18
Figure 4.13: Zambia’s Population Age Structure, 2013	19
Figure 4.14: Trends in Urban Population Growth in Zambia, 1969-2050	19
Figure 4.15: Trends in Slum Population and Proportion of Urban Population Living in Slums, Zambia, 1990-2009	20
Figure 5.1: Comparing Zambia’s Primary and Secondary School Net Enrolment Rates with those of Select East Asian Countries	21
Figure 5.2: Transition Rates from Grade 7 to 8, and from Grade 9 to 10 in Zambia, 2013	22
Figure 5.3: Inequalities in Secondary School (grade 10-12) Enrolment by Gender and Residence	23
Figure 5.4: Life Expectancy in Zambia is Comparable to Regional Counterparts but far behind East Asian Countries	25
Figure 5.5: Comparing Zambia’s Maternal Mortality Ratio (MMR) with that of Select Other Countries	26
Figure 6.1: Real GDP Percent Growth, Zambia, 2000-2013	28
Figure 6.2: Zambia’s GDP at Current Price, 2006-2014	29
Figure 6.3: Change in GDP by sector (%), Zambia, 2008 & 2013	29
Figure 6.4: Distribution of the Employed Persons by Select Industries (%), Zambia 2012	30
Figure 6.5: Distribution of Employed Persons by Selected Industries and Sector of Employment (%), Zambia 2012	30
Figure 6.6: Trends in Imports and Exports as Percent of GDP, Zambia, 2003–2013	31



Figure 6.7: Trends in Poverty Headcount Ratio at National Poverty Line, Zambia, 1991-2010 32

Figure 7.1: Comparison of Trends: Population Age Structures for Zambia and Malaysia 35

Figure 7.2: Growth in Per Capita Gross Domestic Product by Policy Scenario (USD) 44

Figure 7.3: Baseline Population Pyramid and Key Features 45

Figure 7.4: Population Pyramid and Key Features for the Business as Usual Policy Scenario 45

Figure 7.5: Population Pyramid and Key Features for the Economic Emphasis Policy Scenario 46

Figure 7.6: Population Pyramid and Key Features for the Moderate Policy Scenario 46

Figure 7.7: Population Pyramid and Key Features for the Combined Scenario 47

Figure 7.8: Projected Gap between Total Population Aged 15+ and Employed Population 48

Figure 7.9: Projected Per Capita Capital Formation by Policy Scenario (USD) 49

Acronyms

AfDB	African Development Bank
AFIDEP	African Institute for Development Policy
AIDS	Acquired Immunodeficiency Syndrome
BRICS	Brazil, Russia, India, China and South Africa
CAADP	Common African Agriculture Development Programme
CDC	Centre for Disease Control and Prevention
CPR	Contraceptive Prevalence Rate
CSO	Central Statistical Office
CTT	Core Technical Team
DD	Demographic Dividend
DHS	Demographic and Health Survey
ECE	Early Childhood Education
ESARO	East and Southern Africa Regional Office
EY	Ernst & Young
FDI	Foreign Direct Investment
FP	Family Planning
FP2020	Family Planning 2020
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GPI	Gender Parity Index
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HPP	Health Policy Project
ICPD	International Conference on Population and Development
IMCI	Integrated Management of Childhood Illnesses
ILO	International Labour Organization
IMR	Infant Mortality Rate
MCH	Maternal and Child Health
MCDMCH	Ministry of Community Development, Mother and Child Health
MDG	Millennium Development Goals
MIC	Middle Income Country
MMR	Maternal Mortality Ratio
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
NAR	Net Attendance Ratio
NCD	Non-Communicable Diseases



NER	Net Enrolment Rate
PPI	Postpartum Infecundability
PRB	Population Reference Bureau
R-SNDP	Revised Sixth National Development Plan
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SNDP	Sixth National Development Plan
SSA	Sub-Saharan Africa
TEVET	Technical Education, Vocational and Entrepreneurship Training
TFR	Total Fertility Rate
TDRS	Tropical Disease Research Centre
U5MR	Under-five Mortality rate
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNZA	University of Zambia
USAID	United States Agency for International Development
USD	United States Dollars
VSHD	Venture Strategies for Health and Development
WEF	World Economic Forum
ZHDR	Zambia Human Development Report
ZNFU	Zambia National Farmers' Union
ZIPAR	Zambia Institute for Policy Analysis and Research
ZKW	Zambian Kwacha

Executive Summary

Background

The Demographic Dividend is the economic benefit that arises from a significant increase in the ratio of working-aged adults relative to young dependents that results from rapid fertility decline if this change is accompanied by sustained investments in education, skill development, health, job creation and improved governance. When fertility and mortality rates decrease substantially, the age structure shifts in such a way that there are more working-age adults relative to young dependents in the population.

This change can accelerate economic growth through increased productivity of the relatively big labour force if the economy generates adequate decent jobs for them. Further impetus for economic growth is generated through increased household savings and investment, which result from reduced costs for basic needs of fewer children and the relatively smaller young population. Analyses of the phenomenal socio-economic development experienced by the East Asian countries like Malaysia, South Korea and Thailand show that a quarter to a third of the economic growth that these countries experienced between 1970 and 2000 can be attributed to the demographic dividend.

It is critical to underscore that the demographic dividend is neither automatic nor guaranteed; countries must earn it by implementing policies and strategies that will not only accelerate rapid fertility decline, but also ensure that the resulting larger labour force is well educated, skilled, healthy, and economically engaged. Therefore, countries should prioritize simultaneous investments in health and education in order to have quality human capital, to accelerate economic growth and job creation to ensure that the “surplus” labour force is gainfully employed, as well as enforcing accountability and efficiency in use of public resources and delivery of public services.

This report summarises analyses done to assess Zambia’s chances of harnessing the demographic dividend and the policy options the country should adopt in order to optimise its chances of earning maximum demographic dividend.

Economic Outlook and Opportunities

Zambia is one of the growing African countries that has recorded sustained economic growth over the past decade. The economy has grown at an impressive average rate of 6.7% per annum between 2003 and 2013 and Gross Domestic Product (GDP) increased from ZKW 23,202 billion (4,901 billion USD) in 2003 to ZKW 165,632 billion (30,673 billion USD) in 2011. Zambia officially transitioned to a low middle-income economy with an average GDP per capita of 1,839 US dollars in 2013. This growth has been propelled mostly by copper mining, infrastructure development and communications. Although non-traditional exports have grown over the past few years, the economy is over-dependent on copper mining, which contributes about 70% to export earnings.

Zambia’s otherwise good economic growth has been faulted for not being inclusive and pro-poor and for failing to create an adequate number of decent jobs. Poverty levels stood at 60.5% in 2010 while underemployment remained persistently high at 70% especially among youth and women. Therefore, more needs to be done to move the country towards the aspirations and ideals envisioned in the country’s Vision 2030. Access to rights-based social services, particularly health, education, nutrition, water and sanitation is far from equitable, which is reflected in high levels of geographic inequalities in socio-economic development outcomes.

A key reason for the weak performance in reducing poverty is that the country’s growth has been fuelled by the extractive sector that has a low job-multiplier impact. The agricultural sector, which supports livelihoods for over 70% of Zambian households, is under-developed and involves limited value addition. The sector is the largest employer, providing jobs to 56% of those in employment, while the mining and quarrying sector only employs 1.7% of workers. On the other hand, only 3% of agricultural workers have formal jobs, compared to 83% in the mining sector. Furthermore, the productivity of Zambia’s labour force is undermined by high disease burden and poor economic skills due to low levels of education and lack of opportunities for the development of globally competitive economic skills.



Despite these shortfalls, Zambia's positive economic performance is expected to continue, with real GDP projected to grow by 7.4% in 2015. The country's favourable macroeconomic environment and other emerging economic opportunities, including discovery of additional copper fields and other mineral resources, increasing foreign direct investment, potential for agricultural growth, and growing regional integration and partnership with the East, present considerable opportunities to surpass the development ideals outlined in Vision 2030.

High Child-dependency Burden and Youthful Population in Zambia

Zambia's fertility has declined slowly in the context of steadily declining child mortality over the past three decades. Under-five mortality rates declined from 191 per 1000 live births in 1992 to 75 in 2013. The total fertility rate, however, declined marginally from 6.5 births per woman in 1992 to 5.3 in 2013. Consequently, Zambia's population has grown rapidly; it has a high child-dependency burden (0.93 dependents for every working-age person), and 45% of the population is under 15 years of age. Zambia's population increased from about 3.5 million in 1963 to about 15 million in 2014. The population is further projected to reach about 27 million by 2035 and 40 million by 2050, according to the Central Statistical Office (CSO) and United Nations (UN) estimates, respectively.

As noted in Zambia's Vision 2030 and the 2007 National Population Policy, the high child-dependency burden in the country is one of the main bottlenecks for attainment of sustainable socio-economic development. High fertility places a greater demand on state and family resources, making it more difficult for parents and governments to meet the needs of children, leading to poor educational attainment, poor health outcomes and a lower quality of human capital. High fertility also curtails economic productivity because it is associated with low levels of school attendance and participation in formal economic activities among women. If Zambia's fertility declines rapidly, the country's youthful age structure will change to one dominated by working-age adults, presenting a window of opportunity for Zambia to enhance its economic productivity through the demographic dividend.

Attaining Vision 2030 through the Demographic Dividend

Zambia's population dynamics and emerging economic opportunities can be turned into a valuable demographic

dividend that can boost its chances of attaining the development goals outlined in Vision 2030. The Vision 2030 development blueprint seeks to transform the country into a prosperous, industrial middle-income nation that provides opportunities for improving the wellbeing of all its citizens. One of the key targets of Vision 2030 is to sustain an annual economic growth rate of between 6 and 10% per year. Vision 2030's transformative agenda is anchored on three broad pillars, namely: (i) economic growth and wealth creation; (ii) social investment and human development; and (iii) creating an enabling environment for sustainable socio-economic development. These pillars mirror perfectly the five main sectoral pillars that are critical for harnessing the demographic dividend.

The congruence between the Vision 2030 pillars and the demographic dividend pillars shows that Zambia already has the policy framework required for the country to harness the demographic dividend; what remains is to fully implement the vision in an integrated manner, with focused priorities and strategic actions. If Zambia's fertility rates decline rapidly, the country's population will have more working-age people relative to dependent children. This shift in the age structure can provide Zambia with a huge impetus for accelerating the socio-economic transformation envisaged in Vision 2030. In order to set this in motion, however, Zambia would have to simultaneously make effective investments in education and health to enhance human capital development, reform the economy to accelerate inclusive economic growth and the creation of adequate decent jobs and improve accountability in use of public resources and service delivery. These are the essential elements of the formula for Zambia to maximize its demographic dividend.

Study Objectives

The primary objective of the study is to assess Zambia's prospects for harnessing the demographic dividend and explore priority policy and programme options that the country can adopt to optimize the dividend in the light of its development aspirations expressed in Vision 2030. The specific objectives of the study are to:

1. Review demographic and economic opportunities and challenges and assess their implications for attainment of Vision 2030;
2. Assess prospects of harnessing the demographic dividend in Zambia; and
3. Demonstrate policy options for optimizing chances of earning the demographic dividend in Zambia.

Methodology

The study is based on the review of the literature on the demographic dividend, population dynamics and economic changes in Zambia. The study also reviews trends in national demographic and socio-economic indicators derived from various national data sources. Data from UN agencies and the World Bank were used where national data were not available. In order to demonstrate the potential demographic dividend that Zambia can earn under different policy and investment scenarios, the study used the modelling tool called DemDiv, which was created by the Health Policy Project (HPP) at Futures Group, with support from USAID (Health Policy Project & USAID, 2014). The modelling is based on four policy scenarios: the Business as Usual scenario, the Economic Emphasis scenario, the Moderate scenario (Economic Emphasis with moderate investments in family planning and education), and the Combined scenario (Economic and Demographic Emphasis). These policy scenarios are described in detail in chapter 7.

Key Findings

The study shows that Zambia's demographic indicators and emerging economic opportunities can be turned into a sizable demographic dividend by 2053, which can propel the country to surpass the socio-economic transformation targets envisaged in its Vision 2030.

Population and Age Structure Changes

The Business as Usual and Economic Emphasis scenarios would lead to a total fertility rate of 4.09 children per woman and a total population of 49 million people by 2053. The dependency burden will marginally decrease from 0.96 in 2013 to 0.79 in 2053. The annual population growth rate will still be high (2.8%) in 2053. Zambia's age structure under this scenario will not be much different from the current age structure, with a high child dependency burden and a smaller working-age population relative to dependent children. Therefore, Zambia's economic progress will continue to be held back by a high child-dependency burden.

Under the Combined scenario, however, the total fertility rate would be 2.11 and the population size 36 million by 2053. This scenario would result in a marked shift in the age structure of the population, with a marked increase in the working-age population and a dependency burden of 0.51. The proportion of the population under age 15 would be 29%. The annual population growth rate of 1.3% would be

close to the Vision 2030 target rate of less than 1%. Zambia's age structure under this scenario will be similar to the age structure that the Asian Tigers currently have – with more working-age population relative to dependent children.

Working-Age Population and Job-Creation Challenge

All the four policy scenarios will see a significant increase in the size of the working age population aged 15 years and above. Under the Business as Usual and Economic Emphasis scenarios, this population will increase from 7.8 million in 2013 to 30 million in 2053. For the Moderate scenario, the number will increase to 28 million, while under the Combined scenario it will increase to 26 million. These numbers show that Zambia will face an enormous challenge in creating enough jobs for its rapidly growing labour force.

Currently, about 7.8% of the population is unemployed. Despite the relatively low unemployment rates, 70% of those employed are underemployed and 83.4% of the working age population is in the informal sector. It is estimated that under the Business as Usual scenario, the employment gap, defined as the difference between the number of people aged 15 years and above and actual number of those in employment, will rise to about 15 million in 2053. Under the Economic Emphasis scenario the employment gap will be 9 million, while the Moderate scenario will result in a gap of 8 million and the Combined scenario will have a gap of 7 million. The employment gap difference of 2 million between the Economic Emphasis and Combined scenarios is attributable to the demographic dividend.

Change in Economic Growth and Average Incomes

Under the Business as Usual scenario, where the prevailing weak performances in both the economic and demographic environments is projected to continue, Zambia would achieve limited economic growth and development and the per capita GDP would increase from USD 1,839 in 2013 to USD 5,426 in 2053. This would not take Zambia to industrialized middle-income country development levels.

Under the Economic Emphasis scenario, where the country prioritises economic reforms and investments to the level articulated in Vision 2030 without increasing investments in education and family planning, per capita GDP would increase to USD 19,547, levels currently enjoyed by the benchmark countries used in the model (South Korea, Malaysia, Mauritius and Hong Kong). This would be a

sizable improvement from the 2013 income level but with a high risk that without investing in the social development sectors, there will still be great income inequalities and a substantial proportion of households living in poverty.

Under the Moderate scenario, Zambia would have a per capita GDP of USD 22,875. Thus, the country would earn a demographic dividend of USD 3,328 per person beyond what the Economic Emphasis scenario would generate.

Under the Combined scenario, where the country simultaneously prioritises economic, social and demographic factors to achieve the socio-economic transformation envisaged in Vision 2030, per capita GDP would increase to USD 26,940. This is close to the level of per capita income where South Korea was in 2013. Under this scenario, Zambia would earn a demographic dividend of USD 7,393 beyond what it would earn under the Economic Emphasis scenario.

Policy Actions for Harnessing the Demographic Dividend in Zambia

Fulfilment of Zambia's aspirations for socio-economic transformation and transition into an industrialised country can be enhanced considerably if the country adopts policies that will harness the maximum demographic dividend. In order to achieve this, the country should concurrently prioritise investments to initiate rapid fertility decline, improve human capital, reform the economy to create adequate decent jobs and enhance good governance and accountability. All these investments must be done simultaneously in an integrated approach to development if Zambia is to optimise its demographic dividend.

To facilitate a rapid, voluntary decline in fertility, Zambia should ensure universal access to family planning, enhance female education and reinforce its efforts in reducing child mortality.

- The family planning programme within an integrated reproductive, maternal, adolescent, new-born and child health programme should optimise its capacity to address both demand and supply barriers of access and use of modern contraception. The programme should also have strong community orientation and ownership, sustained funding, robust evidence-based and rights-based accountability frameworks, and supported by strong population and reproductive health coordination organs within government.
- In order to improve child survival and therefore encourage couples to have smaller family sizes, informed by knowledge on improved chances of survival of fewer children through adolescence

to adulthood, Zambia should intensify on-going interventions on child survival. These include immunization coverage, integrated management of childhood illnesses (IMCI), use of insecticide treated nets for malaria control, prevention of mother-to-child transmission of HIV, increased deliveries by skilled birth attendants and improved child nutrition.

- The country also needs to advance the empowerment of women and promote girl-child education to curb the high levels of school dropout, teenage pregnancies and early marriage, all of which will help reduce fertility.

To improve the quality of health of its labour force, Zambia should intensify investments in public health services and prioritise the following:

- Reinforce capacity to address pervasive, communicable diseases like HIV and malaria, including ensuring universal access to treatment and care of persons living with HIV and stepping up efforts to eradicate malaria.
- Provide health education to sensitize Zambians on emerging, non-communicable lifestyle diseases, especially on prevention measures and enhancing the capacity of the health system to manage these diseases.
- Improve national capacities for production, training, increased recruitment and deployment of health workers, including provision of incentives to ensure retention within the public sector and in underserved regions (especially rural areas).
- Improve health systems performance through infrastructure upgrades and supply chain management that ensures commodity security.

To improve the education system and equip its human capital to harness the demographic dividend and attain its development vision, Zambia should:

- Enforce a paradigm shift towards universal early childhood and secondary education, and increased enrolment in tertiary institutions.
- Increase availability and improve management of school facilities, increase the number and capacity of trained teachers, improve the quality and ensure adequate quantities of learning materials at all levels to improve the overall quality of education.

- Revise the school curricula at all levels to match skills development in schools with labour market needs.
- Address factors responsible for the huge gender, income, rural-urban, and regional inequalities in school participation – especially at post-primary levels.
- Improve the number of facilities, outreach and quality of Technical Education, Vocational and Entrepreneurship Training (TEVET) institutions to enhance entrepreneurship and the productivity of young people leaving school.
- Put in place incentives to mainstream the informal sector and promote small and medium-sized enterprises.

Key policy options for Zambia to adopt to accelerate economic growth and job creation and thereby harness the demographic dividend include:

- Diversify the economy and reduce overdependence on the extractive industries, especially copper mining.
- Modernize the agriculture sector to improve productivity and prioritise value-addition through agro-industries as the bedrock of transitioning to an industrialised economy.
- Fast-track investments in economic infrastructure, transport, communication and energy to enhance efficiency and lower the costs of doing business.
- Create an enabling environment for private sector development to step up direct foreign investment and facilitate the mass creation of jobs.

To improve governance and accountability, the country should inculcate a performance-based culture in both the private and public sectors by embracing robust monitoring, evaluation, and performance management systems. Effective devolution of resources and decision-making to sub-national levels will help in instilling responsibility for achievement of the Vision 2030 ideals in provinces, districts, local communities, families and individual Zambian citizens.

These are the kinds of policy options that helped the Asian Tigers use the demographic dividend to stimulate the extraordinary economic development that occurred between 1970 and 2000. Zambia's impressive economic growth over the past decade, the emerging economic opportunities, the high levels of unmet needs for family planning and growing desire for couples to have fewer children along with the relatively good articulation of key development bottlenecks and potential solutions in Vision 2030 provide a solid foundation on which to unleash its full development potential. To move forward, Zambia should break away from the Business as Usual culture, mobilise financial and technical resources and cultivate public responsibility and ownership of the country's development destiny.

INTRODUCTION

The relationship between population change and economic growth has been studied and intensely debated for decades with a focus on population size and population growth. However, the debate has given insufficient attention to the critical issue of population age structure, which can change dramatically as fertility and mortality rates change. Age structures can have significant effects on economic growth depending on the proportion of children and elderly (dependents) versus the productive workforce population that directly contributes to economic productivity.

Zambia's past, current and projected future population characteristics present potential challenges and opportunities for the country's development. Due to high and slowly declining fertility in the context of steadily declining child mortality over the past three decades, Zambia's population has grown rapidly and has a youthful structure with a high child-dependency burden. Under-five mortality rates have declined from 191 deaths per 1000 births in 1992 to 75 in 2013.

The total fertility rate however, has marginally fallen over the past two decades, declining from 6.5 births per woman in 1992 to 5.3 in 2013. Zambia's population is currently growing at 2.8% per annum and has increased from about 3.5 million in 1963 to about 15 million in 2014. This trend is projected to continue, reaching 27 million in 2035 and 39.5 million by 2050, according to CSO Population projections and UN Medium Variant projections (UN Population Division, 2013). The 2010 census data show that about 45% of Zambia's population is comprised of children under 15 years of age (CSO, 2012a). The country's child- and elderly-dependency ratio was 96.2 and 98 persons per 100 persons aged 15-64 years in 2000 and 2010, respectively (Republic of Zambia, 2007; UN Population Division, 2013).

These population characteristics pose serious challenges to the attainment of the country's long-term development aspirations. As espoused in the Vision 2030 and the 2007 National Population Policy, the high child-dependency burden in the country is one of the main bottlenecks preventing socio-economic development.

Countries with high fertility have high child-dependency ratios, which make it hard for them to develop. This is because relatively few workers have to spend most of their resources taking care of the dependent children with little money left to save for future use or to invest in businesses. Parents find it hard to make adequate investments to meet the health, educational and other needs of many children, leading to high child mortality, low levels of human capital and less-productive adults. Governments also end up spending huge resources on the basic needs of children and are left with limited resources to invest in enhancing economic infrastructure and productivity¹. High fertility also curtails economic productivity because it is associated with low levels of school attendance for women and relatively low participation of women in formal economic activities due to low educational attainment and the burden of taking care of many children. If Zambia's fertility declines rapidly, the country's youthful age structure will change to one dominated by working-age adults, which could present a window of opportunity for Zambia to enhance its economic productivity. This is as long as the relatively big labour force will be well educated, skilled, and gainfully employed.

Another phenomenal change that Zambia's population is poised to experience is an increase in the proportion of people living in urban areas. Currently, 40% of Zambians live in urban areas. Evidently, Zambia has one of the highest rates of urbanization in Africa. UN projections show that the proportion of the urban population will increase from the current level to 58% by 2050 (UN Population Division, 2014). Given the substantial advantages that urbanisation has traditionally provided to national socio-economic transformation efforts in developed and emerging economies, effective management of the urbanisation process can augment attainment of the Vision 2030 goals.

Zambia is one of the growing sub-Saharan African countries that has recorded sustained economic growth over the past decade. The economy has grown at an impressive average annual rate of 6.7% between 2003 and 2013. GDP increased from ZKW 23,202 billion (4,901 billion USD) in 2003 to ZKW 165,632 billion (30,673 billion USD) in 2014. Per capita GDP was USD 456 in 2003, and increased to

¹Similarly, having relatively more non-productive elderly people compared to workers can also have a negative impact on economic growth and development. However, this effect may not be as debilitating if most of the elderly people had good jobs and accumulated savings during their productive ages.

USD 1,839 in 2013. As such, Zambia has transitioned into a low middle-income economy. Growth in real GDP has largely been driven by manufacturing, mining, infrastructure development, and communications. Copper remains the mainstay of the country's economy, contributing about 70% to export earnings. It is encouraging to note that over the last few years, non-traditional exports have grown substantially. Economic performance in the medium term is expected to remain strong. Real GDP growth is projected to increase to 7.4% in 2015 (AfDB, OECD, & UNDP, 2014). This sustained growth in the context of the ongoing global economic downturn suggests that Zambia's economy is anchored on a relatively strong economic portfolio that is backed up by good macroeconomic policy.

This growth is in line with the country's development blueprint, Vision 2030, whose primary goal is to transform the country into an industrialised upper middle-income country by 2030. Vision 2030 outlines the roadmap for accelerating economic growth and socio-economic transformation of the country, with the goal of achieving annual economic growth rates of between 6 and 10% per annum between 2006 and 2030. Steady economic growth coupled with a favourable macroeconomic environment and other emerging economic opportunities, including the discovery of more copper fields and other mineral resources, the high potential of agricultural growth, increasing foreign direct investment, improving regional integration and growing partnerships with the East give considerable optimism that Zambia can achieve, if not surpass, the development ideals outlined in Vision 2030.

Despite the positive economic outlook, the country's economic growth has been faulted for not being inclusive and pro-poor and for failing to create adequate decent jobs. Poverty levels stood at 60.5% in 2010 while underemployment remained persistently high at 70% especially among youth and women (CSO, 2012b). Therefore, much more needs to be done to move the country towards achieving the aspirations and ideals of Vision 2030.

A key reason for this weak performance in reducing poverty is that growth has been fuelled by the extractive sector, which has a low job-multiplier effect (Republic of Zambia, 2014). The agricultural sector, which supports livelihoods for over 70% of Zambian households, is underdeveloped and involves limited value addition. Only 3% of agricultural workers have formal jobs, compared to 83% in the mining sector (CSO, 2013a). Furthermore, the productivity of Zambia's labour force is undermined by poor health and

inadequate economic skills due to low levels of education and a limited opportunities for development of globally competitive economic skills.

There is limited access to quality social services, particularly health, education and sanitation, along with high levels of geographic inequalities. The 1998 Zambia Human Development Report (ZHDR) 1998 focused on provision of basic social services and showed that only 52% of rural households had access to health facilities within a 5-kilometer distance compared with 100% in urban areas and only 27% of rural households had access to safe water compared with 85% in urban areas. The 2011 ZHDR captured marked improvements in health and education service delivery, however, challenges still persist (UNDP 2011). These include human resource shortages in provider institutions, low levels of government funding for infrastructure investments and service provision, an inefficient pharmaceutical management system, and a policy and regulatory framework that is often not sufficient or contemporary enough to adequately address service delivery shortfalls. In terms of education, while enrolment has improved due to free primary school policy, the 2011 ZHDR highlighted that access beyond primary education was a challenge for many, due to unaffordable fees. Other limitations to access include a shortage of secondary schools and tertiary institutions to meet demand, disabilities, language and cultural barriers (CSO et al. 2009)



A young man welding in a workshop. Photo courtesy: Flickr

BACKGROUND

2.1 Pathways to Harnessing the Demographic Dividend

Analyses of the phenomenal socio-economic development experienced by the East Asian countries like Malaysia, South Korea, Singapore, Hong Kong and Thailand show that a quarter to a third of the economic growth that these countries experienced between 1970 and 2000 could be attributed to the ways they took advantage of the change from an age structure dominated by children to one dominated by working age population (D. E. Bloom & Williamson, 1998; Mason & Center, 2001). The Demographic Dividend is the economic benefit that arises from a significant increase in the ratio of working-age adults relative to young dependents that results from rapid fertility decline, if this change is accompanied by sustained investments in education, skills development, health, job creation and improved governance (D. Bloom, Canning, & Sevilla, 2003; Mason & Center, 2001). When fertility rates decrease substantially, the age structure shifts in such a way that there are more working-age adults relative to young dependents in the population. This change can accelerate economic growth through increased productivity of the “excess” labour force if the workers are well educated and skilled and the economy is able to generate adequate decent jobs for them. Further impetus for economic growth is generated through increased household savings and investment, which result from reduced costs of basic needs of fewer children and a relatively smaller dependent young population.

The First and Second Demographic Dividends

The effects of the demographic dividend operate in two main phases. The first demographic dividend refers to the increase in economic output as a result of the increase in the number of workers. The second demographic dividend refers to the increase in output that is created by the enhanced human capital investments per child and increased savings and investments that households and governments make as a result of reduced costs of caring for children. Quality human capital and more financial

resources help enhance capital formation and development of economic infrastructure, which are critical for igniting further economic growth.

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

Pathways to Harnessing the Demographic Dividend

The First Demographic Dividend

1. Bigger labour force following rapid fertility decline can increase overall economic productivity if the labour force is gainfully employed.
2. Reduced fertility enables women to spend more years in school, participate in formal economic activities, which enhances overall economic productivity.
3. Reduced fertility lowers the total costs of taking care of dependent children (nutrition, health, education), enabling parents to have more disposable income that they can use to enhance the level of human capital investment per child, which helps improve productivity once children grow into working adults).

The Second Demographic Dividend

1. Due to reduced expenditure on children as a result of lower fertility, increased household incomes resulting from greater participation of women in the labour force and improved health and longevity of workers, savings for old age security increase, providing greater impetus for further investment and capital formation.
2. Low fertility enables governments to improve the quality of health and education services and to accumulate savings that can be diverted to capital formation and development of economic infrastructure, which are critical for attracting direct foreign investment

Earning the Demographic Dividend

The demographic dividend is neither automatic nor guaranteed; countries must earn it by implementing policies that will not only accelerate rapid fertility decline, but also ensure that the resulting surplus labour force is well educated, skilled, healthy and economically engaged. Therefore, achieving rapid fertility decline and creating an age structure with more working age adults than dependent children is necessary but not sufficient to harness the demographic dividend. Having quality human capital is key to optimize productivity and associated socio-economic benefits that a country can harness from the demographic transition. Even more crucial, the economy must have the capacity to generate enough decent jobs for the surplus labour force in order to harness the demographic dividend. Finally, in order to instil confidence in both local and foreign investors, there should be good governance, accountability, and stable economic infrastructure for energy, communications and transport that can support business efficiency.

Cultivating a visionary culture of national responsibility and accountability in the use of public resources and delivery of social services will increase the resources available for investment in the development of both human capital and the infrastructure needed to stimulate economic productivity. Therefore, appropriate, country-specific economic and governance reforms should be adopted to attract local savings and foreign direct investment. This will stimulate sectors and industries of comparative advantage in accelerating economic growth and creating decent jobs for the rapidly growing labour force.

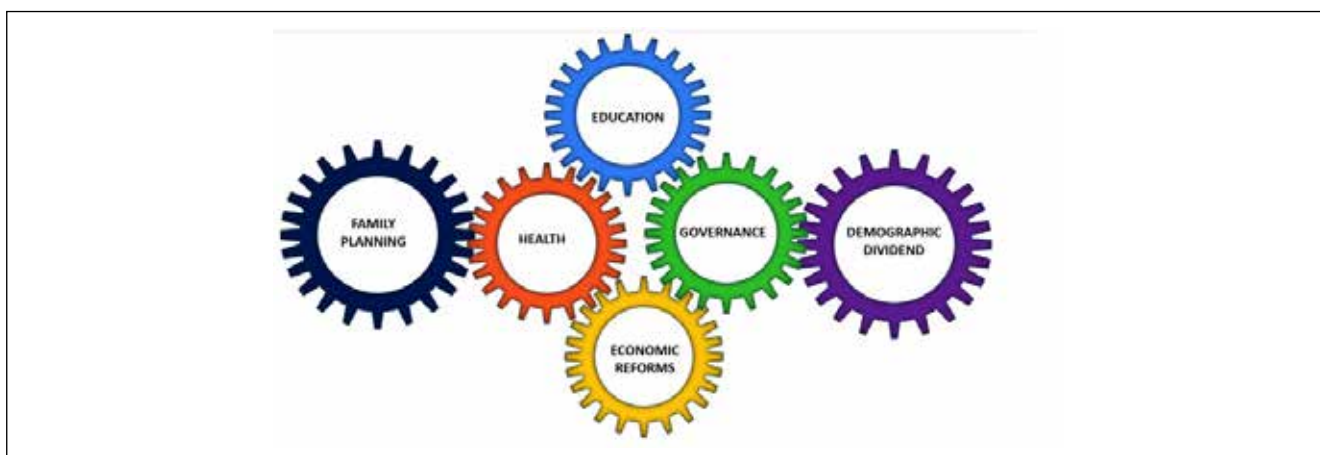
The comprehensive reforms that countries need to enact and implement in order to harness the demographic dividend can be categorised into the following five pillars or wheels:

Five policy pillars / wheels for harnessing the demographic dividend

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

The key point is that all the five policy pillars or wheels are interrelated; they reinforce each other and should be implemented concurrently in order to drive the country towards the economic prosperity that can accrue from the demographic dividend (as illustrated in Figure 2.1). Like cogs in a wheel, each is integral to the success of the rest. If any of the wheels breaks down or is dysfunctional, all the other wheels will be slowed down, thereby limiting the extent to which a country can harness the demographic dividend. Furthermore, the demographic dividend is not an event that happens or is achieved in a given year – it is an accumulation of economic gains over many years as the population age structure changes in favour of more working age people and the requisite investments are made in human capital development and job-oriented economic reforms.

