



**ZIMBABWE**

**2017**

**HARNESSING  
THE DEMOGRAPHIC  
DIVIDEND IN ZIMBABWE**

**HARNESSING THE  
DEMOGRAPHIC DIVIDEND IN  
ZIMBABWE**

**2017**

# Table of Contents

<b>Table of Contents</b>	<b>v</b>
<b>List of Figures</b>	<b>vi</b>
<b>List of Tables</b>	<b>vii</b>
<b>Acronyms</b>	<b>viii</b>
<b>Acknowledgements</b>	<b>ix</b>
<b>Foreword</b>	<b>x</b>
<b>Executive Summary</b>	<b>xi</b>
<b>1. Introduction</b>	<b>1</b>
1.1 Study objectives	5
1.2 Methodology	5
<b>2. Background</b>	<b>7</b>
2.1 Demographic profile	8
2.2 Education and skills development profile	13
2.3 Health status	16
2.4 Economic outlook and opportunities	19
2.5 Governance and accountability	24
<b>3. The National Transfer Accounts</b>	<b>27</b>
3.1 Estimating the demographic dividend within the NTA framework	29
3.2 Data	31
<b>4. Results</b>	<b>33</b>
4.1 Labour income, consumption and the lifecycle deficit in Zimbabwe	34
4.2 Support ratio and the first demographic dividend	40
<b>5. Policy Options for Maximising the Demographic Dividend in Zimbabwe</b>	<b>47</b>
5.1 Facilitating the demographic dividend through reinforcing investments in voluntary family planning and health	49
5.2 Strategising to create mass decent jobs for the youthful population	51
5.3 Focus on education and training to develop a skilled and globally competitive workforce	52
5.4 Strengthening enabling factors for optimising the Demographic Dividend	53
5.5 Planning for the Second Demographic Dividend	54
<b>6. Conclusion</b>	<b>55</b>
<b>References</b>	<b>58</b>
<b>Appendices</b>	<b>61</b>
<b>Appendix I: Zimbabwe modelling and validation workshop participants list</b>	<b>61</b>
<b>Appendix II: Technical note on the fertility scenarios</b>	<b>63</b>

## List of Figures

<b>Figure 1.1:</b> African Union Demographic Dividend Priority Investment Pillars	4
<b>Figure 2.1:</b> Fertility trends in Zimbabwe	8
<b>Figure 2.2:</b> Child mortality trends in Zimbabwe, 1988-2015	9
<b>Figure 2.3:</b> Demographic transition: population age structures for Zimbabwe and selected countries in Asia and Africa in 2017	11
<b>Figure 2.4:</b> Highest level of education attainment (population age 25+)	14
<b>Figure 2.5:</b> Net Attendance Ratios (NAR) for primary and secondary school in Zimbabwe, 2015	15
<b>Figure 2.6:</b> Trends in Malnutrition among Children below 5 Years, Zimbabwe 1992-2015	18
<b>Figure 2.7:</b> Recent trends in Zimbabwe's GDP, 2009-2015	20
<b>Figure 2.8:</b> Unemployment rates among youth and young people in Zimbabwe, 2014	23
<b>Figure 2.9:</b> Zimbabwe Worldwide Governance Indicators (WGI) Trends	25
<b>Figure 3.1:</b> Labour income and consumption across the lifecycle	30
<b>Figure 4.1:</b> Per capita Labour Income (YL) and Consumption (C), Zimbabwe 2011	34
<b>Figure 4.2:</b> Aggregate Labour Income (YL) and Consumption (C), Zimbabwe 2011	35
<b>Figure 4.3:</b> The Aggregate Lifecycle Deficit (LCD), Zimbabwe 2011 (Medium variant scenario)	36
<b>Figure 4.4:</b> Comparing Zimbabwe's Per Capita Labour Income and Consumption Patterns with Selected Others	38
<b>Figure 4.5:</b> Comparing Zimbabwe's Per Capita Lifecycle Deficit (LCD) Profile with Selected Others	39
<b>Figure 4.6:</b> Past Estimates and Projected Support Ratios for Zimbabwe (UN Medium Fertility Scenario)	40
<b>Figure 4.7:</b> Estimating Zimbabwe's Demographic Dividend (UN Medium Fertility Scenario)	41
<b>Figure 4.8:</b> A comparison of the prospects for the first demographic dividend in Namibia, Swaziland, Botswana and Zimbabwe	42
<b>Figure 4.9:</b> Simulations of the DD in Zimbabwe under Different Fertility Assumptions	44
<b>Figure 4.10:</b> Simulations of the DD in Zimbabwe under Different Labour Income (YL) Assumptions	45

## List of Tables

<b>Table 2.1:</b> Population change in Zimbabwe, past estimates and future projections (1982-2032)	10
<b>Table 2.2:</b> Contribution to GDP by Industry, 2008 -2014	21

## Acronyms

<b>AFIDEP</b>	<b>African Institute for Development Policy</b>
<b>AU</b>	<b>African Union</b>
<b>AUC</b>	<b>African Union Commission</b>
<b>CTT</b>	<b>Core Technical Team</b>
<b>CPIA</b>	<b>Country Policy Institutional Assessments</b>
<b>DD</b>	<b>Demographic Dividend</b>
<b>DHS</b>	<b>Demographic and Health Survey</b>
<b>DPRU</b>	<b>Development Policy Research Unit</b>
<b>ECD</b>	<b>Early Childhood Development</b>
<b>EFA</b>	<b>Education for All</b>
<b>ESSP</b>	<b>Education Sector Strategic Plan</b>
<b>FP</b>	<b>Family Planning</b>
<b>GAR</b>	<b>Gross Attendance Ratio</b>
<b>GDP</b>	<b>Gross Domestic Product</b>
<b>GPE</b>	<b>Global Partnership for Education</b>
<b>GPI</b>	<b>Gender Parity Index</b>
<b>IIAG</b>	<b>Ibrahim Index of African Governance</b>
<b>ILO</b>	<b>International Labour Organisation</b>
<b>I-PRSP</b>	<b>Interim - Poverty Reduction Strategy Paper</b>
<b>MDGs</b>	<b>Millennium Development Goals</b>
<b>MMR</b>	<b>Maternal Mortality Ratio</b>
<b>NAR</b>	<b>Net Attendance Ratio</b>
<b>NCD</b>	<b>Non-Communicable Disease</b>
<b>NTA</b>	<b>National Transfer Accounts</b>
<b>PICES</b>	<b>Poverty, Income, Consumption and Expenditure Survey</b>
<b>SSA</b>	<b>Sub Saharan Africa</b>
<b>TB</b>	<b>Tuberculosis</b>
<b>TFR</b>	<b>Total Fertility Rate</b>
<b>UN</b>	<b>United Nations</b>
<b>USD</b>	<b>United States Dollar</b>
<b>WGI</b>	<b>Worldwide Governance Indicators</b>
<b>ZDHS</b>	<b>Zimbabwe Demographic and Health Survey</b>
<b>ZELA</b>	<b>Zimbabwe Early Learning Assessment</b>
<b>Zim Asset</b>	<b>Zimbabwe Agenda for Sustainable Socio-Economic Transformation</b>
<b>ZIMSTAT</b>	<b>Zimbabwe National Statistics Agency</b>
<b>ZSARA</b>	<b>Zimbabwe Service Availability and Readiness Assessment</b>

## Acknowledgements

The Zimbabwe Demographic Dividend study, 2017, was commissioned by the Government through the Ministry of Macro-Economic Planning and Investment Promotion (MOMEPIP), with national data and technical input from the Zimbabwe National Statistics Agency (ZIMSTAT). The UNFPA Zimbabwe Country Office and East and Southern Africa Regional Office (ESARO) provided financial and technical support for the study. The African Institute for Development Policy (AFIDEP) with the support of University of Cape Town's Development Policy Research Unit (DPRU) were commissioned to provide technical leadership in conducting the study.

MOMEPIP chaired the Core Technical Team (CTT), which comprised government officials from various sectors and other stakeholders. The CTT provided technical oversight of the project and validated and approved the inception report and the final technical report. The AFIDEP team comprising Dr. Eliya Zulu, Dr. Bernard Onyango, and Ms Eunice Mueni, together with Mr. Morne Oosthuizen of DPRU provided technical leadership for the study. The study also benefited from technical contributions of Prof. Nyovani Madise of the University of Southampton. The UNFPA team was led by Mr. Piason Mlambo.

The study used the National Transfer Accounts (NTA) methodology to analyse Zimbabwe's potential to harness the demographic dividend and the policy options it can adopt to maximise the magnitude of the dividend in order to boost economic growth in Zimbabwe.

ZIMSTAT convened two analytical workshops to collate and analyse the data in conjunction with AFIDEP, DPRU and UNFPA while the MOMEPIP convened a 4-day participatory workshop in May 2017 for the CTT to validate the findings of the study and deliberate on the policy options to harness the demographic dividend in Zimbabwe. The full list of the workshop participants is provided in Appendix I.

## Foreword

Government recognizes that people are at the centre of development and constitute the country's greatest asset in the attainment of socio-economic transformation and development.

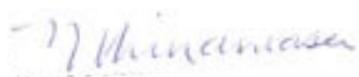
Zimbabwe, like several other African countries commissioned a study on Harnessing the Demographic Dividend in the country. Their followed the adoption by the AU of the 2013 Addis Ababa Declaration on Population and Development in Africa beyond 2014 under the "Harnessing the Demographic Dividend: The Future we want for Africa."

The study sought to review the country's demographic and economic opportunities and challenges and identify key policy options to optimize the chances of earning a maximum demographic dividend to accelerate the achievement of the country's development aspirations.

The study revealed that Zimbabwe entered the demographic dividend window around 2004 and this dividend will last until 2060. The peak of the demographic dividend was in 2012 but the country could not realize the dividend due to the severe challenges posed by the HIV pandemic as well as the hyperinflation that had gripped the economy at the time. However, for the country to maximize what is left of the demographic window period and use this opportunity to hasten the achievement of its long term development aspirations as espoused in ZimAsset, the following four policy areas need to be addressed:

- i) Prioritise economic reforms and investment to urgently accelerate creation of jobs and other well-paying livelihoods for the country's youth;
- ii) Reinforce investments in health to ensure a healthy labour force;
- iii) Facilitate further demographic transition through enhancing voluntary family planning services and access to effective modern contraceptives to curb early marriages, unwanted teenage pregnancies; and
- iv) Strengthen enabling factors for optimizing the demographic dividend such as bridging the gap between policies for socio-economic development and implementation of programmes, and ensuring accountable service delivery and use of public resources.

I therefore entreat all stakeholders to join hands and work together to implement the key interventions that will make a difference in the lives of today's young people to prepare them for the transformative role that they are bound to play in the course of Zimbabwe's attainment of its development aspirations.



Hon. P.A. Chinamasa (MP)

Minister of Finance and Economic Development

## Executive Summary

*The Zimbabwe Agenda for Socio-economic Transformation* (Zim Asset) 2013-2018 lays a foundation for its long-term development aspirations that seek to achieve sustainable development and social equity anchored on indigenisation, empowerment and job creation. Demographic change has implications for the realisation of these ambitions. This study set out to analyse the population dynamics and age-structure changes in Zimbabwe in the medium to long-term and the implications these will have on the ability of the country to maximise its Demographic Dividend (DD). The demographic dividend refers to the temporary economic benefit that can arise from a significant increase in the ratio of working-age adults relative to young dependents that results from fertility decline - if this change is accompanied by sustained investments in education and skills development, health, job creation and good governance. The DD paradigm offers a framework that is congruent with the needs of Zimbabwe's long-term development aspirations as well as the global post-2015 Sustainable Development Goals (SDG) agenda.

Zimbabwe's current population stands at just over 13 million people, and is set to rise significantly to 19.3 million people by 2032. Total fertility in the country in 1988 was estimated at about 5.4 children per woman but has gradually reduced to 4.0 at present. While lower than in many countries in sub-Saharan Africa (where the average is 5 children per woman), this level of fertility is still significantly higher than the replacement level of 2.1. The declines in fertility and mortality in Zimbabwe have resulted in its age-structure shifting slowly from one with more child dependents to one with significantly more people in the economically productive ages. Just over one half (55%) of the present population is between the ages of 15-64 years, often referred to as the working-age population. As the shift to more people in the working age unfolds, this places Zimbabwe within the temporary window period within which to harness the first demographic dividend over the next few decades before the age structure further shifts and becomes dominated by old-age dependency.

This study reviewed Zimbabwe's demographic and economic opportunities and challenges; modelled the DD using the National Transfer Accounts (NTA) methodology; and identified key policy options to optimise the chances of earning a maximum DD to accelerate the achievement of the country's development aspirations. The NTA framework was used to demonstrate the timing of the demographic window of opportunity to harness the DD, to estimate components of the lifecycle deficit (labour income and consumption), and to estimate the DD. Chapter 3 of this report gives a description of the NTA and its application for the purposes of this study.

Based on the NTA analysis, the country's window of opportunity for harnessing the first demographic dividend opened before 1990, while the magnitude of the first demographic dividend peaked around 2013 and is now in the diminishing returns phase. It is important to note though that Zimbabwe is on track to enjoy the benefits of the first demographic dividend to its socio-economic development efforts as late as 2060, the end projection period of this study. This study shows that the potential cumulative boost in living standards emanating from the first demographic dividend between 1990 and 2060 is 33%. Of this, 9% has already been accumulated between 1990 and 2015 while the remaining boost of 24% will accrue between 2015 and 2060, assuming the country follows the Medium fertility variant of the UN population projections.

<sup>1</sup>The average number of children a woman would expect to have during her reproductive life, given the current age-specific fertility rates.

Two other critical features of Zimbabwe NTA profile are that young people remain dependent till age 30 when they start producing more than they consume and that the country has a high level of consumption that produces a huge life-cycle deficit (the difference between consumption and labour income). It is likely that the deficit is being financed by asset transfers from the Government through proceeds from the country's finite mineral resources, and remittances from Zimbabweans in the diaspora. However, the long-term strategy to sustain the high consumption levels should centre on revamping the economy through transformation in sectors such as agriculture and beneficiation. A modern and diversified economy is required to create jobs for young people who will in turn generate more labour income to contribute towards sustainable development.

Moving forward, the big question is what can Zimbabwe do to position itself to maximise what is left of its first demographic dividend and use this opportunity to hasten the achievement of its long-term development aspirations? There are primarily four policy areas where the country can intervene to maximise the demographic dividend:

- 1. Facilitate further demographic transition through enhancing the voluntary family planning services and access to effective modern contraception to reduce the relatively high unmet need (10%), curb early marriages and unwanted teenage pregnancies.** These measures will address the stalled decline in fertility which at a TFR of 4.0 is still fairly high and will likely diminish the magnitude of the first demographic dividend that Zimbabwe could harness. The East and South East Asian countries maximised their first demographic dividend through facilitating a rapid demographic transition. However, it is important to note that it is not just about having significantly large numbers in the working ages but also ensuring that like the Asian Tigers, strategic investments are made early to develop the human capital that can turn Zimbabwe into an industrialised and prosperous country.
- 2. Reinforcing investments in health to ensure a healthy labour force:** Zimbabwe should reinforce investment in public health to consolidate progress it has made in improving child and maternal health outcomes and in improving the health and overall wellbeing of its work force through various interventions, including the efforts to curb HIV and AIDS and to eliminate Malaria. The country should also reinforce health promotion to prevent lifestyles that predispose workers to non-communicable diseases and enhance the capacity of the health system to manage these and other emerging health challenges.
- 3. Prioritise economic reforms and investments to urgently accelerate creation of jobs and other well-paying livelihoods for the country's youth, who continue to be dependent up to age 30.** The first component of this priority entails focusing on investing in areas of the economy with high job multiplier effects and especially so in agriculture, reforming the agricultural sector to be more attractive to youth, providing incentives to companies that consciously create livelihood opportunities for youth, and empowering youth with resources and technical capacities to start and grow businesses. The second component, which is more immediate, entails enhancing the quality of and rebranding TVET/MTCs as an attractive pathway for re-skilling the thousands of out-of-school youth who did not make it to tertiary colleges. The National Youth Policy already has a focus on vocational and technical training that could be a platform for these reforms. If these plans are effectively implemented, they will enhance the employability of youth and their prospects to engage in well-paying and sustainable livelihoods, including owning businesses. This study shows that boosting Zimbabwe's job creation capacity for young people to follow the global median profile for

other countries with NTA data would boost living standards of the population by about 29% between 2015 and 2060.

- 4. Strengthening enabling factors for optimising the demographic dividend:** In order to lay the foundation for Zimbabwe to be successful in the reforms noted above, the country needs to strengthen its public institutions to facilitate effective and accountable service delivery and use of public resources. Zim Asset as well as the I-PRSP acknowledge the central place of governance across sectors in order to achieve sustainable development. Their prescriptions to enhance governance should be used as a springboard to ensure the achievement of transparent and effective service delivery. More importantly, to enhance the opportunity of harnessing substantial demographic dividends, the Government should strive towards bridging the gap between policies for socio-economic development and implementation programmes to achieve the intended outcomes. Robust monitoring, evaluation and performance management measures must be put in place if the intended outcomes of government policies and plans are to be achieved in an efficient, effective and timely manner.

This study shows that Zimbabwe is already deep within the window period to harness its first demographic dividend. Therefore, there is urgent need for the Government and all other stakeholders in Zimbabwe to act together in a strategic manner to implement game-changer interventions that will enable the country to take full advantage of the demographic dividend to achieve its long-term development aspirations to achieve sustainable development and social equity in Zimbabwe.



## Introduction

Zimbabwe's population almost doubled over the span of three decades, rising from 7.5 million in 1982 to 13 million at the last national census in 2012. The United Nations (UN) Population Division (2017) estimates the current population at 16.5 million people. A large proportion of the country's population is youthful. At the last national census, 41% of the population was below the age of 15 and 20% between 15 and 24 years. Overall, 70% of Zimbabweans were below 30 years old (ZIMSTAT, 2013). The child dependency burden is therefore very high with an estimated child dependency ratio of 76 children (age 0-14) for every 100 persons in the working ages 15-64. A high child dependency burden has implications for current and future socio-economic outcomes. The cost of providing essential services such as health and education is very high when there are many children relative to workers and leads to a struggle for both governments and households to provide quality health care, education and other needs for children. Ultimately, this undermines the quality of human capital of the future workforce. Both governments and households are also left with a diminished capacity to save and direct such savings to other productive investments that can boost economic growth.

The rapid population growth in Zimbabwe over the last few decades has been accompanied by tremendous changes in its socio-economic development trajectory, much of it being positive. Since 2000 however, Zimbabwe experienced a deteriorating socio-economic environment as a result of many factors including foreign currency shortages, high cost of production, unsustainable debt stock and economic sanctions imposed on it by Western countries. Consequently, this led to an economic crisis characterised by a hyperinflationary environment, industrial capacity utilisation of below 10% and an overall cumulative gross domestic product (GDP) decline of 50% by 2008. In the social sector, health and education were also adversely affected with increased episodes of disease epidemics experienced as public health weakened, while the quality of education was compromised, as evidenced by the growing number of school dropouts and poor learning outcomes observed at both primary and

secondary levels. Agricultural production was also negatively affected, resulting in the country depending on imports to meet the demand for domestic consumption and industrial needs (Government of Zimbabwe, 2013). Furthermore, these challenges led to significant skills flight and erosion of private and public financing, thereby negatively affecting quality service delivery and achievement of the United Nations Millennium Development Goals (MDGs).

Various remedial measures that were adopted by the Government in 2009 resulted in some degree of economic stabilisation, with the country achieving a real GDP growth rate of 5.4% in 2009, 11.4% in 2010, and reaching a peak of 11.9% in 2011. However, this growth later declined to 10.6% in 2012 and 3.4% in 2013. Despite the relative stability in the economy and inflation below 5%, the country still experiences a myriad of challenges which if not addressed will reverse the marginal gains recorded so far. The manufacturing sector is still operating under capacity despite recent improvements. The average capacity utilisation for the mining sector declined from 71% in 2014 to 60% in 2015 with signs of recovery in 2016 when average capacity utilisation improved to 64% (The Chamber of Mines of Zimbabwe, 2016). This is attributable to structural and infrastructural bottlenecks such as erratic power supply, obsolete machinery and dilapidated infrastructure as well as the lack of and high cost of capital, hence negatively affecting value addition and beneficiation as well as job creation. Additionally, Zimbabwe's GDP growth rate fell from 1.4% in 2015 to just 0.7% in 2016, continuing a negative per capita income growth pathway. Presently, Zimbabwe is categorised as a low-income country. Its GDP per capita in 2015 was USD 1,153 (ZIMSTAT, 2017).

Despite the turbulence of recent years, Zimbabwe's economic fundamentals remain strong: the country has a considerably strong human capital base and a wealth of natural resources that can be exploited to transform the economy and enhance socio-economic development. The Zimbabwe Agenda for Socio-economic Transformation (Zim Asset) 2013-2018, is the Government's signature strategy for development. Its key objective is to achieve

sustainable development and social equity anchored on indigenisation, empowerment and job creation (Government of Zimbabwe, 2013). Zim Asset has identified four focal cluster areas for investment. These are: (i) food security and nutrition; (ii) social services and poverty eradication; (iii) infrastructure and utilities; and (iv) value addition and beneficiation. In addition, there are a set of important sub-clusters aimed at fiscal reform measures and public administration, governance and performance management. However, Zimbabwe's greatest asset is its people and population dynamics have to be at the centre of development planning.

In addition, and to support Zim Asset, the country has also developed the Zimbabwe Interim Poverty Reduction Strategy Paper (I-PRSP) 2016-2018 (Ministry of Finance and Economic Development, 2016) that focuses on specific short-term measures with long-term impact on livelihoods with the objective of promoting and accelerating inclusive growth and poverty reduction through improved policies consistent with the Zim Asset vision: 'towards an empowered society and a growing economy'.

Population change has important implications for socio-economic development and planning. The current population of Sub Saharan Africa (SSA) is estimated at 1 billion, but is projected to double to 2.16 billion by 2050 (United Nations, 2017). The projected rapid increase is fuelled by the high annual population growth rate of 2.7% which is a source of concern for development experts, demographers, economists, environmentalists and African governments. However, unprecedented demographic changes characterised by falling fertility and child mortality rates have prompted some optimism that countries in SSA can economically benefit from this demographic shift as happened in East Asia in the last quarter of the 20th century.

The relationship between population change and economic growth has been studied and deliberated upon for decades with a focus on population size and population growth. However, insufficient focus has been directed to the implications of demographic transition to lower mortality and smaller families on socio-economic

development. This is changing with the renewed interest in the Demographic Dividend (DD) which refers to the temporary economic benefit that can arise from a significant increase in the ratio of working-age adults relative to young dependents as a result of rapid fertility decline (Bloom et al. 2014). This period of economic growth can last between 20-50 years, but it is dependent on investments in human capital to increase productivity, creation of jobs, and an environment that encourages investments and savings (Lee et al. 2003). The logic is that as fertility declines, then in theory, households and nations have more resources per child to invest in their education and health, thus enhancing the overall human capital (Canning et al. 2015). This temporary demographic bonus arising out of the changes in population-age composition can be considered as the **first demographic dividend**. A **second demographic dividend** can occur if, because of longer life expectancy and the need to save for longer retirement, there is an increase in savings and investments by the working-age cohort (Bloom and Graham, 2003; Bloom and Canning, 2001; Bloom and Williamson, 1998). However, the second dividend evolves as the first dividend is waning, when there is a reduction in the working-age cohort due to population ageing (Mason and Lee 2007). A country must have in place the right policies and a well-developed financial sector to incentivise savings and investments if it is to reap the second DD (Canning et al. 2015). Unlike the first DD, the second dividend is not transitory, in that a permanent increase in capital and per-capita income could accrue as a result of population ageing (Lee et al. 2003).

Experts who have analysed the phenomenal socio-economic development of the East and South East Asian countries such as South Korea, Singapore, Taiwan Province of China and Malaysia experienced between 1970 and 2000 estimate that a quarter to a third of the economic growth that these countries experienced was probably because of the DD (Bloom et al. 2000; Bloom and Williamson, 1998). It should be noted that a change in age structure is not a stimulus for **automatic** or **guaranteed** economic growth. For this to happen, the economy needs to generate adequate quality jobs, and the workforce must be well educated, skilled and healthy.

<sup>1</sup>Similarly, 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.

Zimbabwe's population change is therefore an important component to be considered in its development strategy. The rapid increase in population has been a result of past high levels of fertility in the country. The total fertility rate (TFR) - the number of children a woman expects over her reproductive life - in Zimbabwe has stalled at about four children per woman since 1999. This follows a decline from 5.4 children per woman in 1988, to 4.3 children in 1994 and 4 children in 1999. If Zimbabwe's birth rate declines, its age structure will change from the current one that is dominated by dependent children to one dominated initially by youth and then later by working-age adults. This could facilitate its opportunity to benefit from the DD.

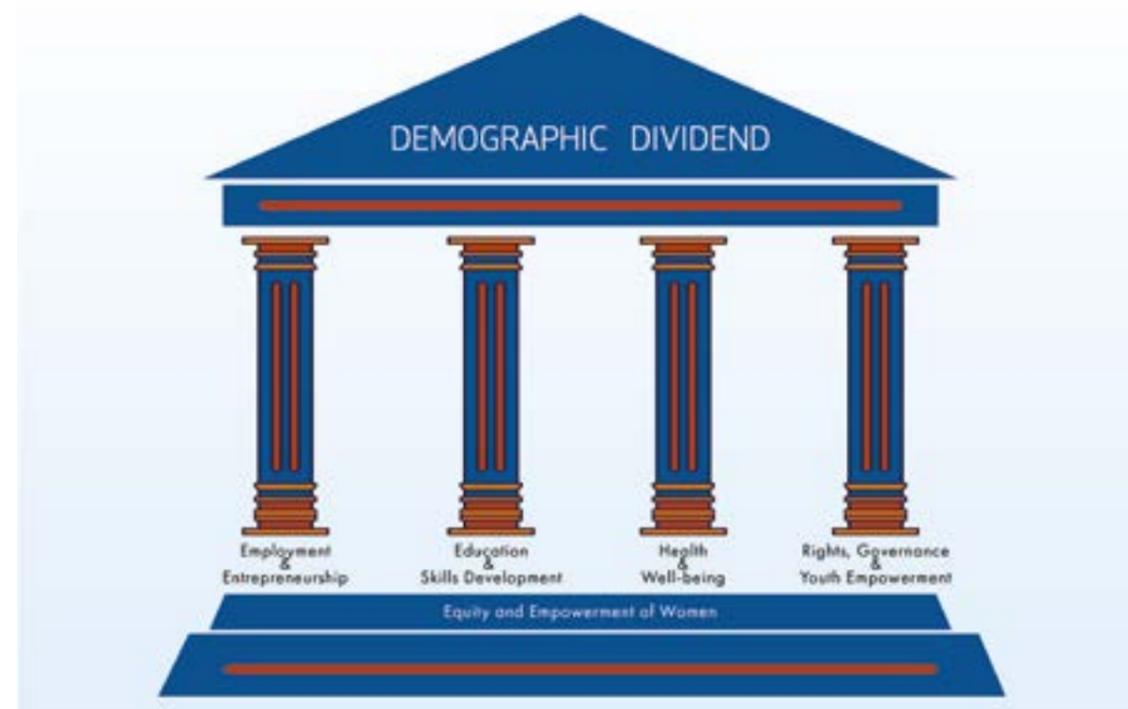
The African Union (AU) designated "Harnessing the demographic dividend through investments in youth" as the theme for its summit in 2017. This was done to highlight the importance of the DD framework and its potential contribution towards the realisation of the socioeconomic transformation goals articulated in the African

Union's Agenda 2063 and various national development visions. The African Union's roadmap for harnessing the DD (African Union Commission, 2016) calls on African countries to domesticate the DD agenda and maximise their chances of harnessing the DD by prioritising investments in the following four pillars:

- 1) Employment and Entrepreneurship
- 2) Education and Skills Development
- 3) Health and Wellbeing (including family planning)
- 4) Rights, Governance and Youth Empowerment

These pillars (depicted in Figure 1.1) are interrelated and each is integral to the success of the rest. As an adaptation to the African Union roadmap pillars, the chart in Figure 1 includes Equity and Empowerment of Women, presented as a horizontal bar to symbolise the cross-cutting importance of addressing gender inequities for harnessing the DD.