Figure 2.1: Five Policy Wheels for Creating and Earning the Demographic Dividend



Source: Adapted from (African Union Commission (AUC) & Economic Commission for Africa (ECA), 2013)



African countries like Tunisia, South Africa, Botswana and Mauritius have also attained significant declines in fertility but have not harnessed the same level of the demographic dividend that Asian countries such as South Korea and Malaysia did because they did not make timely strategic and comprehensive investments in the other sectors. For example, Tunisia’s fertility declined rapidly to about 2 births per woman by 2010. However, its per capita GDP only rose to USD 4,200 while that of South Korea reached USD 26,000 (World Bank, 2014). The policy and investment decisions that Zambia makes in the next few decades will influence the country’s economic future. The country should take advantage of hindsight and lessons learned in other contexts to adjust its development trajectory in order to avoid missing out on earning the substantial demographic dividends seen in the Asian countries that have experienced substantial fertility declines.

2.2 Vision 2030 and the Demographic Dividend

Zambia’s population dynamics and emerging economic opportunities can be turned into a valuable demographic dividend that can boost its chances of attaining the development goals outlined in Vision 2030. This will be possible if the country adopts the kind of policies and investments that the East Asian Tigers followed over the past four decades. Countries like Malaysia and South Korea were at the same level of development with similar fertility

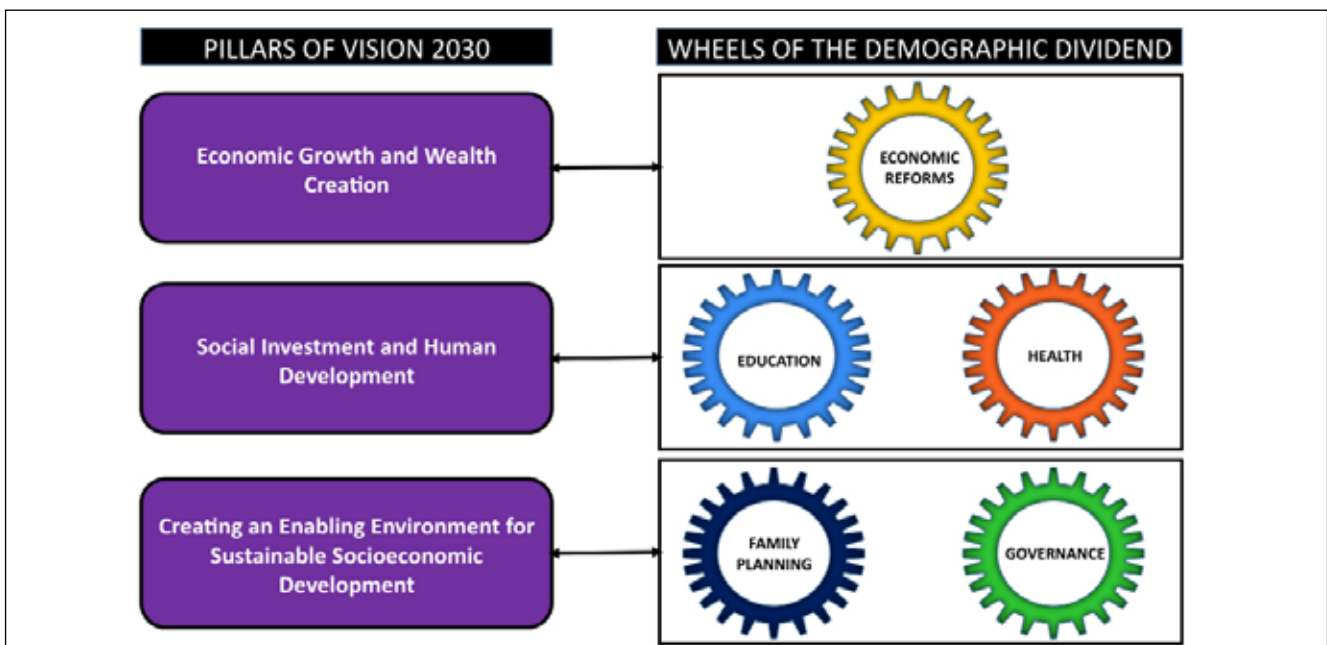
rates as Zambia in the 1960s. But these countries took a drastically different development path through sustained investments in family planning, education, health, and export-oriented economic reforms, all of which helped to accelerate economic growth and job creation. If fertility rates decline steadily, Zambia’s age structure will change, resulting in a population with more working-age people relative to dependent children. This shift in the age structure can present Zambia with a huge impetus for accelerating the socio-economic transformation envisaged in Vision 2030. The age structure change, however, has to be accompanied by requisite investments to accelerate economic growth and job creation and develop quality human capital to ensure that the big labour force will be healthy, well educated, skilled, and gainfully employed.

Zambia’s socio-economic transformation blueprint, Vision 2030, seeks to transform the country into a prosperous, industrial middle-income nation that provides opportunities for improving the well-being of all its citizens (GRZ, 2006). Vision 2030’s transformative agenda is anchored on three broad pillars namely:

1. Economic growth and wealth creation;
2. Social investment and human development; and
3. Creating an enabling environment for sustainable socio-economic development.

These pillars mirror perfectly the five main sectoral pillars that propelled the East Asian Tigers to earn their substantial demographic dividend, as shown in Figure 2.2 below.

Figure 2.2: Comparison of Vision 2030 Pillars and the Demographic Dividend Wheels



Source: Author

The congruence between the Vision 2030 pillars and the demographic dividend pillars shows that Zambia already has the policy framework necessary to harness the demographic dividend – what remains is to fully implement the vision and in an integrated manner.

2.3 Study Objectives

The African Regional Conference on Population and Development held in Addis Ababa Ethiopia from September 30th to October 4th, 2013 adopted a common position for the implementation of International Conference for Population and Development (ICPD) beyond 2014 for Africa's development transformation. The theme of the conference was: "Harnessing the Demographic Dividend: The future we want for Africa". The conference endorsed and adopted the "Addis Ababa Declaration on Population and Development in Africa Beyond 2014" that mapped out a shared, forward-looking plan to enable the continent to accelerate progress towards the goals of ICPD. Zambia was one of the signatories of the Addis Ababa Declaration. In response to commitments 21 and 22 of the Addis Ababa declaration and as part of the preparations for the development of the 2017-2021 National Development Plan, the Ministry of Finance and United Nations Population Fund

(UNFPA), in collaboration with key national institutions: Central Statistical Office (CSO); Ministry of Health (MOH); Ministry of Education (MOE); University of Zambia (UNZA); among others, commissioned the national study to undertake secondary literature review and further in-depth analyses of various national data sources to help the country understand the demographic dividend and come up with appropriate policies and actions to harness it. The Ministry of Finance would use the findings of the study to inform the development of the Seventh National Development Plan, the key planning tool for operationalising the broad development goals outlined in Vision 2030.

The primary objective of this study was to assess Zambia's prospects for harnessing the demographic dividend and to demonstrate priority policy and programme options that the country should adopt to optimise its demographic dividend towards achieving its development aspirations. The specific objectives of the study were:

1. To review demographic and economic opportunities and challenges and assess their implications for attainment of the country's development aspirations;
2. To assess prospects of harnessing the DD in Zambia using the DemDiv Model; and
3. To demonstrate policy options for optimizing chances of earning the DD in Zambia.

STUDY METHODOLOGY AND APPROACH

The study was commissioned and led by the Ministry of Finance. The African Institute for Development Policy (AFIDEP) was engaged by UNFPA to provide technical expertise for the study. AFIDEP worked collaboratively with a team of local technical experts drawn from the University of Zambia (UNZA), the Central Statistical Office (CSO), the Ministry of Health (MOH), Ministry of Education (MOE), Ministry of Community Development, Mother and Child Health (MCDMCH) and the Zambia Institute for Policy Analysis and Research (ZIPAR), among other stakeholders.

The study employed a combination of methodologies including:

1. Collation and interpretation of secondary data and indicators;
2. Further in-depth analysis of existing data to fill particular evidence gaps;
3. Scenario-building and modelling to demonstrate potential impact of various policy options in harnessing the demographic dividend; and
4. Policy analysis to determine policy responses that Zambia needs to adopt in order to optimize its chances of harnessing the demographic dividend.

3.1 Review of Literature and Policy Documents

The study involved a detailed review of literature on the demographic dividend in order to identify policies and strategies that have helped some countries harness the demographic dividend, which was then used as a basis for analysing Zambia's potential. This included a desk review of policy, strategy, and programme documents in order to understand Zambia's development policy framework, particularly where it influences population and economic issues, and to identify opportunities for policy and programme changes that the country should adopt in order to harness the demographic dividend. The review was geared towards identifying the key factors that are inhibiting progress and those that can facilitate positive change in each pillar of the demographic dividend in order to identify the transformations needed to optimise outcomes. International

experiences with policy and programme options that would stimulate progress and transformations possible were also explored.

3.2 Collation and Analysis of Secondary Data and Indicators

Secondary data and indicators were collated and further analyses of existing data were carried out to fill particular evidence gaps, establish past trends and the current status of different issues. These data, along with the understanding of the policy framework, were used to project where Zambia is likely to be and where it should be on various indicators if it is to harness the demographic dividend. National data sets were used; these were supplemented with international data sets from institutions such as the UN, World Bank and International Labour Organisation (ILO) where national data were not available. The national data were derived from housing and population censuses, Zambia Demographic and Health Surveys, Labour Force Surveys, macroeconomic data and other relevant data.

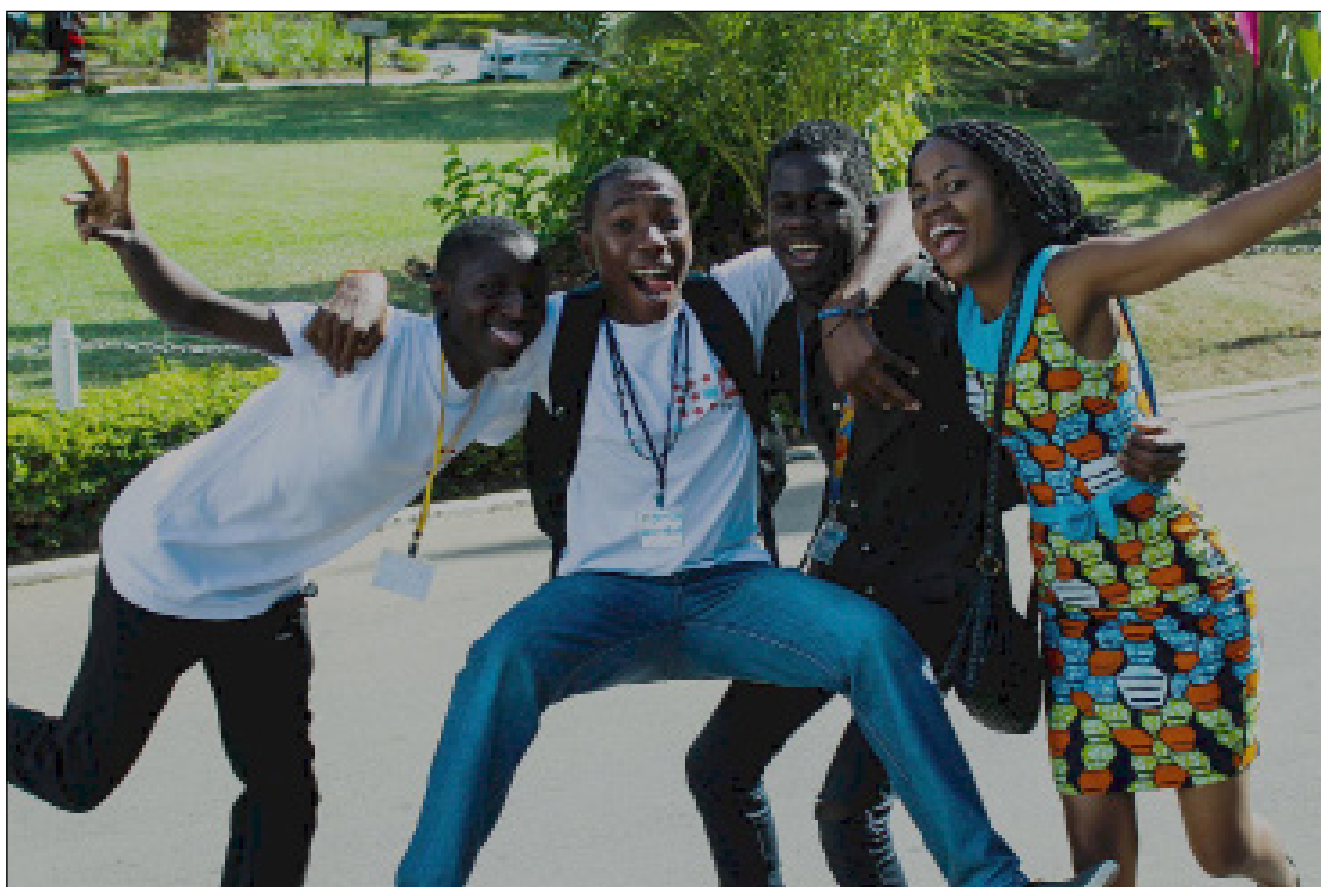
3.3 Modelling the Potential Demographic Dividend for Zambia

In order to demonstrate the potential benefits of the demographic dividend and identify the multi-sectoral policies and investments required to achieve these benefits in Zambia, the modelling tool DemDiv, created by the Health Policy Project (HPP) at Futures Group, with support from USAID, was used (Health Policy Project & USAID, 2014). DemDiv is structured as a two-part model that projects demographic and economic changes with equations to estimate employment and investment, along with an estimation of gross domestic product (GDP) and GDP per capita. The model is scenario- and projection-based, comparing several different possibilities for future development against each other to show the varying benefits of different combinations of investments. In particular, the model allows design of multiple scenarios showing how the combined power of policy investments in family planning (FP), health, education and the economy can generate a demographic dividend, which could play a key role in accelerating socio-economic development for Zambia to achieve Vision 2030.

3.4 Stakeholder Workshops

The Ministry of Finance convened several meetings to enable various stakeholders contribute to the conceptualisation and implementation of the study. In November 2014 the Ministry convened the Demographic Dividend Technical Working Group, comprised of 21 senior government officials and university scholars, to participate in an AFIDEP-led technical workshop on modelling the potential demographic dividend that Zambia could harness under different policy scenarios. The list of participants in the workshop is provided in Appendix I. The participants went through a hands-on process to learn how to set up and run the DemDiv modelling tool. The group agreed on the modelling period and policy scenarios to be used in the

model, reviewed data and the prevailing policy framework and agreed on the baseline and target indicators used in the models. The workshop achieved its primary aim of ensuring that each participant acquired knowledge and skills on how to model the potential demographic dividend for Zambia using the DemDiv modelling tool. In December 2014, the Ministry of Finance convened a multi-sector stakeholder meeting to review and validate the findings of the demographic dividend study. The list of participants at the multi-sector workshop is provided in Appendix II. The participants provided input on the findings of the study and through group work discussions, recommended the high-impact policy options (outlined in Chapter 8) that Zambia should adopt in order to harness the demographic dividend.



Zambian youth in jubilation

POPULATION DYNAMICS – PAST TRENDS AND FUTURE PROSPECTS

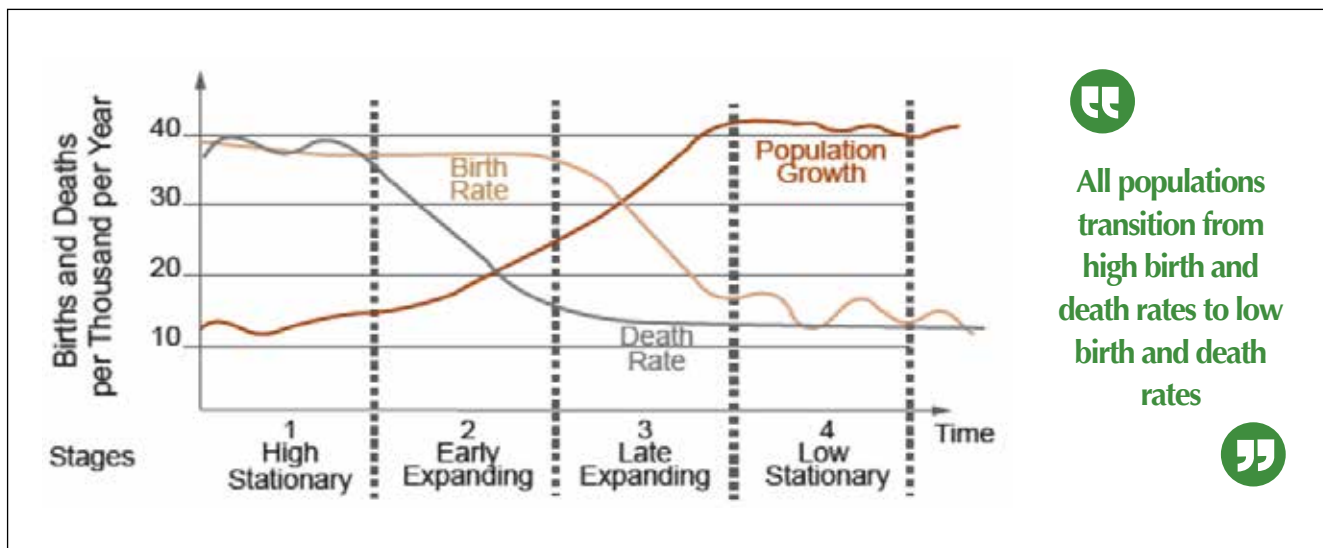
4.1 The Demographic Transition

A review of the history of population change and its linkages to economic development shows that countries typically pass through four stages of transition from high birth and death rates to low birth and death rates as they transform from agrarian economic systems to the industrialised-urbanised economic structures of the nature envisaged in Zambia's Vision 2030 (Figure 4.1).

in infant and childhood mortality. In this stage, the fertility rate also starts to decrease, but less rapidly than the death rate because high fertility is entrenched in cultural and economic values that take time to change.

In the third stage, the fertility rate also decreases rapidly due to a range of factors including use of effective contraception, increased access to female education and employment, urbanisation, reduced child mortality and the declining importance of child labour. During this stage, the population growth rate remains high but begins to decline.

Figure 4.1: Phases of the Demographic Transition



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

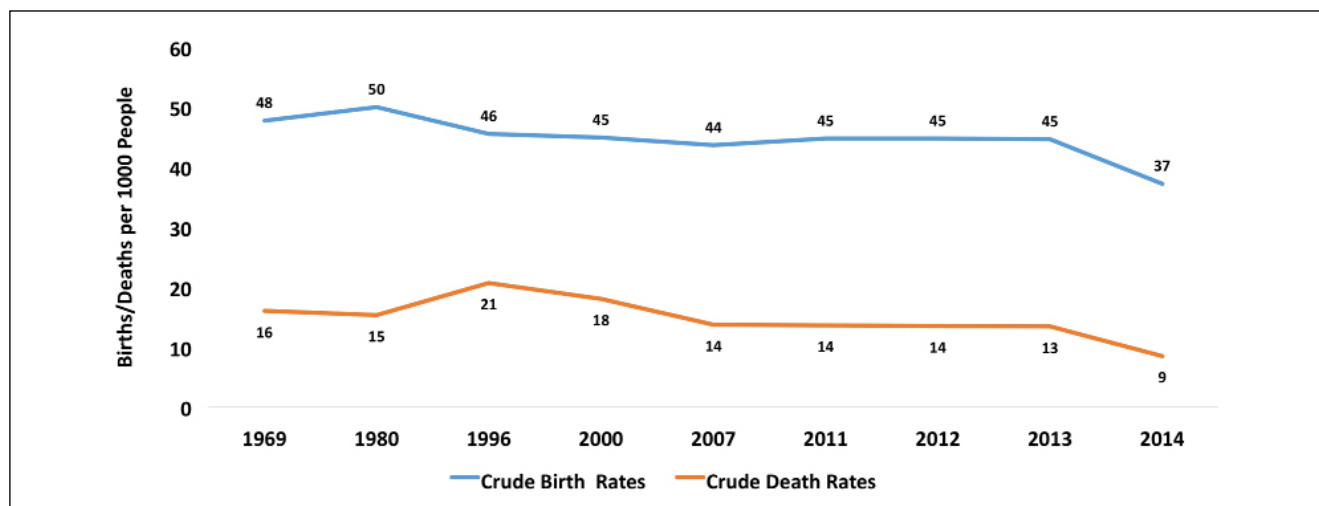
The first stage is characterised by high birth and death rates and low population growth rates. The death rate is high because of high levels of disease, famine, inadequate clean water and sanitation, and poor health care. In response to the high death rates, couples have many children to ensure that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

The second stage is characterised by a rapid increase in the rate of population growth. This occurs as a result of a sharp decrease in the death rates due to improvements in nutrition, sanitation, and public health that lead to reductions

The fourth stage is characterised by stable population growth due to low birth and death rates. Improved control of diseases and reliable availability of food keep the death rate at low level. Reasons for the low fertility rate include increased access to contraception for women, which allows families more choice in the number of children they would like to have and better opportunities for women to be employed. During the course of the demographic transition, the average number of births per woman declines from seven or more to the replacement level of two or fewer.

Zambia is in the second stage of demographic transition, as evidenced by falling mortality rates but persistent high fertility rates (Figure 4.2).

Figure 4.2: Trends in Crude Birth and Death Rates, Zambia, 1969-2014



Source: Central Statistical Office (2012; 2013); Central Statistical Office et al. (2014); UN Population Division (2013)

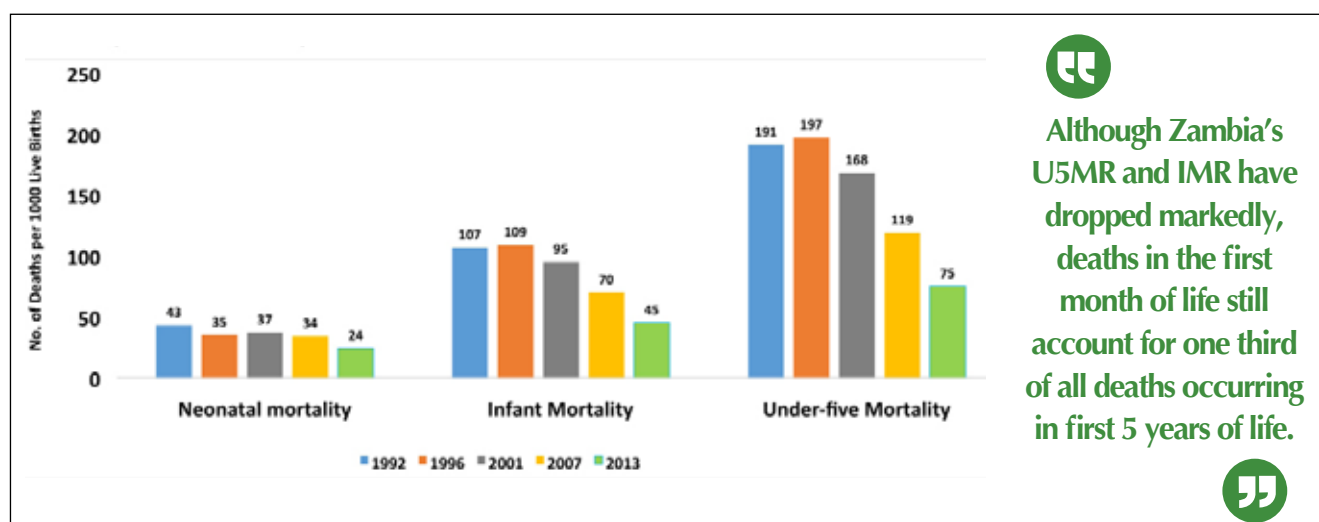
4.2 Child Mortality Trends

Child survival in Zambia has improved tremendously in the last two decades. In 2013, the under-five mortality rate (U5MR) was 75 deaths per 1000 live births, having declined from 191 deaths per 1000 live births in 1992. Similarly, infant mortality rate (IMR) declined from 107 to 45 deaths per 1000 live births during the same period (CSO, MoH, TDRC, University of Zambia, & ICF International, 2014) (Figure 4.3). These data show that Zambia is on track to achieving the MDG goal on child mortality, with a target of 64 deaths per 1000 live births in 2015. The target annual U5MR reduction according to the MDGs is 2.6 percentage points. Zambia's rate of reduction of under-five mortality averaged 5.6 percentage points between 1992 and 2013, with a higher reduction rate of 7.8 percentage points between 2001 and 2013. These data imply that child

mortality will drop further if the ongoing interventions are intensified. Despite this impressive progress in reducing infant and under-five mortality, neonatal mortality (deaths occurring in the first month of life) contribute about 34% of all under five deaths. In addition, neonatal mortality declined by only 44% between 1992 and 2013, compared to almost two-thirds in infant and under-five mortality rates.

These national level data, however, mask huge regional disparities at provincial, district and constituency levels. Although there was little difference between rural and urban levels of IMR (49 and 45 deaths respectively), U5MR was significantly different between urban and rural residents (72 and 85 deaths respectively). Sub-nationally, the differences are huge. For example, U5MR ranged from

Figure 4.3: Trends in Early Childhood Mortality Rates, Zambia, 1992-2013



Although Zambia's U5MR and IMR have dropped markedly, deaths in the first month of life still account for one third of all deaths occurring in first 5 years of life.

Source: Central Statistical Office et al. (2014)

63 in Copperbelt Province to 115 in Eastern Province. Similarly, IMR was highest in Eastern Province at 68 and lowest in North Western Province at 39 deaths per 1000 live births. Childhood mortality also varied with household wealth, with the poorest households having almost double the U5MR of the richest households. This trend was also observed under the education level of the mother; U5MR was more than double among children whose mothers did not have formal education at 109 deaths, compared to those who had secondary and higher levels of education with 43 deaths per 1000 live births (CSO et al., 2014).

Although Zambia has made good progress in reducing child mortality, the current levels are still quite high compared to the levels for the East Asian Tigers and other African countries where fertility has declined (Table 4.1). While the IMR in 2010 was 4.1, 3.4 and 9.9 per 1000 live births in Malaysia, South Korea, and Thailand respectively, Zambia has an IMR of 45. Further, Zambia's under-five mortality rate of 75 in 2013 compared unfavourably with those of South Korea (4), Malaysia (5) and Thailand (12).

Child mortality in Zambia is exacerbated by low coverage of the most important child survival interventions, including immunisation, sleeping under treated mosquito nets, and prompt and effective management of common childhood infections like diarrhoea and respiratory infections. In 2013, only 68% of children below age five had received all required vaccinations before the age of two. In addition, only 57% slept under a treated mosquito net (CSO et al., 2014). Integrated campaigns for vaccination and provision of mosquito nets should be considered as an effective measure to improve these numbers (Grabowsky et al.,

2005). According to the MDG progress report, 2013, the key causes of child mortality in Zambia include neonatal causes (22.9%), pneumonia (21.8%), malaria (19.4%), diarrhoea (17.5%), HIV/AIDS (16.1%), and measles (1.2%) (Ministry of Finance & UNDP, 2013). The high rate of child malnutrition is also a key risk factor for childhood illness and mortality.

Malnutrition affects cognitive development, physical work capacity and exposes children to several adult-onset chronic diseases (Pelletier & Frongillo, 2003). The level of malnutrition in Zambia has hardly changed in the last two decades, resulting in a high rate of stunting. In 2013, 40% of children under five were stunted, compared to 45% in 2007. The proportion of children wasted and underweight remained at about 6% and 15%, respectively during the same period (Figure 4.4) (CSO et al., 2014). The prevalence of stunting was higher in rural areas than urban areas (42% compared to 36%) and there were pronounced disparities between regions. For instance, Lusaka, Western and Copperbelt provinces have the lowest prevalence at 36% while Northern province had the highest at 49% (CSO et al., 2014).

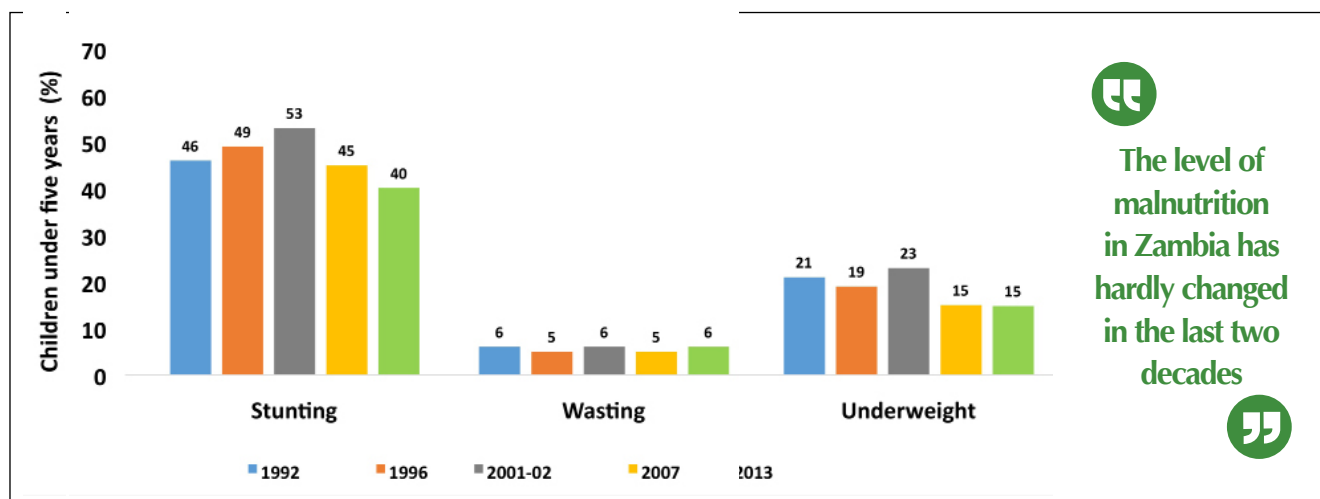
Improving child survival is an important prerequisite for fertility decline because parents are assured that children will not die prematurely and thus are more willing to have fewer children. Enhancing the coverage and quality of the child survival interventions that have contributed to the notable child mortality decline will go a long way in further reducing child mortality and facilitating fertility decline, as well as ensuring that Zambia's future labour force is healthy.