Figure 1.1: African Union Demographic Dividend Priority Investment Pillars



Source: Adapted from the Africa Union Commission, 2016

## 1.1 Study Objectives

As Zimbabwe explores policies and programmes to enable the country to improve its socio-economic development performance and pursue shared prosperity of its people, a big question relates to whether the country can take advantage of the DD paradigm, as was the case with the emerging economies of East Asia like South Korea and Singapore. The primary objective of this study is to assess Zimbabwe's prospects for harnessing the DD and to identify priority options for maximising the dividend. The specific objectives of the study are:

- I. To review demographic and economic opportunities and challenges and assess their implications for attainment of the country's development aspirations.
- II. Use the National Transfer Accounts (NTA) methodology to
  - a. determine the timing of the window of opportunity for harnessing the DD in Zimbabwe,
  - b. estimate the components of the lifecycle deficit (labour income and consumption), and their sub-components; and
  - c. conduct simulations of the first Demographic Dividend based on the NTA estimates and population projections.
- III. Identify key policy options for optimising chances of earning a maximum DD in Zimbabwe in the light of the country's long-term development aspirations.

## 1.2 Study Methodology and Approach

The study employed a combination of methodologies including data compilation and review of literature, secondary analysis of data, scenario building, modelling, and identification of policies for optimising the country's chances of harnessing the DD.

### Data compilation and desk review

The study used national data sets and international data from the UN family, World Bank

and the International Labour Organisation (ILO). For example, data from the national population and housing censuses, national accounts and population projections from ZIMSTAT, the Zimbabwe Poverty, Income, Consumption and Expenditure Survey (PICES) 2011/12 and administrative data from various government agencies, were used. Where data were not available from national sources, data from key UN and World Bank databases were used. Comparator data from the same international databases on economic indicators such as GDP, urbanisation, health, and education and literacy for countries in the region and elsewhere were compiled and analysed alongside the data from Zimbabwe to draw out the similarities and differences.

The study also involved a detailed desk review of literature on the DD and best practices that have helped various countries address implementation hurdles in each of the policy pillars to harness the DD. Documents describing Zimbabwe's vision and development strategies were reviewed to understand the country's long-term and short-term development aspirations. They were analysed to identify bottlenecks to policy actions and to recommend solutions while also highlighting how the DD framework can be aligned to the country's development aspirations. Also examined were opportunities and barriers for each of the pillars of the DD, and the identification of policy and programme options that can stimulate progress, drawing from the experience of other countries in the region and beyond.

### Modelling the Demographic Dividend

The National Transfer Accounts (NTA) framework was used to demonstrate the timing of the demographic window of opportunity to harness the DD and to estimate components of the lifecycle deficit (labour income and consumption), and their sub-components. Additionally, the framework was employed to conduct simulations of the first DD for the country. The NTA framework analyses what is referred to as the 'generational economy', which can be described as "the social institutions and

economic mechanisms used by each generation or age group to produce, consume, share, and save resources" (Mason and Lee 2011, page 7). Chapter 3 of this report gives a more detailed description of the NTA methodology and its application in modelling the DD. The manual describing the full process of the NTA methodology is also publicly available and can be accessed at <http://ntaccounts.org/web/nta/show/methodology>.

### Consultative workshops and roles of various institutions

The Government of Zimbabwe through the Ministry of Macro-Economic Planning and Investment Promotion and in partnership with UNFPA Zimbabwe Country Office and the UNFPA East and Southern Africa Regional Office (ESARO), convened the DD Core Technical Team (CTT) comprising government officials, academics and stakeholders from various sectors. The African Institute for Development Policy (AFIDEP) supported by the Development Policy Research Unit (DPRU) of the University of Cape Town and experts from the Zimbabwe National Statistics Agency (ZIMSTAT) provided the technical leadership in conducting the study. DPRU provided technical expertise on the NTA methodology while ZIMSTAT provided and analysed data for the profiles. MOMEPIP chaired the National Steering Committee for the study which comprised representatives from government, parastatals, private sector and academia. The steering committee provided technical oversight of the project and validated and approved the inception

report and the final technical report.

A webinar on the NTA methodology with the technical leads and key stakeholders in the study was conducted prior to the official commencement of the study. This was followed up by two technical workshops in Kadoma to compile and analyse the data. A final technical workshop to validate the analysis and findings of the study was conducted with stakeholders in Mutare in May 2017. Stakeholders provided feedback to the draft report which was subsequently finalised in October 2017. A full listing of the members of the CTT is contained in Appendix II.



2

## Background

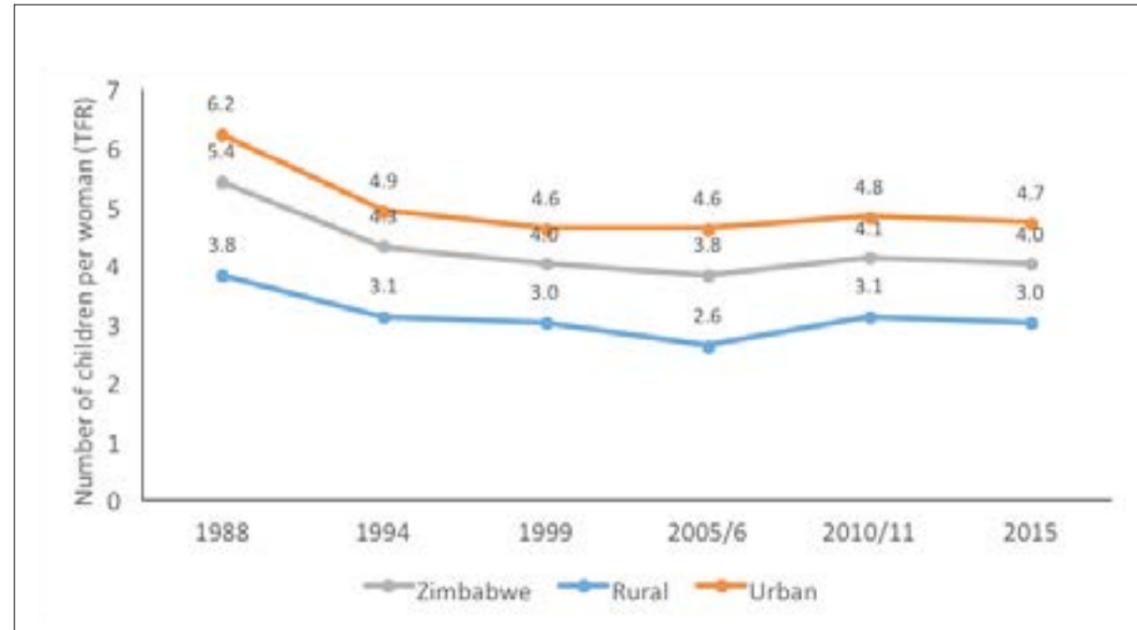
## 2.1 Demographic Profile

In 2015, the Zimbabwe Demographic and Health Survey (ZDHS) observed that women in Zimbabwe on average had 4 children, a slight decline from 4.1 children per woman in the 2010-11 ZDHS. Fertility levels are markedly lower among urban women and those with higher socio-economic status. While women residing in urban areas expect to bear 3 children on average, their rural counterparts have a TFR of 4.7. At regional level, TFR is much lower in the cities of Bulawayo (2.7) and Harare (2.8) compared to Manicaland that has the highest TFR at 5 children per woman. TFR in Matabeleland South is 3.5, while it ranges between 4.2 and 4.4 in Midlands, Mashonaland East, Mashonaland West, Mashonaland Central, Matabeleland North and Masvingo. The number of children a woman bears generally decreases as her education level increases. Women with no education or primary

education have about 5 children on average while those with secondary education have a TFR of 3.8 and those with higher than secondary education have a TFR of 2.2 which is close to the replacement level of 2.1. Variation is also observed by household wealth, with women in the lowest household wealth quintile on average expecting about 3.2 more children than women from the wealthiest households [5.6 versus 2.4 children] (ZIMSTAT and ICF International, 2016).

Zimbabwe's population has almost doubled in three decades, from 7.5 million in 1982 to 13.1 million in 2012; fertility was steadily been declining from about 6 children per woman in 1982 until 1999 when TFR was recorded at 4. During subsequent DHS rounds, the decline in fertility appears to have stalled with estimated TFR of 3.8 in 2005/6, 4.1 in 2010/11 and 4.0 in 2015 (Figure 2.1).

Figure 2.1: Fertility trends in Zimbabwe

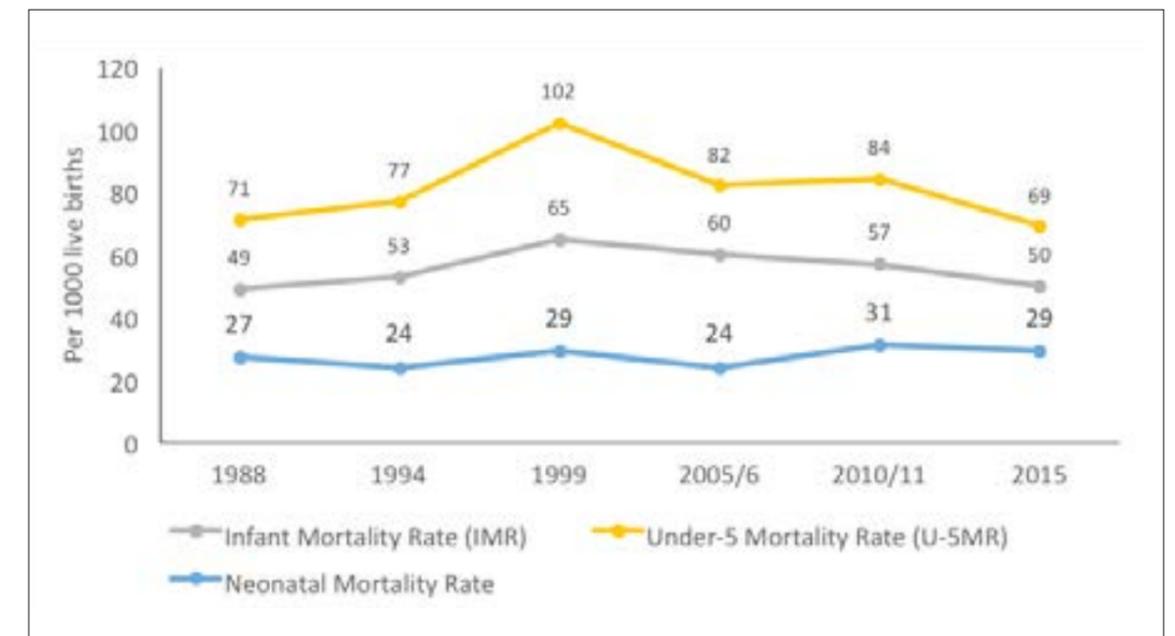


Source: Zimbabwe Demographic and Health Surveys

On the other hand, child mortality rates in recent decades saw a significant increase between 1988 and 1999 and a gradual decline since then (Figure 2.2). During the 2015 DHS round, the infant mortality rate (IMR) was 50 per 1,000 live births while the under-5 mortality rate (U-5MR) was 69 per 1,000 live births. Significantly, neonatal mortality has not seen significant improvement in this period. Life expectancy at birth has steadily been increasing since 1960 until about 1987

when it reached a peak of 61 years after which it gradually declined to a low of 43 years in 2002 before steadily increasing thereafter to a peak of 58 years in 2012 (ZIMSTAT, 2013). The reversal in life expectancy in the 1990s is associated with the HIV and AIDS epidemic that significantly increased mortality in this period before better treatment and care regimens came into play in the 2000s.

Figure 2.2: Child mortality trends in Zimbabwe, 1988-2015



Source: Zimbabwe Demographic and Health Surveys

Overall, Zimbabwe's population is projected to grow from 13.1 million in 2012 to 19.3 million in 2032 (ZIMSTAT, 2015). This gives an average annual population growth rate of 2.0% during the projection period. Table 2.1 shows that the total dependency burden in Zimbabwe was on the decline between 1982 and 2002, then rose between 2002 and 2012. However, the projections to 2022 and 2032 show an expected

decline in the dependency burden, and this decline will be substantial. While there were 83 dependents for every 100 persons in the working ages in 2012, this is projected to reduce to 67 dependents and 57 dependents per 100 persons in the working ages by 2022 and 2032 respectively.

Table 2.1: Population change in Zimbabwe, past estimates and future projections (1982-2032)

Population characteristics	1982	1992	2002	2012	2022	2032
<b>Population by broad age groups (in thousands)</b>						
Age 0-14 (child dependents)	3,596	4,711	4,740	5,384	5,882	6,234
Age 15-64 (working-ages)	3,681	5,358	6,471	7,145	9,621	12,280
Age 65+( old-age dependents)	225	344	421	533	607	771
<b>Total population (in thousands)</b>	<b>7,501</b>	<b>10,413</b>	<b>11,623</b>	<b>13,061</b>	<b>16,110</b>	<b>19,285</b>
<b>Proportion of children and young people in the population (%)</b>						
Age 0-14 (child dependents)	47.9	45.2	40.8	41.2	36.5	32.3
Age 15-34 (working-ages)	49.1	51.5	55.6	54.7	59.7	63.7
Age 65+( old-age dependents)	3.0	3.3	3.6	4.1	3.8	4.0
<b>Dependency</b>						
Dependency ratio (number of dependents 0-14 years and 65+ years per 100 people in working ages - 15-64 years)	104	94	80	83	67	57

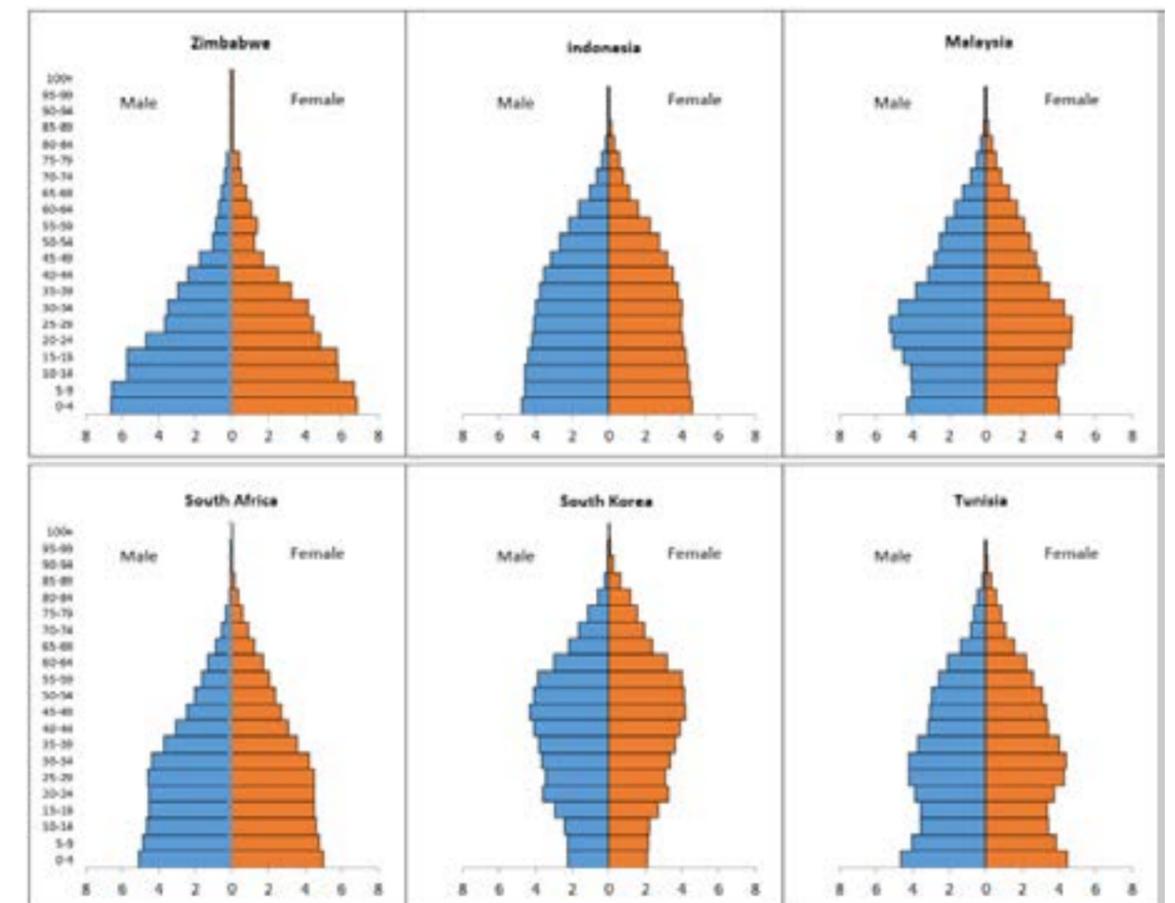
Source: ZIMSAT, 2013; ZIMSTAT, 2015

Zimbabwe's age structure is therefore in the process of changing decisively and places it within the temporary window of opportunity to harness the first demographic dividend. Nonetheless, its age structure is still quite different from the age structures observed in countries in Asia and Africa that have undergone the demographic transition because these countries have much lower levels of fertility. Figure 2.3 compares Zimbabwe's population age structure in 2017 with those of a selection of other countries in Asia (Indonesia, Malaysia and South Korea) and Africa (South Africa and Tunisia). All six countries have undergone significant demographic transition over the last half century when TFR in all of them was around 6 or more children per woman.

However, some of them have undergone fertility transition much faster. For example, while Zimbabwe's fertility has dropped to about 4 children per woman, Malaysia's has dropped to 2.11. As a result, the population pyramids

of the two countries as seen in Figure 2.3 are markedly different with Malaysia showing a significant working-age bulge, compared to Zimbabwe where the working-age bulge is not yet apparent. The 2017 estimate for Malaysia working-age population (age 15-64) is 69% of the total population while in Zimbabwe, the national projections show that about 58% of the population in 2017 are in the working-age group. This means Malaysia is well into the temporary window period to harness its first demographic dividend compared to Zimbabwe. While this may be to Malaysia's advantage now, if Zimbabwe invests adequately in developing its human capital now and puts in place robust strategies for economic growth and job creation, it can harness substantial dividends from the expected changes in its age structure over the next few decades if its fertility falls further to the levels of Malaysia today.

Figure 2.3: Demographic transition: population age structures for Zimbabwe and selected countries in Asia and Africa in 2017



Source: ZIMSTAT, 2015 and UN World Population Prospects, the 2017 Revision

Although the prevailing population characteristics present hurdles to the countries development because of the significant young-age dependency, Zimbabwe can exploit its population dynamics to advance its economic prosperity goals if it makes strategic investments to accelerate fertility decline and enhance the quality of its human capital. A rapid decline in fertility rate from the current level would change the age structure to one with significantly more people in the working ages accelerating the opportunity for accelerated economic growth through the DD. The country could earn a sizable DD and boost its average incomes as has been done by Asian countries such as Malaysia, whose current per capita GDP is more than \$10,000. With the current fertility rate of 4 children per woman, Zimbabwe will struggle to achieve its envisioned economic

transformation. Therefore there is need to accelerate the pace of fertility decline and address the reasons behind the relative stall over the last decade.

### Drivers of fertility in Zimbabwe

Among the drivers of fertility that need to be addressed include measures to increase the targeted uptake of modern contraceptives and strengthening the voluntary family planning (FP) programme in general, to unlock the barriers to access and use of FP services by underserved groups, lowering the adolescent fertility rate, improving the progression to secondary school and tertiary education among girls, and addressing the slowly declining neonatal mortality rate.

Family planning interventions in Zimbabwe have had laudable successes. Between 1988 and 2015, use of modern contraceptive methods among women who are currently married or in union in Zimbabwe has increased substantially from 36% to 66% in 2016. This level of modern contraceptive use is one of the highest in SSA. But there are variations in use. Urban women who are married or in union for instance, are more likely to use modern contraceptives than their rural counterparts (71% versus 63%). Contraceptive use also varies by province, with modern contraceptive use among these women ranging from 57% in Manicaland to 71% in Mashonaland West and Bulawayo (ZIMSTAT and ICF International, 2016). According to the ZDHS 2015, the levels of unmet need for FP (the proportion of women who are married or in union who want to delay or stop childbearing but are not using any form of contraception), stands at 10%. The unmet need is higher among rural women (11%) compared to urban women (9%); among women with primary education or less (14%) compared to 9% among those with secondary education or higher; and among poorer women with those from the poorest households having an unmet need of 14% compared to 7% for women in the wealthiest households.

A major challenge to the national FP programme is heavy reliance on donor support that can potentially jeopardise the gains made and the sustainability of the programme if local resources are not promptly allocated to cover any funding gaps that may be created by possible withdrawal of donor support. There is therefore need to refocus efforts on the family planning programme to ensure that women and men have access to their contraceptive methods of choice to avoid unwanted pregnancies.

Early childbearing is also a significant driver of high fertility in Zimbabwe. To illustrate this problem, an analysis of ZDHS 2015 shows that an estimated 11% of girls between 15 and 19 years old gave birth annually. The rate is even higher for rural girls in this age group with about 14% giving birth compare to 6% for urban girls. It is also much higher for the 15-19 years old girls from the poorest households (17%) compared to their

counterparts from the wealthiest households (4%). Early childbearing is partly explained by the prevalence of child marriage, defined as a formal marriage or informal union before age 18. The ZDHS 2015 reveals that 5% of women age 25-49 were first married by 15 years of age while almost 3 out of every 10 in the same age group were first married by 18 years of age. Early marriages and childbearing contributes to the drop-out rates of girls from school while efforts to keep girls in school delays both marriages and child-bearing thus leading to lower fertility rates.

Decline in child mortality is a critical precondition for fertility decline because parents are assured that the few children they have will not die prematurely. High childhood mortality is positively correlated with high fertility rate since couples tend to have additional children to compensate for potential child loss. Though child survival has generally improved over time in Zimbabwe, the recorded IMR (50) and U-5MR (69) are still much higher than the single digit rates observed in most developed and high-income countries. A significantly large proportion of the child mortality in Zimbabwe is accounted for by the high neonatal mortality rate estimated at 29 per 1,000 live births in 2015. There is therefore an urgent need to target reducing neonatal deaths to improve child survival and as a result facilitate the fertility decline that will contribute to faster demographic transition.

### Urbanisation

Zimbabwe's population is mainly rural, with two out of every three Zimbabweans living in rural areas (ZIMSTAT, 2013). Historical evidence shows that urban areas are often the centres of economic activities that tend to be associated with enhanced productivity. Industries and services are usually concentrated within urban attracting businesses and skilled people. With financial capital and human capital concentrated in urban locations, productivity is promoted through better division of labour, enhanced intra-industry specialisation, easy diffusion of knowledge, improved economies of scale and cheaper transport. In addition, cities nurture new ideas and technologies that can accelerate economic progress.

City dwellers can gain access to many of the benefits of urban life: higher earnings, better schools and health care, and greater access to quality infrastructure and services. Under favourable conditions, urbanisation can lead to higher GDP per capita because of higher levels of productivity (Becker, 2000; Duranton & Puga, 2004). Yet urbanisation is unfolding in Africa without necessarily leading to all these positive outcomes. For instance, the World Bank's *World Development Report 2013* (2012) indicates that while moving from rural agriculture to the cities was associated with the rapid economic growth witnessed in East Asia, the same has not necessarily been the case for SSA where movement from farms to cities in countries such as Zimbabwe, Liberia, and Madagascar between 1985 and 2010 were in fact associated with declines in GDP per capita. Many factors other than urbanisation determine economic growth. Determining whether urbanisation causes growth or, conversely, whether economic growth causes urbanisation is difficult to untangle. The evidence shows that there is a positive association between urbanisation and per capita income: high-income countries and upper-middle income countries are on average 80 per cent and 60 per cent urbanised respectively, while low income countries are only 30 per cent urbanised (United Nations, 2014).

Zimbabwe's 2012 national population census report suggests that notable de-urbanisation occurred between 2002 and 2012. Some external commentators have cited urban-rural migration and the Fast Track Land Reform Programme initiated in 2000 as the principal drivers of this phenomenon. It is important to recognise however, that although Zimbabwe's urbanisation

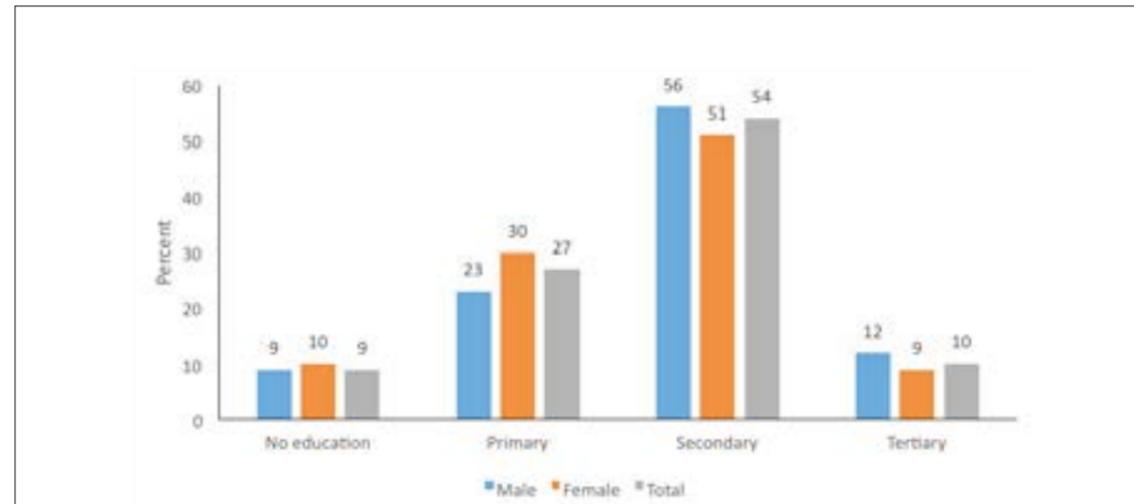
rate may not be increasing, there is absolute growth in the urban population. The average annual rate of change of the urban population in Zimbabwe between 2015 and 2020 is estimated by the UN at 2.4% (United Nations, 2014).

## 2.2 Education and skills development profile

Educational attainment in Zimbabwe is relatively high by SSA standards with a 96% literacy level recorded at the last census. Among those in the adult population 25 years and older, 9%, 27%, 54% and 10% had attained no education, primary education, secondary education and tertiary education respectively (Figure 2.4). More than half (62%) of the adult population have attended secondary school. Seventy-three percent of women and 77% of men have attended secondary school or higher, while only 1% of both women and men have never attended school.

Zimbabwe needs a well-educated and skilled labour force to maximise the DD it can possibly earn. Education, training and skills development are the key aspects of developing a globally competitive and productive workforce. Investing in education at all levels, with emphasis on the tertiary level, enables a country to maximise the productive potential of its citizenry for socio-economic development (Barro & Lee, 2013; Oketch, McCowan, & Schendel, 2014). According to the International Labour Organisation (ILO), effective skills development requires a holistic approach characterised by continuous pathways of learning; development of core skills; development of professional and technical skills; portability of skills; and employability (Brewer, 2013; ILO, 2014).

Figure 2.4: Highest level of education attainment (population age 25+)



Source: ZIMSTAT, 2013

### Recent achievements

Some measure of progress was achieved on MDG 2 on Achieving Universal Primary Education, among others. One way of enhancing primary education, has been through the Global Partnership for Education (GPE) initiative, which has also supported the professional development of teachers. In 2015, results from the Zimbabwe Early Learning Assessment (ZELA) showed that 53% of grade 2 students reached or exceeded the learning benchmark in English, and 66% did so in mathematics, with girls outperforming boys. Additionally, the number of grade 7 students who pass their exams has also steadily improved. In 2015, 42% of students succeeded, compared to 32% in 2012, and only 20% in 2009. These improvements in learning have been largely due to the focused strategies and programs implemented by the Government of Zimbabwe, supported by GPE, UNICEF and other partners. The development of the Education Sector Strategic Plan- ESSP (2016-2020) is a major milestone in the education sector in the country considering that previously the Ministry's education interventions were being guided by the Education Medium Term Plan (2012-2015). An important goal for countries in SSA has been achieving gender parity in school participation. Zimbabwe made a firm commitment to gender parity at all levels of education, a goal which is

highlighted in Zim Asset. Few differences are observed in the net attendance ratios (NARs) for girls and boys at either the primary or secondary school level. At the primary level, the Gender Parity Index (GPI) for the NAR and gross attendance ratio (GAR) are 1.01 and 0.96, respectively. Whereas at the secondary level, the GPIs for the NAR and GAR are 1.03 and 1.02, respectively (ZIMSTAT and ICF International, 2016). Another display of commitment by the Government to enhance education has been the development of a national plan of action setting the objectives and targets towards Education for All (EFA) in 2015. Through this programme, several achievements have been attained including:

- Expanded provision of early childhood development (ECD), with 98% of primary schools having ECD classes
- Training of ECD teachers and para-professionals (2,635 teachers trained as of 2014)
- Reskilling of general course primary school trained teachers to be able to teach ECD (422 reskilled as of 2016)
- ECD provision by both public and non-public providers
- Increased access to UPE / basic education

<sup>2</sup>Launched in 2002, the Global Partnership for Education is comprised of donor and developing country partners that seek to ensure accelerated progress towards achieving the Millennium Development Goal (MDG) of universal primary education by 2015.

throughout the country, with 888 satellite schools established in resettlement and remote areas; total enrolments standing at 3.9 million learners from ECD to Form 6, and of these 3 million learners are from ECD to Grade 7 (2012); 30% do not complete the full primary school cycle; and 80% transit from Grade 7 to Form 1

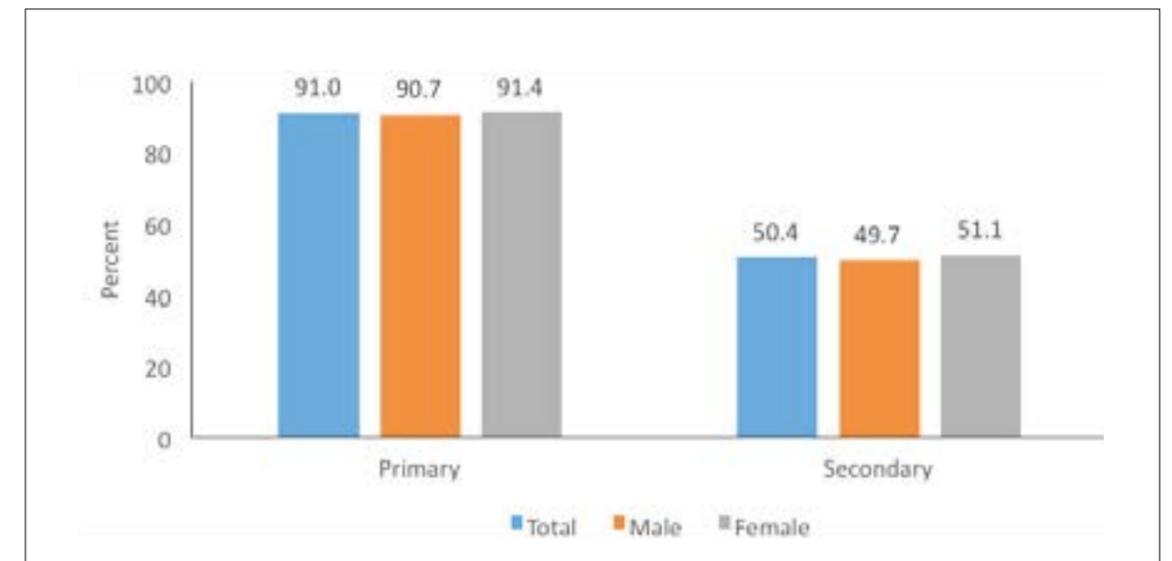
- Gender parity almost 1:1
- The continuous review of the education curriculum

### Challenges

Despite the progress, Zimbabwe is falling short in attaining universal primary education. In fact, many of the school-age children are either not in school or not in the right grade and school level

for their age. Figure 2.5 shows the NARs for the country in 2015. Attendance in primary school by children of primary school age is quite high at 91% with the NAR for females (91.4%) very slightly edging that of their male counterparts (90.7%). However, the narrative on attendance is quite different at secondary school level where just about half (50.4%) of all Zimbabweans of secondary school age are in secondary school. This is a reflection of high drop-out rates and repetition rates within the school system in Zimbabwe. Drop-out rates between grades in primary school in 2011/12 for example show that that 9% of the pupils dropped out between grade 1 and 2, while 7% dropped out between grade 6 and 7 - the last grade in primary school (ZIMSTAT, 2013a).

Figure 2.5: Net Attendance Ratios (NAR) for primary and secondary school in Zimbabwe, 2015



Source: Zimbabwe Demographic and Health Survey, 2015

A terminal exam at the end of grade 7 that determines those who qualify for secondary school contributes to significant drop out numbers between primary and secondary school. For instance, the pass-rate in 2012 was just about 50% (ZIMSTAT, 2013a). The Education Report 2013 shows that more attrition occurs at secondary school with only 19% of the candidates who sit the exam in Form 4 being promoted

to Form 5. Thus, the number of Zimbabwean children who manage to proceed all the way to tertiary education is quite small.

Zimbabwe's education sector has also been affected by the economic crises the country has undergone including causing disruptions to supply of materials for the GPE programme in Zimbabwe. For example, printing of the Early Reading Initiative (ERI) modules have experienced

delays. Districts also struggle to get cash from banks for implementing programs as there is a limit to cash withdrawals at all banks in Zimbabwe. Transaction fees are high given that fund withdrawals have to be made on a daily basis. Challenges specifically faced during the EFA 2015 include: unsatisfactory infrastructure and equipment; inadequate financing of education; unattractive conditions of service for teachers; gaps in monitoring and supervision; provision of facilities for disadvantaged children; and inadequacy of safety nets (Munjanganja L.E. & Machawira M.S, 2014).

The I-PRSP 2016-2018 also outlines several other challenges that Zimbabwe needs to overcome in order to ensure that the country is training enough adequate numbers of Zimbabwean and equipping them with the right skills that can propel the economy to success and unlock the full potential of its human capital. These include:

- Inadequate financing of the sector (despite the education sector consistently receiving the highest share of the national budget).
- High pupil/teacher and student/lecturer ratios in public schools.
- Low teaching staff morale.
- Inadequate facilities and materials for effective learning.
- Inadequate facilities (for example, laboratories, workshops, equipment and machinery) and materials for effective learning.
- Curriculum not responsive to labour market needs (though a new curriculum addressing these concerns is to be implemented).

### 2.3 Health status

Health has been identified as one of the priority sectors in human resource development, and is part of the key clusters in the Zim Asset as well as the second pillar in the I-PRSP 2016-2018 (Ministry of Finance and Economic Development, 2016). The Sustainable Development Goals are a high priority in influencing the development agenda of the country as highlighted in the I-PRSP 2016-2018. Notably, the existing national development plans and strategies, including

sectoral plans and strategies and other related plans, all reflect the SDGs and the unfinished MDGs agenda (WHO, 2016). The vision of the Zimbabwe Ministry of Health and Child Care is to have the highest possible level of health and quality of life for all its citizens, aiming at equity and quality of health: Leaving No One Behind (Ministry of Health and Child Care, 2016).

A healthy workforce is critical in enabling the country to enhance its economic productivity and earn a substantial DD. Zimbabwe values its population as a fundamental resource and therefore banks on it for future development. The country has made some improvements in its health status indicators over the last decade. Life expectancy for Zimbabweans increased from 42.8 years in 2006 to 59.1 years in 2015, with women at 60.6 years compared to men at 57.7 years (World Bank, 2016). Child mortality has been on the decline, and maternal mortality has also improved. Maternal mortality ratio (MMR) reduced from 960 deaths per 100,000 live births in 2010 to 651 deaths per 100,000 live births in 2015 (ZIMSTAT and ICF International, 2016). However, these figures remain unacceptably high and well below the expired MDG targets.

Under-5 mortality declined from 102 deaths per 1000 live births in 1999 to 69 deaths per 1,000 live births in 2015. The prevalence of anaemia (usually caused by infections such as malaria, tuberculosis, and HIV) for women dropped from 38% in 2005-06 to 28% in 2010-11 and then to 27% in 2015. The trend is comparable among men. Similarly, HIV prevalence decreased from 15.2% between 2010 and 2011 to 14.0% according to the 2015 ZDHS. All these achievements are associated with improved access to services such as immunisation coverage through results-based financing and integration of maternal and child health services, and improved data collection and utilisation in decision making. Government's policy to retain its public sector healthcare professionals by increasing their wages, has played a key part in observed improvement in health outcomes.

Although significant progress has been made over the last few years, the country still faces a double burden of communicable and non-communicable

diseases (NCDs). HIV prevalence remains relatively high at 14% among adults as observed in the 2015 ZDHS, and gains achieved to date are threatened by risky behaviours amongst youth and increasing number of teenage pregnancies. The proportion of adolescent females aged 15-19 years who have begun child bearing, has remained high at 20.5% in 1999, and 22 percent in 2015, decreasing as wealth and education increase (ZIMSTAT and ICF International, 2016). Deaths due to tuberculosis (TB) remain high due to its correlation with HIV and AIDS. Malaria remains a major cause of morbidity and mortality in the country and more so in some geographic areas. Therefore, the focus on major communicable diseases must be sustained.

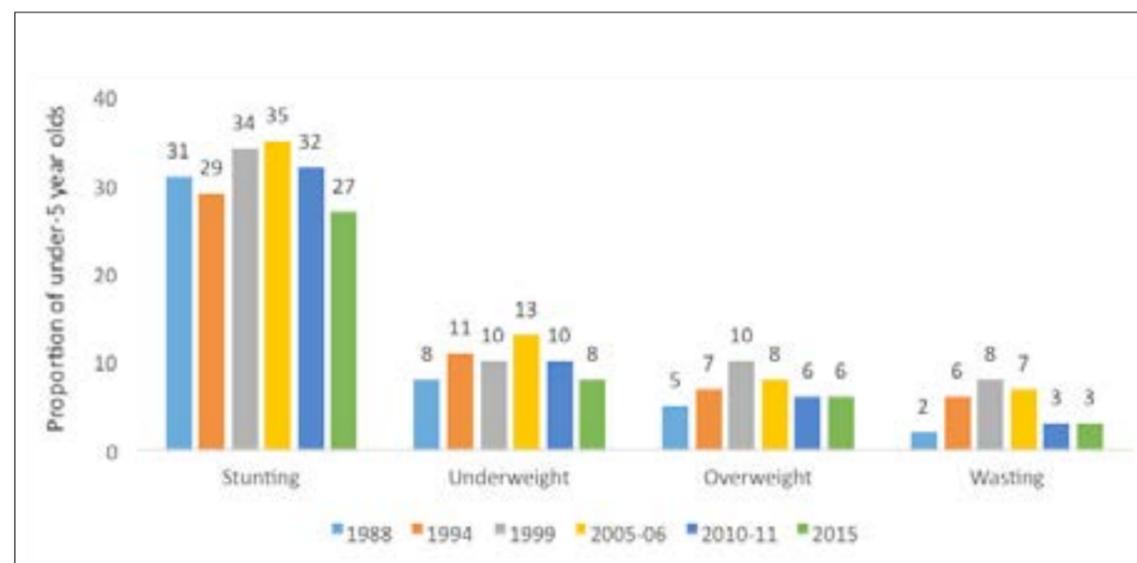
Zimbabwe is now facing an increasing disease burden from NCDs, as noted in the National Health Strategy for Zimbabwe 2016-2020, placing NCDs as the second priority intervention area for the country. It is estimated that NCDs account for 31% of the total deaths in Zimbabwe (WHO, 2014). The common NCDs in Zimbabwe include cancers, diabetes, cardiovascular diseases and chronic respiratory diseases. The main risk factors for NCDs include tobacco smoking, alcohol per capita consumption, raised blood pressure and obesity. In 2015, the WHO Global Health Observatory shows that Zimbabwe had a NCD death rate of 533 deaths per 100,000 people (World Health Organization, 2017). The health sector is currently ill equipped to prevent, diagnose and treat NCDs at early stages. Though the country has an operational NCD unit/branch or department within the Ministry of Health and Child Care, it still lacks operational policies, strategies or action plans to reduce the harmful use of alcohol, physical inactivity and or unhealthy diet. Moreover, the country is yet to institute evidence-based national guidelines/protocols/standards for the management of major NCDs through a primary care approach as well as setting up an NCD surveillance and monitoring system to enable reporting against the nine global NCD targets.

The nutrition status of children in Zimbabwe remains poor. Malnutrition places children at increased risk of morbidity and mortality and

literature has shown that it is related to impaired mental development. The Cost of Hunger in Africa (COHA) studies, including on Zimbabwe, show that under-nutrition has negative life-long and intergenerational consequences (World Food Programme, 2017). Optimal nutrition promotes healthy growth, cognitive development, improves productivity and contributes to the socio-economic development of a country. As of 2015, about one in three children aged below five years in Zimbabwe were stunted (Figure 2.6) with rural areas worse off, reflecting food insecurity. Additionally, Zimbabwe has been experiencing chronic food insecurity since 2000. In 2015, the production levels were far below the national food requirement of 2.1 million tons for human consumption, strategic grain reserve and for livestock consumption (Ministry of Finance and Economic Development, 2016). Declining productivity on grains and all crops in general is worsening the food security and malnutrition situation thereby increasing poverty. Occurrences of anthrax and rabies are also common (Ministry of Health and Child Care, 2012).

The challenges are compounded by health systems constraints related to shortages of critical health workforce, aging infrastructure and equipment, supply of medicines and other commodities, limited health funding currently at \$24 per capita (2015 estimate) versus the recommended \$86 and general challenges with the service delivery platforms and the enabling environment. Overall, the health sector is underfunded and quite dependent on external funding for service delivery (over 40 percent Overseas Development Assistance – ODA - in 2012) given that most of government expenditure on health goes to pay salaries (Ministry of Health and Child Care, 2012).

Figure 2.6: Trends in Malnutrition among Children below 5 Years, Zimbabwe 1992-2015



Source: Zimbabwe Demographic and Health Survey, 2015

### Health infrastructure and health systems

A functioning strong health system is important for the implementation of health interventions to reduce morbidity and mortality. The two decades of poor economic performance that the country went through has had a debilitating effect on almost all the six pillars of a functional health system in the country. Zimbabwe's health system uses the Primary Health Care approach. The health services delivery platforms include primary, secondary, tertiary (provincial) and quaternary (central) facilities. The majority of these health facilities (1,634) are at primary care level. The recent Zimbabwe Service Availability and Readiness Assessment survey (ZSARA 2015) shows that the health system requires strengthening. The General Service Availability index score is 42 percent nationally, with the General Service Readiness index of 78 percent; and a medium score on the Specific Service Availability and Readiness indicators. On average, both health workforce density and service utilisation were below half of the expected target values (Ministry of Health and Child Care, 2015). The implication is that the country as a matter of necessity needs more trained health professionals. This in turn is likely to result in an increase in

health service utilisation.

Poor water and sanitation conditions are major contributors to the burden of disease and expose people to water-borne diseases and related ailments. The 2015 ZDHS report shows that the majority of households in Zimbabwe (78%) have access to an improved source of water: 97% in urban areas and 69% in rural areas, which is in line with one of the Zim Asset targets. Improved sources such as running and piped water, protect against external contamination so that water is safe to drink. In terms of sanitation, nearly 2 in 5 households in Zimbabwe usually use improved toilet facilities, which are not shared with other households. Specifically, about one-third (32%) use a toilet facility in their own dwelling, 58% use a toilet facility in their own yard or plot, and 10% use toilet facility elsewhere. However, the health delivery system continues to be adversely affected by sporadic outbreaks of epidemics such as typhoid and dysentery, increased maternal mortality, shortage of funds to procure essential drugs and equipment and to rehabilitate dilapidated infrastructure. These challenges point to a need for a robust health surveillance and disaster preparedness and response programmes.

Around 2009, lack of access to health care services was considered high, the average

distance to the nearest healthcare facility was between eight to ten kilometres (Choguya, 2015). According to ZDHS 2015, 33% of women reported distance as the main hindrance to seeking medical advice or treatment when they are sick. Due to the economic downturn, several health infrastructure and systems challenges exist in Zimbabwe.

One of the most critical factors to health services is the availability of qualified medical staff (doctors, nurses, technicians and laboratory staff). The ZSARA 2015, shows that the overall density of the core health workers is 8 core health workers per 10 000 population, i.e. about a third of the recommended target of 23 per 10 000 population by WHO, that is about a third of the recommended target of 23 per 10 000 of population by WHO. However, the health worker density is almost three times higher in Bulawayo province with a density of 25 per 10,000 population than the national average. The health worker density is high in the urban provinces because of public quaternary as well as large private hospitals. Manicaland province had the lowest density of 6 per 10,000 population. This highlights the skewed distribution of health care providers. Acute shortages and uneven geographic distribution of health workers are common problems that contribute to inaccessibility, widened inequity and poor quality in access to essential health services. Overall, other identified bottlenecks include; poor or sub-optimal quality of care at all levels, weak programme integration resulting in missed opportunities, lack of continuum of care along the life cycle (new-borns, adolescents, adults) and across service delivery levels (community level, tertiary level). Financial barriers impeded access to services, especially by vulnerable groups due to high user fees (at hospital level and in urban areas), as well as inequitable geographical distribution of health facilities especially in new settlement areas. In addition, there is significant negative influence of religious and other socio-cultural objectors on care seeking.

Limited fiscal space has resulted in inadequate allocation of government resources for service delivery. The main challenge is how to mobilise adequate resources to sustain health services, against a national economy that is still in recovery and changing donor priorities. These challenges must be addressed over the I-PRSP 2016-2018

period.

### 2.4 Economic outlook and opportunities

In order to achieve accelerated economic growth and wealth creation, economic reforms including creation of decent jobs, creating an enabling environment for the private sector to operate and improving competitiveness in doing business, are crucial elements for achieving socioeconomic transformation. Zimbabwe is classified as a low-income country despite its abundant endowment in natural resources such as gold, copper, platinum, iron ore, vanadium, lithium, asbestos, chromium ore, and tin. The largest curtain of falling water in the world, the Victoria Falls is found in Zimbabwe. Zim Asset was formulated to achieve sustainable development and social equity anchored on indigenisation, empowerment and employment creation which will be largely propelled by the judicious exploitation of the country's abundant human and natural resources. The plan identifies four key interlinked clusters: Food security and nutrition; Social services and poverty eradication; Infrastructure and utilities; and Value addition and beneficiation. In accompaniment of the aforementioned; Fiscal reform measures and public administration, governance and performance management, are seen as crucial to support the achievement of sustainable development in Zimbabwe.

#### Economic status

Despite the abundance of natural resources and high literacy rates, the country remains one of the poorest countries in Africa with a broad unemployment rate of 11.3% observed during the 2014 Labour Force Survey (LFS) (ZIMSTAT, 2015a). Majority of Zimbabweans live below poverty line (live on less than 1.25 dollars a day). The gross domestic product (GDP) per capita in 2015 was USD 1, 153 (ZIMSTAT, 2017). The total public and publicly guaranteed external debt was estimated at US\$7.5 billion, 52 percent of gross domestic product (GDP), as of June 2016, of which US\$5.8 billion is in arrears (Ministry of Finance and Economic Development, 2016). The external public debt burden is limiting Zimbabwe's access to affordable new financing critical for development as the country is perceived as a high risk destination.

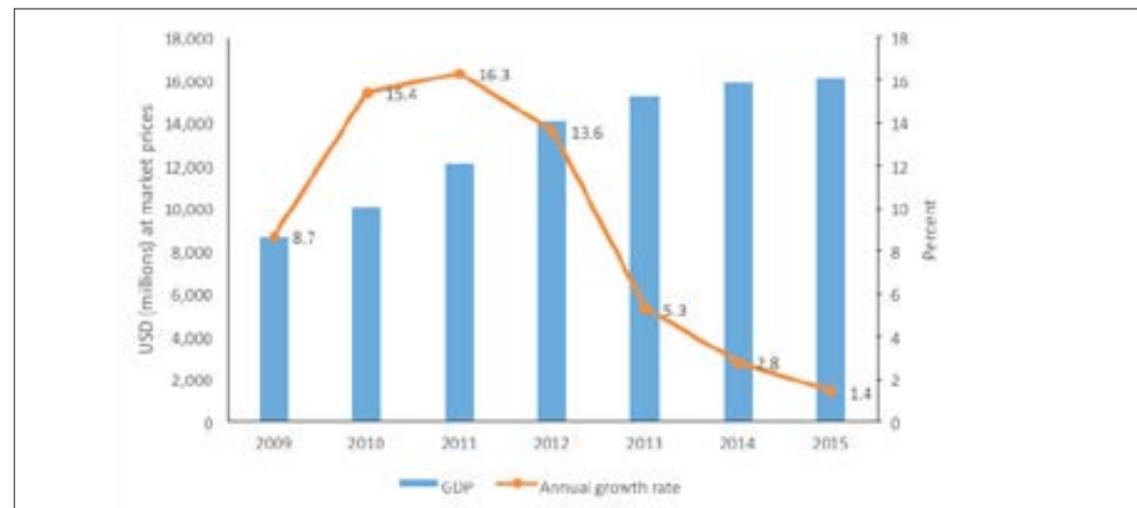
## Key drivers of the economy

GDP growth in Zimbabwe has been on a slump after robust growth between 2009 and 2011 when annual growth increased from 8.7% to 16.3% (Figure 2.7). Growth dropped to 13.6% then 5.3% and 2.8% in subsequent years. In 2015, the annual growth rate was 1.4% (ZIMSTAT, 2017). Nonetheless, a return to more favourable growth is projected for 2017 underpinned by anticipated growth in the agriculture and mining sectors. Despite the recent economic shrinkage, the economic outlook for 2017 comes against a background of above normal rainfall received almost across the country.

Table 2.2 shows the changes in the contribution to GDP by industry between 2006 and 2015. Over this period there have been changes in the top contributors to GDP. While in 2006, the top 3

contributing industries were Agriculture (16.5%), Manufacturing (16.5%) and Finance, insurance, real estate and business services (14.3%), in 2015 it was Wholesale and retail trade, restaurants and hotels (15.9%), Finance, insurance, real estate and business services (13.4), and Agriculture (13.3%). It is also clear that the prominence of mining has grown in this period from commanding a share of 4.4% in 2006, peaking at 10.4% in 2013 and then declining to 8.8% by 2015. Manufacturing had declined to 11.3% in 2015. Manufacturing activities largely consist of agricultural-based value-adding activities, steel products, gold, fruit canning, forestry products, as well as textiles and clothing. Zimbabwe's macro-economic environments were ranked number 126 out of 138 countries according to the World Economic Forum's 2016 Global Competitiveness Report.

Figure 2.7: Recent trends in Zimbabwe's GDP, 2009-2015



Source: World Bank, 2016

The country has over some time now suffered from suppressed economic growth emanating from low productivity and capacity utilisation, liquidity constraints limiting access to financing and capital, and low investment and savings levels that were particularly severe in the first decade of the millennium (Government of Zimbabwe and UNCT, 2010). This led to the decline in industrial capacity utilisation. A grossly undercapitalised financial sector, and inability

to tap external resources, and low revenues continue to be expressed in low levels of investment and savings of less than 5% of GDP. According to the 2017 Zimbabwe Monetary Policy Statement, merchandise exports amounted to USD 3 365.8 million in 2016 representing a 6.9 percent decline from the USD 3 614.2 million recorded in 2015. Exports in 2016 were dominated by minerals (gold, nickel, platinum, and diamonds) and tobacco. Tobacco remains a

Table 2.2: Contribution to GDP by Industry, 2008 -2014

Industry	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Agriculture	16.5	15.6	11.4	15.0	14.4	13.1	13.1	11.9	13.9	13.3
Mining and quarrying	4.4	4.4	3.4	8.1	10.0	10.8	10.1	10.4	9.4	8.8
Manufacturing	16.5	15.6	15.9	15.4	13.8	13.9	13.5	12.7	11.8	11.3
Electricity, gas and water	3.3	3.3	3.4	4.0	4.5	4.7	4.3	4.3	4.5	4.3
Construction	1.1	1.1	1.1	2.0	2.3	3.1	3.6	3.5	3.5	3.4
Wholesale and retail trade, restaurants and hotels	8.8	10.0	12.5	17.5	17.2	15.0	15.2	16.7	15.7	15.9
Transport, storage and communication	8.8	8.9	11.4	15.6	14.2	14.2	12.7	12.0	12.1	12.1
Finance, insurance, real estate and business services	14.3	14.4	11.4	9.9	9.5	9.6	11.8	12.3	12.6	13.4
General government services	5.5	5.6	6.8	2.7	3.6	3.5	3.6	3.5	3.6	3.6
Other services	20.9	21.1	22.7	9.8	10.4	12.1	12.6	12.6	13.0	13.8
Gross domestic product at basic prices / factor cost	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: SADC Statistical Yearbook 2015

major source of export earnings with the Tobacco Industry Marketing Board (TIMB) registering sales of 202 million kilograms (kg) of tobacco as at 12 September 2016, up from 198.9 million kg in 2015. Total sales amounted to USD 593 million at an average price of USD 2.94 per kg. In 2015, the total sales were USD 586.4 million, at an average price of USD 3 per kg. The major export destinations are South Africa, United Arab Emirates, Mozambique, Botswana and Zambia.

## Key challenges in the economy

The sluggish performance of Zimbabwe's economy has been attributed to a number of factors including: shortages of foreign currency to fund critical inputs in most sectors of the economy; high cost of production which has eroded competitiveness; unsustainable public service wage bill; trade deficit; unsustainable debt stock of about 80% of GDP and high inflation rates which are largely due to shortage of foreign exchange which has led to high premiums being charged for accessing foreign currency.