Table 4.1: Comparison of Child Mortality in Zambia and Select countries in Africa and East Asia

Country	Infant Mortality Rate (2010)	Under-five Mortality Rate (2010)
Botswana	32	41
Malaysia	4	5
Mauritius	12	13
South Africa	38	51
South Korea	3	4
Thailand	10	12
Tunisia	16	17
Zambia	45*	75*

Source: UN Population Division (2013); *Central Statistical Office et al. (2014)

Figure 4.4: Trends in Nutritional Status of Children below Five Years, Zambia, 1992-2013



Source: Central Statistical Office et al. (2014)

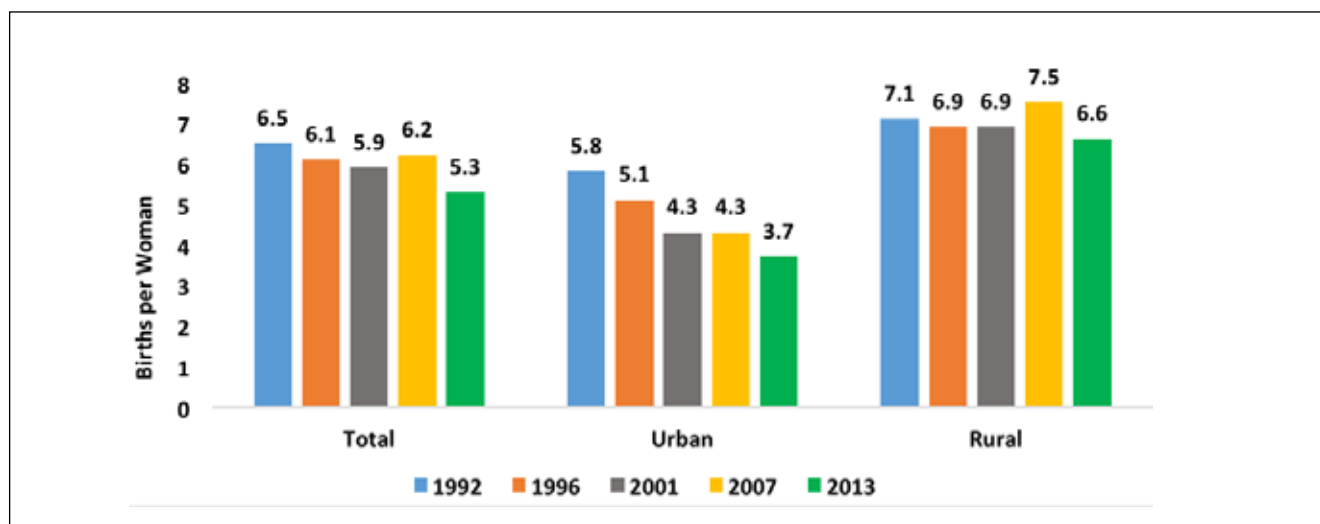
4.3 Fertility Trends

Zambia’s total fertility rate (TFR) has remained largely stagnant, declining by about one child between 1969 (7.4) and 2007 (6.2). The 2014 DHS shows further decline by one child to 5.3 births per woman between 2007 and 2014 (Figure 4.5). This fertility level is relatively high despite the use of modern contraceptives among married women which stands at 44.8% (CSO et al., 2014). According to the 1980 National Population and Housing Census, total fertility rates in 1969 and 1980 were higher in urban areas than in rural areas (CSO, 1982). This trend however reversed by 1990 and the gap between urban and rural fertility rates has widened over time, as shown in Figure 4.5 (CSO, 2003). In 2013, the total fertility rate in urban areas was 3.7, compared to 6.6 in rural areas, a difference of about 3 children. As the

chart below shows, urban fertility declined by more than two children in the last two decades, while rural fertility has hardly changed. Thus, the high fertility rate in Zambia is being driven by the rates in rural areas.

Other substantial socio-economic and geographical differentials in fertility are also observed in Zambia. The Northern Province had the highest fertility rate (7.9) followed closely by North Western (7.3) and Luapula (7.2), while Lusaka had the lowest of all regions (4.1). Fertility differentials by educational attainment show that women with higher educational attainment have fewer children; women with secondary and higher education are close to replacement fertility level (2.4), while the fertility of women without any formal education is more than three times higher (8.2). Significant differences are also observed by

Figure 4.5: Trends in Total Fertility Rates by Area of Residence, Zambia, 1992–2013



Source: Central Statistical Office et al. (2014)

household wealth status, where women from households in the bottom 20% have 8.4 children compared to 3.4 children for women from households ranked in the top 20% (CSO et al., 2014). These data reflect the positive impact of education (particularly girl education) and women's empowerment in reducing fertility.

Drivers of High Fertility in Zambia

The slow decline in fertility has been attributed to the persistence of social norms and cultural practices that favour having many children, including the perceived economic rationale that a large family and many children may provide some economic benefits like old age insurance. The large family sizes are also driven by early marriages and high school dropout rates for girls, mostly due to teenage pregnancy. In 2013, the wanted fertility rate, which measures age-specific fertility rates for births that were desired, was 4.5, compared to an observed fertility of 5.3 (CSO et al., 2014). Therefore, Zambian women have about one child more than they would like to have. This implies that actual fertility would decline by about one child if all unintended pregnancies were avoided through effective means of contraception. This gap is more pronounced among the poor and among rural residents. According to 2013 data, poor women had 0.9 children more than they desired compared to rich women who had 0.3 of a child more (Figure 4.6).

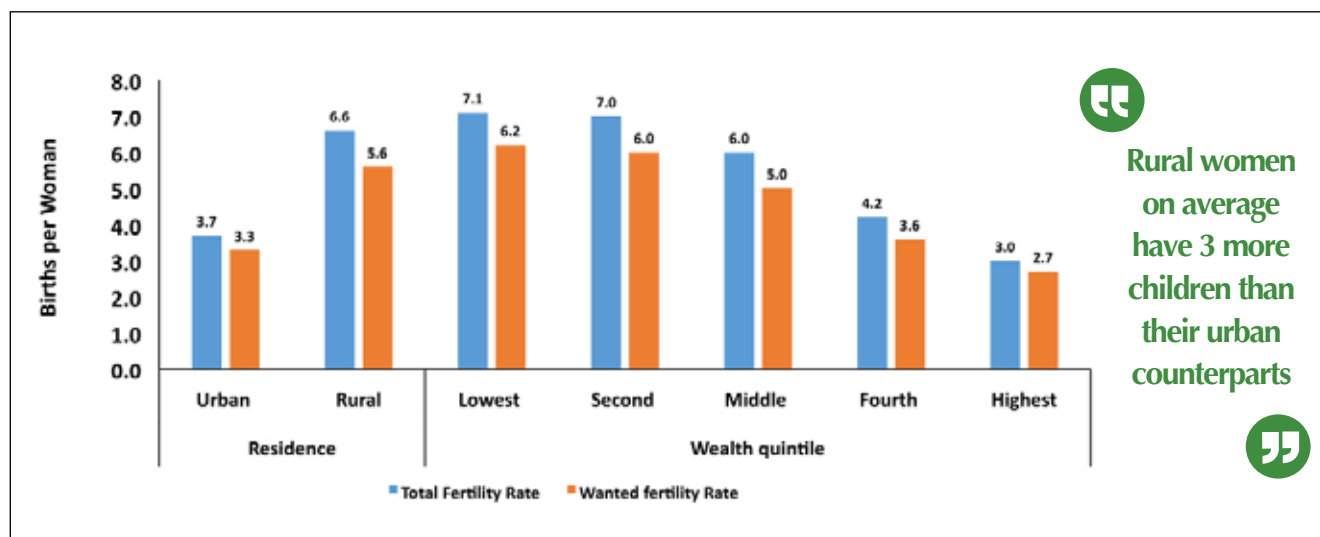
Sub-nationally, the burden of excess children is much bigger among women living in Southern (1.3) and Muchinga (1.1) provinces (CSO et al., 2014). Despite the difference between wanted and observed fertility, it is clear that couples demand large family sizes and thus further fertility

decline will require public education on the advantages of smaller families, in addition to use of contraception. These figures further reinforce the observed impact of education on fertility reduction in Zambia; women with secondary and higher education want and have fewer children.

Use of modern contraceptives is a key driver to fertility decline. In addition, Family planning is one of the most successful development interventions, with wide-ranging benefits to maternal and child health outcomes, empowerment of women, economic growth, and environmental preservation (Ahmed, Li, Liu, & Tsui, 2012; Canning & Schultz, 2012; Cleland, Conde-Agudelo, Peterson, Ross, & Tsui, 2012; O'Neill et al., 2012). According to the 2014 Adding It Up estimates for developing countries, if all the women with an unmet need for modern contraception were to receive effective services, unintended pregnancies would drop by 70%; maternal deaths would drop by 67%; and new-born deaths would drop by 77% (Singh S, Darroch JE, & LS, 2014).

Zambian women who use family planning methods largely opt for modern methods. In fact, the use of traditional methods (including rhythm method, periodic abstinence and withdrawal) among married women has been on a steady decline from 11.5% to 4.3% according to the 1996 ZDHS and 2013-14 ZDHS respectively (CSO et al., 2014). Although modern contraceptive use among married women in Zambia is relatively high (44.8%), slightly above one fifth (21.1%) of married women who want to delay or avoid pregnancy are not using an effective family planning method, and are categorised as having unmet need for family planning. In all provinces except Copperbelt, Eastern, Lusaka and Southern, the unmet need is higher than

Figure 4.6: Gap between Total Wanted and Total Fertility Rates by Area of Residence and Household Wealth, Zambia, 2013



Source: Central Statistical Office et al. (2014)

the national figure, with provinces such as Luapula having one third of the married women with unmet need for family planning (Figure 4.7), (CSO et al., 2014). It is estimated that contraceptive use has helped avert maternal deaths by about 30.2% and that if Zambia addressed all its unmet need for family planning, maternal deaths would decline further by about 29% (Ahmed et al., 2012). According to the relationship between contraceptive use and fertility decline that shows that an increase of 15 percentage points in contraceptive prevalence is expected to yield a decline of about one child in the total fertility rate, Zambia’s fertility rate would further decline by about one child if this unmet need was addressed (J. A. Ross & E. Frankenberg, 1993).

Another driver of high fertility in Zambia is the low level of education, particularly among women. Although primary school enrolment rates for both boys and girls are high (near universal) in Zambia, the net secondary school enrolment rate is very low at 28% and only 31% of these complete the last grade of secondary school (Ministry of Education, 2014). Increasing school attendance and progression for girls is considered to be one of the most effective means to reduce fertility (Basu, 2002), while delaying marriage and child bearing by 5 years can slow population growth by as much as 15% to 20% (Bongaarts J., 2009; Bruce J. & E. Chong, 2005). In addition, keeping girls in primary school for one extra year increases their wages by 10-20% (Levine, C. Lloyd, M. Greene, & C. Grown, 2008). Zambia is facing serious challenges related to school dropout, teenage pregnancies and early marriages. Adolescent fertility rates contribute, to a great extent, to the high total fertility rates in the country. According to the 2013 DHS, the number of births per 1,000 women aged 15-19 years was 141, having

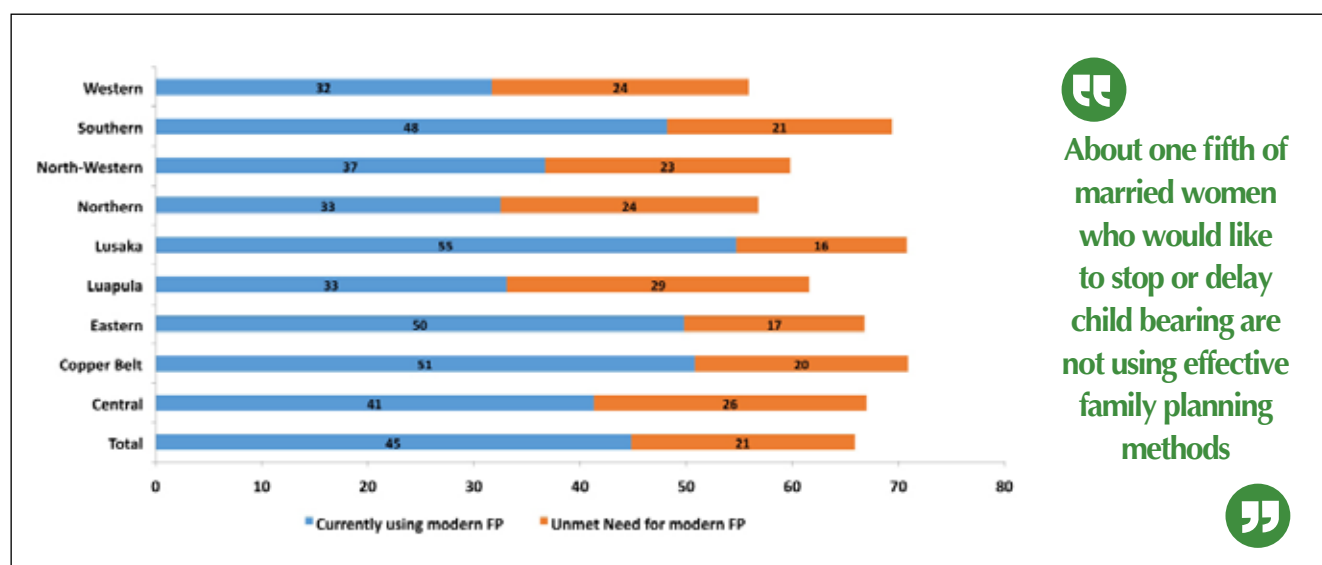
declined from 146 in 2007. In addition, about 28.5% of women aged 15-19 years have begun child bearing. (Figure 4.8) (CSO et al., 2014).

Adolescent pregnancy is one of the contributing factors to school dropout, and thus hinders the meaningful participation of women in national development. According to the Education Statistical Bulletin for 2013, only 35.8% of girls who enrol in grade 1 are expected to reach grade 9. This means that up to 64% are likely to drop out along the way (Ministry of Education, 2014). In addition, Ministry of Education data for 2012 shows that 12,753 girls at primary level and 2,096 girls at secondary level left school due to pregnancy. However, more than half of them did not return to school after giving birth despite the school re-entry policy.

According to 2013 data, half of Zambian women aged 20-49 were married by 18.7 years. (Figure 4.9). Additionally, 28.5% of those aged 15-19 have had a child or are pregnant. Disaggregating these numbers by education level shows a difference of six and three years in median age at first birth and median age at first marriage, respectively, between women with secondary and higher education and those with none.

Promoting the general empowerment of women should, therefore, be at the centre of efforts to facilitate fertility decline. Empowered women have greater autonomy to make informed decisions that positively influence their reproductive health. This entails investing in their education and participation in economic activities. Low levels of schooling undermine social capital and reduce women’s labour force participation rates. According to the 2012 labour force survey, the labour participation rate

Figure 4.7: Proportion of Married Women (15-49) with Met Need and Unmet Need for Family Planning, Zambia, 2013

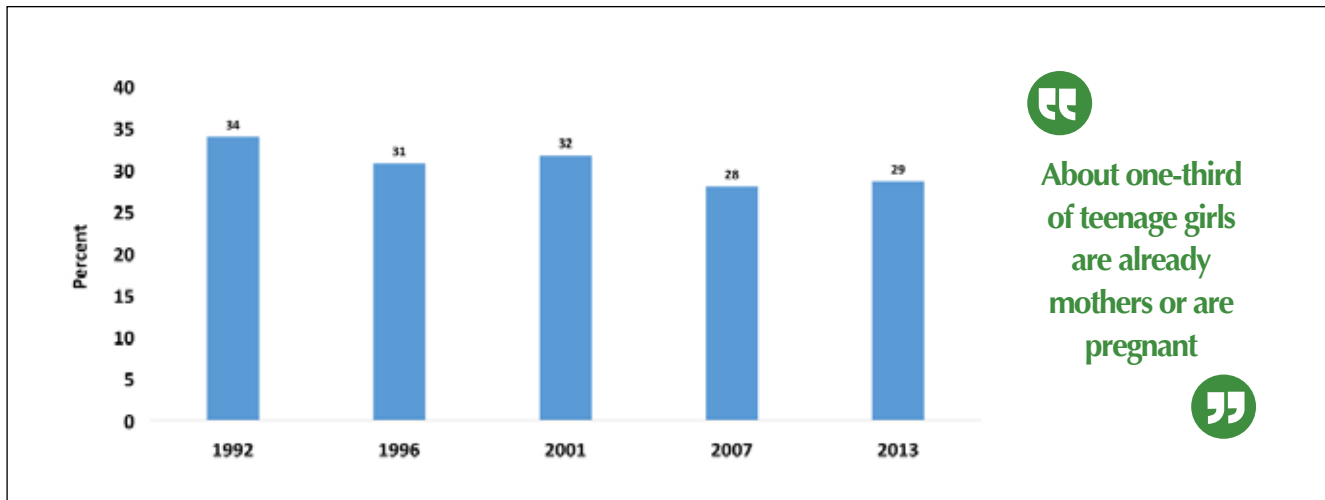


“About one fifth of married women who would like to stop or delay child bearing are not using effective family planning methods”

Source: Central Statistical Office et al. (2014)



Figure 4.8: Proportion of Women Age 15-19 who have Begun Child Bearing, Zambia, 1992-2013



Source: Central Statistical Office et al. (2014)

for men was 80% compared to 69.5% for women (CSO, 2013a). This survey also showed that women were mostly employed in agriculture and other unskilled and household jobs compared to their male counterparts who dominate professional and administrative positions.

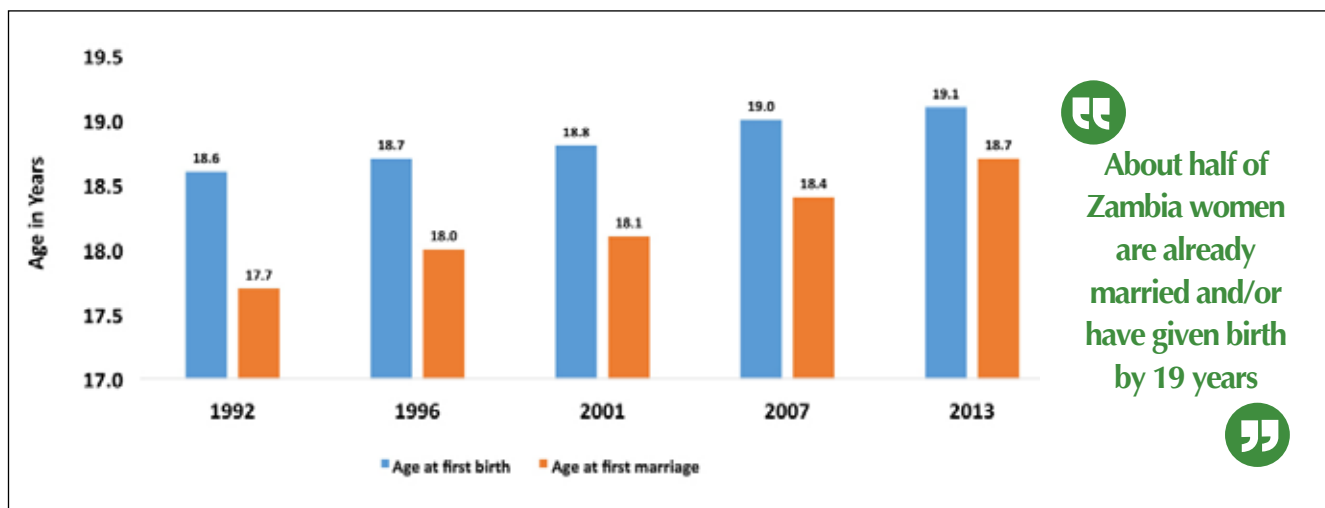
If Zambia is to experience rapid demographic transition and harness a sizable demographic dividend, the country must do much more to address the cultural, socio-economic, psychosocial, and contraceptive supply bottlenecks that are preventing a rapid decline in fertility. South Korea and Malaysia reduced their fertility rates from 6.3 to 1.5 and from 6 to 2.5, respectively, between 1960 and 2000 (UN Population Division, 2013). This is equivalent to South Korea reducing fertility by about five children per woman and Malaysia reducing it by about four children per woman in 40 years. The government of Zambia should therefore prioritise investments in family planning at the national and

subnational levels (particularly Western, Luapula, Northern and North Western provinces); address barriers to demand for, access to, and use of FP among married and unmarried couples; promote school progression beyond primary school so as to delay the onset of childbearing; and provide family planning services to adolescents who are sexually active, especially barrier methods that provide triple protection against pregnancies, HIV and STIs. Furthermore, interventions to reduce child mortality should be reinforced because fertility decline is only possible when parents are assured that their children will survive.

4.4 Past and Projected Population Growth

Zambia has a high population growth rate as a result of a high fertility rate coupled with declining mortality levels. The

Figure 4.9: Trends in Median Age at First Birth and Marriage for Women Aged 20-49, Zambia, 1992-2013



Source: Central Statistical Office et al. (2014)

country's rate of population growth has been increasing and is ranked among the highest growth rates in Sub-Saharan Africa (SSA). According to the 2010 population and housing census, the annual population growth rate increased from 2.4% in 2000 to 2.8% in 2010 (CSO, 2012a), and is projected to remain unchanged at 2.8% up to 2035. As a result of persistently high fertility rate, the total population increased from 3.5 million in 1963 to 13 million in 2010, and is projected to have grown to 15 million in 2014 (Figure 4.10). According to the 2013 CSO population projections, Zambia's population will almost double from 13.7 million in 2011 to 26.9 million in 2035(CSO, 2013b).

Projected Population Growth

The CSO population and demographic projections show that population will grow to 27 million by 2035 (CSO, 2013b). The 2012 UN medium variant population projections further show that the population will increase to 44 million in 2050 and to 71 million in 2070 (Figure 4.11) (UN Population Division, 2013). The population will, however, grow to 49 million in 2050 and to 86 million in 2070 if the country follows the UN high variant population projections.

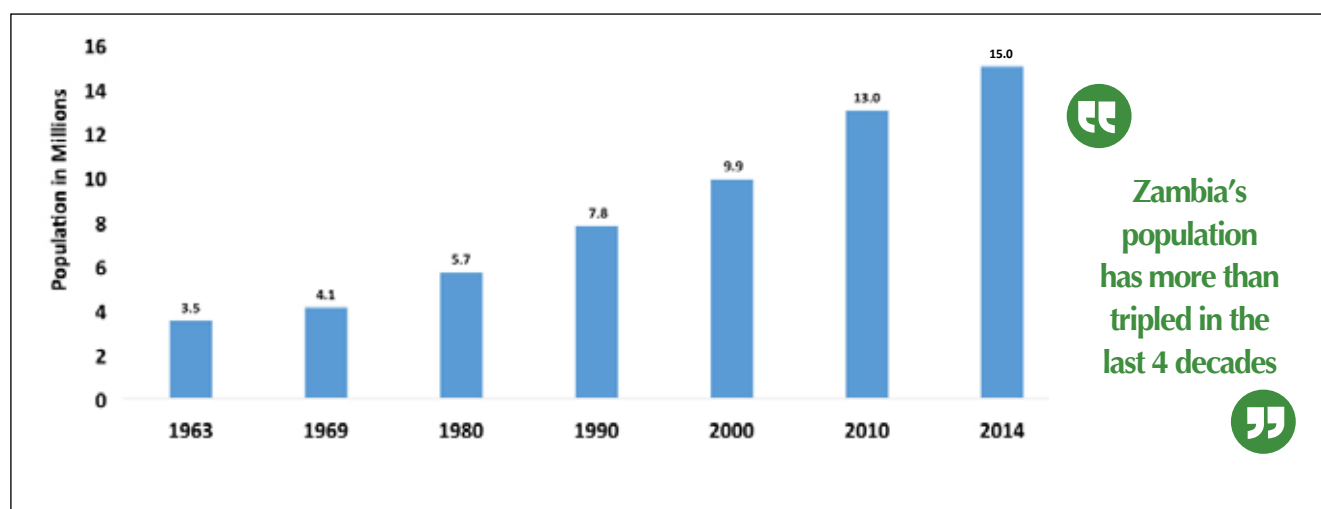
The main determinant of future population growth is how fertility will evolve in the future. The CSO population projections assume that fertility rate will drop from 5.9 in 2010 to 4.5 by 2035. This is probably an under-projection, given that fertility dropped to 5.3 in 2013 (CSO, 2013b). The population size is therefore likely to be lower than projected by 2035. The UN medium fertility variant assumes that the

current level of fertility of 5.3 in Zambia will decline to 4.44 by 2035, 3.84 by 2050, and 3.27 by 2070 (UN Population Division, 2013). The low fertility variant is half a child lower than the medium variant, while the high variant is half a child higher than the medium variant. Therefore, projected fertility under the low variant would be 3.34 by 2050 and 4.34 by 2050 under the high variant.

Population Momentum

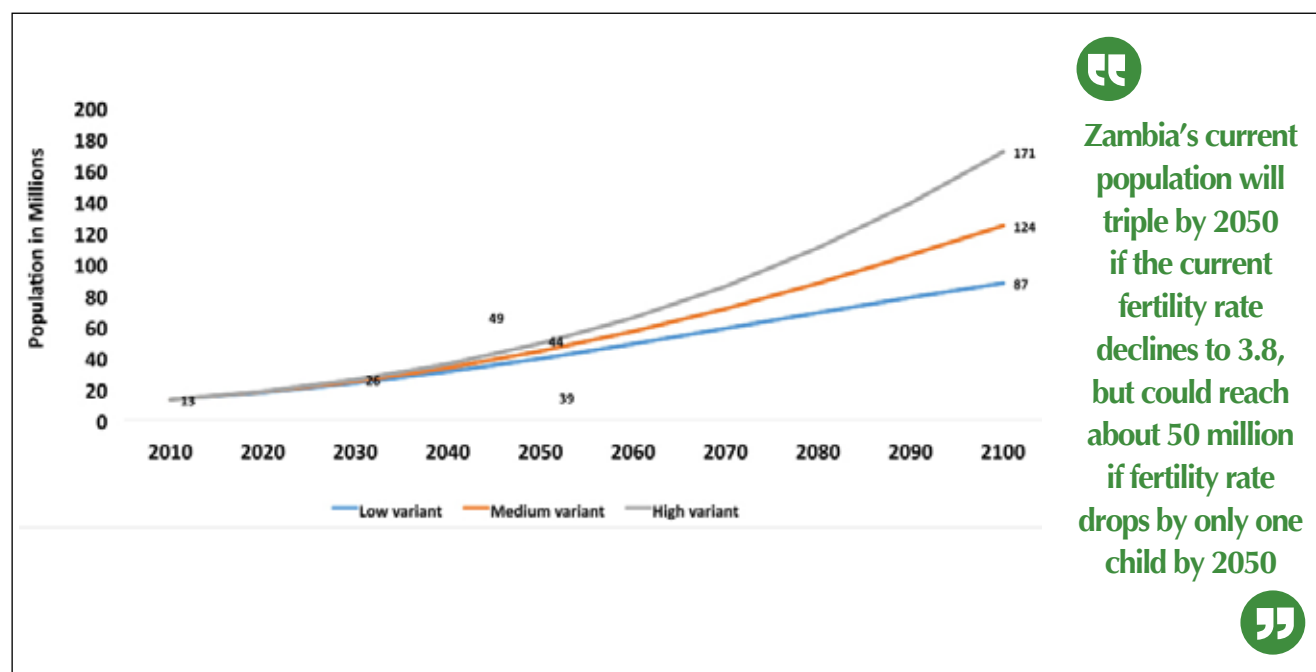
Zambia's population size will continue to grow for many decades to come even if fertility was to decline significantly and rapidly. This is due to long-standing high fertility rate, which has resulted in a very young population. A youthful population creates high population momentum, which refers to the tendency for populations to continue growing for several generations after reaching replacement fertility level (approximately 2.1 births per woman). This is due to the high concentration of young people who are yet to enter their childbearing ages. Although these young people may have fewer children compared to the older generation, their total number of births can be much larger because of sheer greater numbers of the younger generation, thus guaranteeing a substantial population increase in the future. National projections show that annual number of births will increase from 608,076 in 2011 to 941,979 by 2035 (CSO, 2013b). Figure 4.12 shows that if Zambia attained its replacement fertility level by 2020, its population would continue to grow from 13 million in 2010 and stabilise at around 29 million in 2100 (African Institute for Development Policy (AFIDEP) & Venture Strategies for Health and Development

Figure 4.10: Population Growth in Zambia, 1963-2014



Source: Central Statistical Office (2012; 2013)

Figure 4.11: Population Projections for Zambia, 2010-2100



Source: UN Population Division (2013)

(VSHSD), 2012). If the 2013 fertility level of 5.3 children per woman declined to the replacement level by 2040, Zambia's population would continue to grow and would stabilise at about 40 million people in 2115. However, if the replacement fertility level is attained in 2060, the population would stabilise at 56 million around 2120 and at 78 million around 2135 if replacement fertility level is achieved by 2080. As such, the year when Zambia reaches replacement level fertility will affect both the timing of and level at which the population size will peak.

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

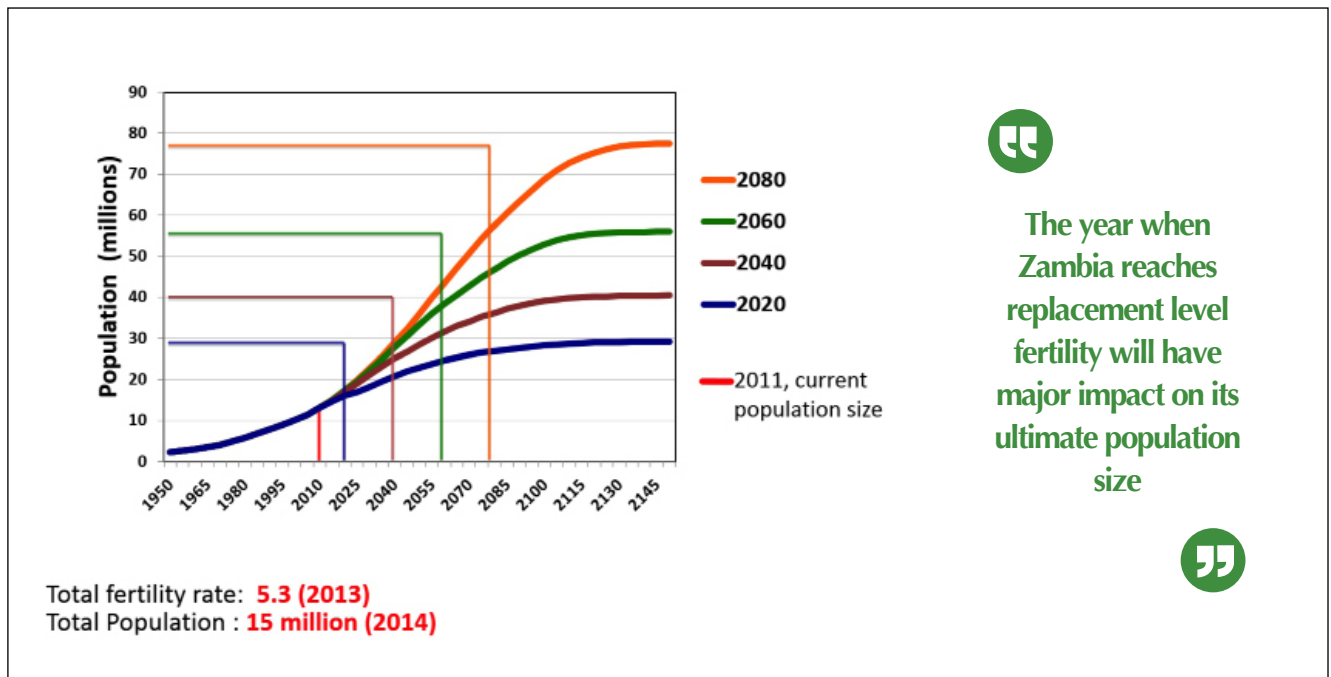
4.5 Population Structure

Figure 4.13 shows the age-sex distribution of Zambia's population, based on 2013 CSO population projection data, showing that the population is largely youthful. In 2010, about 45.4% of the population was below 15 years of age (CSO, 2012a). Based on the high fertility rate, the

age structure is expected to remain relatively unchanged for the next 25 years, according to the CSO 2013 population projections. Although the child dependency ratio has declined over time, it still remains high. The child dependency ratio declined from 104.3 % in 1990 to 90.9% in 2000 before increasing again to 93% in 2010 (Republic of Zambia, 2007; UN Population Division, 2013). Large youth populations like Zambia's create a huge dependency burden for both families and governments because resources are mostly spent on making provisions for people who are not in the labour force and are therefore not contributing to economic productivity.

The economic burden of youthful population is identified as one of the development challenges in the 2007 National Population Policy. The policy states that, "large dependency ratio is a serious burden to development, as a large part of the adult's output is consumed so that little is left for savings or investment, thus affecting capital formation for advancing economic and social development" (2007 National Population Policy, page 8). The young population age structure also presents an opportunity for economic development. If the fertility rate declines rapidly, Zambia's age structure will change, resulting in a population with more working-age people than children. In this situation, if the appropriate investments are made in education, health, job creation and governance, economic growth can be accelerated through the demographic dividend.

Figure 4.12: Projected Effect of Population Momentum on Population Size, Zambia



Source: AFIDEP and VSHD, 2012

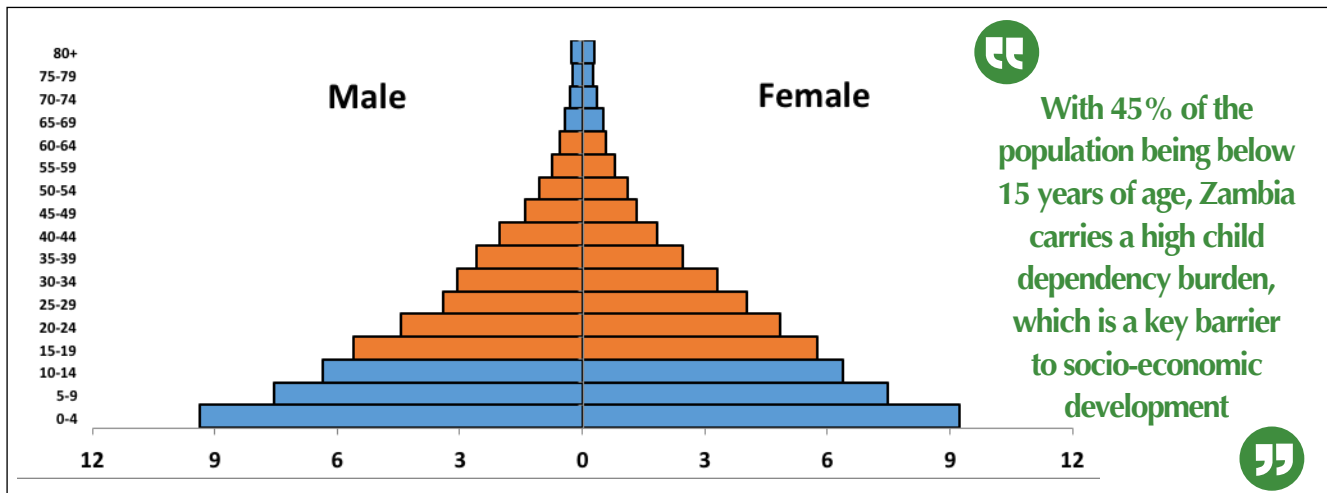
4.6 Urbanisation

Zambia is one of the most urbanised sub-Saharan African countries, with 39.5% of the population living in urban areas (CSO, 2012a). The rate of urban population growth has also accelerated from 1.5% per annum in the period 1990-2000 to 4.5% in 2000-2010 period. As such, urban population as a percent of total population grew from 34.7% in 2000 to 39.5% in 2010. This is projected to increase to 46.1% by 2035 (CSO, 2013b). In absolute numbers, urban population more than doubled in a span of 30 years, from 2.3 million in 1980 to 5.2 million in 2010 (CSO, 2003, 2012a), and, according to the CSO projections, will grow to 12.4 million in 2035. The UN projections show that the proportion of the urban population will surpass rural population by 2035, when urban population will constitute more than half of the total population (Figure 4.14) (UN Population Division, 2014).

Urbanisation has traditionally provided massive advantages to steer national socio-economic transformation efforts in developed and emerging economies. Due to poor planning, rapid growth of the urban population, low investment in urban economic infrastructure, and the limited ability of urban economies to generate decent jobs, cities in Zambia are largely inefficient and uncoordinated. The urban population is concentrated in Lusaka and the Copperbelt cities of Ndola and Kitwe. In these cities and others in the country, majority of the residents live in the squatter and unplanned settlements, characterised by abject poverty, inadequate access to rights-based social services, and unstable livelihoods. UN-Habitat estimates show that about 57% of the urban population in Zambia lived in slums in 2009 (Figure 4.15) (UN-HABITAT, 2012).



Figure 4.13: Zambia's Population Age Structure, 2013

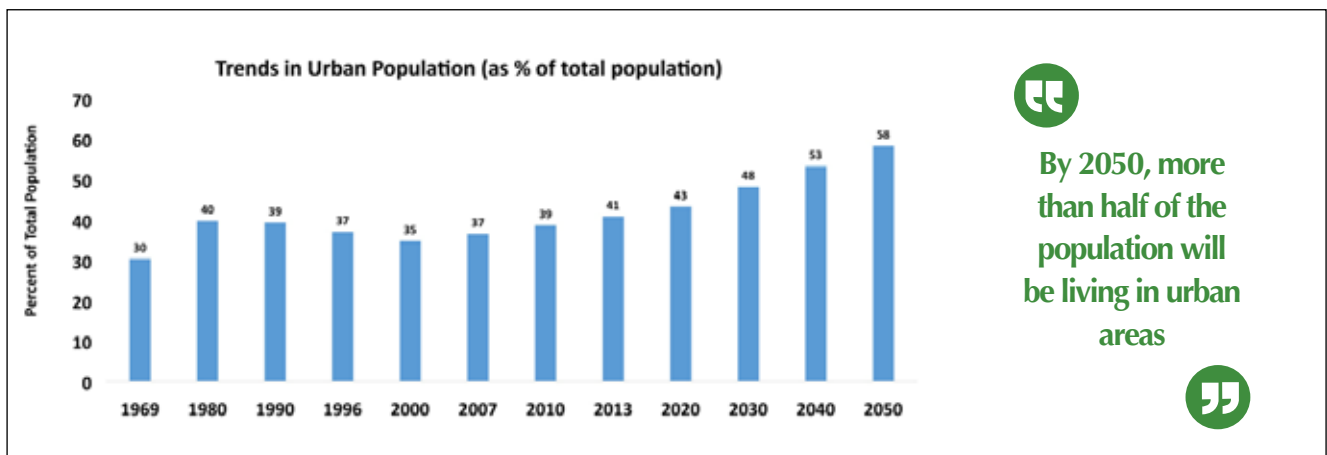


Source: Central Statistical Office et al. (2013)

As the urban population continues to grow, it will place a greater burden on urban infrastructure (e.g., housing, transport and roads, water and sanitation, healthcare and energy), coupled with increased demand for employment opportunities. In particular, this pressure will exacerbate the already poor living conditions for low-income populations and people in urban slums, who face overcrowding, inadequate shelter, inadequate clean drinking water and sanitation, and increased vulnerability to exploitation and abuse. Urban poverty in 2010 Census report was estimated at 27.5% (CSO, 2012a).

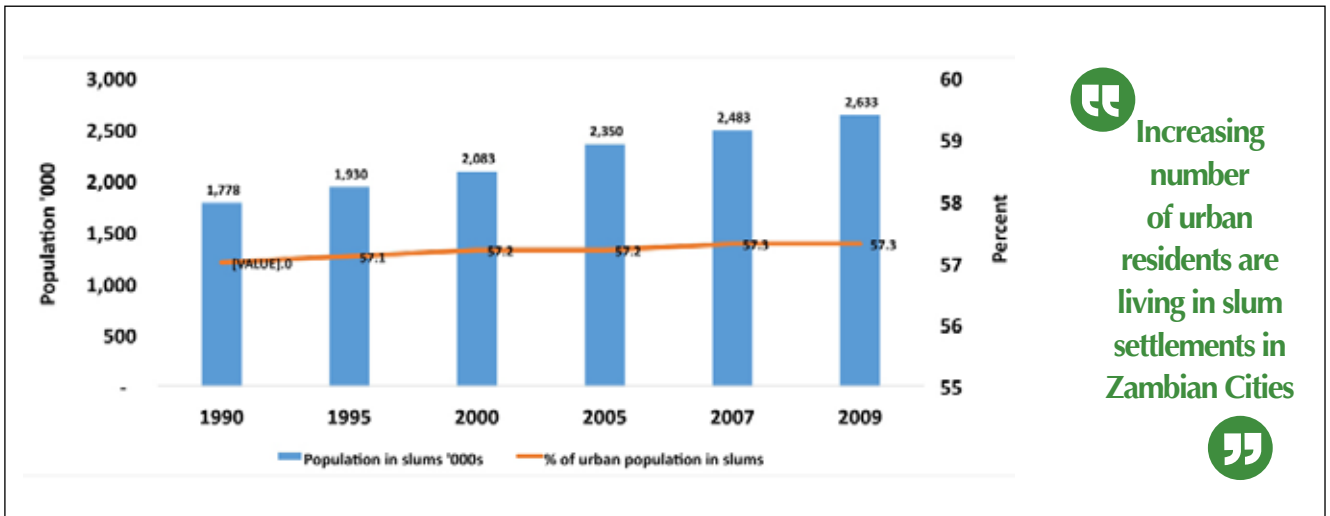
To address the growing incidence of urban poverty clustered in slum settlements, efforts to achieve socio-economic transformation in Zambia should include prioritisation of the development of urban economic infrastructure, including energy, communication and mass transportation systems. Additionally, investments should be made in the provision of high-quality basic social services, amenities, and livelihoods for the rapidly growing urban population. Zambia lacks a comprehensive policy framework for urban upgrading to address the myriad of issues in all informal settlements. Effective management of the urbanisation process can augment the attainment of the Vision 2030 goals.

Figure 4.14: Trends in Urban Population Growth in Zambia, 1969-2050



Source: UN Population Division (2014)

Figure 4.15: Trends in Slum Population and Proportion of Urban Population Living in Slums, Zambia (1990-2009)



Source: UN-Habitat (2012)



A mother and her child visit a malaria clinic in the Zambian city of Chaidna. Photo courtesy: Gates Foundation/Flickr

PAST TRENDS AND FUTURE PROSPECTS: HUMAN CAPITAL DEVELOPMENT

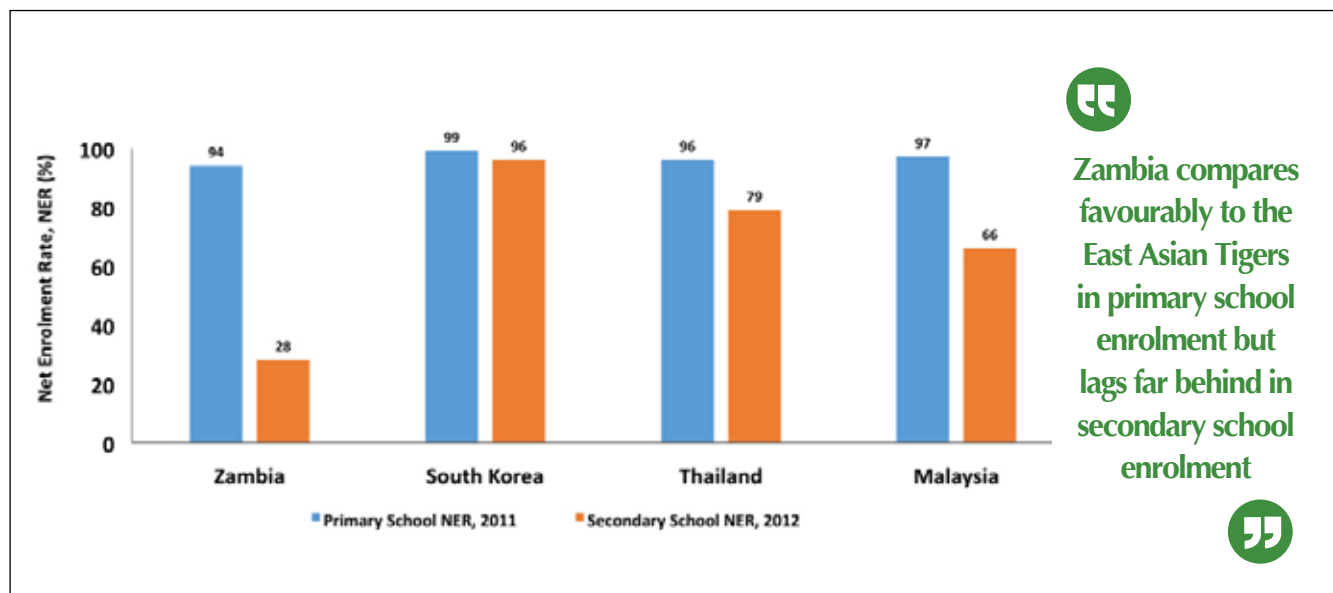
5.1 Education and Skill Development in Zambia

For Zambia to harness the demographic dividend, its labour force must be well educated and have the skills that will make it more productive and competitive in the global market. Studies show that to maximise on the potential of citizens, countries must make huge investments in education at all levels – from basic to tertiary. Although all levels of education are interdependent and should be addressed holistically, evidence shows that tertiary education has a greater impact on economic growth than lower levels of education (Barro & Lee, 2013; Oketch, McCowan, & Schendel, 2014).

Bolstered by the Free Primary Education policy introduced in 2002, school participation rates at primary level in Zambia have risen rapidly to relatively high levels in the past

decade. However, a different picture emerges at secondary and tertiary levels. For instance, by 2011, while the net enrolment rate (NER) for primary school was about 94%, NER in secondary school was estimated at around 30% (Ministry of Finance, 2011b). Gross enrolment rates drop drastically at tertiary level. This is recognised in Zambia's Vision 2030, which indicates that only 2% of the country's population had completed a Bachelor's degree or above by 2006 (GRZ, 2006). Zambia today compares favourably to the East Asian Tigers in primary school enrolment because of the increased access to primary school, but lags far behind in secondary school enrolment (Ministry of Education, 2014; UNESCO, 2014). Figure 5.1 illustrates this state of affairs. In 2011, Zambia had a primary school net enrolment rate of 94% compared to 99% for South Korea, 97% for Malaysia and 96% for Thailand.

Figure 5.1: Comparing Zambia's Primary and Secondary School Net Enrolment Rates with those of Select East Asian Countries



Source: Ministry of Education (2014); UNESCO (2014)

On the other hand, less than a third of Zambian children expected to be in secondary school were enrolled in 2013 (28%), compared to two-thirds or more of their counterparts in Malaysia (66%), Thailand (79%) and South Korea (96%).

Low transition rates from primary school to secondary school contribute to the low secondary NER in Zambia. Transition rates worsen between grades in secondary school. Figure 5.2 shows that the estimated transition rate in 2013 from grade 7 to 8 was only 61.9%, while the transition rate between grade 9 and 10 was worse at 43.2% (Ministry of Education, 2014).

The noted low enrolment rates in secondary school are caused by several factors. To begin with, many of the students drop out at the terminal level of primary school. This is because the expansion of school infrastructure and participation at primary school level has not been accompanied by adequate investments at secondary school level resulting in inadequate facilities to meet the demand for secondary school education.

Moreover, as the pupils move into their teenage years, competing interests come into play that undermines school participation. For instance, children drop out of school into the labour force to help their families generate income. (Chanda, 2014).

Despite the achievements that have been made in increasing school participation in recent years, the poor quality of education persists as a major impediment. Increased enrolments have put a lot of pressure on limited resources and schooling infrastructure. This is coupled with an insufficient number of teachers, many of whom are ill-

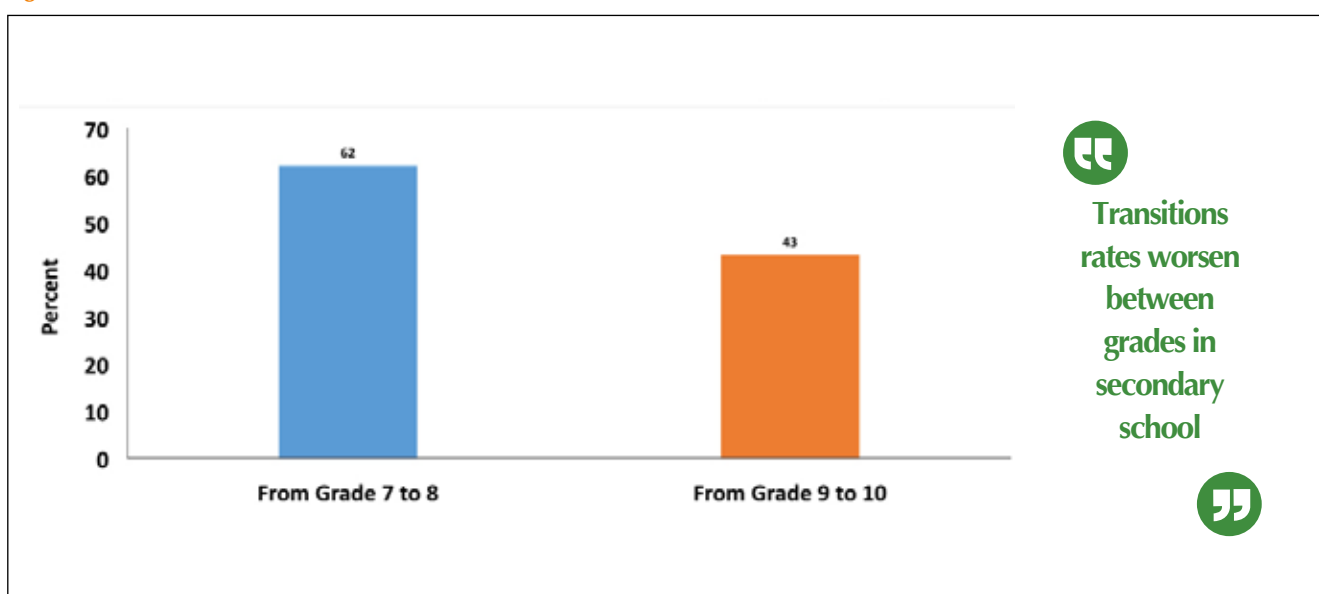
trained and poorly equipped to effectively deliver high-quality education necessary for the 21st century. Zambia for instance has a pupil-teacher ratio of 56:1 (Ministry of Finance, 2013) compared to 12:1 in Malaysia and 19:1 in South Korea (World Bank, 2014).

Furthermore, a study on the quality of primary education in Zambia concluded that against its own set benchmarks, Zambia scored poorly in the provision of basic learning materials and textbooks (Musonda & Kaba, 2011). It is worth noting that the school quality issues that exist at primary school level also exist at secondary school level, further affecting school participation.

Low levels of early childhood education (ECE) in Zambia also undermine children’s learning and development outcomes for the future. In 2012, only 18.7% of children joining primary school had prior ECE experience. Most ECE schools are privately owned and located in urban areas (Ministry of Finance, 2014), disadvantaging rural and poor children.

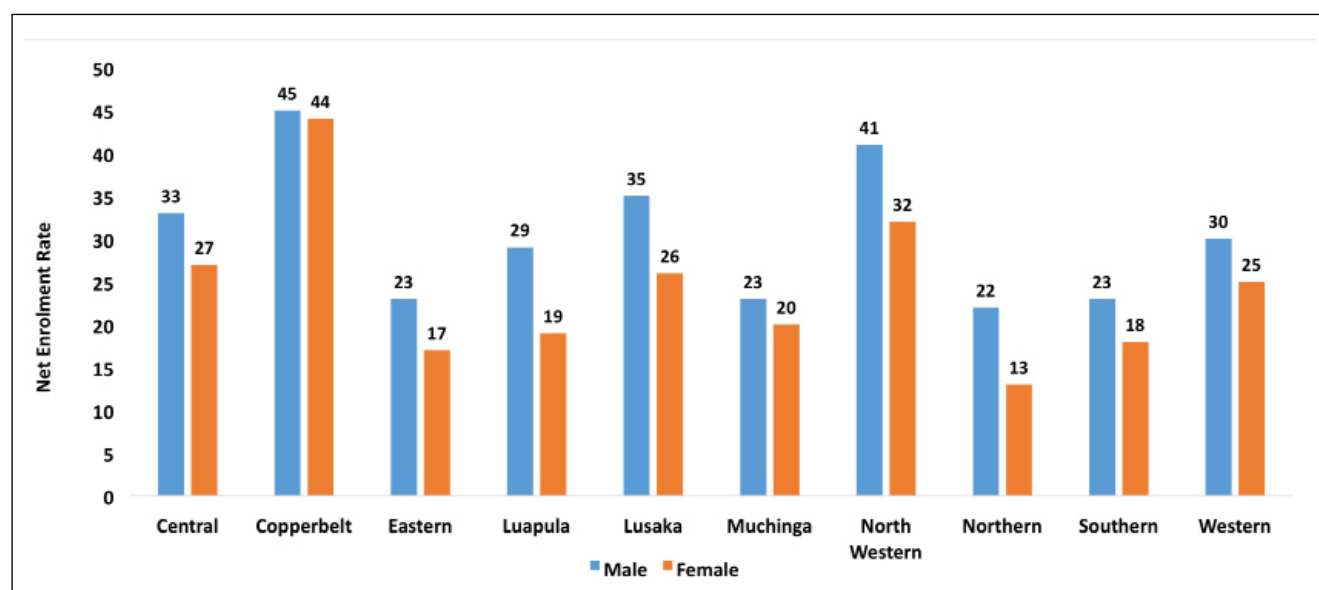
An important goal for countries in sub-Saharan Africa has been to target gender parity in school participation. In Zambia, the free primary education programme as well as the Programme for the Advancement of Girls Education (PAGE) among other policies, have been instrumental in efforts to attain this target (Kaba & Musonda, 2011). Near gender parity in enrolment has been achieved at primary school level. But the situation is markedly different in secondary school, where far fewer girls are in school compared to boys. The Gender Parity Index (GPI) in 2013 for primary school level was 0.98 (98 girls enrolled for every

Figure 5.2: Transition Rates from Grade 7 to 8, and from Grade 9 to 10 in Zambia, 2013



Source: Ministry of Education (2014)

Figure 5.3: Inequality in Secondary School (grade 10-12) Enrolment by Gender and Residence, Zambia, 2013



Source: Ministry of Education (2014)

100 boys enrolled) compared with 0.84 (84 girls enrolled for every 100 boys enrolled) at secondary school level (Ministry of Education, 2014). At tertiary level, the GPI was even worse for girls at 0.75 (75 girls enrolled for every 100 boys enrolled) in 2011 (Ministry of Finance & UNDP, 2013). These differences at higher levels suggest a higher dropout rate for girls, who face obstacles to schooling such as early marriages and pregnancies and being engaged in domestic responsibilities at an early age, thereby adversely affecting their performance in school.

Inequalities in school participation are not just limited to the gender dimension but also have a geographical dimension. Figure 5.3 illustrates regional differences in school participation in secondary education (grades 10-12) in 2013 by gender and residence.

In 2013, while the national NER for grades 10-12 was generally low at only 28%, the regional disparities are huge. The chart indicates that attention to the details of regional disparities must be incorporated in interventions to improve participation and bridge inequality. For example, while Copperbelt and North Western Provinces had the highest NERs at 44% and 37% respectively, the Northern Province had an NER that was 27% and 20% lower than Copperbelt and North Western Provinces respectively. At 20%, Southern and Eastern Provinces also had very low NERs for this level. The chart also demonstrates the differences in gender disparities at the regional level. While boys had a higher enrolment than girls at grades 10-12 in all regions, the disadvantage of girls was felt more acutely in Luapula Province where the NER for girls was 10% lower than that

of the boys, unlike the Copperbelt Province with near-parity in the NER for boys and girls.

The national level indicators mask huge urban-rural and socio-economic disparities. The 2013 Demographic and Health Survey indicates that more people in urban than rural areas had attained higher levels of education. About 22.7% and 14.1% of the urban adult male and female population respectively had completed secondary school. On the other hand, only 6% and 3% of adult rural males and females, respectively had completed secondary education. 6% and 12.7% of rural males and females respectively had no formal education compared to 6% and 9% respectively of their urban counterparts. Children from urban areas were also more likely to attend school than children from rural areas with the advantage increasing by level (84% compared to 79% for primary school net attendance ratio, and 58% compared to only 26% for secondary school net attendance ratio). Further children from the wealthiest households were much more likely to attend school than children from the poorest households and again this advantage gets larger at higher levels (90% compared to 73% for primary school attendance, and 65% compared to only 10% for secondary school attendance).

Zambia's objective should be that its population attain at least secondary education with a significant proportion also attaining tertiary education. A minimum of 12 years of completed education from grade one is expected of those who complete secondary education. As of 2013, estimates from DHS data indicate that Zambians who are 24 years or older had on average completed 6.9 years of schooling, with

men having an edge over the women (7.9 years compared to 6.9 years of schooling). On the other hand, the younger generation of Zambians under the present-day enrolment rates expect to do better than the older generation. Those beginning their formal education life now can expect to complete 10.7 years of education on average (11.1 years for males and 10.3 years for females respectively). This reflects the improvements that the government has made towards educational attainment, but still falls short of the goal to have a majority of Zambians complete their education through to tertiary level, which takes at least 16 years.

The Technical Education, Vocational and Entrepreneurship Training (TEVET) system in Zambia is key to providing Zambia's youth and young adults with skills they need to earn a living and contribute positively to the economy. The courses offered by the system focus on imparting technical and vocational skills that tend to promote self-employment especially among the youth. Yet the quality and current number of TEVET institutions are inadequate. In 2014, The Revised 6th National Development Plan noted that the TEVET system can only absorb about 5% of the 300,000 youths who leave the school system at both grades 9 and 12 each year (Ministry of Finance, 2014).

To cap the challenges to Zambians' education and skills development, there is a notable mismatch between the current education curricula at all levels and the labour market needs. Many Zambians who have gone through the education system have difficulty getting decent jobs because the skills they have learned over the years are inadequate. It is also costing the country as many companies hire foreign experts or invest considerable resources in staff training to address the existing skills gap.

In conclusion, while notable strides have been made in improving the education and skills of Zambians, there are many critical challenges to be addressed if Zambia's workers are to attain their maximum productive potential. The poor educational foundation of few ECE institutions, low transition rates to secondary and higher education, school participation inequality and the mismatch between the education imparted and labour market needs place in serious jeopardy the ability of Zambia to harness the full potential of the demographic dividend. Young Zambians are not being equipped with the requisite quality of training and technical skills needed to maximize productivity and grow the economy. A large proportion end up in the informal sector where returns to their labour are meagre and do not promote a culture of saving and investment. Instead, some of the most sought after, highly skilled and technical positions opening up in Zambia's current booming growth period

are filled in by expatriates. The inability of many Zambians to access higher education undermines the attainment of Vision 2030, which hopes to oversee a structural change from a primary agricultural base to an industrial and service-oriented economy. This situation is also likely to intensify socio-economic inequality.

5.2 Health Status of Zambia's Population

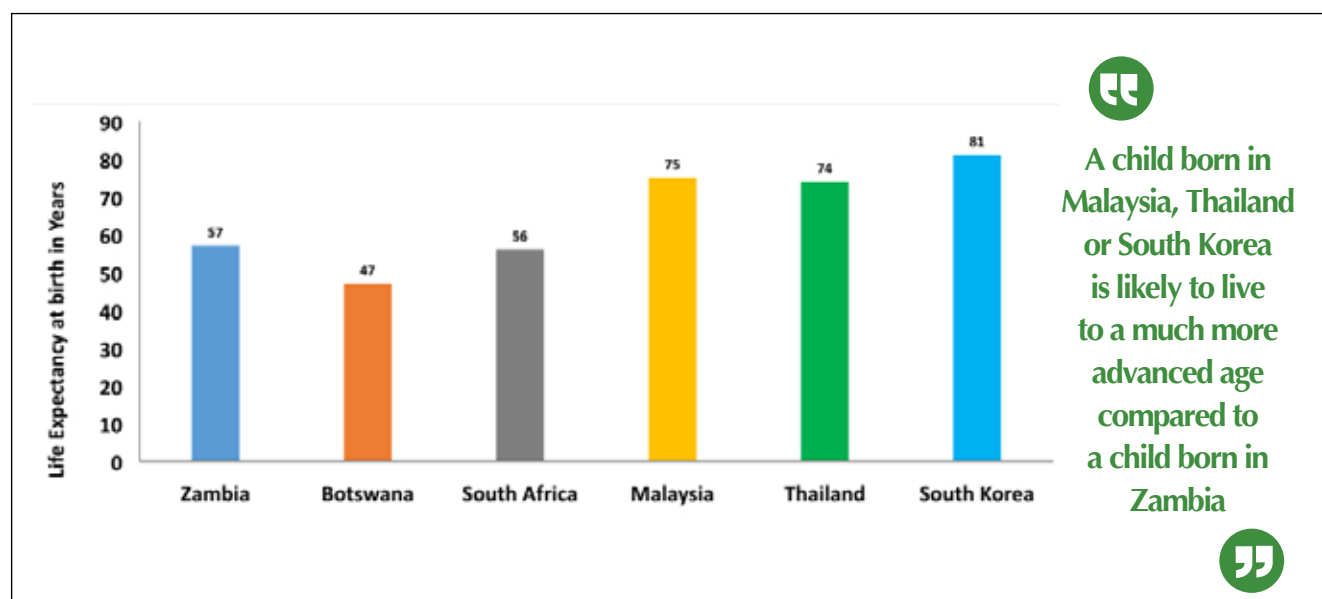
A healthy workforce is critical for the successful attainment of Zambia's Vision 2030 objective of becoming a prosperous middle-income nation. A healthy workforce will enable the country to enhance its economic productivity and earn a substantial demographic dividend. However, Zambia's labour force is currently faced with the double burden of communicable and non-communicable diseases. These include HIV, tuberculosis (TB), malaria, respiratory infections, maternal/reproductive morbidities and mortality and the emerging non-communicable diseases, including cancers, diabetes and heart diseases.

Zambia's Vision 2030 recognizes that the serious health challenges facing the population need to be tackled. Among the stated long-term goals for public health are to stop the spread of HIV, tuberculosis and malaria. It also targets access to safe and potable water to 100% of the population by 2030 and equitable healthcare for all by the same year. However, to meet these goals and to have a sufficiently healthy workforce for maximum productivity, the country needs to make significant efforts and investments.

Life expectancy at birth, an indicator of mortality conditions and a good proxy of health conditions in a country, shows that although Zambia might compare favourably with some of the good economic performers in the region like South Africa and Botswana, it lags far behind the East Asian Tigers (Figure 5.4).

A child born in Zambia in 2014 expects to live to 57 years of age, compared to 47 years in Botswana and 56 years in South Africa. Better overall health indicators and consequent lower mortality rates in East Asia mean that a child born in Malaysia, Thailand or South Korea is likely to live to a much more advanced age - 75, 74 and 81 years for the three countries respectively (World Bank, 2014). The implication is that workers in the East Asian countries will lead a healthier, longer and therefore more economically productive life than workers in Zambia. The high burden of disease partly accounts for Zambia, Botswana and South Africa's much lower life expectancies compared to the East Asian countries.

Figure 5.4: Life Expectancy in Zambia is Comparable to Regional Counterparts but far behind East Asian Countries



Source: World Bank (2014)

HIV/AIDS, tuberculosis, and malaria are major contributors to both morbidity and mortality in Zambia. As part of MDG 6, the country target is to halt and begin to reverse the spread of HIV/AIDS by 2015 and is on track to do so. From 1990 to 2011, the rate of new infections more than halved (Ministry of Finance & UNDP, 2013). HIV prevalence also declined from 16% in 2002 to 13.3% in 2013 (CSO et al., 2014), although this is still high and continues to have negative socio-economic impacts. The incidence of malaria per 1000 persons in 2013 was 358.5, with the reported number of cases for the year exceeding half a million (Ministry of Finance, 2013).