The economy experienced a trade deficit throughout the period January to December 2016 (Government of Zimbabwe, 2017). This scenario is expected to continue given the fact that most of the exports are raw and suffer from lack of competitiveness due to an appreciation of the

US dollar. Moreover, the mining sector continues to face acute capital shortages and delays in procurement of critical inputs. This is compounded by the fact that most of the minerals are exported in raw form. With regards to manufacturing sector, there has been low domestic production as Confederation of Zimbabwe Industries estimates that manufacturing sectors capacity utilisation was 47.4 percent in 2016. This emanated from low demand for domestic products, liquidity crisis, competition from imports and local producers' constraints namely high cost of business amongst other factors. This means that the capacity of the economy to produce goods is heavily compromised. Thus economic agents continue to import goods and services to meet local shortfalls.

The use of the US dollar for trading left Zimbabwe's monetary authorities with inadequate tools to steer the monetary sector in the direction that benefits the real sector, exports, balance of payments and ultimately economic growth. This was worsened by lack of competitiveness that arises from the cost of labour (and labour laws) as well as electricity and fuel in the economy compared to other regional investment destinations. While petrol was selling at USD 1.37 per litre in February 2017 in Zimbabwe, in Botswana petrol was being sold at USD 0.70. While electricity on average costs USD 0.09/kwh in Zimbabwe, in

Zambia it was going for USD 0.06/kwh. There is therefore need to re-examine these cost drivers to enhance export competitiveness and investment attraction to turn the economy's fortunes in the coming years.

Lack of fiscal space has undermined development expenditure and social services provision, exacerbating poverty in rural and urban areas. The Zimbabwe Poverty Atlas of 2015 by ZIMSTAT shows that poverty prevalence remains high throughout the country. Poverty was found to be most prevalent in Matabeleland North (85.7%) while it was least prevalent in Harare (36.4%) and Bulawayo I (37.2 percent). The rest of the provinces had poverty prevalence rates ranging between 65% and 76%. Rising informality has contributed to cash shortages, fiscal revenue underperformance, declining capital inflows and export receipts as well as external imbalances and capital flight.

## Employment

The relationship between employment and economic growth is bi-directional. On one hand, a productive labour force can substantially contribute to the growth of the economy while on the other economic growth can create economic opportunities and employment. As a result of the challenges Zimbabwe has had to grapple with in the economic sector, unemployment and underemployment are significant concerns for the country. The Zimbabwe Labour Force Survey (LFS) 2014 captured the broad unemployment rate in the country at 11.3% in 2014 having increased slightly from 10.7% in 2011. Urban regions have higher unemployment rates than the rural regions. The predominantly urban provinces of Bulawayo and Harare had high unemployment rates of 31% and 30% respectively, while the predominantly rural provinces of Matabeleland North and Matabeleland South had the lowest rates of 2.3% and 2.8%, respectively (ZIMSTAT, 2015a).

Generally, females endure higher unemployment rates than their male counterparts with 14.9% of females unemployed compared to 7.3% of males. The urban disadvantage is still apparent even when unemployment is disaggregated by sex. The female unemployment rate in rural areas was

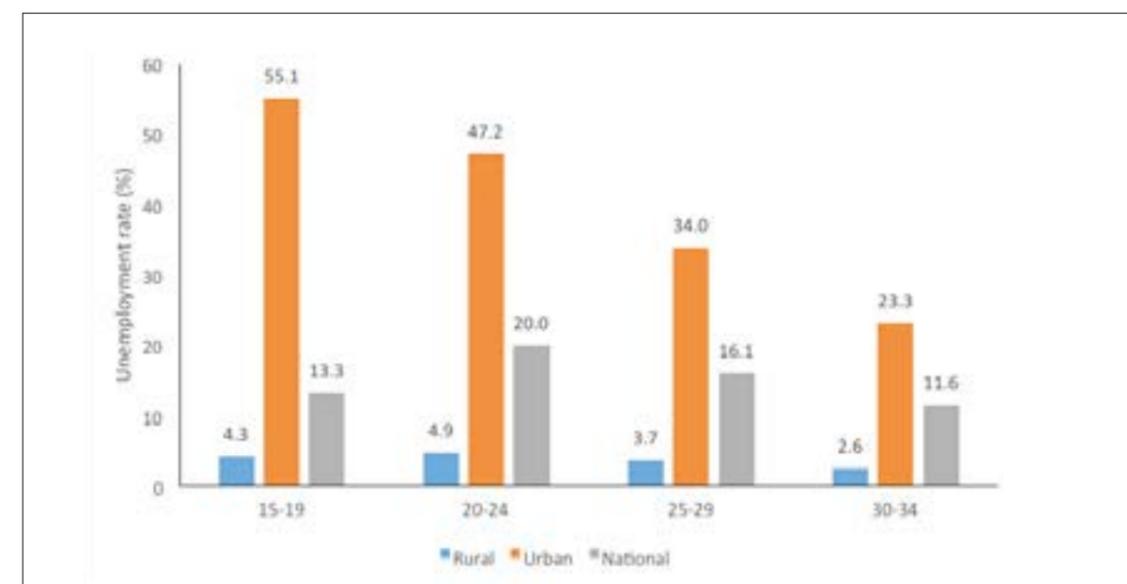
only 3.5% compared to 39.1% for urban areas. For males, whereas 1.6% were unemployed in rural areas, 19% were unemployed in urban areas. About 41.2% and 38.7% of females in Harare and Bulawayo, respectively, were unemployed whereas for males the unemployment rate for Bulawayo was 22% and 18.8% in Harare (ZIMSTAT, 2015a).

Paradoxically, higher education attainment is not necessarily the remedy against unemployment. The Zimbabwe LFS 2014 reveals with the exception of those who had completed diploma/certificate after primary, unemployment rates were high for the population who had completed form 3 to graduates/post graduates levels. Among females, unemployment rates were high for those who had completed form 1 to graduate/postgraduate levels of which the highest was form 6 while for males the highest was those who had completed form 4 to form 6. As in the case of females, male unemployment rate was highest among those who had completed form 6 (ZIMSTAT, 2015a).

The unemployment rate among youth and young adults in particular is much higher than the national average and especially so for the young people in urban areas (Figure 2.8). For example, while the national unemployment rates for those in the 15-19, 20-24, 25-29 and 30-34 age groups were 13.3%, 20%, 16.1% and 11.6% respectively, for urban residents in the same age groups, the rates were 55%, 47.2%, 34%, and 23.3%. However, the unemployment rates for the same age groups in rural areas were much lower than the national average with none being higher than 5%.

The consequence of very high youth unemployment rates is that the theoretical young dependency age which is often stated as children below the age of 15, would seriously understate dependency among youth and young adults in Zimbabwe and especially so in urban areas. In fact, many young Zimbabweans in urban areas who would have otherwise been productive adults are dependents well into their thirties because of the lack of work opportunities. It also calls into question whether rural to urban migration would act as a driver for growth as has been the case in countries that capitalised on urbanisation as an engine for growth, if in fact, young people in urban areas are at high risk of being unemployed.

Figure 2.8: Unemployment rates among youth and young people in Zimbabwe, 2014



Source: Zimbabwe Labour Force Survey 2014

High unemployment rates in urban areas also has serious implications for Zimbabwe in relation to reaping the demographic dividend. Even as the age structure of the country is transitioning to one with more people in the working ages, the potential benefits of increased productivity by young people in the working ages is lost because in fact they are still dependents. To make it worse, they are then a burden to both their families and the state that have to provide essential basic goods and services to them at the expense of household and national savings and investments.

The Zimbabwe LFS indicates that the agricultural sector is still the largest employer accounting for 20.1% of employment. This is followed by wholesale and retail trade, which accounted for 9% of the employed. What is telling is that the two leading employment sectors have in fact shed off many jobs between 2014 and 2016 when agriculture accounted for 29.5% and wholesale and retail trade accounted for 14% of those employed. Job losses in these sectors have likely contributed to the increase in the unemployment rates. Further, despite agriculture and trade being the largest employers, 90% and 67%, respectively of the employees in these industries are employed in the informal sector. This is an

indication of the limited potential for improved living standards for majority of the employed population.

For those who are employed, the fact is that most of them are engaged in the informal sector where earnings can be quite precarious. As noted in the I-PRSP 2016-2018, 94.5% of the employed population aged 15 years and above in 2014 were considered to be in informal employment and under-employment is a major challenge, particularly in rural agriculture. Own account workers (communal, resettlement and peri-urban farmer) contribute the highest share of 58.7% percent to under-employed persons, followed by own account workers with 27.3%, giving a total share of 86 percent from these two groups alone.

It is clear that for Zimbabwe to harness the DD, much more will be required to revive the economy so that it creates new jobs to absorb the large cohorts of young people expected to join the labour force annually for the foreseeable future. Even if the country were to have a large young working-age population, this cannot translate into the desired growth if they do not have decent work opportunities.

<sup>3</sup>The broad unemployment rate definition refers to a person 15 years and above who, during the reference period, was without work and was available for work. If "and was actively seeking for work" is added to the definition then this now refers to strict unemployment rate.

## 2.5 Governance and accountability

Promotion of good governance and accountability are requisite pillars for ensuring sustainable development and the building of a resilient nation. These ensure equitable allocation and distribution of public resources and the efficient delivery of public services, which among other things creates a conducive environment for private sector investment and economic growth.

The Government of Zimbabwe recognises the critical role of good governance as a driver for development and this is reflected in the second sub cluster of Zim Asset which is "Public Administration, Governance and Performance Management". This pillar is also reiterated in the I-PRSP 2016-2018 as Pillar VII, "strengthening governance and institutional capacity". The Government of Zimbabwe renders its commitment towards good governance and accountability through the proclamation of Zimbabwe's Constitution on May 22, 2013. Good governance is one of the national objectives set out in the Constitution to guide the work of the State and all citizens, institutions and agencies. Chapter 2 Section 9 (1) of the Constitution provides that, "The State must adopt and implement policies and legislation to develop efficiency, competence, accountability, transparency, personal integrity and financial probity in all institutions and agencies of government at every level and in every public institution". Zimbabwe recognises the existence of a conducive governance environment with an efficient justice delivery system, as important in the challenge to reduce poverty.

Globally, there are multiple sets of indicators of good governance that are tracked by different organisations such as the World Bank's Worldwide Governance Indicators (WGI) and Country Policy Institutional Assessments (CPIAs) (Arndt, C. & Oman, C., 2006). The Ibrahim Index of African Governance (IIAG) also provides annual assessments of governance performance for African countries. The IIAG defines governance as the delivery of the political, social and economic goods that a citizen has the right to,

<sup>4</sup>Constitution of Zimbabwe (amendment number 20 of 2013).

expects from his or her state, and that a state has the responsibility to deliver to its citizens. The Index tracks four categories: Safety & Rule of law (**Rule of law, Accountability, Personal Safety, and National Security**); participation and human rights (**Participation, Rights, and Gender**); sustainable economic opportunity (**Public Management, Business Environment, Infrastructure and Rural Sector**) and Human development (**Welfare, Education, and Health**). In the IIAG 2016 report, Zimbabwe ranks as 34th out of the 54 countries, with an aggregate score of 44.3, way below the African average score of 50.0. Despite the poor score, on the Overall Governance level, Zimbabwe was the second most improved country over the last decade (+9.7). The overall improvement has been driven by progress across all four categories over the decade.

The recorded progress disguises highly deviating performances at the sub-category and indicator level. In Sustainable Economic Opportunity, Zimbabwe registers the fifth largest improvement (+10.5) on the continent. Zimbabwe is the most improved country in both rural sector (+26.8) and public management (+18.4), although it remains in the bottom half of the rankings in both sub-categories. Meanwhile, Zimbabwe declines in both the infrastructure (-2.1) and business environment (-1.2) sub-categories; it is one of the ten most deteriorated countries in infrastructure, with decline driven by water and sanitation services, the country's most deteriorated indicator over the last ten years. Zimbabwe is one of the few countries to progress in Safety and Rule of Law over the decade, registering the sixth largest improvement on the continent (+6.2). However, Zimbabwe remains a low performing country, achieving its lowest rank (42nd) in this category, with a score of 43.8. Improvement in safety & rule of law is driven by positive trends in rule of law (+11.1), national security (+6.7) and personal safety (+8.1). Despite this progress, half of the ten most deteriorated indicators in Zimbabwe sit in the safety and rule of law sub-category. Zimbabwe's progress in participation and human rights (+14.7) is the third best on the continent, yet not enough to push Zimbabwe into

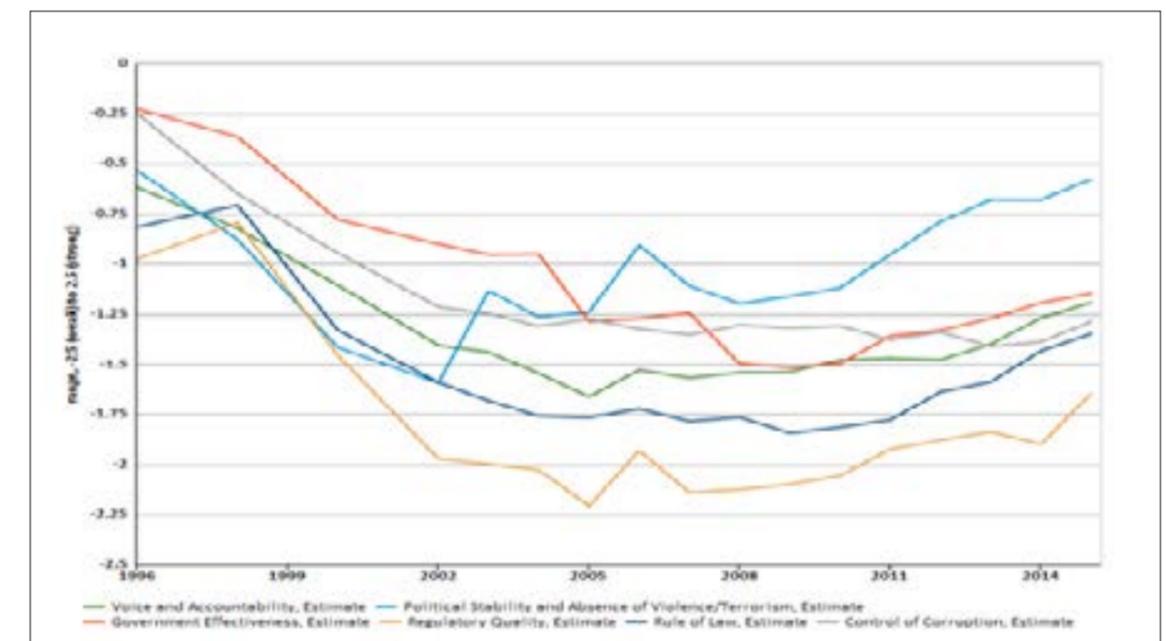
the top half of the rankings (34th). Improvement in gender (+20.9), has pushed Zimbabwe into the top ten performing countries (9th), with workplace gender equality and gender equality featuring among the most improved indicators. Meanwhile, Zimbabwe is the third most improved country in Rights (+16.3), with four of the five indicators registering improvements of more than +15.0 points. Human development, in which Zimbabwe achieves its highest category rank (28th), has improved by +7.4 points over the decade. Progress is registered in all three sub-categories, with particular improvement in the indicators on welfare services and immunisation.

Trends in the WGI rankings (Figure 2.9) provide comparative insights for Zimbabwe relative to other countries in the rest of the world, including some of the East Asian states that provide benchmarks in the demographic dividend discourse.

The WGI indicators include:

- (i) Regulatory Quality;
- (ii) Political Stability and Absence of Violence;
- (iii) Government Effectiveness;

Figure 2.9: Zimbabwe Worldwide Governance Indicators (WGI) Trends



Source: <http://dataviz.worldbank.org/tl/DECDG/authoring/WGI-9-23-16>

- (iv) Voice and Accountability;
- (v) Rule of Law; and
- (vi) Control of Corruption.

Zimbabwe has been performing poorly over the years, but recent trends show positive improvement for all indicators, complementing similar findings above from the IIAG.

Improvements in the country on governance and performance management are also being supported by other evidence sources. A 2013 Capacity assessment report on local government

noted that despite the structural failings of the system, the sector was slowly recovering. The Government of Zimbabwe has been supporting peace building and reconciliation initiatives since independence in its quest to ensure a peaceful environment and coexistence amongst its people.

In 2003, the Government formed the Organ for Healing, Reconciliation and Integration (ONHRI), which was followed by the National Peace and Reconciliation Commission (NPRC) as provided in the 2013 constitution of Zimbabwe. Zimbabwe's political system is made up of formal and informal

political arrangements as well as certain values and institutions of democracy and governance such as the legislature, judiciary and executive, interest groups and political parties . If fully upheld and effectively interpreted the constitution of Zimbabwe has the potential to transform the socio-economic and political aspirations of Zimbabweans and ensure resilient and sustainable development of the country.

Nevertheless, the Zimbabwe 2016 Comprehensive report on the I-PRSP consultative process highlighted corruption, poor management and accountability practices, limited national dialogue and inclusive participation, limited representation in decision making processes, limited capacity

of the justice delivery system, limited access to justice by the poor and vulnerable populations and inadequate capacity for enforcement and implementation of constitutional provisions as key issues the country has to grapple with. Accordingly, under this pillar, areas prioritised in the I-PRSP 2016-2018 include justice and rule of law; service delivery; combating corruption; public sector modernisation and civil service reform; public sector accountability and transparency; capacity development in the public sector including M&E system; peace and security; public financial management and financial controls; fiscal reform measures; poverty statistics and data systems.

3



## The National Transfer Accounts

<sup>3</sup>Sachikonye et al., 2007, Consolidating democratic governance in Southern Africa- Zimbabwe, EISA Research Report, No.30  
<sup>4</sup>[http://www.zw.one.un.org/sites/default/files/Publications/UNZimbabwe/Country%20Analysis\\_FinalReview\\_3Oct2014.pdf](http://www.zw.one.un.org/sites/default/files/Publications/UNZimbabwe/Country%20Analysis_FinalReview_3Oct2014.pdf) accessed 11th July 2017

The National Transfer Accounts (NTA) framework was developed to analyse what is referred to as the 'generational economy', which is defined as "the social institutions and economic mechanisms used by each generation or age group to produce, consume, share, and save resources" (Mason and Lee 2011). By measuring different types of economic flows across the lifecycle, the NTA enables a better understanding of the patterns of the flows that characterise the generational economy across age groups. The key aim of NTA is the quantification of economic

flows for single-year age cohorts. Individuals may receive inflows of resources in the form of labour income (Y<sup>l</sup>), asset income (Y<sup>A</sup>) and transfers from others (+). These resources may then be used for consumption (C), transfers to others (-) and savings (S); these are the outflows. For any individual, inflows must equal outflows. Rearranging the terms yields the following identity, which governs NTA (Lee 1994) and is valid for each age cohort (x):

$$\underbrace{C(x) - Y^l(x)}_{\text{Lifecycle deficit}} = \underbrace{\tau^+(x) - \tau^-(x)}_{\text{Net transfers}} + \underbrace{Y^A(x) - S(x)}_{\text{Asset-based reallocations}} \quad (1)$$

In other words, the lifecycle deficit ( $C(x) - Y^l(x)$ ) equals net transfer inflows ( $\tau^+(x) - \tau^-(x)$ ) plus asset-based reallocations ( $Y^A(x) - S(x)$ ). Since this identity holds true at the individual level, it also holds true at the cohort level and in the aggregate. Accordingly, lifecycle deficits — where consumption exceeds labour income — must be financed through a combination of net inflows from transfers and asset-based reallocations. Individuals and cohorts with lifecycle surpluses would see net outflows in the form of transfers and/or asset-based reallocations.

This study uses the NTA methodology to estimate the size of the DD that Zimbabwe can earn under various scenarios. As will be explained below, to do this, estimates of consumption (C) and of labour income (YL) are required. Labour income is differentiated into two types, namely:

- Employment earnings (YLE); and
- Self-employment earnings (YLS).

For consumption, the NTA differentiates between:

- Private consumption (CF), which consists of:
  - Private consumption of education (CFE);
  - Private consumption of health (CFH); and

- Private consumption of other items (CFX);
- Public consumption (CG), which consists of:
  - Public consumption of education (CGE);
  - Public consumption of health (CGH); and
  - Public consumption of other items (CGX).

To generalise the construction of NTA profiles, first, an age profile for a given flow is constructed using either household survey data or detailed administrative data. The age profile plots the mean per capita value of the flow — averaged across all individuals within each age cohort, whether or not an individual experiences the given flow — at each age. For example, the labour income profile is the mean labour income across all individuals within each cohort, including individuals who are employed, unemployed or not economically active. In the latter two cases, individuals' labour income equals zero and these zeros are included in the calculation of the mean. The mean per capita value of the flow as reflected by the age profile is, then, a combination of the proportion of individuals experiencing that flow and the average value of the flow for those who do experience it.

Next, the age profile is combined with a national population distribution and its level is adjusted so that the implied aggregate value (i.e. the age profile multiplied by the population distribution) equals a control total derived from national accounts or national budget data. The adjustment is made multiplicatively, so that the value at each age is adjusted proportionally. The resulting profiles are then aggregated to derive the various profiles of the lifecycle deficit, net transfers and net asset-based reallocations. To aid inter-country comparisons, standard practice in NTA research is to normalise all age profiles by dividing them by the unweighted mean labour income for 30 to 49 year olds, referred to here as peak labour income. Full details of the NTA methodology can be found in the UN manual for the NTA (United Nations 2013).

### 3.1 Estimating the demographic dividend within the NTA framework

The NTA methodology seeks to quantify the generation and use of economic resources at different ages across the lifecycle. A key feature of the economic lifecycle is the variation in consumption and labour income by age that reflects the mismatch between material needs and the capacity to meet those needs through one's own labour. In societies around the world, the young and the old on average tend to consume more than they produce through their own work. In contrast, working-age adults consume less than they produce. A system of transfer of resources between and across generations is therefore essential to maintain the standard of living of the most vulnerable sections of the population (children and the elderly) and ensure that future generations are better off than the current generation (United Nations, 2013).

The lifecycle deficit (or surplus) is, as noted, the left-hand side of the NTA identity: the right-hand side of the identity then details the financing of the deficit (or the 'distribution' of the surplus) for each age group. For example, a lifecycle deficit generated by a child — whose consumption exceeds her labour income — may be financed through net private transfer inflows (from her

family, in the form of food and housing, for example) and net public transfer inflows (from the state, in the form of in-kind consumption of education and health services, for example). An elderly person's lifecycle deficit, on the other hand, may be financed through net public transfer inflows (from the state, in the form of in-kind consumption of health services or as social grants) and through income generated from their assets or dissaving (i.e. positive asset-based reallocations). A working-age adult's surplus may be distributed to others through private transfer outflows, or through the taxes they pay to the state; at the same time, the individual may be saving for retirement, generating negative asset-based reallocations.

Figure 3.1 illustrates the lifecycle deficit and its components — labour income (upper panel), consumption (middle panel), and the lifecycle deficit (bottom panel, and calculated simply as the difference between consumption and labour income) — graphically. These profiles are calculated as the median across the 35 countries for which these NTA profiles are available in the NTA database.

Combining the NTA profiles with population estimates and projections, it is possible to analyse the consequences of changing age structure on economic growth. One such structural change relates to the rising share of the population within the working ages associated with the demographic transition. The effects of a changing population age structure on economic growth can be understood in terms of a simple identity (United Nations, 2013):

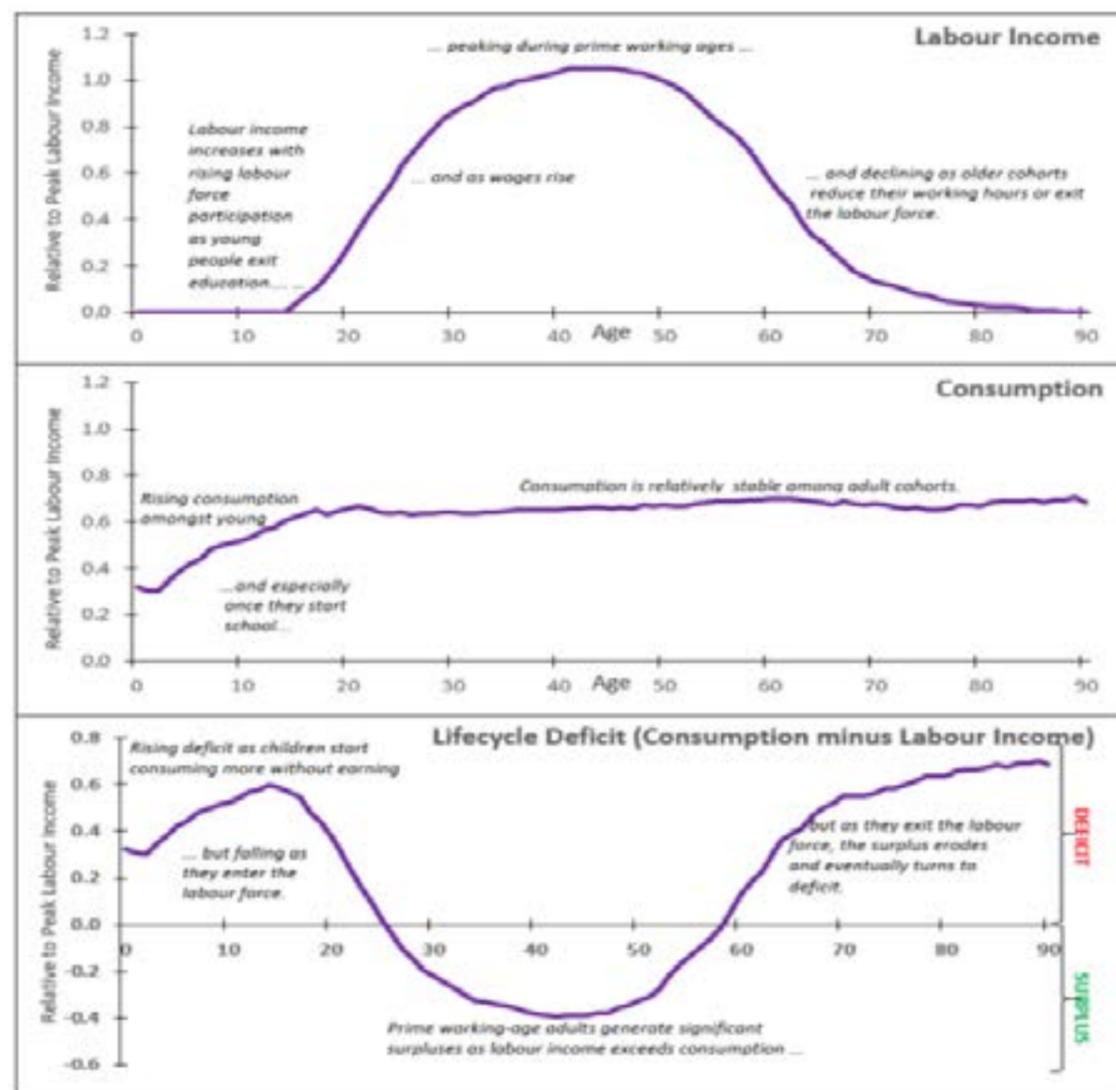
$$\frac{C}{N} = \frac{(1 - s)Y}{L} \cdot \frac{L}{N}$$

where  $C/N$  is consumption per consumer,  $s$  is the savings rate,  $Y/L$  is income per effective worker, and  $L/N$  is the ratio of the number of workers relative to the number of consumers. Living standards, as reflected here by consumption per consumer ( $C/N$ ),

are therefore a function of the income generated and consumed by each worker  $((1-s)Y/L)$  and the support ratio  $(L/N)$ . Expressing the identity in terms of growth rates yields:

$$gr\left(\frac{C}{N}\right) = gr\left(\frac{(1-s)Y}{L}\right) + gr\left(\frac{L}{N}\right)$$

Figure 3.1: Labour income and consumption across the lifecycle<sup>7</sup>



Source: NTA Network

<sup>7</sup>Note: Median profile for 35 countries including Argentina (1997), Australia (2010), Austria (2010), Brazil (2002), Canada (2006), Chile (1997), China (2002), Colombia (2008), Costa Rica (2004), Finland (2004), France (2005), Germany (2003), Hungary (2005), India (2004), Indonesia (2005), Italy (2008), Jamaica (2002), Japan (2004), Kenya (1994), Mozambique (2008), Nigeria (2009), Peru (2007), Philippines (1999), Senegal (2005), Slovenia (2004), South Africa (2005), Rep. of Korea (2000), Spain (2000), Sweden (2006), Taiwan, Province of China (2003), Thailand (2004), United Kingdom (2010), Uruguay (2006), United States of America (2003), and Viet Nam (2008).

where  $gr(x)$  is the growth rate of  $x$ . Changing population age structures affect living standards through their effect on the support ratio; thus, the first DD impacts on living standards through the rate of change of the support ratio, the second term on the right-hand side of the equation. Accordingly, "a 1 percentage point increase in the support ratio leads to a 1 percentage point increase in the standard of living" (United Nations, 2013). The first term on the right-hand side of the equation is the route through which the second DD operates.