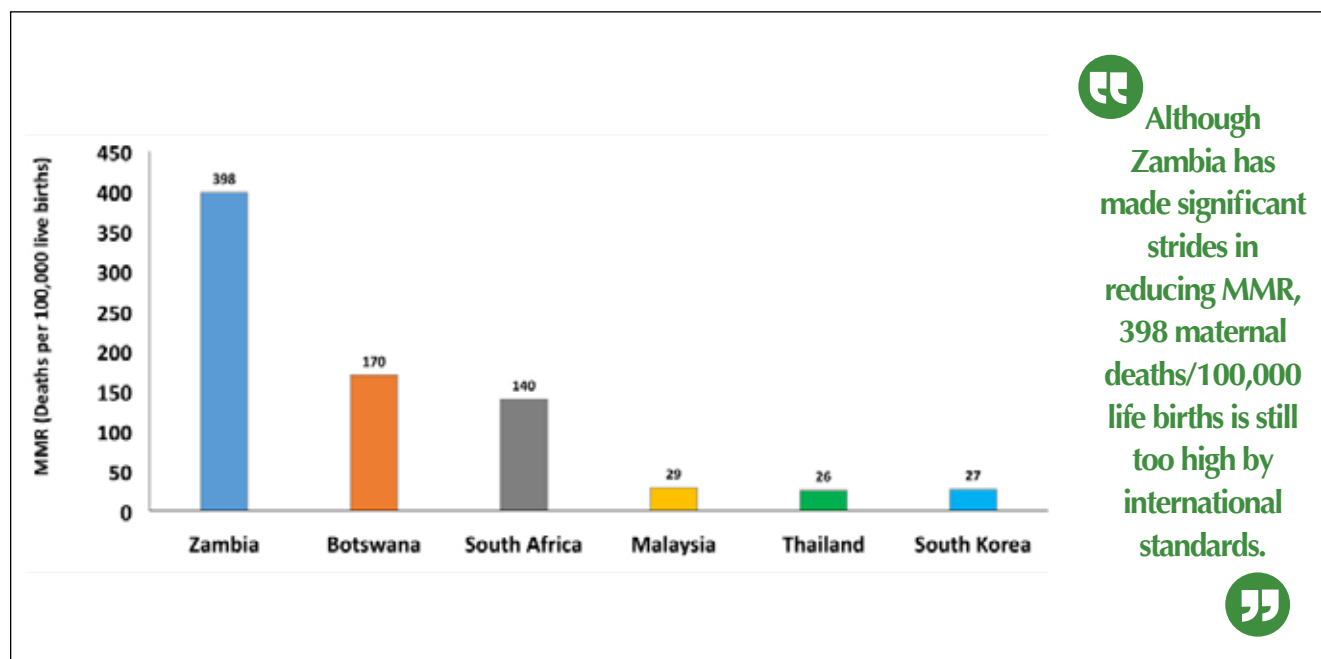
The cumulative costs and negative effects of these leading causes of morbidity and mortality on economic productivity are substantial. For example in terms of malaria, Africa is the most affected region worldwide. The Centres for Disease Control and Prevention (CDC) reports that malaria costs Africa an estimated USD 12 billion every year. This figure factors in costs of health care, absenteeism, days lost in education, decreased productivity due to brain damage from cerebral malaria, premature deaths, and loss of investment and tourism. Malaria has slowed economic growth in African countries by 1.3% per annum, the compounded effects of which are a GDP level up to 32% lower than it would have been if malaria had been eliminated in 1960. In Zambia, it

has been estimated that the suppression of malaria would lead to annual increase in GDP of up to 12% (Jobin, 2014). Therefore access to both preventive and curative health care services should be improved to mitigate effects of ill health on productivity.

A major public health concern captured by MDG 5 (Improving maternal health) is maternal mortality. Zambia has made significant positive strides in curbing maternal mortality. Between 2001 and 2013, the maternal mortality ratio (MMR) nearly halved from 729 deaths per 100,000 live births to 398 deaths per 100,000 live births (CSO et al., 2014). However, this level is still too high by international standards. For instance, Figure 5.5 shows that Zambia's MMR in 2013 was more than twice the level in Botswana (170) and South Africa (140), and extremely high compared to Malaysia (29), Thailand (26) and South Korea (27).

The high level of MMR in Zambia shows that the country needs to make reforms and significant investments to avert maternal deaths. The major direct causes of maternal mortality in Zambia are complications arising during pregnancy and birth, such as haemorrhage, sepsis (blood infection), obstructed labour, hypertensive conditions, as well as unsafe abortions (Ministry of Finance & UNDP, 2013). Further, while hundreds of women die in childbirth

Figure 5.5: Comparing Zambia's Maternal Mortality Ratio (MMR) with that of Select Other Countries



Source: Ministry of Finance and UNDP (2013)

or due to pregnancy complications, many more experience morbidity that can drastically affect their quality of life and productivity. A study in West Africa for instance, estimated that severe maternal morbidity from direct obstetric causes was nearly 30 times more frequent than maternal mortality (Prual, Bouvier-Colle, Bernis, & Breart, 2000). The loss of women from the labour force due to death or debilitating conditions has a negative impact on the country's economy. It also has serious implications for the wellbeing of households as studies have revealed that women's incomes goes towards food, education, medicine, and other family needs—a direct investment in the family's wellbeing (Jowett, 2000). Evidence has also demonstrated that maternal orphans are at a higher risk of mortality than other children (Ueyama, 2007).

While infectious diseases still rank as priority areas for intervention for the Ministry of Health, Zambia must also pay more attention to the emergence of non-communicable diseases (NCDs) as a major challenge to the health status of its citizens and by extension to that of the productivity of the nation. NCDs like cancer, diabetes, heart diseases, stroke, mental illness, asthma and obesity are on the rise (Ministry of Finance, 2011a; FAO, 2009). Some of these conditions are often associated with lifestyle changes that include unhealthy nutrition habits and physical inactivity, and can be exacerbated by rapid urbanisation and urban

lifestyles. It is important to stay a step ahead of the challenge by investing in better diagnoses, case management and research on these ailments.

Vision 2030 identifies access to clean and safe water, and sanitation as a major barrier to good health. Poor water and sanitation conditions are major contributors to the burden of disease and expose workers to water-borne diseases and related ailments. It should be noted that although urban areas have higher access, the water supply and sanitation services are often poor in the peri-urban and informal settlements where many urban residents live. The 6th National Development Plan (SNDP) notes that water supply and sanitation services in Zambia were very low with only 35 sewerage schemes in existence countrywide while less than half the urban population had access to adequate sanitation (Ministry of Finance, 2011a).

Zambia's health challenges are worsened by the healthcare worker crisis. Though efforts have been made, through the National Health Strategic Plan to increase healthcare staff, a significant staff deficit persists in addition to the problem of inequitable distribution across the country. The R-SNDP (Ministry of Finance, 2014) for example, noted that in 2012 there were 35,015 health workers against a recommended number of 59,998. Skewed distribution of health workers in Zambia was revealed in a recent study that showed that the provincial distribution of personnel favoured

urban provinces, with Lusaka Province for instance having a doctor-to-population ratio of 1:6,247, compared to Northern Province with a ratio of 1: 65,736. Further, the study highlighted significant shortages in most staff cadres, except for the support staff, which showed a significant surplus (Ferrinho, Siziya, Goma, & Dussault, 2011).

These highlighted health challenges facing Zambia's Workers should be addressed if Zambia is to harness a substantial demographic dividend. Zambia's labour force

should be healthy because poor health undermines labour productivity. On the other hand, better health outcomes will increase GDP over the long run, generating a fiscal dividend that could be reinvested to further advance workforce skills and public health, among others.. To ensure that the next generation of the labour force will bear a minimal disease burden and ensure a competitive labour force, Zambia should reinforce its on-going efforts in improving public health and general health care services for its populace.



A Zambian school boy. Photo courtesy: Liv Unni Sødem/Flickr

ECONOMIC TRENDS AND PROSPECTS

6.1 Promising Economic Trends and Fundamentals

Zambia has experienced steady economic growth in the past decade, averaging at 6.7%. Although the economic growth in real terms decreased to 6.5% in 2013 from 7.6%, in 2010 in large part due to a poor agricultural harvest, particularly maize and cotton, growth is projected to increase to 7.4% in 2015 (AfDB et al., 2014). Zambia was ranked among the 10 fastest growing economies in SSA in 2012, attaining lower middle income country (MIC) status with a per capita income of USD 1,299 in 2011 (World Bank, 2013a).

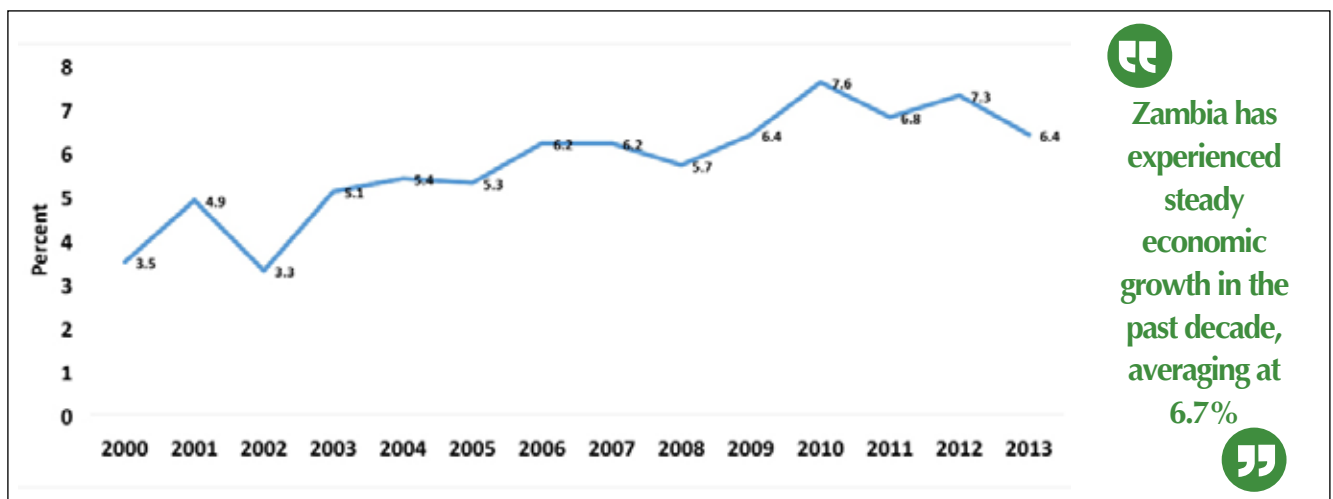
Zambia's first long-term development strategy, Vision 2030, developed in 2006, defined aspirations to transform the country from a primary product-dependent economy to a strong and dynamic middle-income industrialised country by 2030, with a GDP per capita of USD 2,185, (in 2006 GDP per capita was USD 270). The country rebased its economy in 2013, and has since graduated to a middle-income country. The GDP per capita in 2013 was USD 1,839, which is short of Vision 2030's target by only USD 346.

The GDP in real terms in 2013 was USD 26,810 billion. Copper remains the mainstay of the country's economy, contributing about 70% to export earnings. Steep increase in copper prices helped drive investments in the copper industry and related infrastructure — some 315% higher in

nominal terms than they were a decade ago, although they dipped in 2013 (World Bank, 2013b). Over the last few years, however, non-traditional exports have grown substantially. The country has undertaken economic diversification to reduce reliance on the copper industry and exploit other components of Zambia's rich resource base by promoting agriculture, tourism, gemstone mining and hydro-power generation (AfDB et al., 2014). Zambia is internationally recognized as a major producer of the world's highest-grade copper and cobalt (KPMG, 2013), and ranks as the world's third largest producer of copper and the world's second largest producer of cobalt (Ernst & Young, 2014).

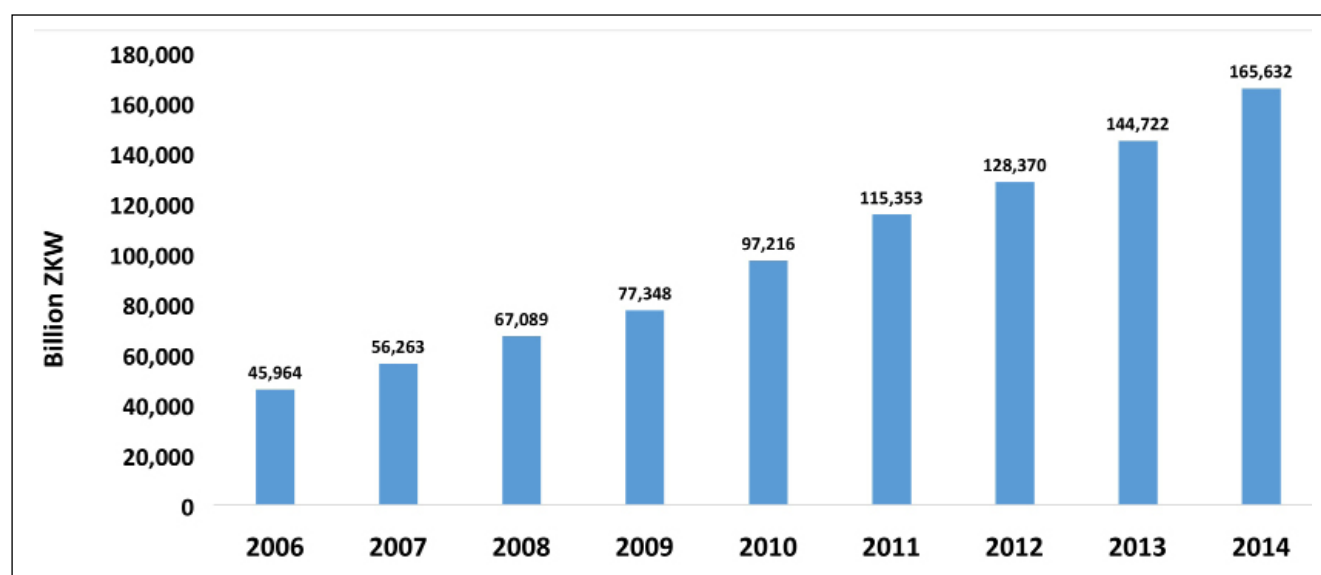
The country is attracting increased Foreign Direct Investment (FDI), particularly for financial services, extractive industry and infrastructure development. According to the 2014 Ernst & Young report, Zambia was ranked among the top ten biggest FDI recipients in Africa in 2013, with a 31% increase between 2012 and 2013 (Ernst & Young, 2014). The biggest investors in the country were South Africa, China and India. As a result, Zambia has demonstrated strong economic growth, averaging 6.7% per year since 2000 (Bank of Zambia, 2014). GDP grew from USD 4,901 billion in 2003 to USD 30,673 billion in 2014 (Ministry of Finance, 2014) (Figures 6.1 and 6.2). A stable macroeconomic environment (inflation of 6% and 7.3% in 2011 and 2012 against a target of 7%), strong export growth, increasing FDI, and increased private investments have contributed to this growth.

Figure 6.1: Real GDP Percent Growth, Zambia, 2000-2013



Source: Ministry of Finance Data, 2014,

Figure 6.2: Zambia's GDP at Current Price, 2006-2014



Source: Ministry of Finance Data, 2014

The steady growth of the Zambian economy over the past decade shows that the country can decisively address its development challenges and achieve the socio-economic transformation envisaged in Vision 2030.

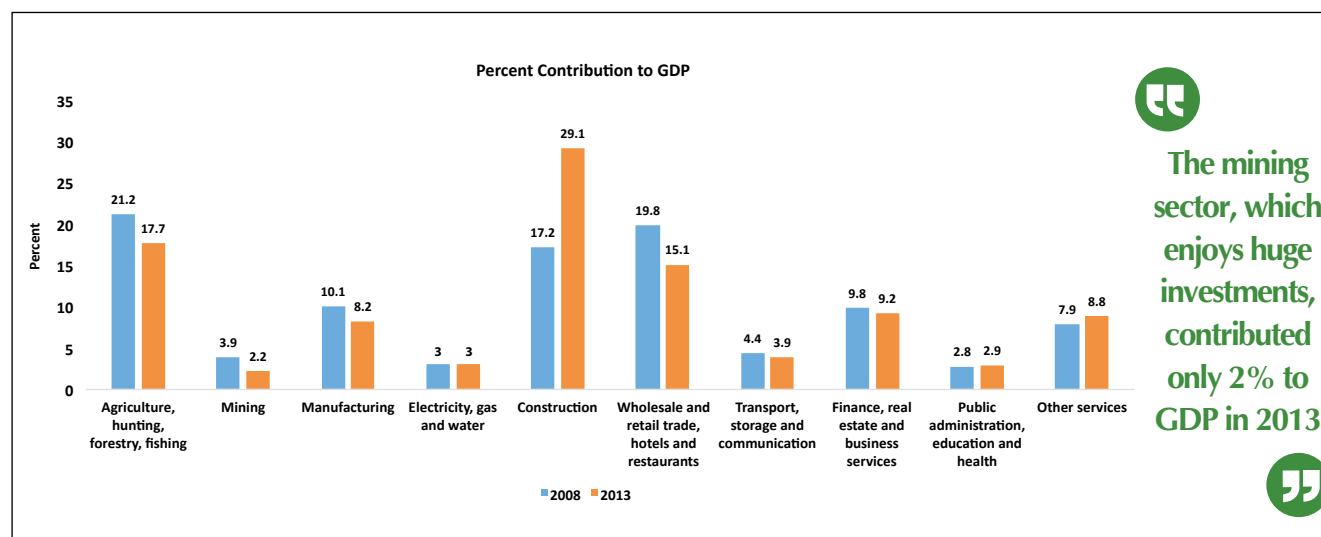
6.2 Restructuring Zambia's Economic Growth to Create More Jobs

Although Zambia's economic growth is mainly driven by the extractive industry, there is a push towards diversification to non-traditional exports, which grew by 29% of total exports in 2012 (Republic of Zambia, 2014). Despite

copper being the largest export earner, the mining and quarrying sector only contributes 4% to GDP. Growth in GDP is largely driven by construction (29.1%), agriculture (17.7%), manufacturing (8.2%), trade, hotels and restaurants (15.1%), and finance (9.2%) (Rasmussen P. E., K. Munkoni, & G. Lwanda, 2014).

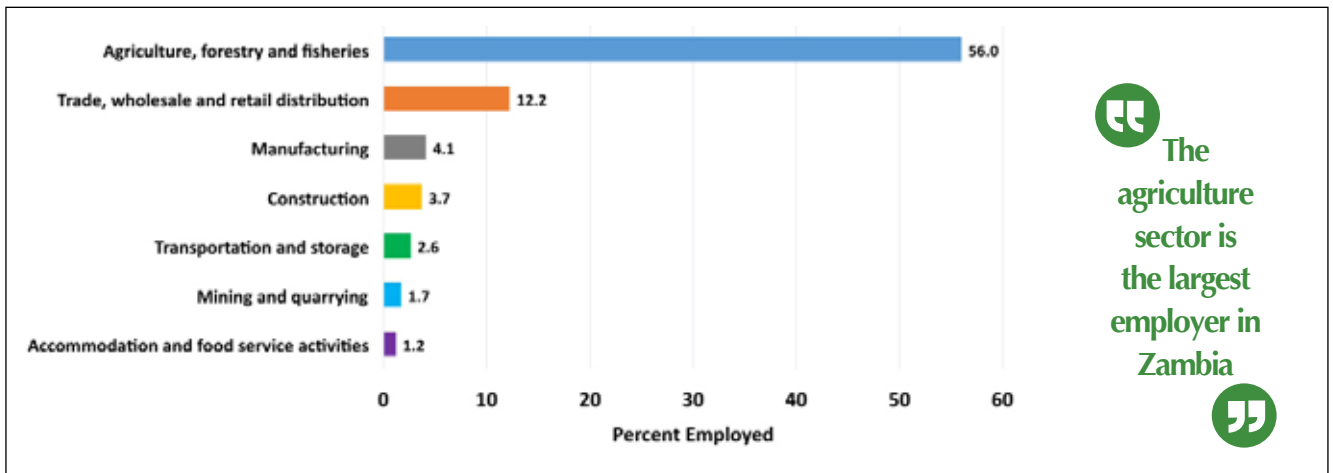
Agriculture is the major employer in the country, employing about 56% of the people, while trade, wholesale and retail sectors accounted for 12.2%. The rest of the industries each employ less than 5% of the working population (Figure 6.4) (Republic of Zambia, 2014). The agriculture sector's potential to contribute to the country's development remains largely

Figure 6.3: Change in GDP by sector (%), Zambia, 2008 & 2013



Source: African Development Bank et al. (2014)

Figure 6.4: Distribution of the Employed Persons by Select Industries (%), Zambia 2012



“ The agriculture sector is the largest employer in Zambia ”

Source: Central Statistical Office (2013)

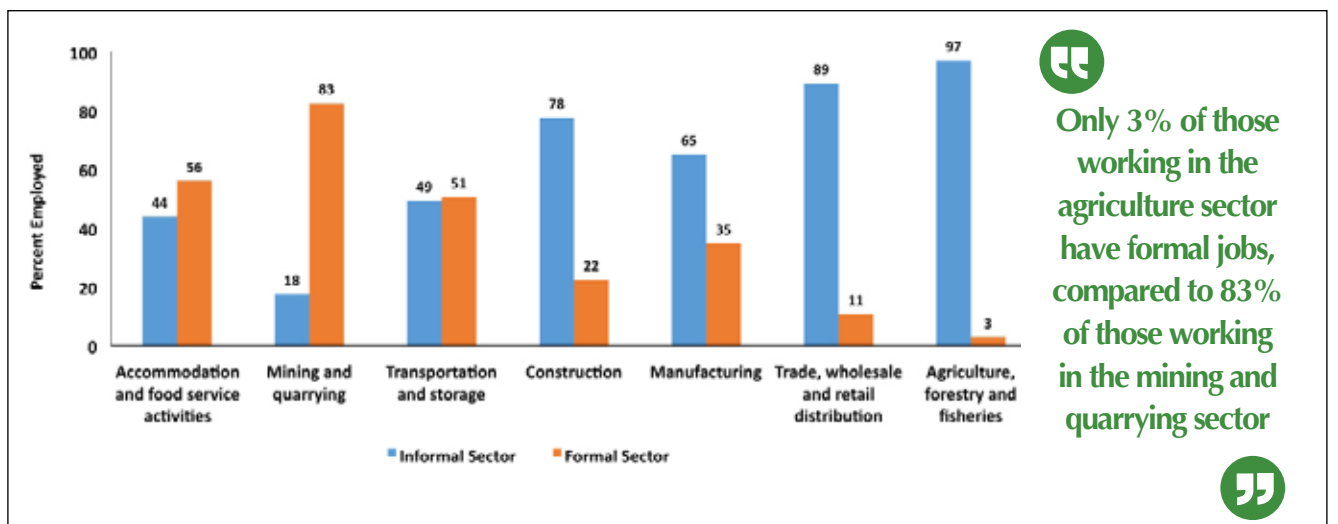
underexploited because of the limited investments which compared to sectors like mining and quarrying, which have very low potential for job creation (World Bank, 2013b). The agricultural sector has not experienced consistent and sustainable productivity growth, due to low mechanisation, poor access to markets, low access to finance and modern farm inputs, poor infrastructure in rural areas and under-funded research and extension services. These are among the main reasons Zambia’s economic growth has not been associated with the creation of adequate numbers of decent jobs or reductions in unemployment and underemployment.

More than three quarters (83.4%) of the employed are in the informal sector, mainly subsistence agriculture and self-employment. These are characterised by low earnings, productivity, capital investments and low levels of technology, thus offering limited prospects for improving

the living standards of the population. Although formal sector employment has grown, its proportion remained low at 16.6% of total employment in 2012, having increased from 10% in 2008. The extractive sector takes the biggest share of formal jobs at 83%, while the agricultural sector has the least (3%) (Figure 6.5) (CSO, 2013a). The relatively low unemployment rates in 2012 (7.9%), mask high levels of underemployment. According to the 2012 Labour force Survey, 70% of those in employment are underemployed (CSO, 2013a).

In the last decade, Zambia has significantly increased its exports as percent of GDP. In 2003, the country had more imports than exports as percent of GDP, but since 2004, Zambia is exporting more, mainly copper and cobalt (Figure 6.6). The gap between imports and exports is however closing, with the amount of imports increasing against

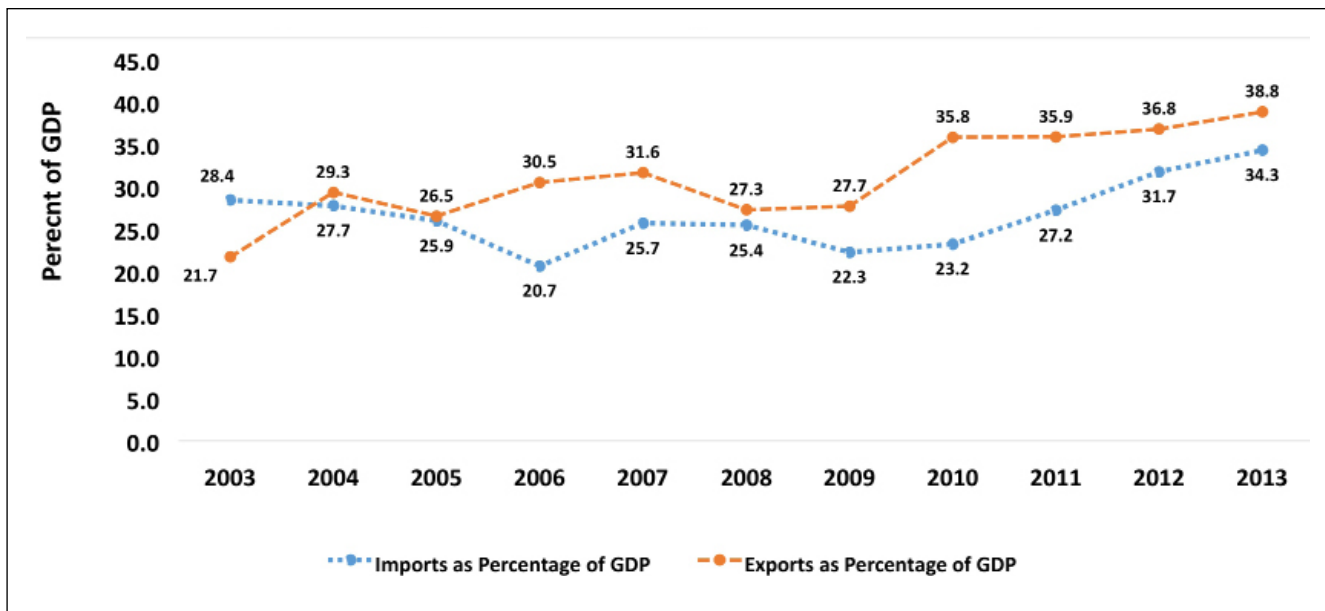
Figure 6.5: Distribution of Employed Persons by Select Industries and Sector of Employment (%), Zambia 2012



“ Only 3% of those working in the agriculture sector have formal jobs, compared to 83% of those working in the mining and quarrying sector ”

Source: Central Statistical Office (2013)

Figure 6.6: Trends in Imports and Exports as Percent of GDP, Zambia, 2003–2013



Source: Ministry of Finance Data, 2014

a relatively constant level of exports. With the growing population of the labour force, it will be important to analyse whether the increased export base will lead to job creation to alleviate the plight of the jobless.

The economy will have to expand to accommodate the expected population growth. Integrating the underemployed and youth into the labour force will require a decisive and deliberate economic policy mix. The main thrust of the R-SNDP is to improve the livelihoods of the Zambian people through promoting growth in sectors that employ comparatively more people such as Agriculture, Construction, Manufacturing and Tourism. The Plan identifies six challenges that face the labour market, which include the following:

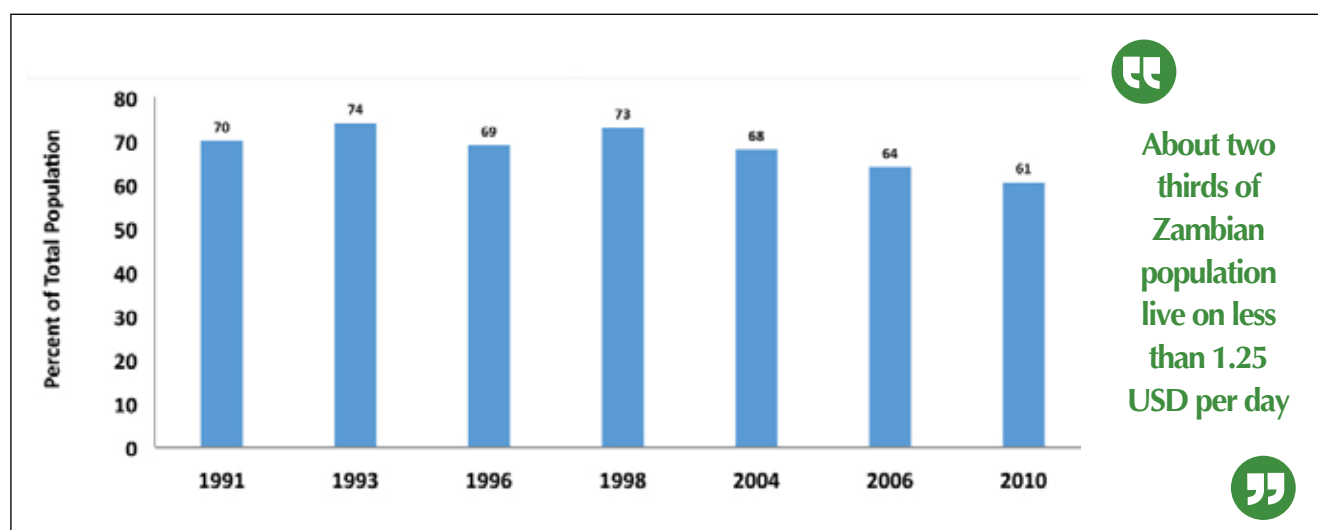
- Low manufacturing and industrial base;
- Low levels of economic diversification, with mining being main economic driver;
- Mismatch between supply of skills and demands of industry, including lack of information on existing job opportunities;
- Inadequate post-primary and post-secondary education opportunities that support practical work related skills, with a concentration towards provision of white collar job-related training programmes as opposed to technical and vocational skills;
- Limited graduation of Micro and Small to Medium Scale Enterprises; and

- Low quality of work with majority of the population employed in informal sector and high incidences of the working poor.

The target of the development plan is to implement interventions to address these challenges and to create 800,000 formal jobs by 2016 (Republic of Zambia, 2014). The positive economic trends at the macro level have not translated into improvement of the standards of living for the majority of the Zambian people. In particular, job creation has not been commensurate with the gains registered from economic growth. However, the sectors that have contributed most to growth have not significantly contributed to job creation. The country still records limited progress in inclusive and equitable economic growth with poverty level of 60.5% (Figure 6.7). Although the poverty level generally declined from 70% to 60.5% between 1991 and 2010, the absolute numbers increased from about 6 million in 1991 to 7.9 million in 2010 due to the increase in the population (Republic of Zambia, 2014).

Notably, poverty persists as a rural phenomenon – the incidence of poverty in rural areas is 77.9% compared to 27.5% in urban areas. Poverty is also highest in rural agricultural areas. In addition, income inequality increased overtime, with the Gini coefficient rising from 0.53 in 1990 to 0.65 in 2010 (UNDP, 2014; World Bank, 2014). Inequality is highest in the urban areas. Increasing levels of income inequality could perpetuate intergenerational transmission of poverty. Therefore, it is imperative that all sections of the population are enabled to participate productively in the economy and are guaranteed economic

Figure 6.7: Trends in Poverty Headcount Ratio at National Poverty Line, Zambia, 1991-2010



Source: Central Statistical Office (2012)

security. The R-SNDP has a target of reducing the headcount poverty levels from 60.5% in 2010 to 38% by 2015.

Youth (15-34 years) unemployment, at 10% in 2012 compared to the adult rate of 7.9%, remains one of the biggest challenges in Zambia. According to the 2012 labour force survey report, those aged 20-24 had the highest unemployment rates at 16.6%. The urban youth are more affected; more than 30% of those aged 20-24 were unemployed in urban areas compared to 6.1% in rural areas (CSO, 2013a). The 2013 Afrobarometer² survey showed that unemployment was ranked by youth (18-30 years) as the most important problem they face, while the older generation ranked it as the third most important (Mujenja Fison, 2014), a clear indication that the youth are more affected by unemployment.

The country needs to reinforce its recent economic growth by defining and prioritising sectors and industries that have a comparative advantage in both generating growth and creating decent jobs for the labour force. A starting point would be modernising the agriculture sector to enhance its productivity. Based on the experience of the Asian Tigers and many developed countries, it is logical to industrialise from the agricultural base that provides livelihoods for most families and has higher job-multiplier effects than many of the current fast-growing industries. In this regard, Zambia is among the first countries on the path to aligning its development plans to the Common African Agriculture Development Programme (CAADP) strategic framework for boosting agricultural productivity and growth. Specifically,

the framework aims at increasing agricultural growth to at least 6% per annum, thereby enabling income growth and wealth creation sufficient to reduce poverty by 50% by 2015. The strategic focus of Zambia CAADP include agricultural productivity improvement; sustainable land and water management; agricultural marketing development; agricultural investment promotion; food and nutrition security; and research and extension enhancement. The CAADP process in the country has been participatory and inclusive of key stake holder groups including the Zambia National Farmers' Union (ZNFU), private sector, agricultural research institutions, the academia, civil society groups and development partners.

6.3 Fiscal Policies and Governance

Zambia has enjoyed a long period of political stability since independence, and carried out credible peaceful elections and government transitions even after the return of multi-party democracy in 1991. According to the 2014 African Economic Outlook developed by the African Development Bank, Zambia is ranked fourth in Africa in free and fair elections. The country is also classified as having a low risk of debt distress according to WB-IMF debt sustainability analysis done in 2012 (AfDB et al., 2014). The country's Vision 2030 identifies good governance as one of the requisite areas for socio-economic development. The Vision's target is to ensure total adherence to principles of good governance, through: improving access to justice; enhancing human

²The Afrobarometer is a comparative series of public attitude surveys, covering 35 African countries. It measures public attitudes on democracy and its alternatives, evaluations of the quality of governance and economic performance.



rights awareness; achieving and sustaining efficiency and effectiveness in the delivery of public services; and attracting and retaining quality technical, professional and managerial staff in the public service. The R-SNDP also identifies good governance as a precursor to accelerated development in the economy and proposes governance reforms to enhance separation of duties and responsibilities to ensure efficient implementation and accountability in government.

As a result of increased government commitment, the country has made progress in economic governance as evidenced by improvements in domestic revenue mobilisation and public administration since 2000. In addition, Zambia stepped up the battle against corruption between 2000 and 2012, including, for example, cases being pursued to recover stolen assets (AfDB et al., 2014). Further, government institutions are developing and reinforcing transparency and accountability efforts. There was, however, a decline in budget transparency from 2010 to 2012 (AfDB et al., 2014)

The favourable investment environment has resulted in high investor confidence, as evidenced in the success of the two Euro Bonds issued in 2012 and 2014. Net FDI and portfolio investments grew steadily over 2009–2012, from USD 305 million to an estimated USD 1.1 billion. FDI inflows continue to be directed mainly at mining, with some considerable contributions from the financial institutions, wholesale trade, real estate activities and communications (World Bank, 2013b).

The country has experienced fluctuations in local savings. According to the World Bank's World Development Indicators, Zambia's national gross saving as percent of GDP has fluctuated over time, averaging at 11% between 1978

and 2012 (World Bank, 2014). The low levels of savings are likely a result of the high levels of underemployment and low wages as well as the high costs associated with the prevailing large family sizes that undermine the ability to save.

The country will need to generate the critical infrastructure necessary to facilitate industrial-based economic growth, including energy supply, communication and transportation, given the impact of poor economic infrastructure on businesses efficiency and production costs. Enforcing accountability in the use of public, financial and other resources and in service delivery is not only central to attracting investment, but also in accumulating finances to invest in human capital and infrastructure development. Although Zambia has not had major corruption scandals, the practice still exists. According to Transparency International (TI), the corruption perception index score for Zambia improved from 26 in 2001 to 38 in 2013³ (Transparency International, 2013). This indicates that efforts to address corruption are bearing fruit, but much more needs to be done to ensure individual and institutional accountability in implementing the country's positive development policies and in the use of public resources.

To improve accountability, the country should inculcate performance-based culture in both the private and public sectors, and embrace robust monitoring, evaluation and performance management systems. Effective devolution of resources and decision-making to sub-national levels will help in instilling responsibility for achievement of the Vision 2030 ideals at all levels of leadership and ensuring buy-in from the citizenry.

³ 0 represents the worst corruption levels, 100 represents little or no corruption

PROSPECTS AND POTENTIAL CONTRIBUTION OF THE DEMOGRAPHIC DIVIDEND IN ZAMBIA

7.1 Opportunities for Harnessing the Demographic Dividend in Zambia

Zambia can exploit its population characteristics and economic opportunities to advance its economic prosperity by implementing appropriate policies. A rapid decline in fertility from the current high levels would present opportunities to benefit from the resultant, larger working-age population. As the current youthful population joins the labour force, the large working population relative to dependants will produce more if gainfully employed and will simultaneously release resources for investment in economic development and family welfare that will spur further economic growth. A smaller dependant population resulting from a shift in age structure can unleash Zambia's potential to achieve its transformational socio-economic development goals for Vision 2030 and beyond. This, however, will be realised only through an integrated approach; essential investments in human capital development for a large labour force that is healthy, well-educated and highly skilled must be coupled with economic reforms that generate adequate and decent jobs.

Following a decade of sustained economic growth and the rebasing of its economy, Zambia has recently attained lower middle-income status, but the goal outlined in Vision 2030 to progressively migrate labour from the agriculture (primary) to industrial (secondary) and service (tertiary) sectors still has a long way to go. Efforts must be made to ensure that the growth is inclusive and income inequality is reduced. Recent estimates indicate a Gini coefficient of 0.65 (UNDP, 2014) and a national poverty headcount of 60.5 % (CSO, 2012b), which are far off the targets outlined in Vision 2030 of less than 0.4 and 20% respectively.

There are key areas in which more efforts are essential to lead to enhanced and inclusive economic growth. Accelerating infrastructure development, diversification of the economy and the promotion of rural investments, all outlined as objectives in the Sixth National Development Plan (SNDP 2011-2015), are salient pillars to the realisation of enhanced socio-economic growth. Diversification of the

economy and reducing reliance on the copper industry in particular are important components to attaining sustainable growth. Mainstreaming the significant informal economy should also be a priority area.

Among the critical areas for investment in human capital is education. Laudable efforts have been made in the past decade to improve participation in primary school. Participation rates at secondary and especially tertiary levels still need significant improvement. Further, challenges in school quality, high dropout rates and low transition rates must be addressed. A prompt review of the curriculum at all levels to address the education and job-market skills mismatch is vital for Zambia's education system to produce a competitive labour force that will make the country's economy globally competitive. The education system needs to shift from focus on passing exams to imparting practical skills on innovation, science and technology, entrepreneurship and leadership for the country to make the envisioned leap in its socio-economic development trajectory as the Asian Tigers did.

The relative peace and democratic transitions that the country has made over the years make Zambia an attractive and stable investment destination. Enhanced mechanisms for good governance and accountability are necessary to support the successful implementation of the policy prescriptions laid out in the development plans. Each sector requires stringent monitoring and evaluation mechanisms that ensure the gap between policies and implementation is bridged.

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

Figure 7.1 and Table 7.1 show changes in population age structures and socio-economic and demographic indicators for Zambia and Malaysia (one of the benchmark countries for Vision 2030) between 1960s and in the more recent period.

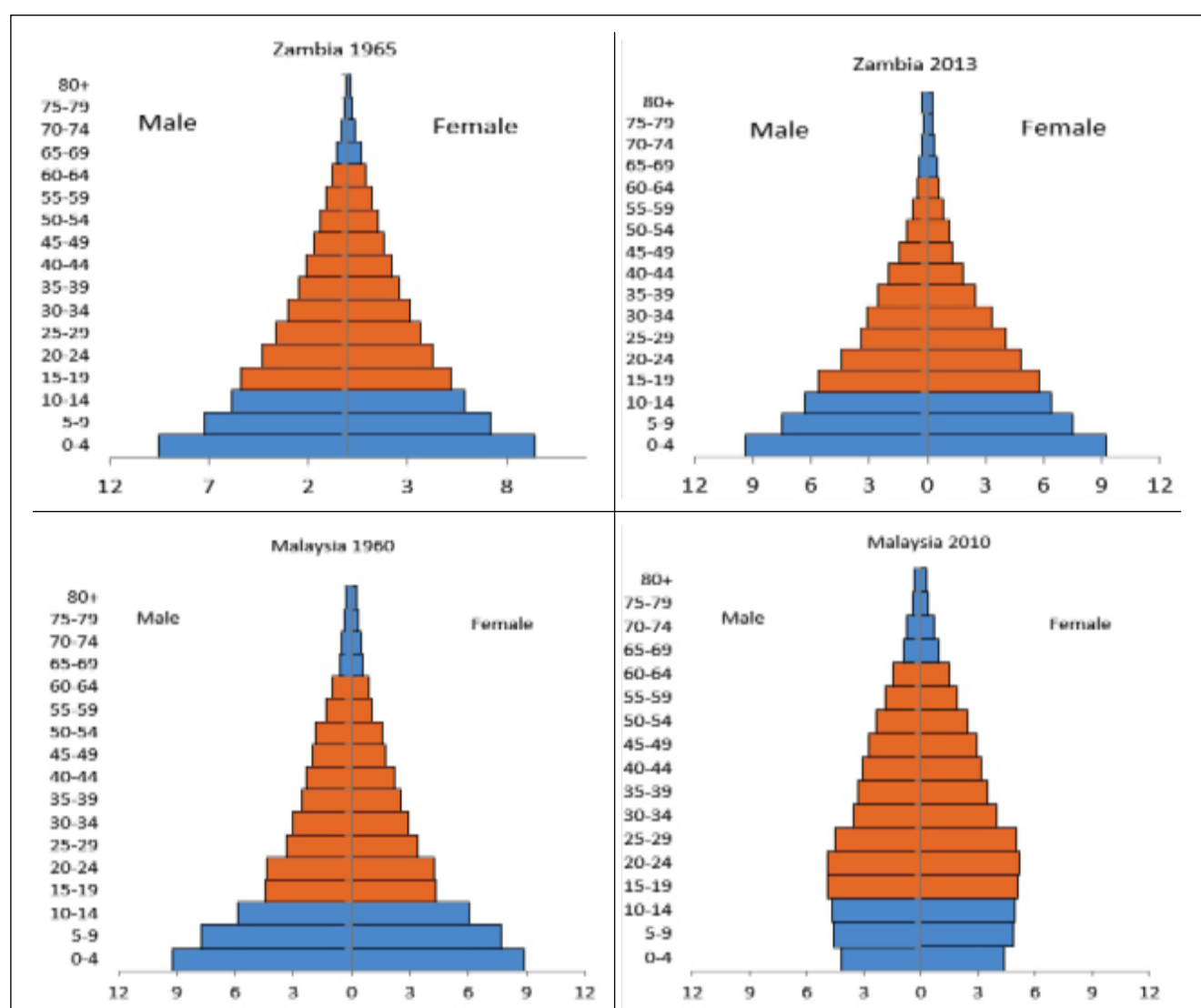
These data show the extent of the challenge that Zambia faces in attempting to harness its demographic dividend and to achieve the socio-economic transformation it desires. At the same time, the fact that Malaysia had relatively similar indicators to Zambia 40 years ago suggests that Zambia can emulate Malaysia's development path and possibly even surpass it if it can adopt similar development policies in the next 40 years or so.

The population structures were relatively similar in the 1960s when the average number of births per woman was 6.0 in Malaysia and 7.2 in Zambia. While the 2013 age structure for Zambia is similar to the one for 1960, Malaysia's 2010 age structure is totally different due to the rapid decline in fertility and mortality rates the country has experienced since the 1960s. Malaysia also achieved significant improvements in education: two-thirds and one-

third of the population have completed secondary and tertiary education, respectively.

Finally, while Zambia has made considerable progress in reducing child mortality and is on target to achieve MDG 4, the 2013 level of under-five mortality of 75 deaths per 1000 live births is much higher than the current level for Malaysia (6.0 in 2010). Thus, Zambia needs to intensify the on-going efforts to reduce child mortality, to improve the quality of life of its population and lay the foundation for decline in fertility rates. Decisions to have few children are often predicated on the understanding that the few children will survive to adulthood. These transformations made contributions to Malaysia's accelerated economic growth, which has resulted in a GDP per capita of USD 10,513 in 2013 according to the World Bank World Development Indicators.

Figure 7.1: Comparison of Trends: Population Age Structures for Zambia and Malaysia



Source: UN Population Division, 2013; Central Statistical Office (2012)

Table 7.1: Comparison of Trends in Various Economic and Demographic Indicators, Zambia and Malaysia

Indicator	1960		2013	
	Malaysia	Zambia	Malaysia	Zambia
GDP per capita (USD)	299	227	10,514	1,839
Total fertility rate (births per woman)	6.0	7.2	2.0	5.3
Under-five mortality (per 1000 live births)	85	214	6	75
Net secondary school enrolment rate (%)	35	-	66	28
Gross tertiary institution enrolment rate (%)	4.0	0.4**	37.0	2.4***

Note: ** 1970; *** 2000

Sources: UN Population Division (2013); World Bank (2014); Central Statistical Office (2014); Ministry of Education (2014); UNESCO (2014)

7.2 Policy Scenarios for Modelling the Potential Impact of the Demographic Dividend for Zambia

The study used the DemDIV modelling tool to measure the potential impact of the Demographic Dividend on economic growth and other socio-economic outcomes in Zambia. The modelling was based on four policy scenarios that were selected to demonstrate the net and combined effects on economic growth and other development outcomes of focusing on investments in economic and social development. Targets for these policy scenarios were mostly derived from the average of various countries that are at the level where Zambia aspires to be in 2030 and where it could reach in 2053 for various indicators. A summary of the policy scenarios is presented in Table 7.2.

Business as Usual Scenario

This scenario represents a case where the status quo, characterised by the persistence of high child-dependency ratios and relatively modest economic performance, continues. The country would continue to perform below its full potential and there would be no definitive action to address the widely acknowledged development bottlenecks in order to break away from the Business as Usual culture characterised by weak implementation of the country's development policies. Zambia would continue making the modest improvements that have helped it reach low middle-income status and possibly increase its income to the middle range of middle-income countries – but fail to reach the high-income bracket of the middle income countries. In general we assume that targets for economic, education and family planning indicators would improve but only to a third of the progress that the country would need to make to achieve optimal targets set out in Vision 2030.

Economic Emphasis Scenario

This scenario represents a case where the country is decisively aggressive in addressing the economic challenges to socio-economic development. It would put in place policies, systems, and resources to fully implement the economic ideals defined in Vision 2030 and operationalised through the five-year development plans. In this scenario, we benchmark Zambia's progress against the middle-income Asian Tigers whose incomes are in the middle to the high end of this income bracket. These include Malaysia, South Korea, and Hong Kong. In addition, we include Mauritius as the African country that has completed the demographic transition with per capita GDP in the upper middle-income range (USD 9,209 in 2013). This scenario represents the best economic case for Zambia in terms of reforming the economy to enhance productive efficiency and accelerate economic growth, job creation, and poverty reduction. The current average values for the benchmark countries were used for most of the global competitiveness indicators. Education indicators change slightly to cater for potential trickle-down effect on education of improving economic performance, but family planning indicators were held constant at the Business as Usual level.

Moderate Scenario

This scenario is designed to assess the net impact of moderate increases in investments in interventions that reduce family size, including family planning and education beyond the impact of the Economic Emphasis scenario. In this case, we increase contraceptive use from the current level of 45% to 55% by 2053. As the Contraceptive Prevalence Rate (CPR) increases, the rate of increase will slow down, and thus it is assumed that Zambia will experience a much slower rate of increase of CPR compared to previous rates of increase. We also increase the baseline education indicators to at least 50 % of the progress needed to attain the target of 16 completed years of schooling by 2053.

Combined Scenario

This scenario provides the best policy option for attaining the socio-economic transformation envisaged in Vision 2030. The scenario adopts the best target indicators for economic competitiveness, education, and family planning and it enables assessment of the net impact of maximum prioritisation of family planning and education beyond effects of prioritisation of economic reforms (i.e. the demographic dividend). In this scenario we set the economic, family planning, and education target indicators for 2053 to the averages of the benchmark countries. This scenario entails determined commitment and action to develop high-quality human capital in Zambia, comparable to the other upper middle-income countries. There is prioritisation of empowerment of women and their partners to avoid

unintended pregnancies through universal access to effective methods of contraception. Furthermore, there is an overhaul of the educational system resulting in increased years of schooling completed and better quality of education, which are critical for enhancing the level of skills and innovation of the labour force. Increasing completed years of schooling helps to keep girls in school, prevent early childbearing, and reduce fertility. For the education indicators, we assumed that for Zambia to be economically competitive and self-sustaining as indicated in Vision 2030 and the R-SNDP, the country should achieve universal secondary education and a large proportion of the school-going population having tertiary education. The contraceptive prevalence rate was set at 74%, which would be among the highest levels in the world based on 2013 levels.

Table 7.2: Summary of Characteristics of Policy Scenarios for Demographic Dividend Modelling for Zambia

Policy Scenario	Key Characteristics
Business as Usual	<ul style="list-style-type: none"> ● Status quo characterised by slow progress in economic reforms, human capital development and reduction in fertility by 2053 ● Targets for economic and education indicators are higher than baseline indicators by 30% of the progress needed to achieve 2053 model targets ● Use of family planning to grow at an average 0.26 percentage points per year, which is lower than the 1.71 percentage points growth achieved over the last two decades (1992-2013). The assumption is that as CPR levels increase, the rate of increase reduces, tapering off at around 75-85%, as seen in countries with the highest CPR levels globally.
Economic Emphasis	<ul style="list-style-type: none"> ● Represents optimisation of Zambia's global competitiveness and governance as outlined in Vision 2030 ● Target economic indicators for 2053 are the average economic indicators for four countries: South Korea, Malaysia, Hong Kong and Mauritius, except for Imports, as shown in Table 7.3 ● Education indicators are slightly higher than the Business as Usual scenario (by 5%), while family planning indicators were held at the same level as the Business as Usual scenario.
Moderate Scenario	<ul style="list-style-type: none"> ● Economic indicators held to the same level as the Economic Emphasis scenario in order to examine net effect of moderate improvement on FP and Education. ● Target indicators for Education are higher than baseline indicators by 50% of the progress needed to attain the 2053 optimal targets ● Modern contraceptive prevalence rate to increase to 65%
Combined Scenario	<ul style="list-style-type: none"> ● Emphasises an integrated development model that concurrently maximises investments and reforms in economic, family planning and education to prevent unintended births, build high-quality human capital and increase productive population. ● Economic indicators held to the same level as the Economic Emphasis scenario ● Target indicators for education were set at the highest level to achieve universal secondary education and have a critical mass with tertiary education ● Modern contraceptive prevalence rate to increase to 74% by 2053, which would be among the highest in the world.

7.3 Baseline and Projected Economic and Demographic Indicators

The specific indicators that the DemDiv model uses to operationalise the five wheels that open and propel the window of opportunity for harnessing the demographic dividend are presented in Table 7.3. For each variable, we indicate the baseline value and the values used in the four policy scenarios. The meanings of the variables are defined in Appendix III, and the rationale and assumptions behind the choice of the target indicators are explained below.

Economic Indicators

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

Baseline estimates of output variables were obtained from official national statistics,⁴ except for the capital stock and capital stock depreciation rate, which were derived from the model dataset by Berlemann and Wesselhoft (2012). The share of imports to GDP was obtained from Ministry of Finance 2013 estimates. The rest of the economic indicators were sourced from the Global Competitiveness Index (GCI), 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. The database assesses the strengths and weaknesses of national economies by analysing the efficiency of various sectors and their contributions to productivity of the economy over time. The GCI database has many indicators/components that are grouped into 12 pillars of competitiveness. Each indicator is presented on a scale of 1 - 7, with 7 as the best performance. For this report and in line with the DemDiv model, indicators from four pillars were selected: labour market flexibility, financial market efficiency, ICT use and public institutions.

The 2013 figures for Zambia were used as the baseline for economic variables. Under the Business as Usual scenario

the country will continue to perform below its full potential and attain about 30% of the progress it requires to catch up with the average economic indicators for the four benchmark countries (South Korea, Hong Kong, Malaysia and Mauritius). The benchmark countries were selected to show the diverse economy that Zambia aspires to have in 2030. Under the Economic Emphasis scenario, the average economic indicators for the four countries as target indicators were used.

Labour Market Flexibility

Labour market flexibility creates a positive effect on worker performance and on the attractiveness of the country for talent and high quality skills. This pillar is critical for ensuring that workers are allocated to their most effective use in the economy (based on their skills) and provided with incentives to give their best effort in their jobs. Labour market flexibility enables shifting of workers from one economic activity to another rapidly and at low cost and allows for wage fluctuations without much social disruption. It provides for equity in the business environment between women and men. The components that make up this pillar include: cooperation in labour-employer relations; flexibility of wage determination; hiring and firing practises; redundancy costs-weeks of salary; and effects of taxation incentives on work.

Zambia's labour market flexibility baseline index is 3.9. Under the Business as Usual scenario, the assumption was that the index would increase to 4.23, representing 30% of the increase the country needs to make to reach the current average value (5.0) for South Korea (3.9), Hong Kong (6.0), Malaysia (5.1), and Mauritius (5.1) set for the Economic Emphasis scenario.

Financial Market Efficiency

This pillar deals with allocation of national resources and foreign direct investments in the different sectors. An efficient financial sector should channel resources to those entrepreneurial or investment projects with the highest expected rates of return rather than to those which are politically well-connected. To ensure financial efficiency, economies require sophisticated financial markets that can make capital available for private-sector investment from a

⁴Data on capital formation and capital stock were obtained from MoF ZAMMOD (Zambia Model) economic model, while GDP per capital and the GDP growth rate were obtained from national accounts data from the CSO. Employment data came from the 2012 Labour Force Survey.

sound banking sector, well-regulated securities exchanges, venture capital, etc. The banking sector therefore needs to be trustworthy and transparent and appropriately regulated to protect investors and other actors in the economy at large. The constituent components of this sub-pillar include: availability and affordability of financial services; local equity market financing; ease of access to loans; and venture capital availability.

Financial market efficiency is an area with good potential for growth in Zambia as service and manufacturing sectors grow and financial markets open up due to the solidification of regional integration. In recognition of the likely continuation of the growth that the sector has experienced over the past decade, it is projected that the financial market efficiency index would increase from 3.30 to 3.63 under the Business as Usual scenario. This represents 30% of the improvement the country will need to achieve to reach the current average level (4.4) for South Korea (3.1), Hong Kong (5.3), Malaysia (5.1) and Mauritius (4.2), which is the target for the Economic Emphasis scenario.

ICT Use

ICT use, under the technological readiness pillar, 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. ICT use constitutes: proportion of the population using internet; 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.

ICT use is one area where Zambia has made considerable progress over the past decade, especially in the use of mobile phones. It is a priority area for the country as demonstrated by its vibrant ICT policy and strategy. This sector is largely driven by the private sector and can easily expand to the next level without considerable public sector intervention. For instance, the mobile money service is growing rapidly with minimal public sector investment and mobile subscriber penetration rate was estimated at 78.1 for every 100 inhabitants in 2012 (Republic of Zambia, 2014). Use of technology in Zambia is projected to increase due to increasing income per capita, low cost of technology and the increased demand for mobile money transactions. It was therefore projected that progress in this area would continue even under the Business as Usual scenario and the index would improve from 1.3 to 2.26, representing 30% of the

progress the country needs to reach the target of 4.5 under the Economic Emphasis scenario. This target is the average of South Korea (5.6), Hong Kong (6.6), Malaysia (2.7) and Mauritius (2.9).

Public Institutions

This pillar represents the accountability mechanisms and strategies that have been laid to promote and protect both local and foreign investments. The institutional environment is determined by the legal and administrative framework in which individuals, firms and governments interact to generate wealth. The effective functioning of public institutions influences investment decisions and the organisation of production. Government attitudes toward markets and freedoms and the efficiency of its operations are key. Excessive bureaucracy and red tape, overregulation, corruption, dishonesty in dealing with public contracts, lack of transparency and trustworthiness, inability to provide appropriate services for the business sector and political dependence of the judicial system can impose significant economic costs to businesses and thus slow the process of economic development.

Proper management of public finances also falls under this pillar and is critical for ensuring trust in the national business environment. The components of this sub-pillar are: i) property rights and intellectual property protection; ii) ethics and corruption that includes diversion of public funds, public trust in politicians, irregular payments and bribes (awarding of contracts, taxation payments, favourable judicial decisions, etc.); iii) undue influence that affects judicial independence and favouritism in decisions touching government officials; iv) government efficiency that includes wastefulness of government spending, burdens of government regulation, efficiency in legal frameworks (settling disputes and challenging regulations) and transparency in government policymaking; and v) security (business cost of terrorism/crime/violence, and reliability of police services).

Vision 2030 and the R-SNDP identify good governance as a precursor to accelerated development in the economy. In order for Zambia to attract foreign investment and reduce the cost of doing business, the country will need to operationalise the Vision 2030 commitment to total adherence to principles of good governance including efficiency and effectiveness, transparency and accountability in the delivery of public services. The model projects the capacity of Zambia's public institutions to enforce accountability in service delivery and the use of public resources and to ensure the protection of

lives, investments, and property would improve modestly under the Business as Usual scenario – from 4.10 to 4.28. It would then reach the target level of 4.7 under the Economic Emphasis scenario, which is the average value for South Korea (3.6), Hong Kong (5.6), Malaysia (5.1) and Mauritius (4.5).

Share of Imports as Percent of GDP

High levels of imports (as percent of GDP) can undermine socio-economic development, capital formation and prospects for mass creation of jobs in the local economy. Imports in the last decade averaged at 26.6% of Zambia's GDP. In 2012, the import share increased to 31.7% and further increased to 34.3% in 2013⁵. This increase resulted from a change in government policy where tax allowance on capital imports was reduced from 100% in late 2012 to 25% in 2013. This created a high level of capital imports in 2012 and 2013. Taking into account the uniquely high levels of imports in 2012 and 2013, the average for 2011-2013 (27.2, 31.7, and 34.3, respectively) was adopted as the baseline value for 2013, with a value of 31.1.

Copper mining has resulted in large importations of capital goods and thus capital imports constitute about 50% of total imports. It was projected that capital imports would go down over time as the economy diversifies and the importation of the costly capital equipment for mining declines. Therefore, it was projected that imports as a share of GDP would decline to 26.6% by 2053 under the Business as Usual scenario. As the country builds its manufacturing sector as outlined in Vision 2030, it will continue to rely on imports to engineer its infrastructure, in addition to expected increase in consumption needs as the middle class group expands with overall economic development. As such, the share of imports as percent of GDP is projected to increase to 45% under the Economic Emphasis scenario. This value is above the values for Egypt (25%) and South Africa (34%), which have relatively mature and diverse manufacturing sectors, upon which Zambia can model its manufacturing sector.

Family Planning Indicators

In this category, we focus on three indicators: the contraceptive prevalence rate (CPR), the period of postpartum infecundability (PPI) and sterility. Family planning is a very important intervention for fertility decline since it enables women and their partners to prevent unintended births.

Contraceptive Prevalence Rate

This analysis used the proportion of married women using both modern and traditional contraception. Modern methods and traditional methods of contraceptive effectiveness was assumed at 95% and 50% respectively. The baseline contraceptive use levels for 2013 were 44.8% and 4.3% for modern and traditional methods.

The proportion of married women using modern contraceptives increased from 32.7% in 2007 to 44.8% in 2013, representing an annual increase of 2.02 percentage points. This was higher than the annual percentage point increase of 1.71 achieved between 1992 and 2013. On the other hand, use of traditional contraceptives has declined rapidly from 8% in 1996 to 4.3% in 2013.

In the Business as Usual scenario, it was projected that modern contraceptive use would increase to 55% by 2053. The rate of contraceptive use increase tends to taper off at higher levels of use as contraceptive use increases, with the current highest levels of contraceptive use for middle income and developed countries estimated between 65% and 82%.

In the Economic Emphasis scenario, the contraceptive use level is the same as in the Business as Usual scenario.

In the Moderate scenario, the projection was that the country would enhance its FP effort and CPR would increase to 65%. Use of traditional methods would continue to decrease, and assumed that only 2% of women would be using traditional methods by 2053.

In the Combined scenario, the projection was that the country would intensify its efforts to address barriers to access and use of FP and create more demand for family planning; as such modern contraceptive use would increase to 74%. This would take Zambia's CPR level to among the highest in the world. Use of traditional methods would remain at the same level as the Moderate scenario (2%). In 2014, the countries with high rates were: United Kingdom (84%), Brazil (77%) and Thailand (77%) (PRB, 2014). Reviews suggest that increases in contraceptive use slows down at higher levels of contraceptive prevalence when non-users of family planning are mostly those not predisposed to use contraception due to self-assessment of fecundity, concern about side effects, and for religious or cultural beliefs (J. Ross, Abel, & Abel, 2004).

⁵Ministry of Finance Statistics, 2014

Postpartum Infecundability and Sterility

The **Period of Postpartum Infecundability** (PPI) is the duration after giving birth when a woman is not susceptible to pregnancy due to lactational amenorrhea and / or postpartum sexual abstinence. The 2007 DHS PPI was 12.5 months⁶. It was projected that the duration would decrease slightly because breastfeeding is likely to decline due to increases in participation of women in the labour force and the decline in postpartum sexual abstinence would continue. No change under the Business as Usual and Economic Emphasis scenarios was projected, but that there would be a decrease to 12 months under the Moderate and Combined scenarios.

Sterility is measured by the proportion of women in union who remain childless at the end of their reproductive years (ages 45–49). The proportion of Zambian women who were childless in the 45–49 age group was 1.4 in 2013. Although this measure is not expected to change much over time, it was assumed that there would be a small reduction, to 1.1%, under the Moderate and the Combined scenario, premised on the belief that improvement in FP and enhancement of broader sexual and reproductive health services can help reduce infertility levels even if slightly.

Education Indicators

Education is essential for harnessing the demographic dividend because it has wide-ranging effects on socio-economic development. Female education, especially at the secondary and higher level, plays a key role in lowering fertility by delaying marriage and the onset of childbearing. Better-educated women are also more likely to use contraception and use healthcare services for themselves and their children. Education also helps to increase the quality and productivity of the labour force. Years of schooling, the quality of education and relevance of the curriculum in promoting innovation and entrepreneurship are very important for enhancing a country's chances of harnessing the demographic dividend. For accelerated economic growth, countries have to nurture pools of well-educated workers who are able to perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the production system. The model used two indicators to show the impact of education on development: expected years of schooling and the observed mean years of schooling for males and females.

The **Expected Years of Education** refers to the total number of years of schooling a six-year-old child today can expect to receive, assuming that the probability of her / him being enrolled in school at future ages is equal to the current enrolment rate at those ages. The expected years of schooling generated from predicted values based on trends from the DHS 2007, 2001 and 1996 as the baseline figures for 2013 were adopted. These were 10.9 years for females and 12.9 years for males. DHS data show that Zambia experienced an improvement in expected years of schooling from 1996 when the levels were 7.3 and 8.8 years for females and male, respectively.