The purposes of this study is to estimate the first DD and therefore estimate the support ratio over time for Zimbabwe. In practice, the support ratio is calculated as the ratio of the population-weighted labour income profile (i.e. total labour income) to the population-weighted consumption profile (i.e. total consumption). The default projection of the DD within the NTA framework assumes fixed consumption and production profiles, while the demographic change follows the medium scenario of the UN population projections. However, extensions to this scenario can be explored to enrich the analysis. For instance, other population projection scenarios can be applied, or simulations under different labour income profiles can be applied. In this study both of these avenues are explored and the results and implications of these different scenarios are presented later in this section.

### Support ratio vs Dependency Ratio

It is important to note the difference between the support ratio and the dependency ratio that is often used by demographers and economists. The dependency ratio is an approximation of the economic support, pegged on the population in the theoretical working-ages (15-64) out of the total population. It assumes that all people of working-age are effectively working, while those who are outside active ages (15-64) are all dependents. The NTA framework does not make this assumption. Instead, NTA uses actual data on consumption, transfers and income rather than just making estimates based on age. This reveals a more complex reality in which the age of dependency can extend well beyond age 15. With high unemployment rates among young people, increasing numbers opt to continue living

with their parents and other relatives well into their late twenties. Conversely, the NTA can also capture the reality of early/child labour in countries or regions where this is prevalent. Nevertheless, though significant numbers of children may be engaged in income generating activities, the reality is that on average, even in these countries, children as a group generally consume more than their labour income and therefore contribute to the overall dependency burden. In addition, for developing countries with large numbers engaged in the informal sector and with poorly developed social safety nets for the elderly, the NTA would also capture the reality of many elderly people who are not dependents in the sense that they may be working and earning a livelihood.

### 3.2 Data

This study relied on various data sources for analyses, and a short description and justification of the data used follows below.

#### Household survey data

Household survey data is central to the construction of the NTA profiles: it is from this data that the shapes of the majority of profiles are determined. Ideally, a single household survey that would include all the required data would be used; however, this is often not possible. In such instances, different pieces of data from different datasets are employed in order to compile the profiles.

The Zimbabwe, Income, Consumption and Expenditure Survey (PICES) 2011/12 (ZIMSTAT, 2013b), a nationally representative household survey, provided the necessary microdata to develop the labour income and consumption profiles. The NTA profiles constructed were thus anchored to 2011/12 as the base year for analyses. The microdata used from the PICES 2011/12 included the following information:

- Age of each household member;
- Income from work (whether in employment or self-employment) for each household member;
- Household expenditure data, with specific detail on: (1) education; and (2) health.

### Macro controls

Macro controls - also referred to as aggregate controls - are used to adjust the levels of the profiles so that, once weighted by the age-specific population estimates, they are consistent with national accounts. Data underlying the macro controls were abstracted from the National Accounts, supplemented by expenditure data from consolidated national budgets for the same year. Data for the macro controls were primarily drawn from:

- The Generation of Income account.
- The Allocation of Primary Income account.
- Detailed estimates of household final consumption expenditure according to purpose.

In order to disaggregate government consumption as reported in national accounts, additional information was drawn from actual expenditure figures reported in national budget documentation, with particular detail on education and health.

### Population data

Detailed population data—population per single-year age cohort—is required for three key purposes:

- To correctly apply the macro controls;
- To aggregate these profiles, i.e. to calculate total labour income or total private education consumption within a country; and
- To project NTA profiles into the future, which is required for the estimation of the DD.

To ensure consistency across NTA countries, country teams use population estimates and projections from the United Nations' World Population Prospects. For baseline projections, the study relied on the medium fertility variant projections from the 2015 Revision of the World Population Prospects (United Nations, 2015). The UN data allow for projections far into the future, but mindful of the increase in uncertainty in projections with time, the decision was made to cap the end year of the simulations to the year 2060.



## Results

## 4.1 Labour income, consumption and the lifecycle deficit in Zimbabwe 34

In this section, the patterns of labour income and consumption in Zimbabwe in the base year 2011 and the resulting lifecycle deficit profile are discussed. The labour income and consumption patterns underlie the calculation of the support ratio and the first DD. Furthermore, the aggregate profiles generated for Zimbabwe are compared with selected profiles generated from existing data within the NTA network database.

### Per capita labour income and consumption

Per capita labour income in Zimbabwe follows the expected lifecycle pattern whereby labour income begins to rise among teenagers, rises steeply from the early twenties when a majority of young people are exiting the education system and joining the workforce, peaks in the most economically productive middle-ages, and then declines rapidly as older persons exit from the labour force (Figure 4.1). In 2011, labour income is observed from as early as the age of 10 years although the amount is very small (less than a dollar per year). Much of

this activity among young people is unpaid work in family businesses/enterprises or self-employment. By age 19, average income exceeds USD 100 for the first time. Many of the teenagers in Zimbabwe are involved in the labour force as unpaid family workers or in self-employment activities, and therefore relative to peak labour income of USD 1,532, most teenagers make very little amounts with those between the ages of 10 and 19 earning just about 1.6% of peak labour income on average.

However, by 20 years of age, labour income has risen significantly to an average of USD 258 and rises sharply thereafter to peak at 40 years of age at USD 1,679. Per capita income thereafter starts declining, at first slowly, and then rapidly. Between age 40 and age 60, average annual income declines by about 40%, from USD 1,679 to USD 999. It continues to diminish faster with those at age 70 on average earning only USD 286. Nevertheless, the study also found that even at very old ages, there are Zimbabweans generating some labour income. Those at age 80 earned an average of USD 15 (just over 1 percent of peak labour income) in 2011.

The consumption profile for Zimbabwe suggests relatively high levels of consumption in the country relative to labour income. Per capita consumption rises gradually from about USD 457 per capita in the first year of life, and then rapidly increases from age 4, coinciding with entry into the grade school system. As costs of education rise with entry into schooling, consumption rises rapidly, peaking at USD 1,288 at the age of 23 which coincides with the ages at which Zimbabweans who make it beyond secondary school are most likely to be in tertiary education. It is worth noting that although only a small fraction of Zimbabweans attain tertiary education, the public spending on education is significant. For instance, in 2011, 7% of central government expenditure went to expenditure on tertiary education compared with 18% spent on all other levels of education. In 2013 it was still about 7% for tertiary level versus 19% for all other levels combined. (ZIMSTAT, 2013a). The consumption profile after age 23 is fairly stable with a marked decline only becoming evident after age 60.

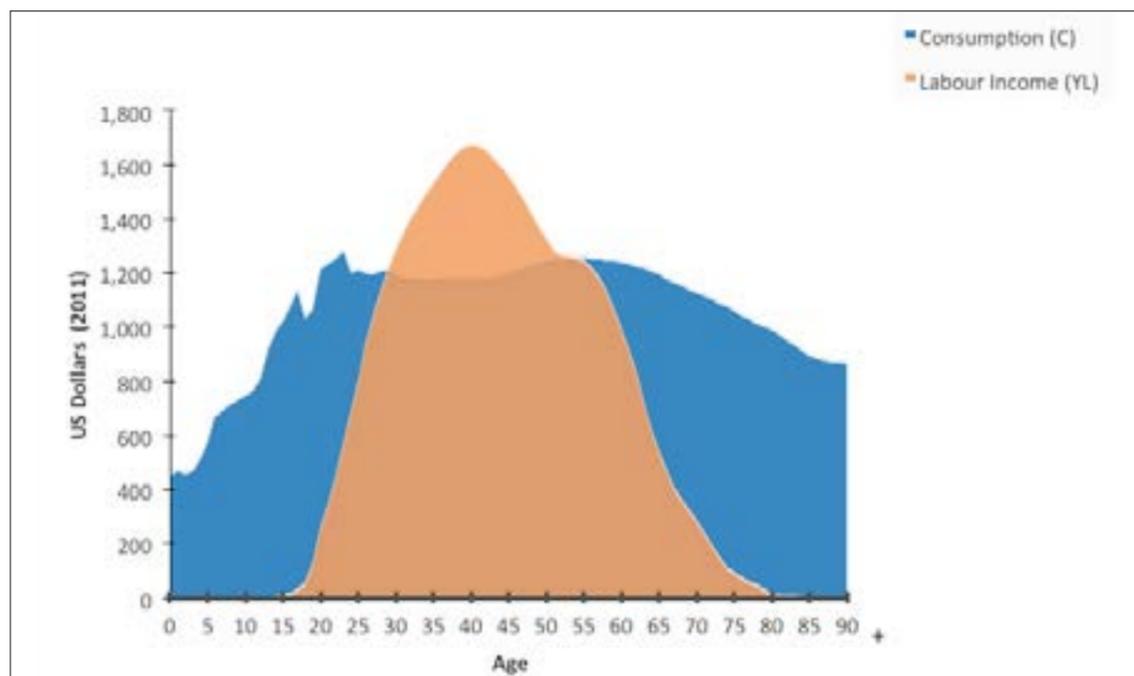
Average annual consumption per person is higher than average labour income per capita from infancy to age 29. Over a range of 24 years between the

ages of 30 and 53, mean per capita labour income exceeds per capita consumption. Thereafter, labour income again falls below the level of consumption. In sum, individuals under the age of 30 years (the young age dependency) and those aged 54 years and above (the old age dependency) contribute to the dependency burden in Zimbabwe. This empirically identified economic dependency is substantially different from the often-used theoretical dependency ages of 0-15 years and 65+ years.

### Aggregate labour income and consumption

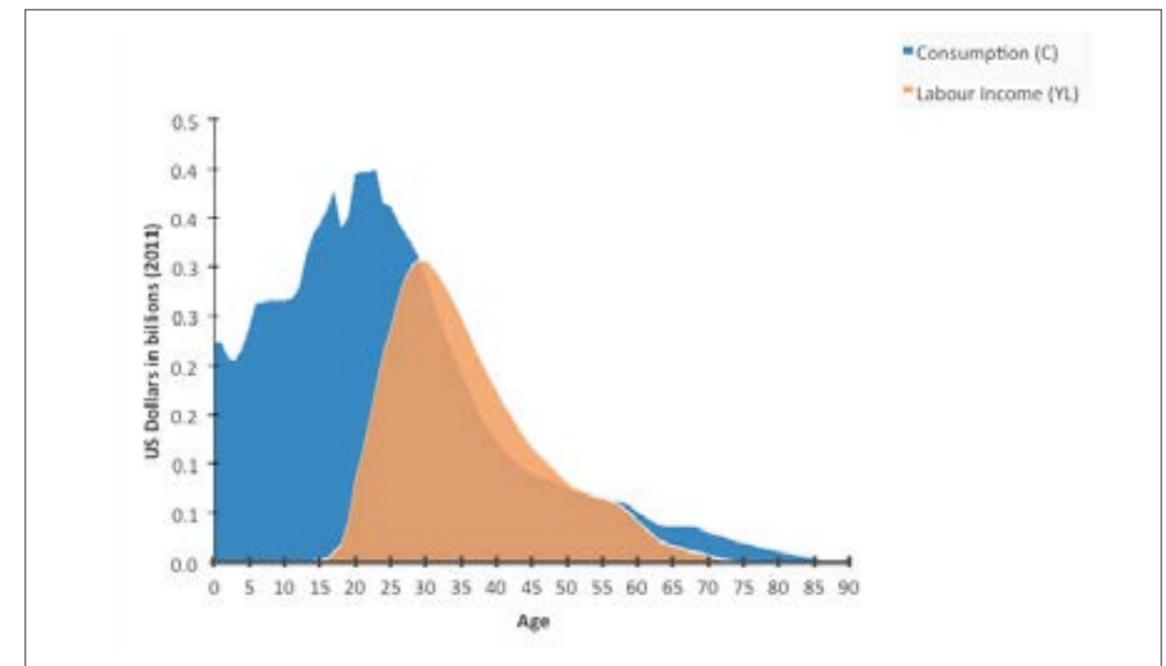
To take account of the age structure of the population and its implications for aggregate consumption and labour income, the per capita profiles in Figure 4.2 below are weighted by actual population size at each age to calculate the aggregate labour income and consumption profiles in Figure 3.3. In the case of Zimbabwe, once this is done, the most striking observation is the very large magnitude of consumption relative to the labour income. This is because Zimbabwe's population is

Figure 4.1: Per capita Labour Income (YL) and Consumption (C), Zimbabwe 2011



Source: Study estimates

Figure 4.2: Aggregate Labour Income (YL) and Consumption (C), Zimbabwe 2011

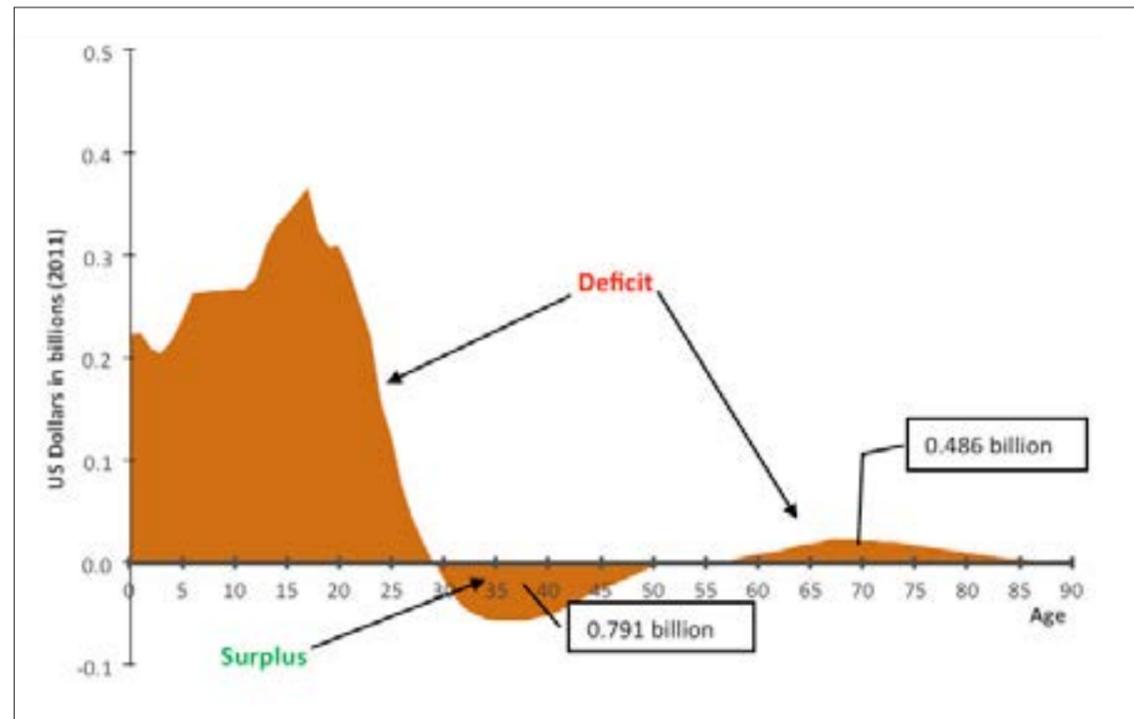


Source: Study estimates

concentrated at younger ages where they are either entirely dependent or generating very little labour income. The Zimbabwe census in 2012 showed that young people below the age of 30 constituted 70% of the total population. As noted in the per capita profiles, it is only at age 30 that the average individual begins to generate a surplus by earning more from their labour than they consume. High levels of unemployment and limited opportunities in the labour force for

that have applied NTA analysis, the general finding is that of general dependence during the life course in the early phases which lasts around 25 years. Lee and Mason (2011) thus classify those between age 0 and 24 as children. Many individuals to this age are either still going to school and/or have not yet begun to earn significant labour income. Borrowing from this classification, this study examined the consumption needs of children (0-24 years)

Figure 4.3: The Aggregate Lifecycle Deficit (LCD), Zimbabwe 2011 (Medium variant scenario)



Source: Study estimates

making decent wages among young people have contributed to the inability of younger adults in their twenties and early thirties to fully finance their consumption through their labour income.

Moreover, as is clear in Figure 4.2, those in the age range 30-53 years make a very small aggregate lifecycle surplus. An aggregate deficit is then again observed from age 54 although this is not as pronounced as in the younger ages since the proportion of those 54 years and older is less than 10 percent of the total population.

Analysing data from countries across the world

in Zimbabwe in 2011 as a percentage of the total labour income. The findings show that the consumption needs of this age group is a massive 109% of the total labour income. In comparison, analysis of NTA data from South Korea (2000), a country that has been noted to have reaped a significant DD, the consumption needs of children (0-24 years) as a percentage of total labour income was only 35%. It is important to note that the data for the South Korea analysis are from 2000 when the country was already much further along the demographic transition than Zimbabwe today and

hence had a significantly large proportion of its population in the working-ages relative to dependents compared to the case of Zimbabwe today. Similar analysis from the 2005 Nigeria NTA profiles, which is much more comparable to Zimbabwe today in terms of the age structure, indicate an estimate of 80% for children's consumption relative to total labour income (Lee and Mason, 2011).

Zimbabwe therefore is presently saddled with an extremely large dependency burden from children and young people that must be financed through other avenues than the labour income generated within the country. One possibility is that the very high consumption levels is partly being financed through international remittances. Nevertheless, with such elevated levels of consumption relative to labour income, it is very difficult for households to make savings that can be directed towards investments that boost the economy of the country.

### Aggregate Lifecycle Deficit (LCD)

Figure 4.3 summarises Zimbabwe's aggregate lifecycle deficit (LCD), which is the difference between aggregate labour income and aggregate consumption, in 2011. In monetary terms, it shows that the aggregate deficit of about US\$ 0.23 billion for those in their first year of life increases steadily with age and peaks at age 17 (US\$ 0.37 billion) and then begins to decline as individuals exit the education system and enter the labour force, thereby resulting in falling aggregate consumption and rising labour income.

Yet it is not until age 30 that a cohort is able to produce a surplus (negative deficit). The surplus peaks at a maximum of US\$ 0.573 billion at age 36. The total working-age surplus in Zimbabwe is very small and is about only 11 percent of the total labour income. As a result, the sum of the deficit at young ages (US\$ 7.065 billion) and at old ages (US\$ 0.486 billion) far outweighs the surplus (US\$ 0.791 billion), adding up to an overall lifecycle deficit of US\$ 6.76 billion. Ways of financing this deficit include financing from asset income (including rents from natural resources), transfer inflows from the rest of the world, or dissaving (borrowing). The limits on the availability of transfer inflows from the rest of the world – whether these be private inflows,

such as remittances in cash or in kind, or public inflows in the form of foreign aid – as well as on the country's ability to finance consumption through borrowing, means that Zimbabwe must put in place policy actions that can significantly increase labour income in the country including ensuring the faster generation of decent jobs for young people.

### How do the Zimbabwe consumption and labour income profiles compare against other known profiles?

Using profiles available from the NTA network database, Zimbabwe's labour income and consumption profiles were compared with a selection of other NTA profiles. To facilitate the comparisons within the NTA framework, all the age profiles are normalised by dividing them by the unweighted mean labour income for those in the age group 30 to 49 years, or peak labour income (United Nations, 2013). These comparisons are derived from the respective per capita profiles and are depicted in Figure 3.5.

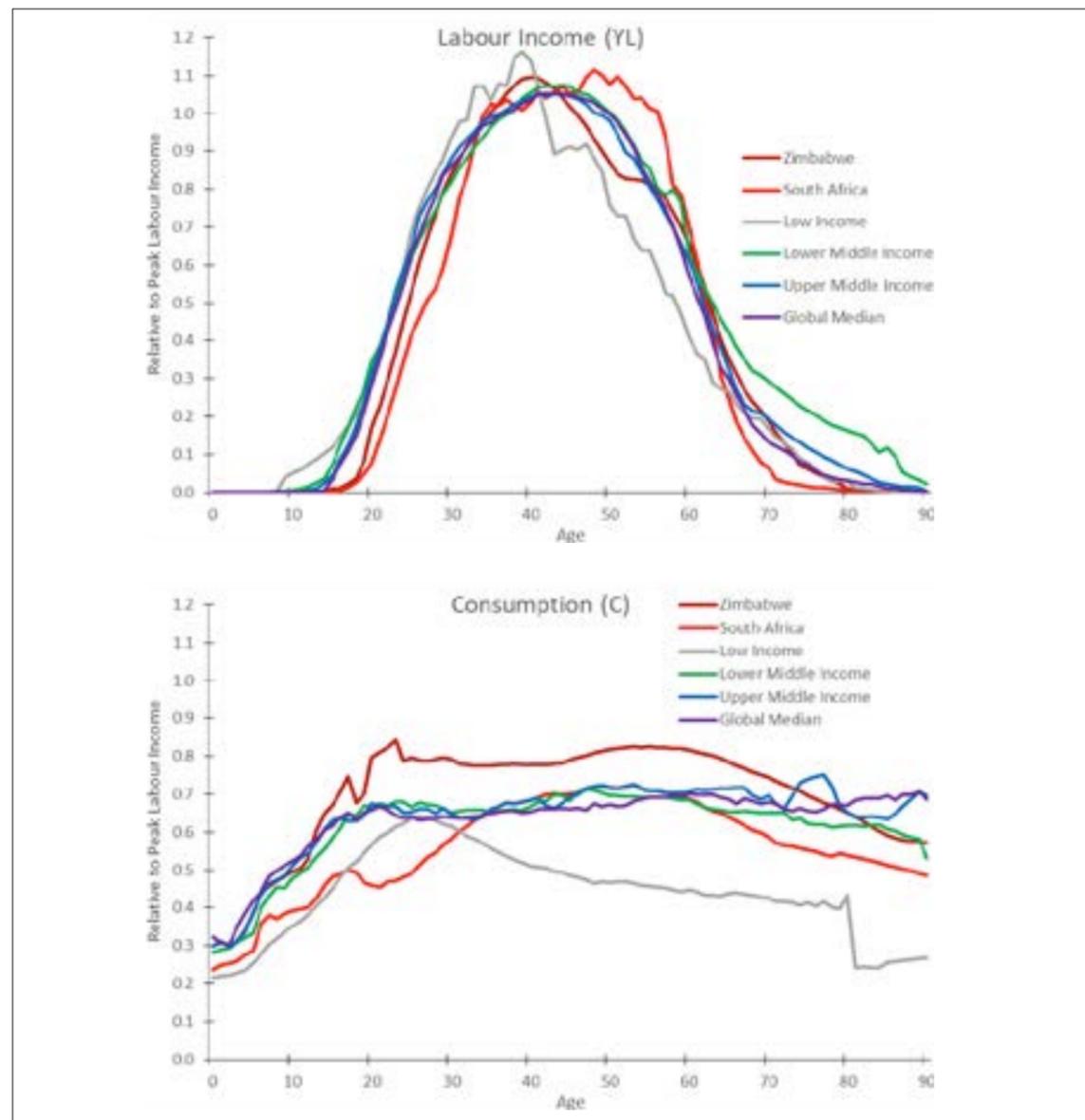
As comparators, median profiles for low-income, lower middle-income and upper middle-income countries for which there are NTA estimates as well as the global median profile, were included. In addition, the profile for South Africa is included. The standardised labour income profiles (Figure 4.4, upper panel) show that in general, all the profiles conform to the expected pattern over the life course. However, Zimbabwe and South Africa stand out from the rest of the labour income profiles in the delay in the rise of their profiles. This feature reflects the elevated level of unemployment among the youth in both countries and the generally poorer labour market outcomes for young people. Because of high levels of youth unemployment, young cohorts in Zimbabwe and South Africa begin to earn income at a relatively later age than in the comparison group of countries in general. The problem is likely exacerbated by underemployment. The median labour income profile for low-income countries begins to rise a little earlier than the rest of the countries, a reflection of the engagement of children below the age of ten in income generating activities in those countries.

The pattern of labour income in Zimbabwe shows that it has a narrow peak and begins to decline faster than any of the other comparators apart from the low-income countries, where the decline begins even earlier. However, the Zimbabwe profile converges closer to that of the global median profile, the upper-middle income countries and South Africa after age 60. Upper middle-income countries on the other hand appear to enjoy greater levels of labour income into the older ages relative to their peak labour income.

The Zimbabwe profile is peculiar from the mid-forties to mid-fifties with much lower labour income

at ages where middle income countries and even the global median are earning significant labour income. Interestingly, Zimbabwe then converges to the pattern expected in higher-income countries where there are well-defined retirement ages and where most of employment is within the formal sector after age 60. This appears to indicate that there may be an influence in this profile by the exit of a considerable number of Zimbabweans from the labour force in the ages between the mid-forties and mid-fifties most likely due to migration. This would therefore result in depressed labour income at these ages.