The **Mean Number of Years of Schooling** is the average number of years of schooling for the adult population ages 25 and above. According to the DHS, this indicator has improved by 2.5 years to 7.0 years for females and by 1.6 years to 8.5 years for males between 1996 and 2007. The 2007 figures were used as the baseline for the analysis.

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

For the Business as Usual scenario, the projection was that the country would achieve 30% of the progress necessary to attain the best target expected years of schooling and mean years of schooling for 2053. The expected years of schooling under this scenario are 12.43 years for females and 13.83 years for males. The mean years of schooling would be 8.35 years for females and 9.4 years for males.

The levels of education in the Economic Emphasis scenario were increased by 5% above the Business as Usual values to cater for the trickle-down effect of economic growth on education. This translates to 12.69 expected years of schooling for females and 13.99 for males. The mean years of schooling would increase to 8.58 mean years for females and 9.55 years for males.

⁶The 2007 DHS value was used because the 2014 DHS results were not available at the time the modelling was done

In the Moderate scenario, it was assumed that the country would make more progress in improving education outcomes of its population and that the country would attain about 50% of the progress that it needs to make by 2053 to attain the education levels that its benchmark countries currently exhibit. For Expected Years of Schooling, this would translate to 13.45 years for females and 14.45 years for males. For the mean years of schooling, the target figures would increase to 9.25 years for females and 10.0 years for males.

In the Combined scenario, it was projected that Zambia would prioritise human capital development and ensure

that it attains the education levels currently achieved by the benchmark Asian Tigers, characterised by near-universal secondary education with at least a third of the total population attaining tertiary education. This is the level of education Zambia would need to achieve the socio-economic transformation envisaged in Vision 2030 in order for the country to harness the demographic dividend. The target values for this scenario are 16 years as expected years of education for both females and males and 11.5 years as target values for mean years of education for both females and males. The target values are set at the same level to underscore Government's commitment to eliminate gender differentials at all levels of education.

Table 7.3: Baseline and Target Indicators for Policy Scenarios Used for Demographic Dividend Modelling for Zambia

POLICY SCENARIO			Baseline	Business-as-Usual	Economic Emphasis	Moderate Scenario	Combined Scenario	Data Source
REF YEAR			2013	2053	2053	2053	2053	
INTERVENTION POLICY AREA	Education	Expected Years Female	10.90	12.43	12.69	13.45	16.00	<i>Computed from Zambia Demographic and Health Surveys (1992-2007)</i>
		Expected Years Male	12.90	13.83	13.99	14.45	16.00	
		Mean Years Female	7.00	8.35	8.58	9.25	11.50	
		Mean Years Male	8.50	9.40	9.55	10.00	11.50	
		Mean Years (Male & Female)	7.75	8.88	9.06	9.63	11.50	
	Family Planning	CPR Modern Methods (Married women)	44.8	550	55.0	65.0	74.0	<i>DHS 2007, 2013</i>
		CPR Traditional methods (Married women)	4.3	3.0	3.0	2.0	2.0	
		PP1 (Months)	12.5	12.5	12.5	12.0	12.0	
		Sterility (Percent Married Women 45-49 without children)	1.4	1.4	1.4	1.1	1.1	
	Economic	Labour Market Flexibility	3.90	4.23	5.00	5.00	5.00	<i>World Economic Forum, Global Competitiveness Report 2013–2014</i>
		ICT Use	1.30	2.26	4.50	4.50	4.50	
		Financial Market Efficiency	3.30	3.63	4.40	4.40	4.40	
		Public Institutions	4.10	4.28	4.70	4.70	4.70	
		Imports as % of GDP	31.1	26.6	45.0	45.0	45.0	Ministry of Finance

Table 7.4 shows the other DemDiv model inputs that were used as baseline indicators for various outputs of the model. All data were drawn from national data sources and official reports, except the capital stock depreciation rate, a constant drawn from the Berlemann and Wesselhöft 2012 report (Berlemann & Wesselhöft, 2012).

7.4 Modelling Results

Growth in Per Capita GDP

The results show that GDP would grow from the current level of USD 26.8 billion to USD 269 billion for the Business

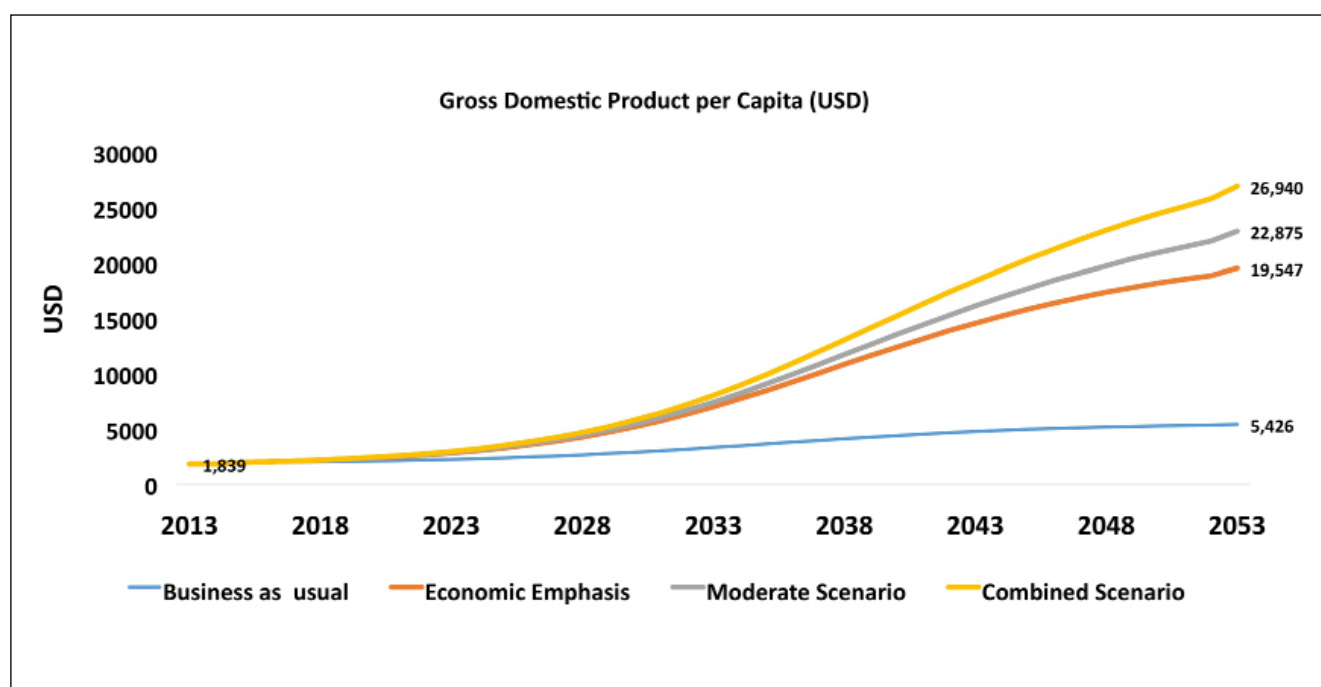
as Usual scenario and to USD 969 billion for the Combined scenario by 2053.

Figure 7.2 shows growth in GDP per capita between 2013 and 2053 for each of the four demographic dividend policy scenarios for Zambia. Under the Business as Usual scenario, per capita GDP would increase from the 2013 level of USD 1,839 to USD 2,875 in 2030 and to USD 5,426 in 2053.

If Zambia pursues its economic strategies as set out in Vision 2030 to graduate to an upper-middle income country by 2030, GDP per capita would increase to about USD 5,197 in 2030 and onwards to USD 19,547 in 2053 under the Economic Emphasis scenario.

Table 7.4: Baseline values for Model output indicators

Category	Indicator	Base Year Value (2013)	Data Source
Health	Percent married	60.1	<i>DHS 2007, 2013</i>
	Total fertility rate (TFR)	5.3	
	Proportion of high-risk births	39.3%	
	Infant mortality rate (IMR)	45	
	Under-five mortality rate (U5MR)	75	
	Maternal mortality rate (MMR)	398	
	Female life expectancy	55.4	<i>CSO Population and Demographic Projections (2011-2035), 2013</i>
	Female-male life expectancy difference	4.8	<i>CSO Population and Demographic Projections (2011-2035), 2013</i>
	Contraceptive Effectiveness Modern Methods	0.95	<i>Assumptions</i>
	Contraceptive Effectiveness Traditional Methods	0.5	
Economic	Capital formation per capita	590	<i>MoF Economic Model (ZAMMOD), 2013</i>
	Initial employment	5,499,673	<i>Labour Force Survey, 2012</i>
	Initial employment growth rate	2.8%	<i>MoF Economic Model (ZAMMOD), 2013</i>
	GDP per capita	1,839	<i>National Accounts (CSO), 2013</i>
	Ratio of capital stock to pop 15+	5732	
	Initial GDP growth rate	6.7%	
	Capital stock growth rate	20.0%	<i>Computed</i>
	Labour Force Participation Rate	0.759	<i>Labour Force Survey, 2012</i>
	Capital stock depreciation rate	4%	<i>Berlemann and Wesselhöft 2012</i>
	Primary education costs as % of GDP per capita	0.07%	<i>Ministry of Education</i>

Figure 7.2: Growth in Per Capita Gross Domestic Product by Policy Scenario (USD)


Source: Modelling Results

Per capita GDP would increase to USD 5,441 in 2030 if the country invests in moderate efforts to increase family planning and education, in addition to economic emphasis, and this would further increase to USD 22,875 in 2053. The difference in per capita income between the Economic Emphasis model and the Moderate scenario represents the demographic dividend that Zambia would attain by going beyond economic investments to moderately prioritise social development investments in education, family planning and health. In 2030, this would amount to USD 244. These effects are much higher if the efforts are sustained over a relatively long period of time. In 2053, the dividend earned would increase to USD 3,328.

If Zambia pursues policies, investments and programmes that simultaneously prioritize economic growth and job creation, education, family planning, health, and accountability under the Combined scenario, GDP per capita would increase to USD 5,808 in 2030 and USD 26,940 in 2053. In this case, the demographic dividend earned would be USD 611 in 2030 and USD 7,393 in 2053.

Population Size and Structure

Figures 7.3 - 7.7 show the baseline and projected age-sex distribution of Zambia's population and key population and human capital features for each of the four policy scenarios.

The Business as Usual scenario would lead to a total fertility rate of 4.09 children per woman and a total population

of 49 million people. The dependency burden would decrease from 0.96 in 2013 to 0.79 in 2053. As a result of the decrease in the mortality rate, female life expectancy would increase to 62.0 years in 2053 from the 2013 level of 55.4 years. The Human Development Index (HDI), which is a composite measure of countries' levels of social and economic development based on life expectancy at birth, years of schooling, and per capita gross national income, would increase from the current level of 0.504 to 0.63. At this level, Zambia would be ranked at position 120 based on the 2010 global rankings. The annual population growth rate would still be high at 2.8% in 2053. As noted above, Zambia would be performing far below its potential under this scenario and achieving the socio-economic transformation envisaged in the Vision 2030 would be a far-fetched dream. The country would not attain upper middle-income status and its development prospects would continue to be undermined by a high child-dependency burden.

With the Economic Emphasis scenario, total fertility rate, life expectancy at birth, dependency burden and population size would be the same as the Business as Usual scenario. HDI would increase to 0.71, representing a ranking of 70 based on 2010 rankings.

Adoption of the Moderate scenario would lead to a fertility rate of 3.13 children per woman, a dependency burden of 0.65, and 35% of the population would be under age 15. Life expectancy at birth would increase to 64.2 years and the

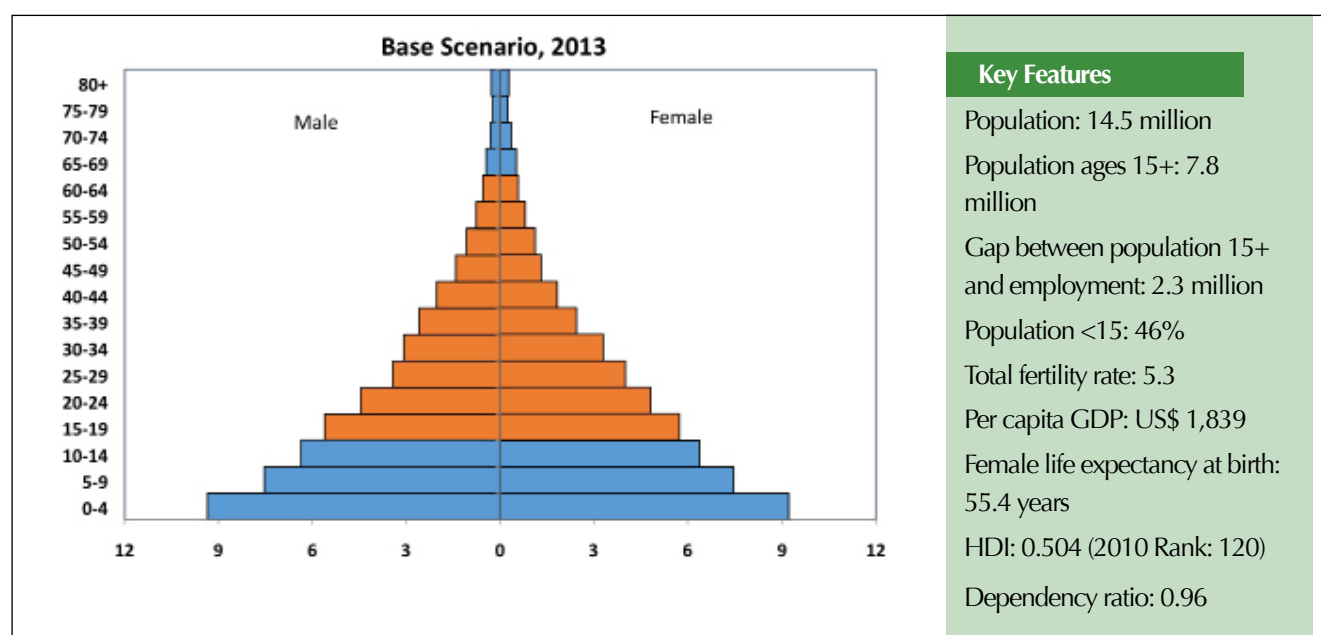


HDI to 0.75, where Zambia would be ranked 57 based on the 2010 rankings. Zambia’s population size would increase to 43 million. Under this scenario, the annual population growth rate would decrease to 2.1%, which is much higher than the Vision 2030 target of less than 1%.

The Combined model, which provides the best combination of policies and investments for transforming Zambia into an upper middle-income economy by 2053, would result in a total fertility rate of 2.11, and a population of 36 million by

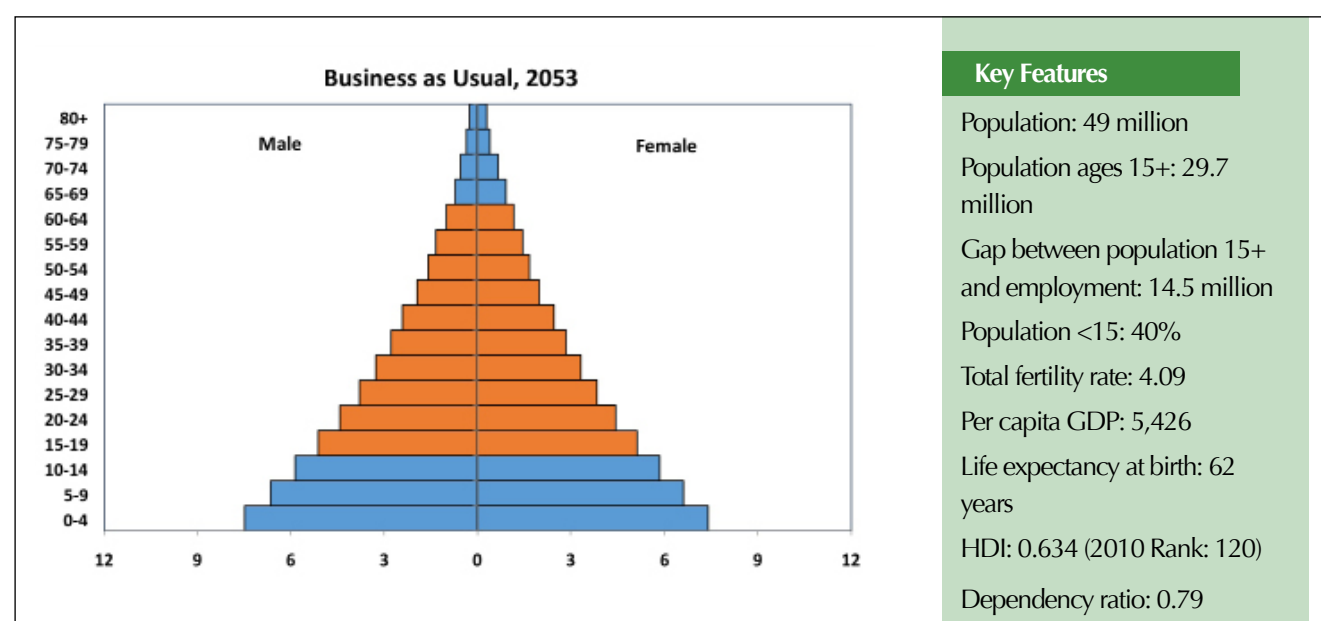
2053. This scenario would result in a marked shift in the age structure of the population, with a marked increase in the working age population and a dependency burden of 0.51. The proportion of the population under age 15 would be 29%. Life expectancy at birth would increase to 67.9 and the HDI would be 0.82 where Zambia would rank at 31 according to 2010 rankings. Under this scenario, Zambia’s annual growth rate of 1.3% would be close to achieving its Vision 2030 target annual population growth rate of less than 1%.

Figure 7.3: Baseline Population Pyramid and Key Features



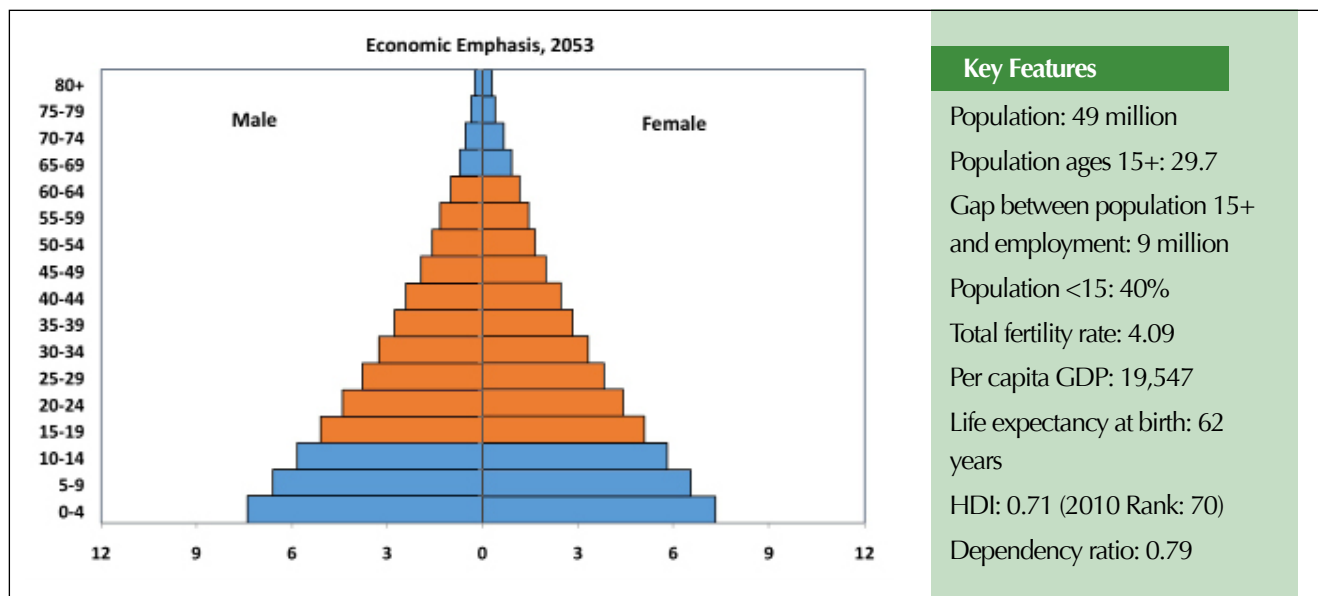
Source: Modelling Results

Figure 7.4: Population Pyramid and Key Features for the Business as Usual Policy Scenario



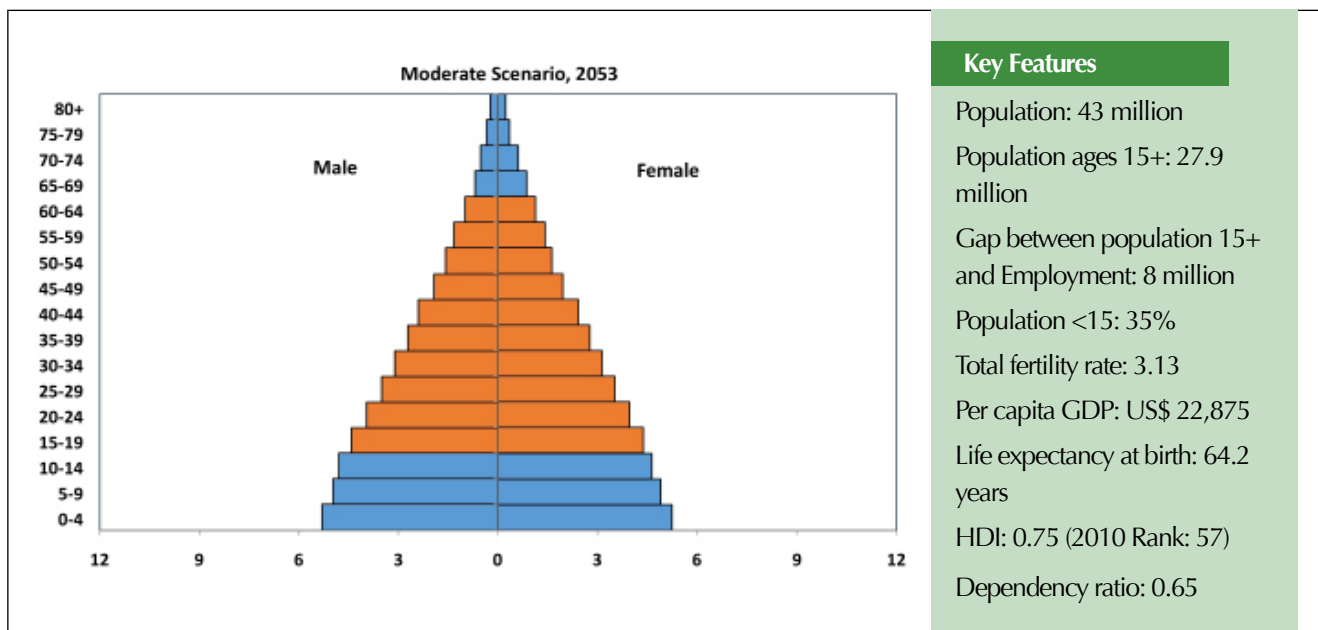
Source: Modelling Results

Figure 7.5: Population Pyramid and Key Features for the Economic Emphasis Policy Scenario

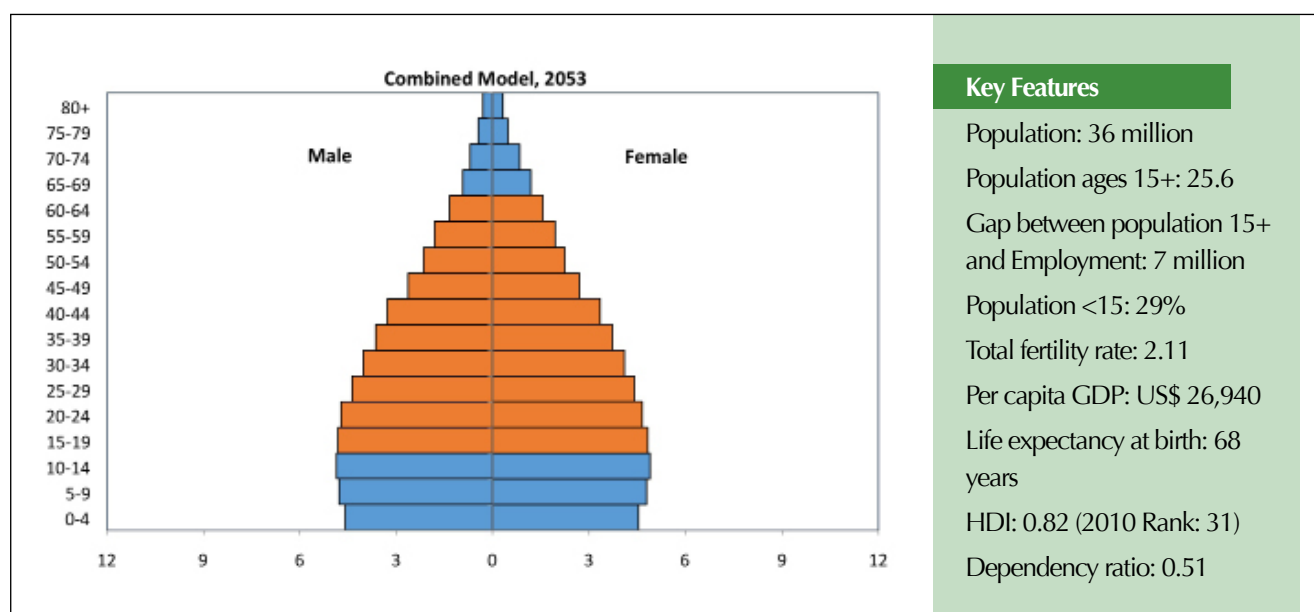


Source: Modelling Results

Figure 7.6: Population Pyramid and Key Features for the Moderate Policy Scenario



Source: Modelling Results

Figure 7.7: Population Pyramid and Key Features for the Combined Scenario


Source: Modelling Results

Working Age Population and Job-Creation Challenge

All the four policy scenarios are characterized by significant increase of the working age population aged 15 years and above. Under the Business as Usual and Economic Emphasis scenarios, the number of people aged 15 years and above would increase from 7.8 million in 2013 to 30 million in 2053. For the Moderate scenario, the number would increase to 28 million, while under the Combined scenario it would increase to 26 million. These numbers show that Zambia will face an enormous challenge in creating enough jobs for its rapidly growing labour force.

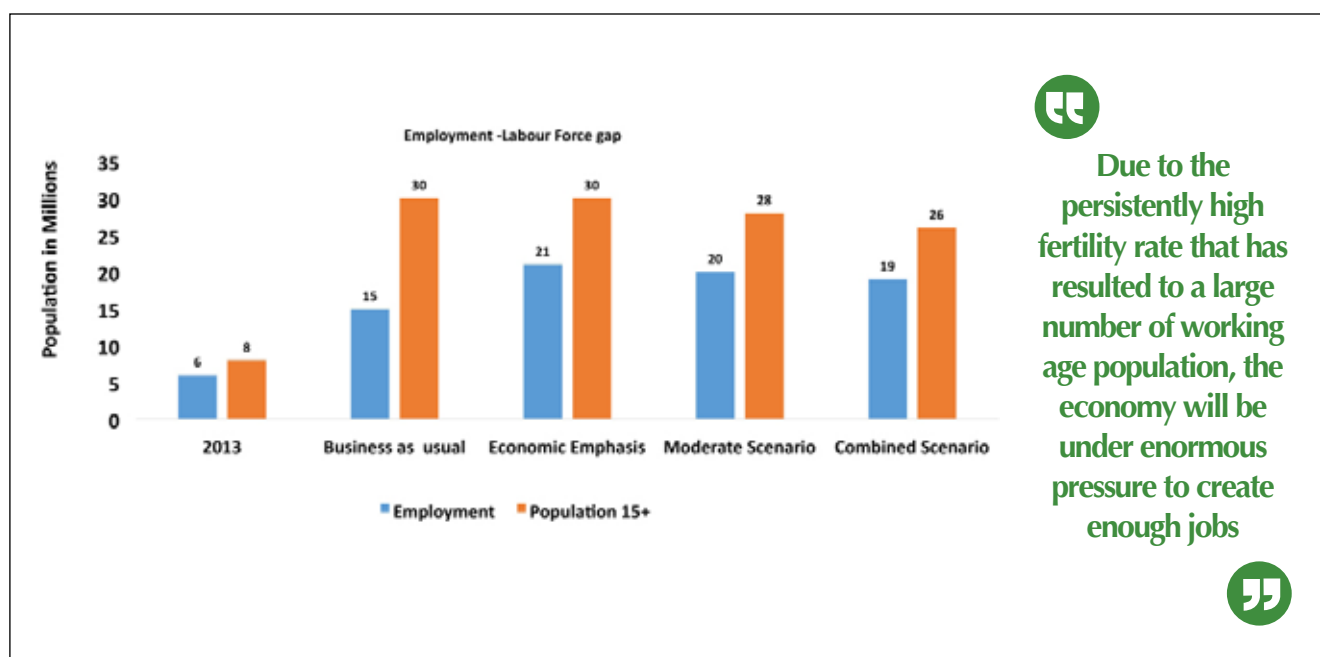
Currently, about 7.9% of the population is unemployed. Despite the relatively low unemployment rates, 70% of those employed are underemployed, and 83.4% of the working population is in the informal sector (Republic of Zambia, 2014). It is estimated that under the Business as Usual scenario, the rate of unemployment, defined as the difference between the number of people aged 15 years and above and the level of actual employment, would rise to about 15 million by 2053 (See Figure 7.8 below). This trend poses a serious challenge to poverty reduction efforts. One of the objectives of Vision 2030 is to reduce national poverty head count to less than 20% of the population, but this may not happen if such a large proportion of the labour force is not employed. The rising level of unemployment may also

lead to political and social unrest and instability. The small difference in the size of the working-age population across the scenarios is due to the high population momentum that Zambia has accumulated as a result of persistently high fertility.

Under the Economic Emphasis scenario the unemployment gap would be 9 million, while the Moderate scenario would result in a gap of 8 million. Under the Combined scenario, where economic reforms and policies are combined with maximum intervention efforts in FP and education, the unemployment gap would reduce to 7 million. Compared to the Economic Emphasis model, the employment gap would thus be 2 million less if the integrated approach to development is taken.

These statistics underscore the job creation challenges that Zambia will face due to the high population momentum that has accumulated over time. So while the effects of the demographic dividend are realised through the increase in the working-age population relative to dependent children, it is important to note that the sheer increase in the number of working age population will place enormous pressure on the economy to create enough jobs. The government will therefore need to keep unemployment rates at low levels as highlighted in Vision 2030, but also address the high rates of underemployment and mainstream the informal sector.