Figure 4.4: Comparing Zimbabwe's Per Capita Labour Income and Consumption Patterns with Selected Others



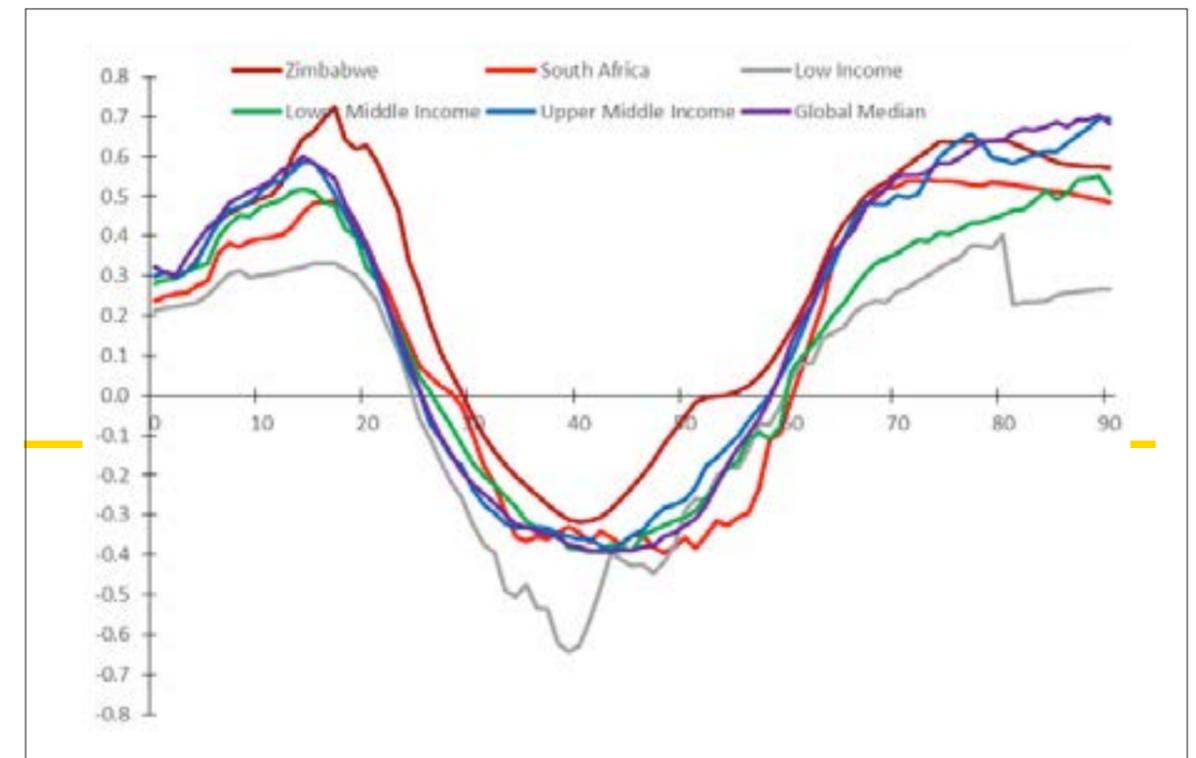
Source: NTA Network and study estimates

A comparison of the consumption profiles of Zimbabwe and the comparator countries/ country groupings show much greater variation than in the labour income profiles (Figure 4.4, lower panel). The Zimbabwe profile stands out, showing much higher consumption levels relative to their peak labour income at virtually all ages from teenage years until the seventies when it converges with most of the rest of the profiles. At age 20, consumption in Zimbabwe relative to peak labour income is about 80% and reaches a high of 84% of peak labour income at age 23. These are much higher levels than the other profiles at these points. For instance, the global median consumption at age 20 and age 23 are at 65% and 64% of peak labour income respectively. Moreover, Zimbabwe maintains the high level of consumption relative to peak labour income at a high level (over 70%) until the mid-70s when

it converges with most other profiles. Low-income countries at all ages have much lower consumption levels relative to peak labour income with a high of 63% at age 27. The underlying consumption profile for Zimbabwe relative to peak labour income suggests that some form of transfer, with the likelihood of remittances, finances the high levels of consumption. It also means that Zimbabwean households are unlikely to make significant savings that can be invested to boost the economy. This has negative implications for the magnitude of the first demographic dividend that Zimbabwe can harness.

Because of the high levels of consumption relative to labour income, Zimbabwe has a large lifecycle deficit – the difference between labour income and consumption. Figure 4.5 shows that among the comparison profiles, Zimbabwe generates the

Figure 4.5: Comparing Zimbabwe's Per Capita Lifecycle Deficit (LCD) Profile with Selected Others



Source: NTA Network and study estimates

smallest surplus relative to peak labour income and has the shortest period in which the working age surplus is generated – 24 years (between the ages 30 to 53) compared to 33 years for both the global median profile, and lower middle-income countries and 32 years for upper middle income countries and South Africa. The low-income countries experience a surplus for 35 years between the ages of 25 and 59.

## 4.2 Support ratio and the first demographic dividend

The aggregate profiles discussed in section 3.3 underlie the calculations for the support ratio, which determine the estimation of the first DD. As per the discussion in section 3.2, the first DD within the NTA framework is defined as the rate of change of the support ratio, which is the ratio of effective producers to effective consumers. Thus, the first DD operates through growth in the support ratio: a one percentage point increase in

the support ratio leads to a one percentage point increase in the standard of living in the population, all other things being equal (United Nations, 2013).

For the baseline simulation of the support ratio and the first DD, the UN medium fertility population projections were used and estimates of these two variables made for the period between 1990 and 2060. The simulations are anchored to the base year of the study and the projections assume no change in the labour income and consumption profiles (expressed relative to peak labour income) over time.

Figure 4.6 shows that Zimbabwe has experienced a sustained period of increase in the support ratio since 2005 with the period before that from 1990 being positive but relatively flat. The support was 0.491, 0.493, 0.485 and 0.481 in 1990, 1995, 2000 and 2005 respectively. It is likely that the support ratio could have increased significantly in this period if it were not for the effects of the HIV and AIDS pandemic in this period that had a negative

impact on labour income. Between 2005 and 2010, a significant increase in the support ratio is observed rising to 0.5. In 2015, the support ratio is estimated to have reached 0.534 and is projected to further increase to 0.567 by 2020, 0.604 by 2030, 0.642 by 2040, 0.667 by 2050 and 0.677 by 2060. This bodes well for Zimbabwe since it is projected to still have an extended period in which to harness the first demographic dividend as its age-structure continues to shift to one with more people in the working ages.

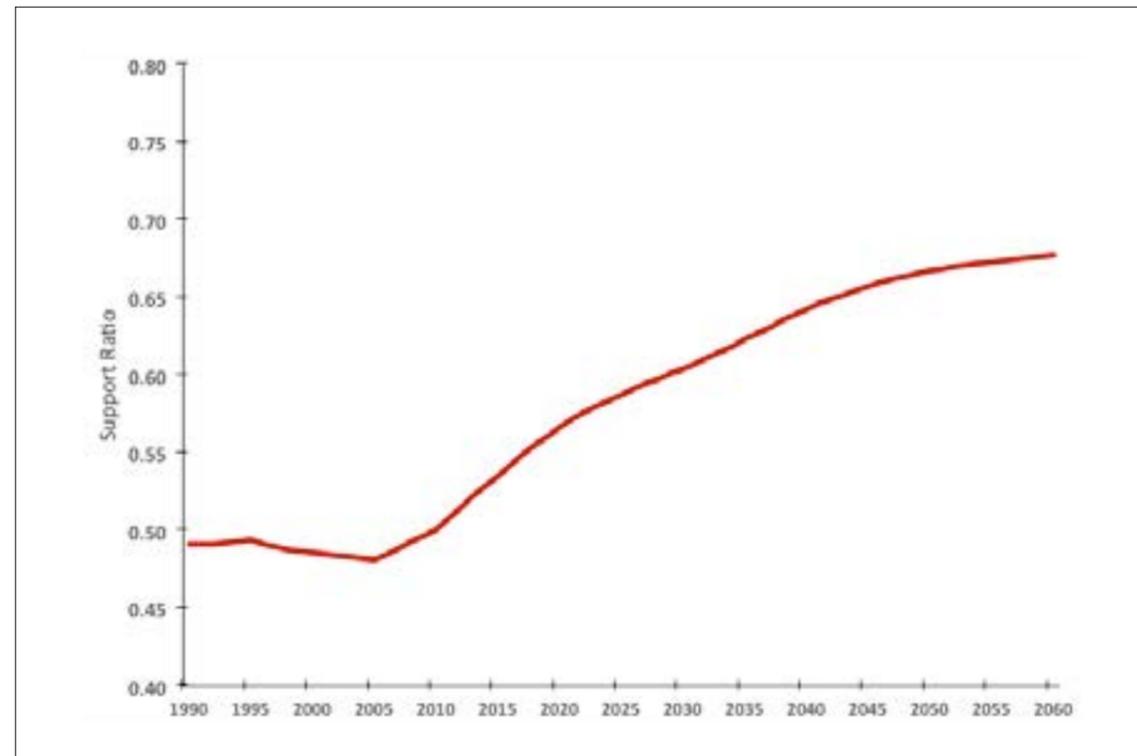
### Estimating the First Demographic Dividend

The window of opportunity for harnessing the first DD is understood to be in effect during the period when there is a positive support ratio. The first DD can be estimated as the rate of change of the support ratio (the ratio of effective producers to effective consumers): if the support ratio is rising, the DD is positive, but is negative if the support ratio is falling. While the support ratio continues to rise, the first DD is positive; as the support ratio peaks, the dividend equals zero; and as it begins to

decline, the dividend becomes negative, implying the demographic change acting as a break on economic growth rather than an impetus for economic growth (Oosthuizen, 2015). Figure 4.7 shows projections of the first DD, calculated as the slope of the support ratio in Figure 4.6. To reiterate, the 2011/12 labour income and consumption profiles are held constant and it is only the population that changes, with the population projections being the UN -medium fertility scenario.

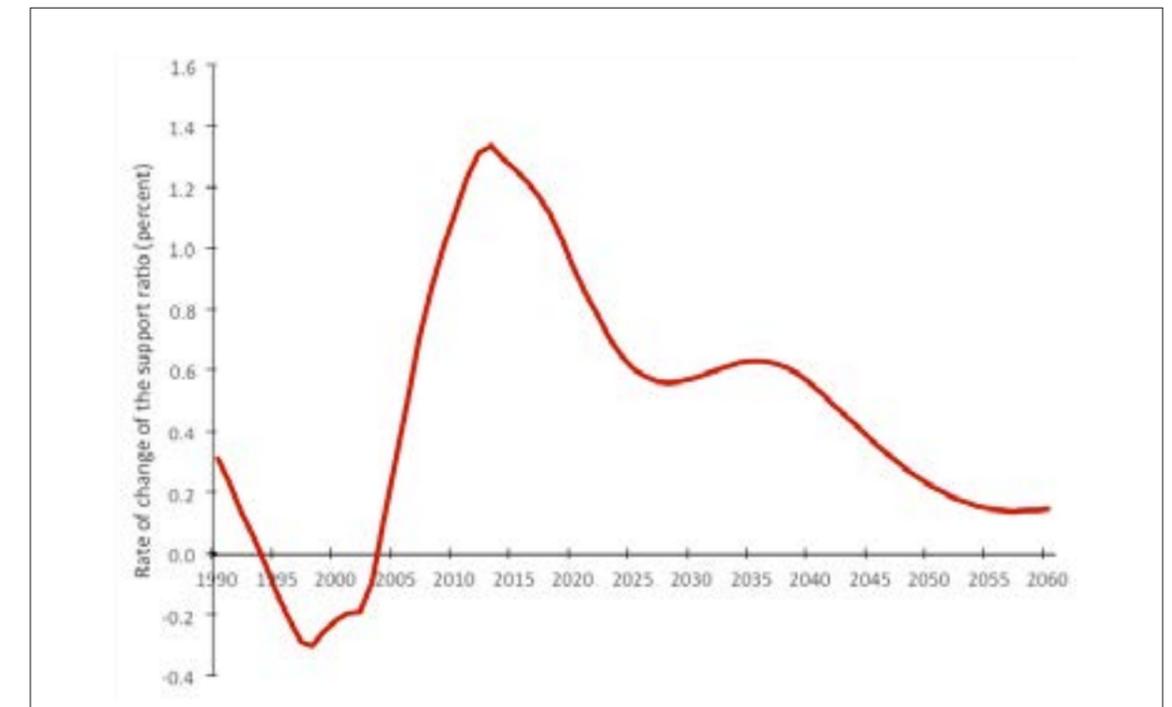
The chart shows that, in 1990, Zimbabwe was experiencing a positive first DD, with demographic change enabling a rise in consumption per consumer of around 0.3 percent. However, as the rise in support ratio slowed down and even declined in some years, the demographic dividend turned negative by 1994 when the rate of change of the support ratio was -0.04 and remained negative until 2003. However, mirroring the rapid increase in the support ratio from the mid-2000s, the magnitude of the first DD increased from 0.1 percent in 2004 and to an estimated peak of 1.3 percent in 2013. From this point, the rate of change of the support ratio although still positive begins to decline and therefore

Figure 4.6: Past Estimates and Projected Support Ratios for Zimbabwe (UN Medium Fertility Scenario)



Source: Study estimates

Figure 4.7: Estimating Zimbabwe's Demographic Dividend (UN Medium Fertility Scenario)



Source: Study estimates

too the magnitude of the first DD. The first DD is projected to fall to 0.9 percent by 2020, 0.6 percent in 2030, and 0.2 percent by 2060. The effect of the first DD in Zimbabwe is therefore expected to be positive even up to 2060, but the returns to the change in age structure to one with more people in the working ages will be fast declining by then.

Generally, Southern African countries are struggling with similar barriers to harnessing the demographic dividend. Three concurrent studies similar to the Zimbabwe study were conducted in Swaziland, Botswana and Namibia. Figure 4.8 illustrates the projected first demographic dividend for Zimbabwe compared alongside the three countries. It is worth reiterating that the estimated demographic dividend is the combination of the unique per capita profiles of labour income and consumption in each country, and each country's population projections.

What is immediately evident is that each of the four countries has experienced or will experience a peak in the magnitude of the

demographic dividend at some point in the first two decades of the 21st century. These peaks are not necessarily the high point of the entire first demographic dividend period—Namibia's demographic dividend was slightly higher in the 1990s, for example—but they do represent local peaks. Botswana's demographic dividend peaks earliest and at the highest level; Zimbabwe's peaks slightly lower and slightly later; Swaziland's peaks for an extended period and is the last to begin to decline; and Namibia's peak is the lowest of the four countries. However, it is important to note that each country is at a different stage of the demographic dividend: Zimbabwe is much closer to the beginning of the period of positive first demographic dividend while Botswana is much farther along the demographic transition, with Swaziland and Namibia in between.

All four countries also saw some kind of interruption in their period of first demographic dividend during the 1990s and/or the early 2000s. During this period, Namibia's demographic dividend fell from close to 0.9 percentage points to under 0.2 percentage points, Botswana's fell

by one-third, while Zimbabwe's turned negative. Although there is no big decline for Swaziland during this time period, its demographic dividend was close to zero for much of the 1990s. Weak demographic dividends during this period is linked to the impact of HIV/AIDS on the population, which particularly affected individuals in the prime working age cohorts and eroded their contributions to aggregate labour income, thereby suppressing the demographic dividend.

### What can Zimbabwe do now to maximise its demographic dividend?

The key message from the analyses of Zimbabwe's first DD using the NTA methodology is that the country is already within its window to harness the first DD and that the peak of the support ratio has already occurred. Nevertheless, the country still has at least four decades in which to maximise its first demographic dividend. However, the returns to the change in the age structure will be declining with time and there is need to put in place the necessary investments in human capital and job creation now to maximise the DD. The evidence presented above shows that the rate of change of the ratio of effective producers to effective consumers under the medium fertility scenario has been on the increase from 2004 but peaked by 2013 and thereafter began to slow down. The slowdown in the increase of effective producers relative to effective consumers means that, at present, although Zimbabwe is currently in a phase where the impact of the DD on economic growth is still positive, this phase is already waning. Zimbabwe can still put in place measures to boost its DD. In the rest of this section, additional simulations are presented that show the possible results of policy actions that can shift the magnitude of the DD that Zimbabwe can earn. These projections are made from 2015.

### Demographic transition

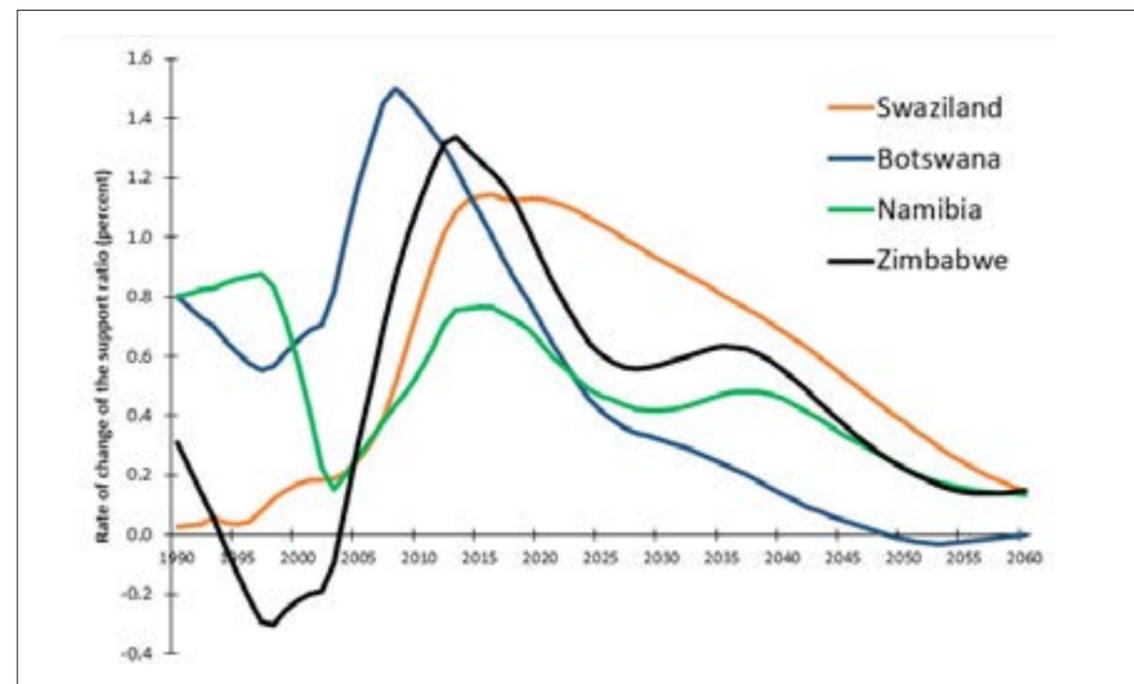
Between the 1980s and early 1990s, Zimbabwe's fertility decline was on a trajectory for it to experience a rapid demographic transition. For instance, between 1988 and 1994, TFR fell from 5.4 to 4.3. Further declines though slower were observed in 1999 (TFR 4.0) and in 2005/6 (TFR 3.8). However, since then, there has been a virtual

stall in the decline (even slight increase) with the TFR in 2010/11 and 2015 recorded at 4.1 and 4.0 respectively. Factors such as teenage pregnancy and early marriages are some of the contributors to this stall. Policy actions are required to ensure that adolescent girls get comprehensive sexuality education and have access to voluntary family planning services and commodities when they need them to curb the teenage pregnancies and the negative impact they have on the ability of affected girls to actualise their potential and indeed contribute to maximising the DD. Other underserved groups, including women residing in rural areas, low income households and women with low levels of education, also require similar interventions since they also experience higher levels of fertility than the national average. Such interventions could possibly lead to further declines in the country's TFR from the current level. Taking this into account, the following four simulations in which only assumptions on fertility are varied are presented:

- i. Constant/No change in fertility from the 2015 levels.
- ii. The UN Medium fertility scenario from the **UN World Population Prospects: the 2015 Revision**, which have been used for all the analyses presented thus far.
- iii. The UN Low fertility scenario from the **UN World Population Prospects: the 2015 Revision**, which assumes fertility to be 0.5 children per woman below the medium variant.
- iv. The UN High fertility scenario from the **UN World Population Prospects: the 2015 Revision**, which assumes fertility to be 0.5 children per woman above the medium variant.

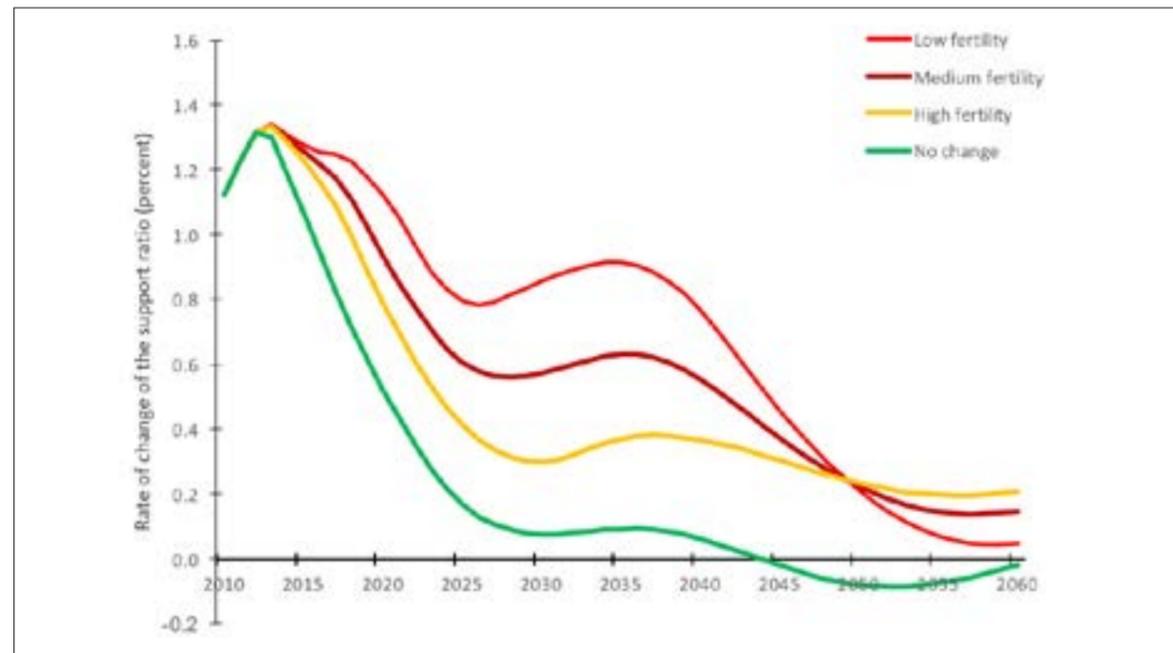
The results of the simulations (Figure 4.9) show that, if the fertility level prevailing in 2015 is maintained at a constant, the period of a positive first DD will be considerably shortened and as a result, the magnitude of the DD earned will also be significantly smaller. Under this scenario, the first DD will turn negative by 2044. If the high fertility scenario is to prevail, the magnitude of the DD will also be much smaller than under the medium and low fertility scenarios, although the period in which the support ratio is positive is likely to be longer for

Figure 4.8: Simulations of the DD in Zimbabwe under Different Fertility Assumptions



Source: Various National Demographic Dividend studies; results estimated using the NTA methodology (projections from 2015-2060 use the UN Medium Variant population projections from the UN World Population Prospects: the 2015 Revision)

Figure 4.9: Simulations of the DD in Zimbabwe under Different Labour Income (YL) Assumptions



Source: Study estimates

the latter two.

The low fertility projection, on the other hand, shows that it is still possible to boost the magnitude of the DD earned relative to the medium, high and no change scenarios. For example, in 2030 it is estimated that the DD can raise consumption per consumer by an estimated 0.9 percent under the low fertility scenario compared to 0.6 percent under the medium variant, 0.3 under the high fertility scenario and only 0.1 under the no change scenario. By 2040, the DD can raise consumption per consumer by an estimated 0.8 percent under the low fertility scenario compared to 0.6 percent under the medium variant, 0.4 under the high fertility scenario and only 0.1 under the no change scenario.

Overall, the estimated cumulative effects of the DD on living standards between 2015 and 2060 is highest under the low fertility scenario (30%), followed by the medium fertility scenario (24%), and the high fertility scenario (19%). It is lowest if fertility remains constant at 2015 levels at only 7%. These results suggest that there is a

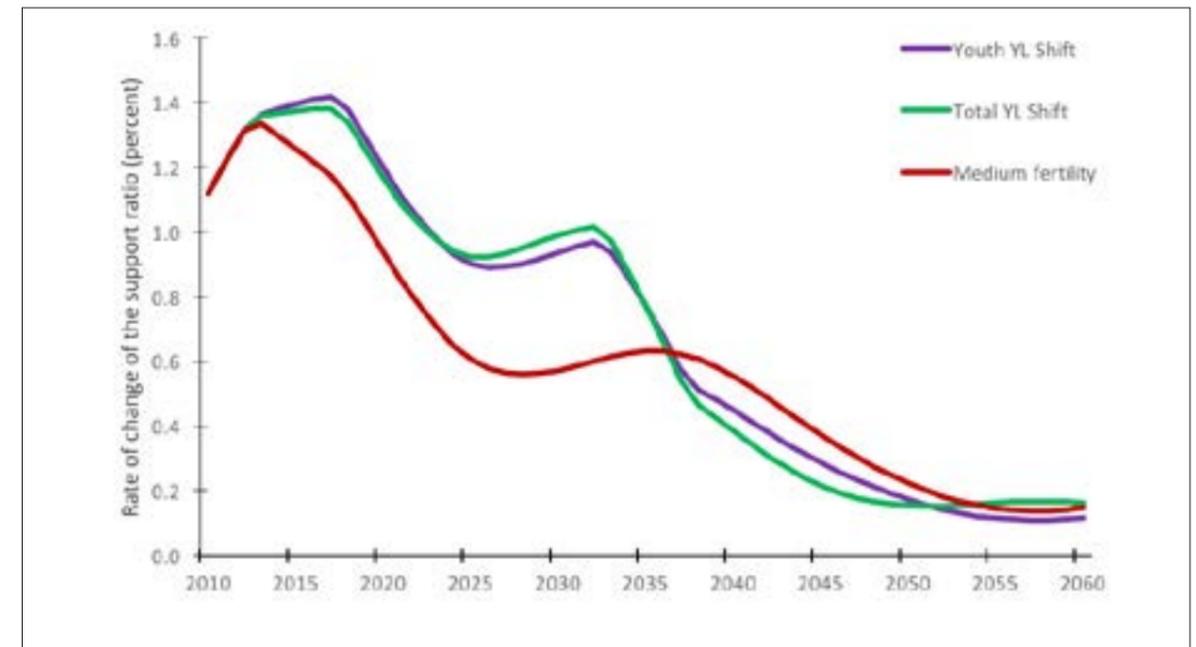
case to be made for supporting policy actions for voluntary family planning that target reducing unplanned and unwanted fertility, especially among adolescents and under-served groups in order to maximise Zimbabwe's DD.

### Labour income (YL)

It is noted that Zimbabwe has high unemployment and underemployment rates and more so among young people. The findings of the NTA analyses support this and earlier in this chapter it was shown that like South Africa, the NTA labour income profile for Zimbabwe generally begins to rise quite late in comparison to other countries – a sign of a combination of late entry into the labour market and possibly low-quality jobs with low returns for young people. Clearly then, a key policy priority in terms of maximising the demographic dividend would be addressing the significant youth unemployment and labour market challenges facing Zimbabwe.

The potential impact that such policies may have on the magnitude of the demographic dividend is simulated below, by allowing the labour

Figure 4.10: Simulations of the DD in Zimbabwe under Different Labour Income (YL) Assumptions



Source: Study estimates

income profile to shift over time while keeping the consumption profile constant. Specifically, the labour income profile is shifted from the original labour income profile to a target profile over a 20-year period between 2015 and 2035. The adjustment happens at a constant rate of change over the period.

For the purposes of these simulations, the global median labour income profile presented in Figure 1.5 is used as a target. As can be seen above, this requires an increase in per capita labour income relative to peak labour income amongst younger cohorts, and a reduction in per capita labour income relative to peak labour income amongst the oldest cohorts.

Two simulations are presented in Figure 4.10. The first simulation assumes that the shape of the Zimbabwe labour income profile gradually changes over the 20-year period, so that by 2035 it is identical to the global median labour income profile. The second simulation assumes that this shift occurs only for younger cohorts under the age of 35; in other words, by 2035, the portion of the labour income profile for cohorts aged 0 to 34 will look like the global median profile for

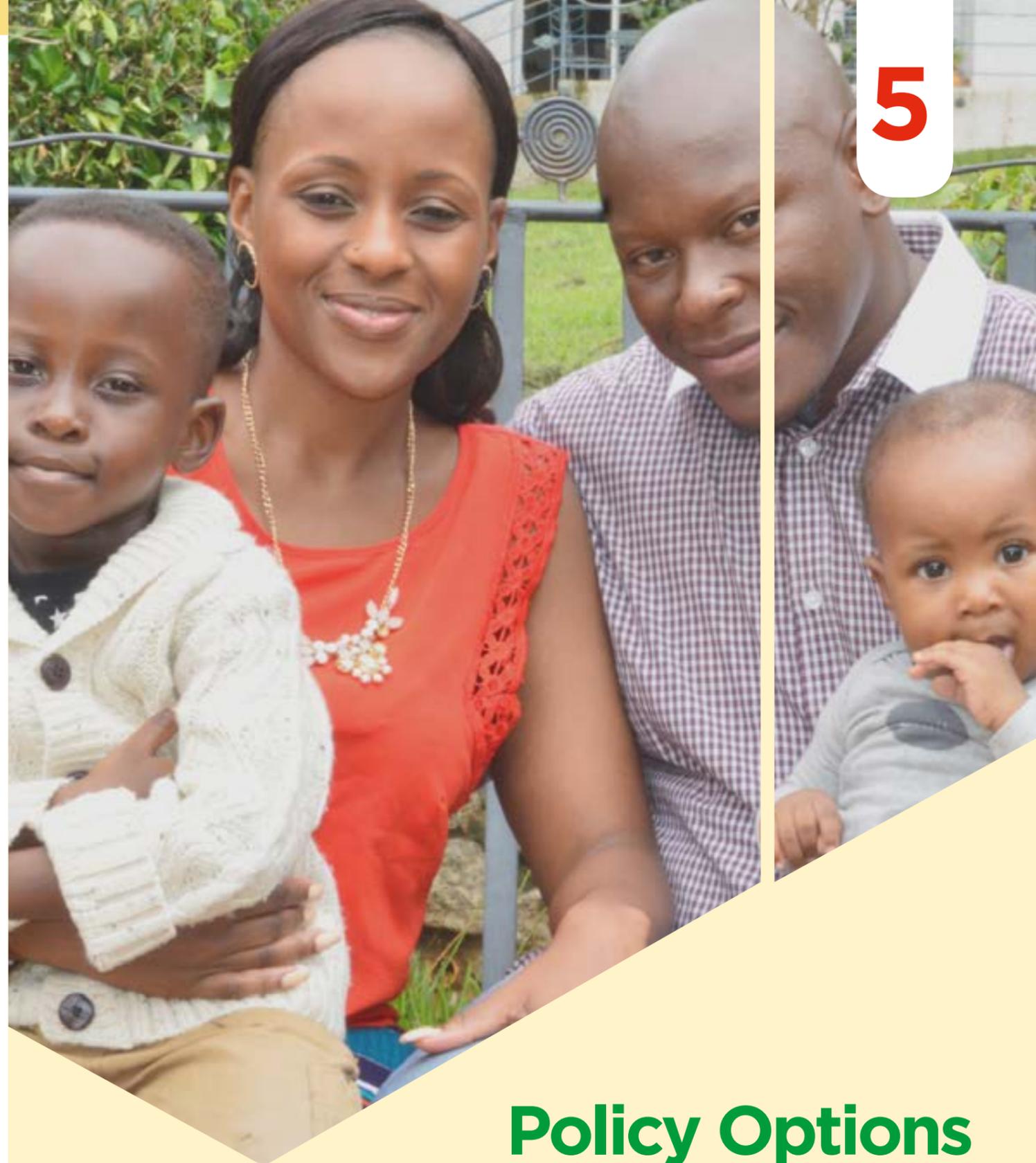
those cohorts, while the portion of the profile for cohorts aged 35 years and above will be the original Zimbabwe labour income profile for those cohorts. Both simulations use the UN medium fertility projections and, for each cohort, a constant rate of adjustment is assumed.

Both simulations suggest that policies aimed at 'normalising' the labour income profile for Zimbabwe will have beneficial effects in terms of the magnitude of the first demographic dividend. The cumulative effect of the two simulations are significantly positive on the DD. The baseline scenarios see an aggregate impact on living standards of 16 percent between 2015 and 2035. In contrast, shifting the entire labour income profile yields an impact of 22 percent, while shifting just the youth portion of the profile yields a similar impact of 22 percent.

Therefore, it can be concluded that addressing the high youth unemployment rate is fundamental to the achievement of a larger demographic dividend in Zimbabwe. In addition to depressed productivity at present, high levels of unemployment have the implication that the levels of national savings will be low, jeopardising the realisation of the

second demographic dividend. Strategies that will swiftly increase employment opportunities for the young population in the country and improve the quality of human capital in general are critical if Zimbabwe is to maximise the contribution of the DD to its sustainable growth goals. The other area to consider is the continued high public spending on health and education in Zimbabwe. While this has ensured that the country has made positive strides on human capital development relative to most countries in SSA, the inevitable questions on the sustainability of such levels of

public spending will abound. This is especially so if the country continues to be dependent on its finite natural resources to finance public spending. This does not mean that Zimbabwe needs to reduce its investments to develop its human capital which is important for its development take-off. Rather, it means that the country must look for innovative options for achieving its goals in this area including public-private partnerships and achieving the highest impact possible from the public investments.



## Policy Options for Maximising the Demographic Dividend in Zimbabwe

## Zimbabwe is within the window of opportunity to harness the demographic dividend and the time to act is now

Zimbabwe's fertility has dropped significantly over the last few decades. In 1988, women in Zimbabwe expected to have an average of 5.4 children over their lifetime. This has today dropped to 4 children per woman as observed during the ZDHS 2015. Nevertheless, Zimbabwe's fertility level is still far above the replacement level of 2.1. Moreover, it appears to have stalled over the last few years. Despite the slow pace in decline in fertility in Zimbabwe in recent years, the population age structure is on its way to shift decisively from one dominated by children to one dominated by the working age population. For instance, while children below 15 years old and the working-age population (15-64 years) constituted 48% and 49% of the total population respectively in 1982, by the 2012 Population Census, these numbers had shifted to 41% for children below 15 years and 55% for the working-age population. The national population projections show that by 2032, these numbers will have shifted even more with the working-age population rising to 64% and the proportion of children below 15 years decreasing to 32% (ZIMSTAT, 2015; 2013). These changes in the population age structure are priming Zimbabwe to benefit from the DD.

At the same time, Zimbabwe is endowed with abundant natural resources and arable land that is favourable for commercial agriculture. Despite this, the country has had a turbulent socio-economic development trajectory in this millennium although there are signs of recovery due to the efforts to stabilise the macro-economic fundamentals by the Government. The country's GDP per capita, of about USD 1,153 still places it among the low-income countries but it is acknowledged that the country has a lot of potential to significantly improve its development trajectory and facilitate inclusive prosperity among its citizens. The changes in its demographic profile can help boost these aspirations if the country can strategically invest to maximise its demographic dividend.

The NTA results demonstrate that Zimbabwe's window of opportunity for harnessing the first DD opened before 1990 when the rate of change in the support ratio (i.e. ratio of effective producers to

effective consumers) became positive. However, it declined sharply in the mid-1990s, turning negative in 1994 before a resurgence when it turned back to positive territory in 2003. Part of the decline in the 1990s and early 2000s can possibly be attributed to the negative impact of HIV and AIDS on morbidity and mortality. The rapid rise since 2003 peaked in 2013. The positive rate of change in the support ratio has since slowed down and is expected to continue declining although remain positive by the end of the projection period in 2060. The implication of this is that Zimbabwe still has at least 4 decades in which it can harness the first DD although the returns from the first DD to economic development will be declining with time.

The results further show that the cumulative boost in living standards arising from the first DD between 2015 and 2060 is estimated at 24%, assuming that the country will follow the UN projections medium fertility variant. The first DD has already cumulatively enhanced living standards between 1990 and 2014 by 9%.

The findings also show that with its current level of fertility of 4.0 which has also levelled out in recent years, Zimbabwe is still early in its demographic transition and has to contend with a sizable child dependency burden that limits availability of resources for savings and future investment for both households and the Government. The consumption needs of children (0-24 years) in 2011 in Zimbabwe made up to an estimated 109% of the total labour income while in Nigeria, which is also in the early transition period of its population had consumption needs of children making up 80% of total labour income when a similar study was carried out there with the baseline being 2005. This finding shows that consumption relative to labour income in Zimbabwe is very high and undermines its ability to invest decisively in its human capital and other development ventures.

That Zimbabwe has already benefitted from the peak of its first DD means that the country should focus immediately on policies to maximise the benefits from the first DD over the next 4 decades before the window for doing so completely shuts down. Indeed, the country should act with urgency and identify policy actions and investment decisions that would enable the country to take full advantage of the DD to achieve its long-term development

aspirations. Zim Asset lays a good foundation for strategies to fulfil Zimbabwe's promise. Nevertheless, taking account of the population dynamics of the country, including the impact of international migration, should be at the centre of development planning and implementation of programmes for Zimbabwe to benefit significantly from the DD.

The big question ensuing from the foregoing picture, therefore, is "what can Zimbabwe do to position itself to maximise what is left of the first DD"? In other words, are there aspects of Zimbabwe's DD profile that can be tweaked through deliberate policy actions and investments to enhance the contribution that the DD can make to improve the living standards of Zimbabweans?

A couple of important features of Zimbabwe's NTA profiles stand out relative to most other countries for which similar studies have been done. The first is a labour income pattern that starts to rise late as a result of high unemployment rates among young people. The second thing is its particularly high consumption profile for the prime working age adults. The Zimbabwe consumption profile stands out, showing much higher consumption levels relative to their peak labour income at virtually all ages from teenage years until the seventies when it converges with most of the rest of the profiles. At age 20, consumption in Zimbabwe relative to peak labour income is about 80% and reaches a high of 84% of peak labour income at age 23. These are much higher levels than comparator profiles at these points. For instance, the global median consumption at age 20 and age 23 are at 65% and 64% of peak labour income respectively. Moreover, Zimbabwe maintains the high level of consumption relative to peak labour income at a high level (over 70%) until the mid-70s when it converges with most other profiles. Low-income countries at all ages have much lower consumption levels relative to peak labour income with a high of 63% at age 27.

Zimbabwe's high consumption pattern together with the delay by young people getting into the labour market and earning significant labour income results in a small lifecycle surplus and conversely a large lifecycle deficit (the difference between consumption and labour income). The number

of years in which the Zimbabwe's lifecycle deficit profile exhibits a surplus is also much shorter (24 years) compared to the global median surplus period (33 years). Thus Zimbabwe's consumption is probably not sustainable for the long-term as it is hardly being matched by the labour income being derived by workers.

For the country, a serious analysis is required to understand how the huge lifecycle deficit that results from this level of consumption relative to labour income is being financed. One likely avenue is the contribution of remittances. In addition, the deficit is also probably financed by the Government through asset transfers from its mining industry. Since the mineral resources are finite and the markets are at times volatile especially for primary producers as is the case with Zimbabwe, this avenue at best is tenuous and not favourable for long-term sustainability. The life-cycle deficit can be managed by job creation strategies that will provide more opportunities for decent work for citizens and as a result increase productivity of the labour force. If remittances are determined to be very significant to the economy, strategies to tap into the contribution of Zimbabweans in diaspora should be developed along the lines of countries that have benefited greatly from migrant labour such as the Philippines and Mexico. The country should also embark on strategies to ensure there is value addition to its primary products.

## 5.1 Facilitating the demographic dividend through reinforcing investments in voluntary family planning and health

The magnitude of the first DD that Zimbabwe will ultimately earn will be lower than what countries that experienced more rapid fertility decline like South Korea earned. This is partly as a result of the slow demographic transition occurring in the country because of the slow pace of fertility decline. The last three Zimbabwe DHS rounds show that TFR has stalled at about 4 children per woman. The analyses show that if Zimbabwe's birth rate remains constant at the current level of 4 births per

woman between 2015 and 2060, the cumulative boost in living standards arising from the first DD will only be 7%. However, if we go by the medium fertility variant that assumes that birth rates will decline to about 2.4 births per woman by 2050, the cumulative contribution of the DD to living standards over the same period can get as high as 24%.

The rate of population growth is significantly important for planning for socio-economic development and the fact is that Zimbabwe's population is set to rise significantly even with further declines in fertility. To illustrate, Zimbabwe's population will continue rising rapidly for decades to come irrespective of what fertility pattern the country follows. Under the UN medium fertility scenario noted above, the population is projected to rise to 21.5 million by 2030 and 29.7 million by 2050. Under the constant fertility variant, however, Zimbabwe is projected to have about 23 million people by 2030 and 38.1 million people by 2050.

It is important to bear in mind the internationally accepted principle of the 1994 International Conference on Population and Development (ICPD) held in Cairo, that it is the right of every woman and her partner to voluntarily and freely decide on how many children they would like to have and when they should have them. The duty of governments should be to support the couples fulfil their reproductive intentions and needs. This principle has guided Zimbabwe's reproductive health policy and programmes and the Government has invested in FP programmes to address unmet need with modern contraceptive use increasing from 36% in 1988 to 66% during the 2015 round of the Zimbabwe DHS. This is one of the highest rates in Africa. However, unmet need is still high, estimated at 10%, and the country also has to contend with other drivers of fertility contributing to its relatively high TFR. These include early childbearing, with an estimated 11% of teenage girls between 15 and 19 years old giving birth annually.

In addition to sustaining investments in family planning, the country should also optimise its investments in the health sector to ensure it further reduces childhood mortality and that it has a healthy workforce. High disease burden reduces

productivity and increases the costs of doing business through increased costs of health care and loss of productive hours. HIV and AIDS as well as tuberculosis rank among the major contributors to ill health and mortality in Zimbabwe. In addition to communicable diseases, the country also has to deal with an increase in non-communicable ailments stemming from lifestyle changes. Other public health challenges facing Zimbabweans include human resource and infrastructural inadequacies in the health system.

These challenges are articulated in the various development plans and strategies of the country as well as the health sector plans. What is critical, therefore, is to mobilise the financial and technical resources to effectively implement the following policy options:

- I. Address all barriers of access to and use of family planning, paying particular attention to preventing unplanned pregnancies among young women and other underserved populations to unlock the recent stall in fertility transition.
- II. Reinforce ongoing efforts to control and eliminate communicable diseases with emphasis on halting transmission of HIV and ensuring universal access to AIDS treatment.
- III. Provide emergency obstetric and neonatal care in health facilities that are in rural and hard-to reach areas, and deploy qualified midwives in such facilities. In addition, strengthen the referral system to ensure that women get proper care when they need it.
- IV. Intensify ongoing interventions aimed at improving child health, with particular emphasis on child nutrition.
- V. Enhance health education to sensitise Zimbabweans on prevention of non-communicable diseases and strengthen the capacity of the health care system for early diagnosis and management.
- VI. Improve the health infrastructure and systems, and expedite the implementation of the health sector Human Resources strategy to ensure equitable distribution of qualified personnel in all regions of the country to help address inequities in health service provision that disadvantage poor and rural communities.

- VII. Encourage community participation in the planning, implementation, monitoring and evaluation of population initiatives.

## 5.2 Strategising to create mass decent jobs for the youthful population

The results show that the late entry into the labour force by Zimbabwe youth, coupled with the high consumption relative to labour income in the country will lead to it harnessing a much smaller magnitude of the first demographic dividend than it would have if for instance it had the same labour income profile as the global median. On the average, Zimbabwe youth remain dependent and only start to earn enough to meet their needs and generate a surplus at age 30 and the period in which they generate a surplus is also among the shortest observed (24 years compared to 33 years for the global median profile). The delayed manifestation of a surplus reflects relatively high levels of unemployment and underemployment among youth compared to their counterparts in other parts of the world. Addressing this problem would have far reaching impact in increasing the DD that the country can earn. For instance, if Zimbabwe boosts its job creation capacity for young people by accelerating transition from schools and colleges to employment to match the global profile for countries with NTA data, it would boost overall labour income and living standards cumulatively by 29% between 2015 and 2060 compared with a cumulative boost of 24% under current conditions.

Zimbabwe must prioritise the ongoing economic development reforms under Zim Asset and within different sectors to kick-start its economy for long-term growth. The country is well endowed with the necessary resources required for this revival that is critical in creating decent jobs for the young population and harnessing the maximum first DD possible. Efforts towards attracting more foreign direct investments to boost the economy should also be in place. Value addition and beneficiation, infrastructure development and food security, three priority areas of the Zim Asset, should be at the heart of these reforms that would create decent

jobs for young people.

The following policy options should be considered in strategies to reform and reorient the economy towards job creation for the youth:

- I. With a majority of the Zimbabwe labour force engaged in the agricultural sector, it is imperative to modernise the sector to enhance its capacity to create attractive livelihood opportunities for youth across the value chain. In addition to attracting more investors in the sector, interventions could include developing infrastructure for irrigation, communication and transportation of commodities, developing agribusiness and integrating ICT use in agriculture.
- II. Implement the beneficiation policies in order to enhance value addition in the mining industry.
- III. Improve the ease of doing business in Zimbabwe to attract investors and promote growth of the private sector as a key driver of job creation for young people. Interventions could include offering incentives to companies that excel in creating jobs for youth, supporting set-up and growth of micro and small enterprises and facilitate their graduation into medium and large size enterprises.
- IV. Promote financial inclusion and access to credit facilities for young people and women, with particular focus on empowering young people to expand the service sector through ICT and related innovations.
- V. To enhance self-employment that can create more jobs for young people, the Government should invest in a supportive environment to nurture and promote local start-ups. This should be coupled with development of incubation centres and technology hubs, and mentorship to ensure expansion beyond incubation tenure.
- VI. Enhance the infrastructure development programmes to improve doing business, enhance production and connect the rural, urban and international markets.

### 5.3 Focus on education and training to develop a skilled and globally competitive workforce

Like most African countries, Zimbabwe invests heavily in education and training. It is one of the most literate countries in the continent. However, many children still dropout of school while the country has also experienced significant brain drain over the last two decades.

Most of the youth who drop out at various stages of the education pipeline do not have opportunities to attend training institutions to enhance their skills due to limited infrastructure and negative attitudes about technical and vocational training. In addition, the quality of education and training is also an area of concern with assessment in reading and mathematics revealing that a sizeable proportion of school children are not performing in the reading and math tests at the expected levels. Repetition of grades is also common and this is an indicator of challenges related to quality of education and training received by the children.

As a result of these challenges, graduates and drop-outs from the school system lack critical practical skills that they need to be successful and productive in the labour market, and employers have to use considerable resources to address the skills mismatch.

To maximise the DD that it can harness and enhance the productivity of its workforce, Zimbabwe should align its development targets in the education sector to match the objectives of SDG 4: **Ensure inclusive and equitable quality education and promote lifelong opportunities for all**. The following are priority policy action areas for the country to optimise the value of its significant investment in education and training:

- I. Address the underlying causes of poor performance and high school drop-out rates between junior primary and senior secondary school.
- II. Review curriculum for all stages of the education pipeline and enact required reforms to decisively shift the education system from the current knowledge based orientation to the competency based one. This should be accompanied by massive investments to retrain all teachers in learner-centred pedagogies, aligning curriculum in

teacher training institutions with the competency based system, providing required learning materials, and improving the working conditions and remuneration of teachers to attract and retain good teachers.

- III. Partner with the private sector in curricula development and reviews to address the skill mismatch between education training and the labour market needs.
- IV. Strengthen the Basic Education Assistance Module (BEAM) programme to improve quality education particularly to vulnerable groups.
- V. Expand and improve school infrastructure at all levels and especially for under-served rural areas. These should include facilities such as hostels, teachers', accommodation, laboratories, libraries, recreational infrastructure, ICT, electricity, water and sanitation
- VI. Take advantage of the National Youth Policy focus on the establishment of Vocational Training Centres (VTCs) to rebrand and improve the quality of TVET training to make it a rewarding skill development mechanism for securing sustainable livelihoods for the thousands of young people who do not make it to tertiary education. TVET should be designed and implemented in close partnership with the private sector to ensure that it is responsive to the labour market needs and ultimately enhance the employability and capacity for self-employment of its graduates. Aspects of TVET should also be main-streamed in primary and secondary school curriculum to ensure that practical work-related skills are imparted throughout the school years.
- VII. Address low female enrolment in STEM fields, especially at the tertiary level through affirmative action and incentives to attract girls to these fields that have been traditionally male dominated.
- VIII. Enhance performance monitoring and management systems in the education sector to ensure that decision-making is routinely informed by robust data and evidence. Critically, there is urgent need to understand the high levels of school drop-out to devise corrective measures and to provide an enabling environment for education reform experts and other change agents to test and ultimately scale up various

innovations for addressing pervasive education quality challenges.

### 5.4 Strengthening enabling factors for optimising the Demographic Dividend

#### Governance, efficiency and accountability

Good governance, efficiency, and accountability create an enabling economic and political environment that are key to attract foreign and local investment and lead to efficient, effective, and equitable use of public resources and delivery of public services. Governance and accountability are cross-cutting factors that affect the capacity of a country to make progress in the other pillars of the DD. The Government of Zimbabwe recognises the critical role of good governance as a driver for development and this is reflected in the second sub cluster of Zim Asset which is "Public Administration, Governance and Performance Management". This pillar is also reiterated in the I-PRSP 2016-2018 as Pillar VII, "strengthening governance and institutional capacity". The following are policy options that can help strengthen governance and accountability to improve service delivery and programme implementation in Zimbabwe.

- I. Put in place measures to enhance the participation of young people in decision-making and increase their representation in important organs of governance such as parliament.
- II. Popularise Zim Asset and its objectives to enhance its ownership by all cadres and enhance efforts towards ensuring shared responsibility in achieving the country's long-term development vision by all government sectors at all levels of governance, the private sector, other non-government entities, and the citizenry.
- III. Strengthen performance management systems to entrench a performance based work culture and ensure that public policies swiftly move to the action phase and corrective measures taken in a timely manner when challenges arise.

- IV. 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.
- V. Enhance institutional building and independence to ensure that the long-term national development plans are independent and sustained even when political leadership changes.

#### Gender equity and empowerment of women

Achieving gender equity is an ideal of our time and though Zimbabwe has made commendable efforts towards this goal, much more needs to be done. Maximising the DD for the country will be facilitated by Zimbabwe being an inclusive society where gender norms do not hold back either girls or boys from fulfilling their full potential. Therefore there is still a lot of room for improvement and to ensure that the gains for women in advancement of gender equity are consolidated and expanded, especially to lift the wellbeing of the most vulnerable and underserved women. A particularly effective pathway to women's empowerment around the world has been through promotion of financial inclusion of poor women through micro-credit programmes. Temporal use of quotas has also been successfully used to enhance participation of women in political leadership in countries like Rwanda. The bottom line is that a country cannot achieve its full socioeconomic transformation potential, including harnessing the full magnitude of the demographic dividend, if women are not fully engaged as equal partners in all aspects of the socio-development process.

#### Strengthening data and evidence for performance monitoring and learning

In order for Zimbabwe to effectively monitor its performance towards maximisation of the first and second demographic dividends, it should reinforce its investments and capacity in generation and use of data and evidence in development planning and execution. Reliable evidence is vital in conducting structured policy prioritisation analysis to guide

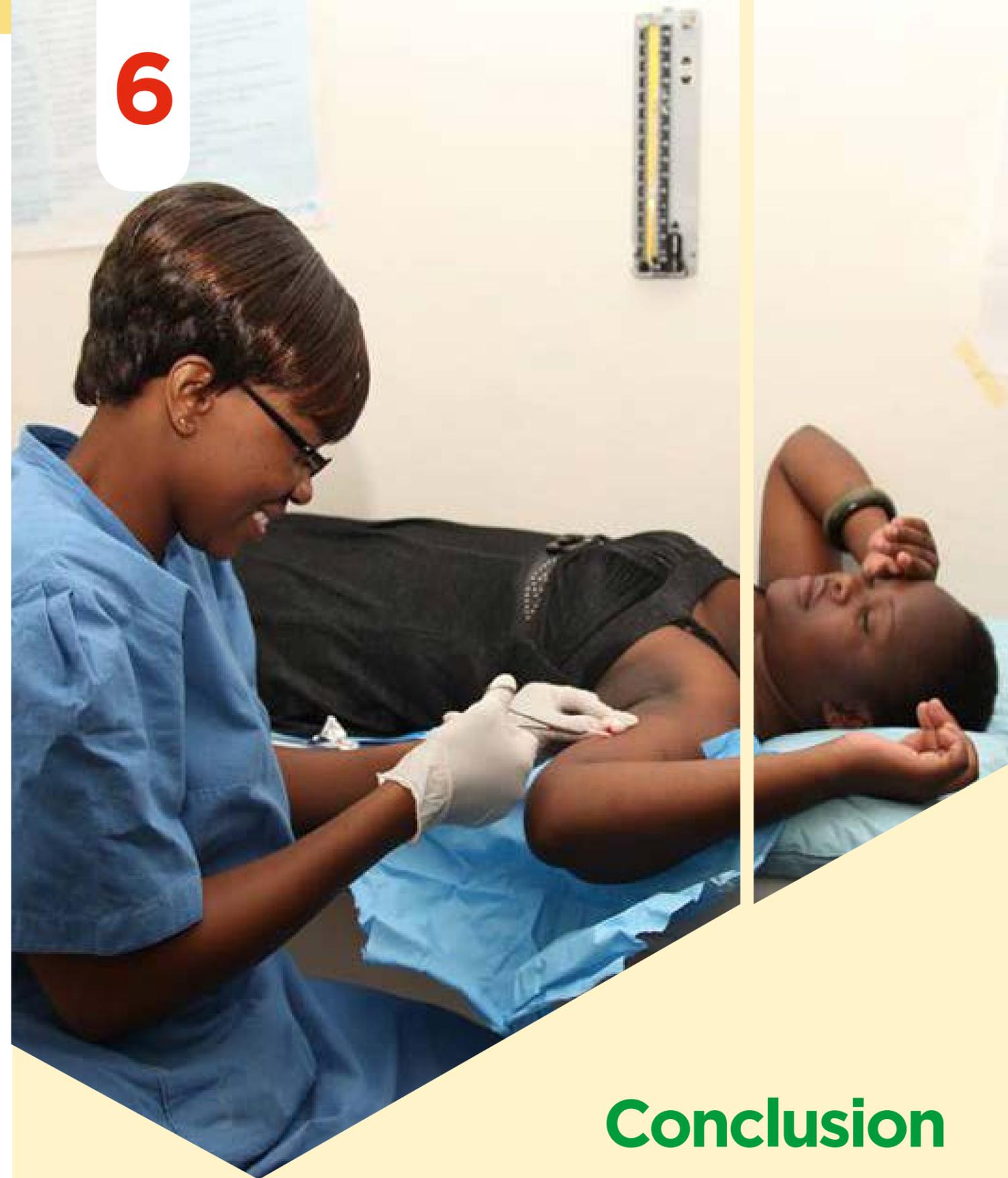
selection and design of cost-effective game-changer interventions. The Government should ensure that significant data gaps that may exist are addressed in order to ensure steady availability of contextualised and internationally comparable data for effective planning and execution of programmes. One area that Zimbabwe needs to invest in is understanding the role and contribution of international migration to its socio-economic development and how it can maximise the contribution of its population in diaspora towards nation building.