Figure 7.8: Projected Gap between Total Population Aged 15+ and Employed Population



Due to the persistently high fertility rate that has resulted to a large number of working age population, the economy will be under enormous pressure to create enough jobs

Source: Modelling Results

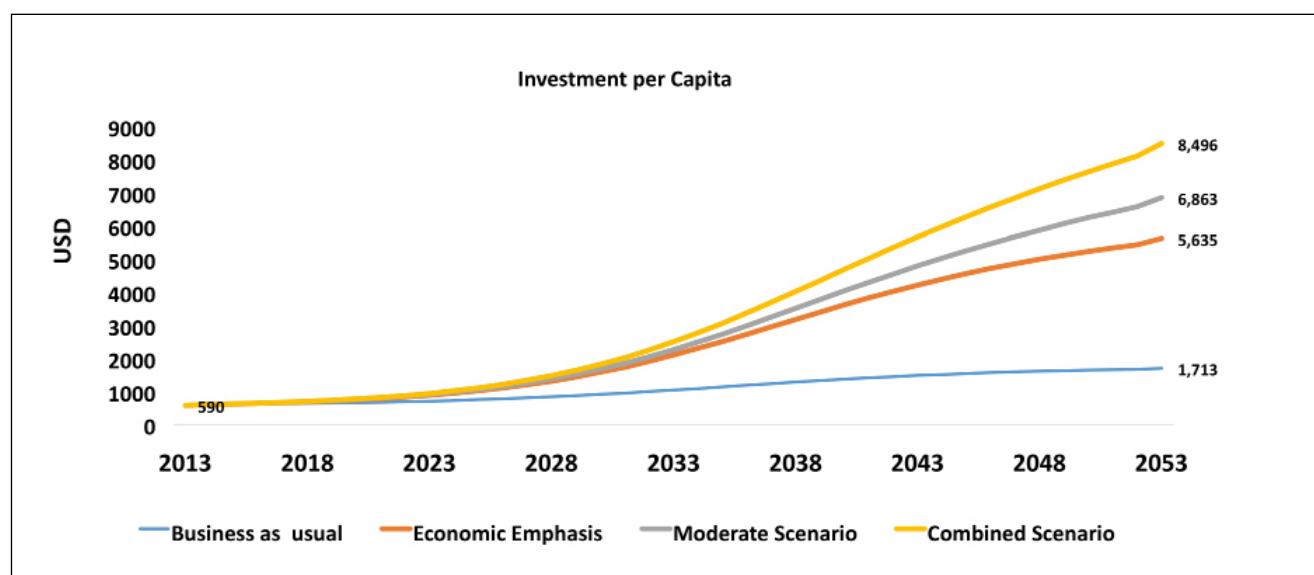
Capital Formation and the Second Demographic Dividend

As noted above, an increase in the working age population relative to dependents is not in itself sufficient for a country to harness the demographic dividend; investments in human capital development and job-oriented economic reforms are necessary for countries to earn the demographic dividend. Having a productive and skilled labour force is critical to attract investments for capital formation and boost economic productivity. The size of the demographic dividend would, therefore, depend on the rate of fertility decline, the extent of investments in human capital, the extent to which the country identifies and invests in sectors that generate mass decent jobs, and the existence of an enabling environment that promotes local savings and attracts direct foreign investment. These conditions would enhance the development of economic infrastructure and capital formation, which are critical for harnessing the demographic dividend and fuelling further economic

growth that would help Zambia graduate to upper-middle-income status.

Figure 7.9 shows projections in per capita capital formation for the four policy scenarios. Fixed capital formation measures how much of the new value added in the economy is invested in fixed assets (less disposals of fixed assets) by the business sector and governments, rather than consumed. The results show that the per capita capital formation would be USD 1,713 under the Business as Usual scenario and USD 5,635 under the Economic Emphasis scenario. Under the Moderate scenario, capital formation per capita would increase to about USD 6,863. Under the Combined scenario the level of investment per capita would be USD 8,496 in 2053. Therefore, making appropriate investments to maximise Zambia’s chances of harnessing the demographic dividend between now and 2053 would lay the foundation for propelling it to greater economic prosperity beyond 2053.

Figure 7.9: Projected Per Capita Capital Formation by Policy Scenario (USD)



Source: Modelling Results

Summary of Results

The findings for the study are summarised in Table 7.5. The Combined scenario that concurrently prioritises job-oriented economic reforms and investments in family planning and education to accelerate fertility decline and develop human capital would give Zambia the best chance of achieving the socio-economic transformation envisaged in Vision 2030. This would help Zambia emulate the development path that the Asian Tigers achieved over the past thirty to forty years.

The difference between the Economic Emphasis model and the Moderate scenario (USD 3,328) represents the demographic dividend that Zambia can harness by increasing its family planning and education investments beyond the Business as Usual level that ends with the TFR of 4.09 to the one that ends with a TFR of 3.06, respectively.

However, the country can harness a much higher demographic dividend of USD 7,393 if it reinforces its family planning and education investments to achieve the fertility and education levels that the Asian Tigers achieved over the thirty-year period that their incomes grew impressively.

Due to the high population momentum that Zambia has accumulated over the years, the working age population will continue growing for several decades, creating an enormous challenge for job creation. The big gap between employed population and those aged 15+, even for the Combined scenario, shows that the country will have to use extraordinary strategies to accelerate economic growth and generate enough decent jobs for its youthful population and prevent the social and political instability that may arise from high unemployment rates.

Table 7.5: Summary of Modelling Results per Policy Scenario

Indicator	Baseline (2013)	Business as Usual Scenario	Economic Emphasis Scenario	Moderate Scenario	Combined Scenario
Total Population (millions)	15	49	49	43	36
Population <15 (%)	45	40	40	35	29
Total fertility rate (number of children per woman)	5.3	4.1	4.1	3.1	2.1
Per capita GDP (USD)	1,839	5,426	19,547	22,875	26,940
Life expectancy at birth (female)	55.4	62.0	62.0	64.2	68.0
Dependency ratio (population ages 15–64 divided by population <15 and 65+)	0.96	0.79	0.79	0.65	0.51
Gap between population ages 15+ and employment (i.e., unemployed population) (millions)	2	15	9	8	7
Investment per capita (USD)	590	1,713	5,635	6,863	8,496

Source: Modelling Results

POLICY OPTIONS FOR HARNESSING THE DEMOGRAPHIC DIVIDEND IN ZAMBIA

Fulfilment of Zambia's aspirations for socio-economic transformation and transition into an industrialised upper-middle income country can be enhanced considerably if the country adopts policies that will harness the demographic dividend. The country's population dynamics and the economic opportunities are favourable and can be turned into a valuable demographic dividend if it adopts the policy mix followed by the East Asian Tigers that the country benchmarks itself against in Vision 2030. Realising the full potential of Zambia's demographic dividend must be strategically planned to fully exploit the window of opportunity. The Vision 2030 and the policy instruments developed to operationalise it, such as the R-SNDP, already have a roadmap with plausible targets and mechanisms to arrive at this goal if faithfully implemented. This section highlights the key policies that Zambia should prioritise to optimise its chances of harnessing the demographic dividend and its contribution to the realisation of Vision 2030 through subsequent National Development Plans and related policies.

8.1 Accelerating the Demographic Transition

A starting point for Zambia to enter the pathway to harnessing the demographic dividend is to facilitate rapid voluntary fertility decline by ensuring universal access to family planning, enhancing female education and

reinforcing efforts in reducing child mortality. Experience from the Asian Tigers and other African countries such as Tunisia, South Africa and Botswana show that it is possible for Zambia to reduce fertility considerably over the next couple of decades. Zambia's commitment to the FP2020 programme is a major positive step, but much more needs to be done to stimulate political will and ensure universal access to quality contraception, paying particular attention to addressing all inequality in access to contraception.

The main challenges that the country faces in its efforts to reduce fertility include:

- A high demand for children;
- High levels of unmet needs for family planning;
- High child mortality rates;
- High school dropout rates, especially for teenage girls;
- Early initiation of childbearing and early marriage; and
- Huge geographical and income group differentials in fertility preferences and access to family planning methods.

These challenges are recognised and hence the country's commitment to the FP2020 programme as part of a wider strategy to meeting family planning goals. Some of the key policies and interventions Zambia should adopt to meet the goal of rapid fertility decline are outlined below.

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

Building on the remarkable progress Zambia has made in increasing contraceptive use, the country should prioritise the following actions to ensure increased demand for, and universal access to family planning:

- Reinforce political will and government investments in FP at national and sub-national levels, building on the FP2020 commitment, which includes doubling of budgetary allocation for family planning interventions as articulated in the 8 year FP scale-up plan (2013 to 2020).
- Intensify communication and educational programmes and develop innovative outreach services to promote the benefits of family planning and the resultant planned family sizes.
- Improve the quality and equitable access to high impact maternal health services such as skilled attendance at birth and emergency obstetric care.

- Encourage and reinforce male involvement in reproductive health programmes, including family planning.
- Pay particular attention to underserved population groups such as youth and to underserved provinces, districts and constituencies.
- Strengthen government institutions responsible for coordinating reproductive health programmes, including family planning programmes.
- Reinforce M&E and accountability mechanisms for financing and service delivery, including budget tracking for FP commodities.
- Reinforce public-private partnerships in delivery of Reproductive Health programmes, including family planning services.

In order to improve child survival and therefore encourage couples to have smaller family sizes knowing that the chances of their few children surviving to adulthood are high, Zambia should:

- Intensify on-going interventions to further reduce child mortality including immunization campaigns, integrated management of childhood illnesses (IMCI), use of insecticide treated nets, prevention of mother-to-child transmission of HIV, deliveries by skilled birth attendants and improving child nutrition including Vitamin A supplementation.
- Pay particular attention to interventions addressing neonatal mortality and stunting.
- Target vulnerable population groups and underserved provinces, districts and constituencies.

In order to keep girls in school and prevent early pregnancies and marriages, Zambia should take the following actions:

- Address cultural, social and economic barriers that increase school dropout including financial barriers to accessing quality education.
- Enforce laws on the legal minimum age of marriage – Constitution/Marriage Act - and sensitize communities to value the education of girls with its benefits at household, community and national levels.
- Address the stigma, misconceptions and financial constraints that prevent girls from taking advantage of the school re-entry policy after giving birth.
- Scale-up comprehensive sexuality education and services for in and out of school adolescents, including removing the age consent barrier to accessing contraception and other reproductive health services.

8.2 Creating a Healthy Workforce

A healthy workforce is critical to enhancing economic productivity and for Zambia's chances to harness a substantial demographic dividend. Zambia's labour force bears a high burden of disease from communicable diseases and increasingly from non-communicable diseases (NCDs) and accidents. These health challenges are worsened by insufficient and skewed access to and distribution of health workers, health facilities, and water and sanitation services. To fully harness the demographic dividend, Zambia should intensify its efforts and increase investments in public health and general healthcare services to support a high-quality labour-force for the future. The key health challenges for workers health include:

- A high burden of disease mainly driven by HIV/AIDS, malaria, respiratory infections and malnutrition;
- High levels of maternal and reproductive morbidities and mortality;
- Emerging lifestyle and non-communicable diseases, including various forms of cancers and diabetes;
- Inadequate numbers of well-trained health workers and health facilities to meet the demand; and
- Skewed distribution of health workers and facilities that in particular favour urban areas.

The government recognizes these challenges and there are on-going efforts to address them. The following should be prioritised as the focus of interventions:



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

- Increase political will and commitment to health, including increasing budgetary allocations and investments in the sector, ensuring that recurrent expenditure does not take preference over service provision, and ensuring efficient budgetary distribution between curative and preventive care, in consideration of the returns on investments accruing to types of care, especially in terms of equitable health outcomes.
- Enhance provision of health education to sensitize Zambians on various health issues and increase demand for preventive health care, including those that limit the emerging life-style diseases, while enhancing the capacity of the health system to manage NCDs.
- Improve quality of training to increase the production capacity, equitable deployment and retention of health workers, with specific focus on providing incentives to retain the workers in the public sector and underserved regions.
- Informed by evidence, build and adequately equip health facilities to increase equitable geographic access, particularly for rural communities.
- Ensure universal access to life saving health commodities and medicines, including ARVs for populations living with HIV/AIDS, essential commodities, modern contraceptives, and maternal and child health medicines, among others.
- Step up efforts to eradicate malaria, considering its high prevalence in the country and its effects on productivity of the workforce.
- Considering the high HIV prevalence in the country, prioritize HIV prevention, treatment and care.
- Urgently address malnutrition from childhood through adolescence to adulthood to secure the productivity of Zambia's workforce.
- Improve health infrastructure and systems, including supply chain management to ensure health commodity security with particular focus on underserved areas.
- Encourage and reinforce public-private partnerships in health care delivery within an enhanced coordinated and accountability mechanism that leverages synergies and eliminates inefficiencies.

8.3 Enhance Coverage and Quality of Education and Skill Development

For Zambia to effectively harness the demographic dividend, its labour force should be well educated and should possess high-quality skills that make it more productive and competitive in the global economy.

The key challenges to improving the education attainment and skills development in Zambia to produce a high-quality and competitive labour force can be summarised as follows:

- Limited access to secondary and higher education due to lack of facilities and other resources;
- Poor quality of education due to inadequate school facilities, learning materials and teachers;
- A mismatch between skills imparted by the education system and the labour market needs;
- Huge inequality in school enrolment especially at post-primary levels that marginalise girls, children in rural areas and those from poor families;
- Low levels of Early Childhood Education (ECE); and
- Inadequate TEVET institutions to meet demand – especially of youth who leave the school system at grades 9 and 12.

Vision 2030 emphasises on developing quality human capital, including investing in quality education and skills development, as a key pillar of success. This undertaking is costly but essential if the country hopes to emulate the development of the Asian Tigers and other industrialised high middle income countries. Below is an outline of key policy options that Zambia should embrace to spur its education system and equip its human capital to harness the demographic dividend and attain its development vision.

Policy Options for Education Reforms Needed for Zambia to Harness the Demographic Dividend

- Adopt a universal secondary school policy in order to improve progression rates to secondary and increase enrolment in tertiary institutions.
- Increase investments in Early Childhood Education (ECE) to adequately prepare children for formal education.

- Increase commitment and budgetary allocation to ensure adequate distribution of gender sensitive school facilities, well trained and motivated teachers and quality learning materials at all levels of education. This will improve the quality of learning, reduce school dropout, and help achieve universal secondary education.
- Revise school curricula at all levels to match skills development in schools with the labour-market needs, including focus on important contemporary global market skills needs such as science and technology, innovation, entrepreneurship and strategic leadership training.
- Address factors responsible for the huge gender, income, rural-urban, and regional inequality in school participation and completion including social norms, cultural practices and economic factors.
- Improve the number of facilities, distribution and quality of vocational training to enhance entrepreneurship and productivity of out-of-school youth.

8.4 Accelerating Economic Growth and Job Creation

With a rapidly growing youthful population, a key challenge for Zambia is job creation to maximize the productive potential of this segment of the population as they transition into the working-ages. Zambia's economic growth has to be accompanied by job creation for the "people-centred economic growth and development" goal of the R-SNDP to be achieved. The current challenges to creating enough decent jobs for Zambia's labour force are marked by the following characteristics:

- Widespread poverty, with about 60.5% of the population living in poverty;
- An unemployment rate of 7.9% that masks high levels of underemployment estimated at about 70%;
- At least 83% of the employed are engaged in low quality and low earning jobs in the informal sector;
- Higher levels of unemployment for women and the youth compared to other population segments;

- The prominence of the extractive sector – particularly copper mining and infrastructure development as the key growth engines, which have low job-multiplier effects, while the agricultural sector that supports a majority of households remains underdeveloped and operating well below its optimal levels;
- A significant skills mismatch gap between market needs and what the education system produces; and
- Low prioritization of incentives to indigenous entrepreneurs compared to efforts to attract FDI.

For Zambia to achieve inclusive development and maximise its demographic dividend, job creation should be central to its economic strategies. Key policy options for Zambia to adopt so as to accelerate economic growth and job creation and therefore harness the demographic dividend are listed below:

Policy Options for Accelerating Economic Growth and Job Creation in Zambia

- Diversify the economy and reduce overdependence on the extractive industry, and prioritise the expansion and investments in labour intensive sectors such as agriculture, manufacturing and tourism.
- Modernise the agriculture sector to improve productivity and prioritise value-addition through agro-industries as the bedrock of transitioning to an industrialised economy.
- Fast-track investments, especially in rural areas, in economic infrastructure, transport, communication and energy to enhance efficiency and lower the cost of doing business.
- Create an enabling environment for private sector development to step-up direct foreign and domestic investment and facilitate creation of mass decent jobs.
- Put in place incentives to mainstream the informal sector that employs majority of the youth and women and promote small and medium sized enterprises.

8.5 Fiscal Policies, Governance and Accountability

Zambia's Vision 2030 identifies good governance as one of the key pillars for socio-economic development. Good governance also creates an enabling environment to boost investments and savings.

Zambia can adopt the following policy options to improve governance and accountability as it strives to harness the demographic dividend:

Policy Options for Enhancing Fiscal Policies, Governance and Accountability

- Strengthen governance and anti-corruption systems in order to optimise investor confidence and ensure all public resources are used for national development.

- Enhance efficiency and accountability in the delivery of public service by improving local technical capacity to conduct evidence-based priority setting; resource allocation; programme design, implementation and monitoring.
- Devise effective devolution of resources and decision-making to sub-national levels.
- Reform macroeconomic policies and financial institutions to promote private savings and domestic investments as well as FDI.
- Adopt policies and laws that empower women and enhance their leadership roles and equitable participation in the labour force.



A computer learning session for Zambian professionals. Photo courtesy: Teachers Without Borders/Flickr

DISCUSSION AND CONCLUSIONS

Zambia's socio-economic development blueprint, Vision 2030, seeks to transform the country from a low-income country to a prosperous and dynamic middle-income industrial nation that provides opportunities for improving the wellbeing of all its citizens by 2030. The Vision provides a broad based framework for addressing the strategic bottlenecks that have constrained Zambia's socio-economic development, including rapid population growth and high child dependency burden. The country's development path is benchmarked to Upper Middle Income countries, but specifically to the experience of four countries: Malaysia, South Korea, and Hong Kong in East Asia and Mauritius in Africa.

Vision 2030's transformative agenda is anchored on three broad pillars, namely economic growth and wealth creation, social investment and human development and creating an enabling environment for sustainable socio-economic development. These pillars mirror perfectly the five main wheels of the demographic dividend – family planning, education and skills development, health, economic reforms and job creation, and good governance and accountability. The congruence between the Vision 2030 pillars and the demographic dividend wheels shows that Zambia already has the policy framework that it needs to harness the demographic dividend – what is outstanding is to fully implement the Vision in an integrated and coordinated manner. The demographic dividend would present an additional impetus for the country to accelerate economic growth if the country makes smart investments to facilitate rapid fertility decline, enhance human capital development and reform the economy to create mass decent jobs.

In the past decade, Zambia has achieved exceptional economic growth. Between 2003 and 2013, the economy grew at an average of 6.7%. The country also rebased its economy in 2013 raising its average income to USD 1,839, and in the process attaining lower middle-income country status. However, this enviable economic growth has not been accompanied by the creation of adequate decent jobs. By 2010, up to 60.5% of Zambians were still poor. Levels of unemployment and underemployment are high, especially for the youth and women. More than 83% of employed Zambians are engaged in the informal sector, where jobs are often low-paying. The lack of translation of economic growth into all-inclusive prosperity is not surprising since it is mainly driven by the mining sector that has a low job-

multiplier effect.

However, Zambia can turn this inequality around if the economic reforms envisaged in Vision 2030 - operationalised by the Revised 6th National Development Plan - are effected. Agriculture, manufacturing, energy, construction and tourism have been identified as critical growth sectors with abundant potential. In particular, investments in agriculture that support the livelihoods of the majority of Zambians and rural enterprises have been identified as key pathways to promoting rural development and bridging the inequality gap. The economic opportunities in Zambia, growing FDI, a growing consumer market, closer regional economic ties and integration, as well as emerging development partnerships, such as with the BRICS (Brazil, Russia, India, China and South Africa) bloc, if well exploited, can propel Zambia to achieve Vision 2030.

Zambia has a relatively young population as a result of past and current high levels of fertility amidst declining child mortality. As noted in Vision 2030, this has led to rapid population growth and a high child dependency burden. Almost half (45%) of Zambia's population is aged less than 15 years. A high child dependency burden stretches the resources of both families and the government that have to provide for the essential needs of a large population that does not contribute to economic productivity. It also limits the ability of both families and governments to save and make investments that can spur further economic growth. Zambia's Population Policy, 2007 identified the high dependency burden as one of the main barriers to sustainable socio-economic development. UN 2012 Population projections indicate that Zambia had a dependency ratio of 0.98 in 2010 i.e. there is almost one dependent for every Zambian of working age (15-64 years old).

Although the large young population in Zambia presents huge challenges to socio-economic development, it also offers a unique opportunity that needs to be harnessed for accelerated economic growth. If fertility declines rapidly, the age structure will shift from the present one dominated by child dependency to one in which there are more people in the working-ages relative to dependents. If this change is accompanied by strategic and simultaneous investments in human capital development, economic reforms and job creation, and good governance as envisaged in Vision 2030, then Zambia can experience a sustained period of rapid economic growth. This can earn the country a

substantial demographic dividend as the East Asian Tigers did between the 1960s and 2000s. The key to success is to ensure the five wheels of the demographic dividend move together, reinforcing each other in an integrated approach to development.

The analyses presented in this study report show that Zambia can harness a sizable demographic dividend. Zambia should adopt policies and prioritise investments aimed at accelerating fertility reduction through voluntary and rights based interventions and education to open the window to harnessing the demographic dividend. Additionally, Zambia has to make strategic investments in education and skills development, health, economic reforms and job creation. Coupled with good governance and accountability, Zambia can create a globally-competitive economy that would accelerate economic growth and thus earn her a substantial demographic dividend.

Under the Economic Emphasis model, prioritising economic reforms to the level of the benchmark countries would increase Zambia's per capita GDP from the 2013 level of USD 1,839 to USD 5,197 in 2030. If in addition the country embarks on moderate investments in family planning and education (moderate model), the per capita GDP would increase to USD 5,441 by 2030. However, if Zambia simultaneously invests fully in economic reforms, human capital development and family planning in the Combined model, the GDP per capita would increase to USD 5,808. This translates into a demographic dividend of USD 611 – the difference between the income level of Economic Emphasis model and the Combined model.

By 2053, the potential impact of the demographic dividend would be immense. Per capita income would rise under the Economic Emphasis model to USD 19,547, to USD 22,875 under the moderate model, and to USD 26,940 under the Combined model. Hence Zambia would harness a demographic dividend of USD 7,393 beyond what the country would have earned if it only focused on economic reforms. Although the projected incomes modelled in this study may at first look unrealistic, the fact that South Korea increased its income from a much lower level in 1960 than Zambia today, to around USD 26,000 per capita GDP in 2013, shows that Zambia can achieve the same if it makes the right investments across all the five policy wheels of the demographic dividend.

The model results also show that the task of job creation will be tough under all the scenarios projected. This is because Zambia will have a large population due to long-standing high fertility. If no serious interventions are made to facilitate fertility decline for instance, under the

Economic Emphasis model, Zambia's population will more than triple from the current level to 49 million people in 2053. In comparison, under the Combined scenario, where in addition to economic emphasis, priority is given to both family planning and education, the population will increase to 36 million people by 2053. Adequate and decent jobs have to be created to absorb the increased working-age population. The projections show that by 2053 under the Economic Emphasis model, the difference between the population aged over 15 years and the number of available jobs (the employment gap) will increase to 9 million from the current 2.3 million. On the other hand, the employment gap will increase to 7 million under the Combined scenario. These results show the urgency of huge investments, including a long-term job creation plan since high levels of unemployment can have a serious negative impact on security and stability of the nation.

For Zambia to harness the substantial demographic dividend modelled in this study, the country should facilitate voluntary fertility decline by enabling all women and men who would like to postpone or stop childbearing to access effective contraceptive methods to realise their reproductive rights. The fertility decline will reduce the high child dependency ratio and create a labour force bulge, which can accelerate economic productivity and growth if the labour force is gainfully employed. Reduced fertility will enable women to have more time for formal employment and to contribute in more ways to economic productivity. At the same time, it will enable families and governments to increase investments in education and health per child, in turn helping build high quality human capital for the future.

Reforming the education system to ensure universal enrolment at secondary and tertiary levels will not only help reduce fertility by delaying onset of childbearing by most of the women; it will also ensure the country has well-educated, skilled, industrious and innovative labour force ready to boost economic productivity and development.

Enhancing investments in the health sector will also ensure that the country has a healthy labour force that will live longer and contribute more to development.

Accelerating economic growth by paying particular attention to development of sectors with high growth and job creation potential will be very critical for the country to harness the demographic dividend as Zambia's labour force will continue growing for a long time due to the high population momentum.

The results of these analyses show that exclusive focus on economic reforms and investments will not suffice for Zambia to decisively reduce poverty and attain the socio-

economic transformation envisaged in Vision 2030. The country has to prioritise concurrent investments in economic and social factors, particularly family planning and human capital development. That is precisely what the Asian Tigers did over a forty-year period between the 1960s and 2000s. The Zambian government has prioritised economic policies especially infrastructure development and attracting FDI for investments in the extractive sectors to accelerate economic growth and reduce poverty. The economic policies should now focus on diversifying the economy. Increased investments to enhance education and skills development have largely been focused on expanding access to primary school. Zambia should also step up investments that promote universal secondary education and target a critical mass attaining tertiary education. Curricula at all education levels have to target imparting market oriented knowledge and skills. Increased and targeted investments should also be made to improve the health of Zambians through high impact and cost effective interventions. However, to harness the demographic dividend, the window of opportunity has to be first opened.

Vision 2030 and the RSNPD correctly identify some of the major challenges to Zambia's socio-economic development. They also broadly prescribe solutions to these hurdles. The big challenge for the country is how to identify the game-changer interventions that will result in the highest impact returns. To do this, the government should rely on evidence-based decisions when investing in intervention programmes. Further, to surmount the challenges, the government has to partner with all policy actors and interest groups including the civil society, bilateral and multi-lateral partners, and the private sector. The role of the latter in socio-economic

development has for far too long been neglected but this is rapidly changing with the development of more and more public-private partnerships across the globe.

In pursuit of becoming a high middle income nation, Zambia has to be careful to ensure that the growth is beneficial to all and that safety nets and social protection measures are widely available for the less fortunate and the most vulnerable in the society. These include the poor (particularly in the rapidly growing urban areas) who disproportionately experience the negative effects of rising inequality. Unless checked, rising social inequality is likely to create a poverty trap for the poor that will perpetuate intergenerational transmission of poverty.

While job opportunities have to be created for the burgeoning youth, it will be equally important going forward for the country to develop social protection mechanisms to cushion the old as their numbers grow in the future. Part of these plans should include inculcating a savings culture with an eye towards old age support. The health system should also be prepared to cater for the increased demand by the aged who unlike younger people are likely to suffer from chronic ailments that are expensive to manage.

In conclusion, Zambia has an enabling environment and all the necessary tools and conditions to match and even surpass the rapid socio-economic development growth and transformation recorded by the Asian Tigers. If the Vision 2030 blueprint and the policies developed to operationalise it are effectively and efficiently implemented, including emphasis on governance and accountability, then Zambia will achieve its goals and become an upper middle income country that achieves a people-centred socio-economic transformation over the next three to four decades.



An African family. Photo courtesy: Google images

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APPENDIX

Appendix I: List of Core Technical Team members who attended the Demographic Dividend Workshop, Zambia

No	NAME	INSTITUTION
1	Chola Daka	Central Statistical Office
2	Chitembo Chunga	Ministry of Finance
3	Palver Sikanyiti	Central Statistical Office
4	Pamela Kauseni	Ministry of Finance
5	Andrew Banda	University of Zambia
6	Nchimunya Nkombo	Central Statistical Office
7	Charles Banda	UNFPA
8	Francis Mpampi	Ministry of Finance
9	Lee Chileshe	Central Statistical Office
10	Bupe Musonda	Ministry of Education
11	Susan Kamuti	UNFPA
12	Maketo Mulele	Ministry of Finance
13	Buleti Nsemukila	UNFPA/University of Zambia
14	Chinwe Ogbonna	UNFPA
15	Nawa Kutoma	Ministry of Finance
16	Gibson Masumba	Zambia Institute of Policy Analysis and Research
17	Nkuye Moyo	University of Zambia
18	Dr J.R.S Malungo	University of Zambia
19	Chibesa Musamba	Central Statistical Office
20	Edmond Mwakalombe	MCDMCH
21	Greenwell Lyombe	Ministry of Justice

Appendix II: List of Participants in the Multi-Sector Stakeholder Meeting to Review and Validate Study Findings

No.	Name	Position	Institution
1	Mrs Pamela C. Kabamba	Acting Secretary to the Treasurer	MOF
2	Mary Otieno	Country Rep	UNFPA
3	Takaiza Cleophas	Director Training	TEVTA
4	Chinwe Ogbonna	Deputy Rep	UNFPA
5	Patrick H. Choolwe	Assistant Director	MOF
6	Mubita Luwabelwa	Deputy Director	MOH
7	Sally Ross	Assistant Director	Office of the Auditor General
8	Mainga Luwabelwa	Chief Planner	MOF
9	Charles Mweshi	Chief Planner	Ministry of Youth & Sport
10	Maketo M. Mulele	Chief Economist	MOF
11	Amos Mwale	Executive Director	CRHE
12	Edford Mutuma	Executive Director	PPAZ
13	Nkuye Moyo	Head of Department	UNZA
14	Sibeso Mululuma	Assistant Rep.	UNFPA
15	Charles Mwila	Principal Planner	MAL
16	Chitembo Chunga	Principal Planner	Ministry of Finance
17	Henry Matimuna	Principal Planner	MCDMCH
18	Francis Mpampi	Principal Planner	MOF
19	Mwila Daka	Principal Planner	MCTI
20	Pamela Kauseni	Principal Planner	MOF
21	Nchimunya Nkombo	Principal Statistician	CSO
22	Charles Banda	NPO	UNFPA
23	Lewis Mwila	Senior Planner	MTWSC
24	Hassan Banda	Senior Planner	MLSS
25	Brian G. Mtonya	Senior Private Sector Development Specialist	World Bank
26	Nicholas Mwale	Snr. Planner	MAL
27	Sosten Banda	Economist	NFNC
28	Chola N. Daka	Senior Demographer	CSO
29	Buleti Nsemukila	Consultant	UNFPA/UNZA
30	Palver Sikanyiti	Assistant Demographer	CSO
31	Nawa Kutoma	Planner	MOF
32	Chibesa Musamba	Demographer	CSO
33	Andrew Banda	Lecturer	UNZA
34	Mupuwaliywa Mupuwaliywa	Research Assistant	World Bank
35	Vivian Sakaya	M & E Officer	PPAZ
36	Gibson Masumbu	Research Fellow	ZIPAR
37	Sharon Chitambo	Programme Officer	ILO
38	Brian Kayongo	National Coordinator	NYPD

39	Sampa K. Wilkie	Communication Officer	ECA
40	ECM Soko	Data Manager	MCTI
41	Greenwell Lyempe	M & E	MOJ
42	Isabel Muyanda	Planner	MMEWD
43	Jennipher Mijere	P.O	UNFPA
44	Peggy Simwanza	PRO	MGCD
45	Peter Mucheleka	National Coordinator	MOCTA
46	Precious Zandonda	Communication Officer	UNFPA
47	Susan Kamuti	Consultant	MAL

Appendix III: Model Input Variables Used in the DemDiv Model for Zambia

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



Financial Market Efficiency	Measurement (on a scale of 1-7) of efficiency of financial markets, including factors such as availability and affordability of financial services, financing through local equity market, ease of access to loans and venture capital availability.	Efficiency of financial markets facilitates movement of funds and investments and promotes investments by local and foreign investors.
Imports as Percent of GDP	Imports as percent of GDP. Total imports refer to the sum of total imports of merchandise and commercial services.	As economies advance, they specialize in industries and sectors where they have a comparative advantage and import products that they are not well placed to produce. At the early stages of economic transformation and industrialization, level of imports increases and falls and this may fall as developing countries develop capacity to produce a lot of the products that they import.
Governance and Accountability		
Public Institutions	Measurement (on a scale of 1-7) of public institution strength, including factors such as property rights, division of powers, corruption, regulatory burdens, transparency, waste in government spending and public safety.	Strong public institutions help enforce accountability in use of public resources, service delivery, and protection of public and private property and investments and in ensuring public safety, all key ingredients for promoting investments and economic productivity.









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