The Government of Zimbabwe and its development partners can build on the NTA methodology used in this study to set up an ongoing NTA centre that will update NTA profiles over time. This centre can be established at one of the Universities in the country as the NTA network has a strong history of developing such partnerships. Regular update of the NTA profiles and their analyses will help assess how well the country is doing in addressing its life-cycle deficit over time and in relation to its development goals. Another interesting angle that can be pursued in the NTA is the Counting Women's work module that more accurately estimates the contribution of women to the economy, taking account of the non-paid family work that many women do as detailed at [www.countingwomenswork.org](http://www.countingwomenswork.org).

### 5.5 Planning for the Second Demographic Dividend

The second DD typically kicks in as the first one is waning. Once the first DD is realised through exploitation of the productive capacity of the working age bulge, it paves the way for the second DD whose socioeconomic transformational effects can be more permanent. Indeed, depressed productivity of the labour force through high levels of unemployment or underemployment among youth can limit the levels of national savings and jeopardise the realisation of the second DD. Improved investments in human capital that results from reduced child dependency burden is likely to accrue significant benefits in increased productivity of the labour force in future, which would lead to further increases in savings, capital deepening and enhanced magnitude of the second DD. To promote savings, proactive government policies and robust financial markets need to be in place to encourage asset accumulation and savings for retirement among the working age population.

Zimbabwe's window of opportunity for harnessing the first DD is already open and the magnitude of the DD is in the diminishing-returns phase. The country needs to urgently start planning on how it can invest now to ensure it maximises its second DD from the onset. If the status quo continues, whereby the many of the working age people are not employed in the formal labour market where they make decent incomes to save for the future and possibly earn pensions, most of the burden of taking care of the future old age bulge will also fall on the shoulders of the Government and households further increasing the dependency burden.



## Conclusion

The Zimbabwe Agenda for Socio-economic Transformation (Zim Asset) alongside the national development plans and sectoral plans seek to achieve sustainable development and social equity in Zimbabwe. Significant progress has been made in recent years to revive the fortunes of Zimbabwe's disrupted socio-economic development witnessed in the last decade. However, much more needs to be done to achieve the ultimate objectives through the consolidation of these gains achieved and the enhancement of efforts towards attaining the targets that have not yet been achieved and new ones arising out of evolving needs.

Zimbabwe's development strategies over the next decade or two will be unfolding in the backdrop of a critical demographic transition in the country that has a significant bearing on its socio-economic development trajectory. Over this period, it is projected that the country's age-structure will continue its ongoing transformation from one with more child dependents to one with significantly more people in the working-ages. About 5 out of every 10 Zimbabweans are currently between the ages of 15 and 64 years and by 2032, the national projections estimate that at least 6 out of every 10 will be in the working ages. Based on analysis of the support ratio (the ratio of effective producers to effective consumers), the country's window of opportunity for harnessing the first demographic dividend opened before 1990, while the magnitude of the first demographic dividend peaked around 2013 and is now in the diminishing returns phase. It is important to note though that Zimbabwe is on track to still be enjoying the benefits of the first demographic dividend to its socio-economic development efforts as late as 2060, the end projection period of this study. This study shows that the potential cumulative boost in living standards emanating from the first demographic dividend between 1990 and 2060 is 33%. Of this, 9% has already been accumulated between 1990 and 2015 while the remaining boost of 24% will accrue between 2015 and 2060, assuming the country follows the Medium fertility variant of the UN population projections.

Two other critical features of Zimbabwe NTA profile are that young people remain dependent till age 30 when they start producing more than they consume and that the country has a high level

of consumption that produces a huge life-cycle deficit (between consumption and labour income). It is likely that a part from asset transfers from the Government to finance this deficit through proceeds from the proceeds of the country's finite mineral resources, remittances from Zimbabweans in the diaspora also play an important role in bridging this deficit. However, the long-term strategy to sustain the high consumption levels should centre on revamping the economy through transformation in sectors such as agriculture and beneficiation. A modern and diversified economy is required to create jobs for young people who will in turn generate more labour income to contribute towards sustainable development.

Moving forward, the big question is what can Zimbabwe do to position itself to maximise what is left of its first demographic dividend and use this opportunity to hasten the achievement of its long-term development aspirations? There are primarily four policy areas where the country can intervene to maximise the demographic dividend:

1. **Facilitate further demographic transition through enhancing the voluntary family planning services and access to effective modern contraception to reduce the relatively high unmet need (10%), curb early marriages and unwanted teenage pregnancies.** These measures will address the stalled decline in fertility which at a TFR of 4.0 is still fairly high and will likely diminish the magnitude of the first demographic dividend that Zimbabwe could harness. The East and South East Asian countries maximised their first demographic dividend through facilitating a rapid demographic transition. However, it is important to note that it is not just about having significantly large numbers in the working ages but also ensuring that like the Asian Tigers, strategic investments are made early to develop the human capital that can turn Zimbabwe into an industrialised and prosperous country.
2. **Reinforcing investments in health to ensure a healthy labour force:** Zimbabwe should reinforce investment in public health to consolidate progress it has made in improving child and maternal health outcomes and in

improving the health and overall wellbeing of its work force through various interventions, including the efforts to curb HIV and AIDS and to eliminate Malaria. The country should also reinforce health promotion to prevent lifestyles that predispose workers to non-communicable diseases and enhance the capacity of the health system to manage these and other emerging health challenges.

**3. Prioritise economic reforms and investments to urgently accelerate creation of jobs and other well-paying livelihoods for the country's youth, who continue to be dependent up to age 30.**

The first component of this priority entails focusing on investing in areas of the economy with high job multiplier effects and especially so in agriculture, reforming the agricultural sector to be more attractive to youth, providing incentives to companies that consciously create livelihood opportunities for youth, and empowering youth with resources and technical capacities to start and grow businesses. The second component, which is more immediate, entails enhancing the quality of and rebranding TVET/VTCs as an attractive pathway for re-skilling the thousands of out-of-school youth who did not make it to tertiary collages. The national Youth policy already has a focus on vocational and technical training that could be a platform for these reforms. If these plans are effectively implemented, they will enhance the employability of youth and their prospects to engage in well-paying and sustainable livelihoods, including owning businesses. This study shows that boosting Zimbabwe's job creation capacity for young people to follow the global median profile for other countries with NTA data would boost living standards of the population by about 29% between 2015 and 2060.

**4. Strengthening enabling factors for optimising the demographic dividend:** In order to lay the foundation for Zimbabwe to be successful in the reforms noted above, the country needs to strengthen its

public institutions to facilitate effective and accountable service delivery and use of public resources. Zim Asset as well as the I-PRSP acknowledge the central place of governance across sectors in order to achieve sustainable development. Their prescriptions to enhance governance should be used as a springboard to ensure the achievement of transparent and effective service delivery. More importantly, to enhance the opportunity of harnessing substantial demographic dividends, the Government should strive towards bridging the gap between policies for socio-economic development and implementation programmes to achieve the intended outcomes. Robust monitoring, evaluation and performance management measures must be put in place if the intended outcomes of government policies and plans are to be achieved in an efficient, effective and timely manner.

This study shows that Zimbabwe is already deep within the window period to harness its first demographic dividend. Therefore, there is urgent need for the Government and all other stakeholders in Zimbabwe to act together urgently but in a strategic manner to implement game-changer interventions that will enable the country to take full advantage of the demographic dividend to achieve its long-term development aspirations to achieve sustainable development and social equity in Zimbabwe.

## References

- African Union Commission. (2016). AU Roadmap on Harnessing the Demographic Dividend through Investments in Youth (in response to AU Assembly Decision [Assembly/AU/Dec.601 (XXVI)] on the 2017 theme of the year). Addis Ababa: African Union Commission (AUC).
- African Development Bank (2017). Zimbabwe outlook
- Arndt C. & Oman C. (2006). Uses and Abuses of Governance Indicator; OECD Development Centre, Center for International Private Enterprise (CIPE), Washington DC, USA.
- Barro & Lee, 2013; Oketch, McCowan, & Schendel (2014). The Impact of Tertiary Education on Development: A Rigorous Literature Review. Department for International Development.
- Becker, Randy and J. Vernon Henderson. 2000. Intra-industry specialization and urban development. In Jean-Marie Huriot and Jacques-François Thisse (eds.) *Economics of Cities: Theoretical Perspectives*. Cambridge: Cambridge University Press, 138–166.
- Bloom, D., Humair, S., Rosenberg, L., Sevilla, J. P., y Trussel, J. (2014). Capturing a demographic dividend: source, magnitude and realization. En A. Soucat y N. Mthuli (Eds.), *One Billion People, one Billion Opportunities*. Washington, D.C.: African Development Bank, Communications Development Incorporated.
- Bloom, D.E. & Graham, B. (2003). Longevity and life-cycle savings. *Scandinavian Journal of Economics*, 105 (3): 319-338.
- Bloom D.E. and Canning D. (2001). Cumulative causality, economic growth, and the demographic transition. In *Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World*, N. Birdsall, A. C. Kelley, and S. W. Sinding, eds. Oxford: Oxford University Press, pp. 165-200.
- Bloom, D.E., Canning, D., and Malaney, P. (2000) "Demographic Change and Economic Growth in Asia." *Population and Development Review* 26 (supplement): 257-90.
- Bloom, D., David Canning, & Sevilla, J. (2003). *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*, by RAND MR-1274-WFHF/DLPF/RF, 2002, 100 pp., ISBN: 0-8330-2926-6. Retrieved from Santa Monica, CA, USA.
- Bloom, D. E., & Williamson, J. G. (1998). Demographic transitions and economic miracles in emerging Asia: *World Bank Economic Review*.
- Brewer, 2013; ILO, (2014). Integrating core work skills into TVET systems: six country case studies
- Canning, D., Raja, S., & Yazbeck, A. S., (Eds.). (2015). *Africa's Demographic Transition: Dividend or Disaster?* Africa Development Forum Series. Washington D.C.: World Bank.
- Choguya, Naume. (2015). On the Margins of Health Care Provision: Delivering at Home in Harare Zimbabwe. *International Journal of Recent Research in Social Sciences and Humanities*. 2. 28-39.
- Duranton, Gilles and Diego Puga. (2004). Micro-foundations of urban agglomeration economies. In Vernon Henderson and Jacques-François Thisse (eds.) *Handbook of Regional and Urban Economics*, volume 4. Amsterdam: North-Holland, 2063–2117.
- Government of Zimbabwe. (2017). 2017 Economic Outlook. Ministry of Macroeconomic Planning and Investment Promotion: February 2017.
- Government of Zimbabwe. (2013). Zimbabwe Agenda for Sustainable Socio-Economic Transformation (Zim Asset) - Towards an Empowered Society and a Growing Economy - October 2013- December 2018.
- Government of Zimbabwe and UNCT. (2010). Country Analysis Report for Zimbabwe: Government of Zimbabwe/UN Country Team (UNCT). Harare, August 2010
- <http://dataviz.worldbank.org/t/DECDG/authoring/WGI-9-23-16>
- [http://www.zw.one.un.org/sites/default/files/Publications/UNZimbabwe/Country%20Analysis\\_FinalReview\\_3Oct2014.pdf](http://www.zw.one.un.org/sites/default/files/Publications/UNZimbabwe/Country%20Analysis_FinalReview_3Oct2014.pdf) accessed 11th July 2017 :On\_the\_Margins\_of\_Health\_Care\_Provision\_Delivering\_at\_Home\_in\_Harare\_Zimbabwe
- ILO. (2014). *World of Work Report 2014: Developing with Jobs*. Revised Edition
- Lee, R. D., & Mason, A. (Eds.). (2011). *Population aging and the generational economy: A global perspective*. Edward Elgar Publishing.
- Lee, R., Mason, A., & Miller, T. (2003). Saving, Wealth and the Transition from Transfers to Individual Responsibility: The Cases of Taiwan and the United States. *The Scandinavian Journal of Economics*, 105(3), 339-357.
- Lee, R. (1994). The Formal Demography of Population Aging, Transfers and the Economic Lifecycle, in S. P. L. Martin, ed., 'The Demography of Aging', National Academy Press, pp. 8–49.
- Mason, A. and Lee, R. (2011), Population aging and the generational economy: Key findings, in 'Population Aging and the Generational Economy', Edward Elgar Publishing, Inc. and the International Development Research Centre, Cheltenham, UK, and Ottawa, Canada, pp. 3–31.
- Mason, A., & Lee, R. (2007). Transfers, capital, and consumption over the demographic transition. *Population aging, intergenerational transfers and the macro-economy*, 128-162.
- The Chamber of Mines of Zimbabwe. (2016). *The State of the Mining Industry Survey 2016*.
- Ministry of Finance and Economic Development. (2016) Zimbabwe Interim Poverty Reduction Strategy Paper (I-PRSP) 2016-2018.
- Ministry of Health and Child Care. (2016). *The National Health Strategy for Zimbabwe (2016-2020): Equity and Quality in Health – Leaving no One Behind*.
- Ministry of Health and Child Care. (2015). *Zimbabwe Service Availability and Readiness Assessment Report*.
- Ministry of Health and Child Care. (2012). *Zimbabwe E-Health Strategy (2012-2017)*
- Ministry of Primary and Secondary Education Zimbabwe & UNICEF. (2016). *Global Partnership for Education – 11th Quarterly report*.
- Munjanganja, L.E & Machawira, M.S, (2014). *Education for All 2015: National Review*
- Oketch, M., McCowan, T., & Schendel, R. (2014). *The impact of tertiary education on development: A rigorous literature review*. London: Department for International Development.
- Poverty Income Consumption and Expenditure Survey (PICES) Report (2011-2012)
- Sachikonye et al. (2000) *Consolidating democratic governance in Southern Africa- Zimbabwe*, EISA Research Report, No.30
- SADC. (2016). *SADC Statistical Yearbook 2015*. Southern African Development Community, Secretariat, Gaborone, Botswana.
- UN-HABITAT Global activities report 2015: Increasing synergy for greater national ownership

United Nations, Department of Economic and Social Affairs, Population Division. (2017). World Population Prospects: The 2017 Revision, custom data acquired via website.

United Nations Human Settlements Programme (2016). Urbanization and Development: Emerging Futures

United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, custom data acquired via website.

United Nations, Department of Economic and Social Affairs, Population Division. (2013). National Transfer Accounts Manual: Measuring and Analysing the Generational Economy. United Nations, New York.

UNDP. (2016). Human Development Report 2016: Development for Everyone.

USAID (2007). Zimbabwe Economic Performance Assessment: A Benchmark Study

WHO. (2017). Global Health Observatory. <http://www.who.int/gho/en/>

WHO. (2016) Country Cooperation Strategy 2016-2020, Zimbabwe. WHO Regional Office for Africa, Brazzaville, Republic of Congo.

WHO. (2014). Non communicable Diseases (NCD) Country Profiles 2014: Zimbabwe.

World Bank Data (2016). World Development Indicators Data

World Bank, 2017: Zimbabwe Economic Update: The state in the economy. Issue 2

World Bank. (2012). World Development Report 2013: Jobs. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-9575-2. License: Creative Commons Attribution CC BY 3.0.

Zimbabwe National Statistics Agency (ZIMSTAT) 2015: Population Projections Thematic Report

ZIMSTAT. (2017). Quarterly Digest of Statistics: 4th Quarter 2016. Harare, Zimbabwe: Zimbabwe National Statistics Agency (ZIMSTAT).

ZIMSTAT and ICF International. (2016). Zimbabwe Demographic and Health Survey 2015: Final Report. Rockville, Maryland, USA: Zimbabwe National Statistics Agency (ZIMSTAT) and ICF International.

ZIMSTAT. (2015). 2012 Zimbabwe Population Census: Population Projections Thematic Report. Harare, Zimbabwe: Zimbabwe National Statistics Agency (ZIMSTAT).

ZIMSTAT. (2015a). 2014 Labour Force Survey Report. Harare, Zimbabwe: Zimbabwe National Statistics Agency (ZIMSTAT).

ZIMSTAT. (2013). Zimbabwe Population Census Report 2012 National Report. Harare, Zimbabwe: Population Census Office.

ZIMSTAT. (2013a). Education Report 2013. Harare, Zimbabwe: Zimbabwe National Statistics Agency (ZIMSTAT).

ZIMSTAT. (2013b). Poverty Income Consumption and Expenditure Survey 2011/12 Report. Harare, Zimbabwe: Zimbabwe National Statistics Agency (ZIMSTAT).

## Appendices

Appendix I: Zimbabwe modelling and validation workshop participants list

	Name	Institution	Email Address
1	Taguma Mahonde	Ministry of Macro-Economic Planning and Investment Promotion (MOMEPIP)	taguma@topchannel.co.zw
2	Godfrey Mukwakwami	MOMEPIP	mukwag@gmail.com
3	Beverly Bukutu	MOMEPIP	rutendobukutu@gmail.com
4	Tracy Chiyanike	MOMEPIP	tchiyanike@gmail.com
5	Fadzai Mhariwa	MOMEPIP	fmhariwa@live.co.za
6	Wellington Uta	MOMEPIP	wellyuta@gmail.com
7	Irene Makonese	MOMEPIP	irene.makonese@gmail.com
8	Chatherbert Mudgunguyo	Ministry of Finance and Economic Development	cmundunguyo@gmail.com
9	Mutasa Dzinotozei	Zimbabwe National Statistics Agency (ZIMSTAT)	dg@zimstat.co.zw
10	Nelson Taruvinga	ZIMSTAT	ntaruvinga@zimstat.co.zw
11	Godfrey Matsinde	ZIMSTAT	gmatsinde@zimstat.co.zw
12	Grown Chirongwe	ZIMSTAT	gchirongwe@zimstat.co.zw
13	Clever Chingwara	ZIMSTAT	cchingwara@zimstat.co.zw
14	Langton Chikeya	ZIMSTAT	lchikeya@zimstat.co.zw
15	Munjira Mutambwa	ZIMSTAT	mmutambwa@zimstat.co.zw
16	Wishy Chipiro	ZIMSTAT	wchipiro@zimstat.co.zw
17	Tigere Majoni	ZIMSTAT	tmajoni@zimstat.co.zw
18	Lawrence Mkwala	Ministry of Primary and Secondary Education (MOPSE)	lawmkwala@gmail.com
19	Casbert Butete	Ministry of Higher and Tertiary Education, Science and Technology Development (MOHTESTD)	cbutete@gmail.com

20	Cyprian K. Masocha	MOHTESTD	ckentmasocha@gmail.com
21	Stephen Banda	Ministry of Health and Child Care (MOHCC)	stevbanda@yahoo.com
22	Simbarashe Musarira	Ministry of Youth, Indigenisation and Economic Empowerment (MOYIEE)	simbarashemusarira@gmail.com
23	Sikhanyisiwe Ncube	MOYIEE	sikhanyiencube@gmail.com
24	Chido Madiwa Tsinakwadi	Ministry of Women Affairs, Gender and Community Development (MOWAGCD)	chidolaurra@gmail.com
25	Grace Maramba	Ministry of Public Service, Labour and Social Welfare (MOPSLSW)	geemaramba@gmail.com
26	Innocent Mawire	Ministry of Justice, Legal and Parliamentary Affairs (MOJLPA)	innomawire@gmail.com
27	Mugove Chisvo	Zimbabwe Youth Council (ZYC)	chisvomugove@gmail.com
28	Kupakwashe Midzi	Confederation of Zimbabwe Industries (CZI)	kmidzi@czi.co.zw
29	Naomi Wekwete	University of Zimbabwe (UZ)	nwekwete@gmail.com
30	Peter Bare	Sightsavers	pbare@sightsavers.org
31	Bernard Onyango	African Institute for Development Policy (AFIDEP)	Bernard.onyango@afidep.org
32	Morne Oosthuizen	University of Cape Town (UCT)	Morne.Oosthuizen@uct.ac.za
33	Piason Mlambo	United Nations Population Fund (UNFPA)	mlambo@unfpa.org

Appendix II: Technical note on the fertility scenarios

### 1. Technical Note on the Fertility Scenarios

The four fertility scenarios applied in the simulations for this study are adopted from the population estimates and projections of the United Nations Population Division World Population Prospects – The 2015 Revision. This is a summary of the assumptions underpinning the four fertility scenarios. For a detailed description, reference can be made to the publication on the methodology of the United Nations Population Estimates and Projections that can be accessed at [https://esa.un.org/unpd/wpp/Publications/Files/WPP2015\\_Methodology.pdf](https://esa.un.org/unpd/wpp/Publications/Files/WPP2015_Methodology.pdf).

The four fertility scenarios used in the analyses for this report include:

- No change/Constant variant
- Low variant
- Medium variant
- High variant

The **Medium variant** is the anchor scenario for the fertility projections. The overall approach for the projections is based on a probabilistic methodology that in general assumes that fertility in all countries declines over time with the demographic transition from high fertility to low fertility, eventually fluctuating around or below the replacement level of 2.1 children per woman. In the **2015 Revision**, whose baseline period is 2010-2015, the most recent empirical evidence from censuses, surveys, registers and other sources, taking into account all information available and conducting internal checks for consistency by tracking changes in cohort size between successive censuses are used. The probabilistic method used in the 2015 Revision builds on models of fertility change developed in earlier revisions.

**High variant:** this is based on a high fertility assumption where fertility is projected to remain at 0.5 children above the fertility in the medium variant over most of the projection period. To

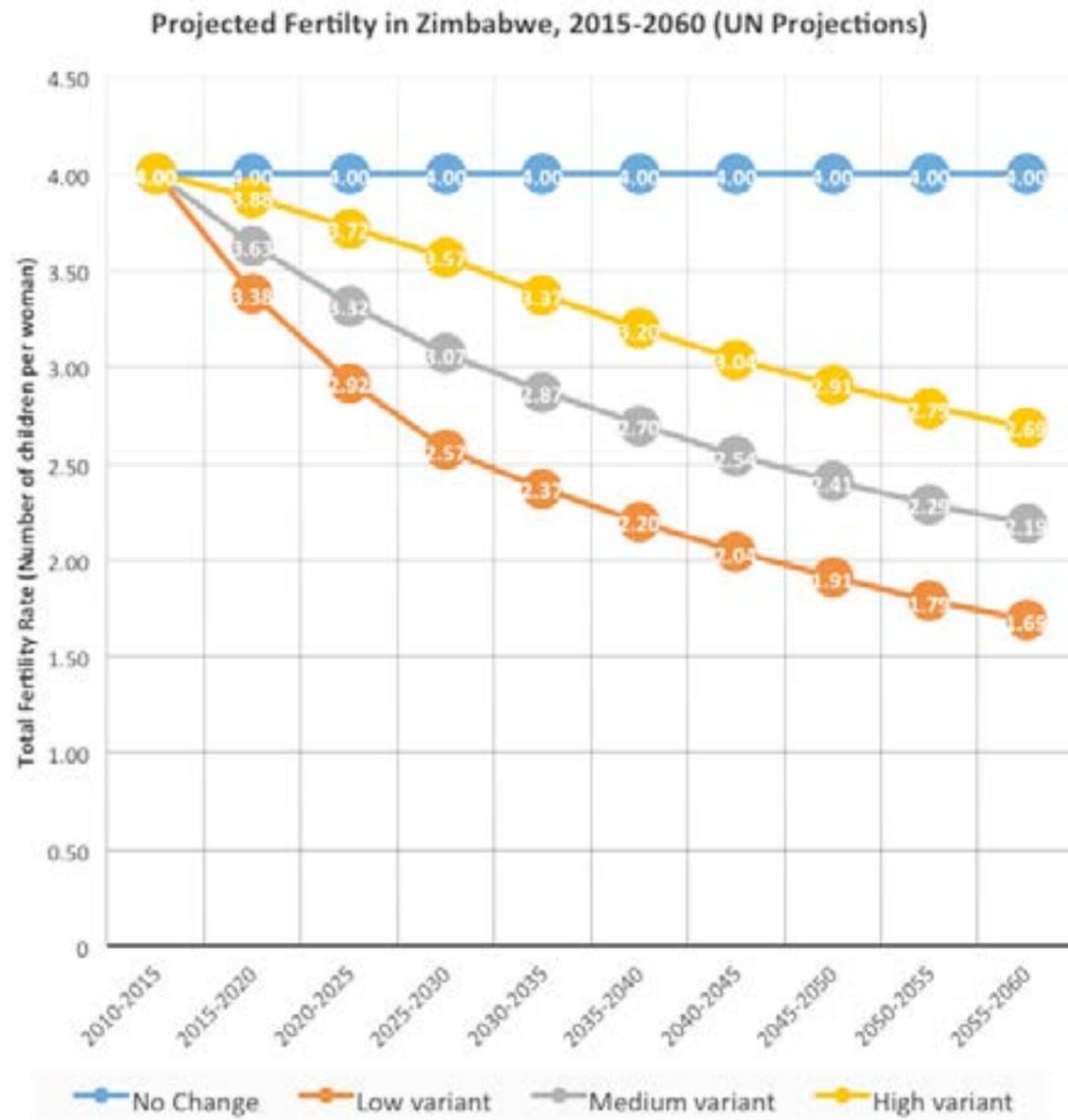
insure a smoother transition between the baseline period (2010-2015) and the high variant, fertility in the high variant is initially +0.25 child in the first projection period (2015- 2020), +0.4 child in the second projection period (2020-2025), and +0.5 child thereafter. By 2025- 2030, fertility in the high variant is therefore half a child higher than that of the medium variant. That is, countries reaching a total fertility rate of 2.1 children per woman in the medium variant have a total fertility rate of 2.6 children per woman in the high variant.

**Low variant:** based on a low fertility assumption, fertility is projected to remain 0.5 children below the fertility in the medium variant over most of the projection period. To insure a smoother transition between the baseline period (2010-2015) and the low variant, fertility in the low variant is initially -0.25 child in the first projection period (2015-2020), -0.4 child in the second projection period (2020-2025), and - 0.5 child thereafter. By 2025-2030, fertility in the low variant is therefore half a child lower than that of the medium variant. That is, countries reaching a total fertility rate of 2.1 children per woman in the medium variant have a total fertility rate of 1.6 children per woman in the low variant.

**No change/Constant variant:** under this variant, fertility in all countries remains constant at the level estimated for 2010-2015.

The figure below depicts the fertility projections for Zimbabwe under the four assumptions. Under the **Medium fertility** variant, fertility is projected to decrease from 4.00 in the 2010-2015 period to 2.87 by the 2030-2035 period and just above the replacement level at 2.19 by 2055-2060. Under the **High fertility** variant, fertility is projected to decrease from 4.00 in the 2010-2015 period to 3.37 by the 2030-2035 period and 2.69 by 2055-2060. On the other hand, under the **low fertility** scenario, fertility is expected to dip below the replacement level much sooner. By 2030-2035, it is projected to be at 2.37, dipping below replacement level by 2045-2050 (TFR 1.91) and will further decline to 1.69 by 2055-2060.

<sup>a</sup>United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, Methodology of the United Nations Population Estimates and Projections, Working Paper No. ESA/P/WP/242





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