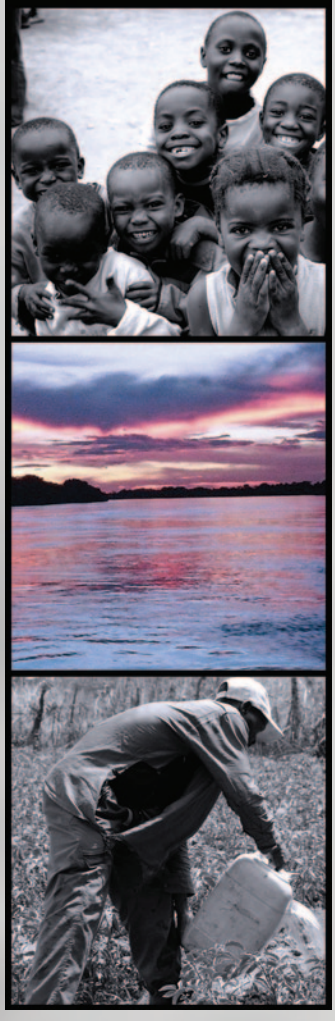
JANUARY 2010

Population

and National Development

ZAMBIA



MINISTRY OF FINANCE AND NATIONAL PLANNING
P.O. Box 50062 Lusaka

ZAMBIA

Population

and National Development

Ministry of Finance and National Planning

January 2010

Ministry of Finance and National Planning. 2010. Zambia: Population and National Development.
Lusaka, Zambia: Ministry of Finance and National Planning.

Table of Contents

List of Charts

Foreword

Through its Vision 2030 and supporting development plans and through its efforts to achieve the Millennium Development Goals (MDGs), Zambia is committed to making social and economic progress and to achieving middle-income status by 2030. This analysis asks: what is the importance of population factors to the ability of the country to achieve the national vision? It illustrates how today's population situation could impact Zambia's ability to achieve the economic and social development goals it has set for tomorrow.

In the 1980s, Zambia recognised that a slower rate of population growth would allow the government to serve the people better, as greater resources would be available to educate students and provide healthcare to those in need and to spur social and economic growth. Hence, population growth issues started to receive explicit mention in Zambia's national policies and plans. Most notably, in 1989, Zambia adopted a National Population Policy. While policymakers and advocates were successful in bringing population issues to the national forefront, fertility and population growth rates have remained high since that time.

In 2007, the country revised the National Population Policy, with a goal of improving the quality of life of Zambians by improving population trends to support social and economic development. Some of the main objectives are to

- Reduce the incidence of morbidity and mortality, particularly maternal, infant, and child mortality;
- Reduce the high level of fertility, particularly adolescent fertility; and
- Improve sexual and reproductive health (including family planning) so as to encourage a manageable family size.

Zambia has an ambitious vision to provide a high-quality life for all its people and to develop a strong and competitive economy. Population planning needs to be an integral part of efforts to achieve this vision. The information in this document is meant to be used to that end.

Likolo Ndalamei

Secretary to the Treasury

Acknowledgements

The Ministry of Finance and National Planning (MOFNP) thanks the many Zambian organisations and individuals who provided background documents, data, and other information to assist in the development of this report. MOFNP also recognises the contributions and reviews of members of the Inter-Agency Technical Committee on Population. Finally, the ministry also gratefully acknowledges support from the USAID | Health Policy Initiative, Task Order 1.

Summary

Zambia continues to have high birth rates and a fast-growing population. At the current rate of growth, the population would double in size in about 23 years. The purpose of this briefing book is to consider some of the implications of this growth rate for the country's social and economic development. The book is divided into five sections.

- The Zambian Development Vision. Vision 2030 articulates an aspiration for Zambia to develop as a prosperous middle-income nation over the next generation.
- Population Characteristics and Projections. Zambia is a high-fertility, rapid population growth country with a youthful age structure. The population is going to continue to grow rapidly despite the HIV epidemic. More importantly, the course of fertility will be a key determinant of the future size of the population.
- Population, Economic Development, and Poverty Reduction. Much has been learned in recent years about the relationships among population, economic development, and poverty reduction. The experiences of the "Asian Tigers" are particularly instructive. Slower population growth creates the potential for more rapid economic growth. Also, rapid fertility decline at the country level helps to create a path out of poverty for many countries.
- Impact of Rapid Population Growth on Social and Economic Development. Continued rapid growth of the population may make it more difficult for the country to attain its social and economic development objectives. This section uses two different population projections—a high-fertility projection and a declining-fertility projection—to consider the impact of population growth on achievement of the development vision. It uses examples from education, health, urbanisation, the labour force and the economy, and agriculture and the environment.
- Policy Response. There is a high unmet need for family planning among married women of reproductive age. Many women want to space or limit their births but are not using contraception. High fertility and high population growth can be influenced by conscious public policy decisions to satisfy some of the unmet need. One important public policy area is contraceptive security—or ensuring that every person is able to choose, obtain, and use high-quality contraceptives whenever he or she needs them. In summary, good demographic outcomes depend on good policies and on empowering couples and individuals to make free and responsible choices.

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
FNDP	Fifth National Development Plan
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
IEC	Information, Education, and Communication
IMR	Infant Mortality Rate
MMR	Maternal Mortality Ratio
MOFNP	Ministry of Finance and National Planning
NGO	Nongovernmental Organisation
NHSP	National Health Strategic Plan
SADC	Southern Africa Development Community
TFR	Total Fertility Rate
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
ZDHS	Zambia Demographic and Health Survey

Introduction

Since the mid-1980s, Zambia has recognised high population growth as an obstacle to socio-economic development. In 1989, Zambia adopted a population policy as part of the Fourth National Development Plan (1989–1993) as a way to mitigate the impact of a rising population on economic growth, social development, and adverse health outcomes. Since then, national plans and strategies—such as Zambia's Vision 2030 Statement, poverty reduction strategy papers, and national development plans—have identified rapid population growth as a key factor to be addressed to improve economic, social, and health indicators.

The purpose of this briefing book is to explore the impact of rapid population growth on various social and economic sectors and to provide decisionmakers with policy recommendations to help address high population growth. It revisits the relationship between population and development and identifies some challenges Zambia will face in achieving middle-income status by 2030 should population growth continue at the current pace. This briefing book is divided into the following five sections:

- The Zambian Development Vision—the national vision for social and economic development and poverty reduction.
- Population Characteristics and Projections—some of the noteworthy demographic characteristics of the country and how the population will grow under different assumptions.
- Population, Economic Development, and Poverty Reduction—what international experience tells us about the relationships among population, economic development, and poverty reduction.
- Impact of Rapid Population Growth on Social and Economic Development—how different rates of population growth might affect the ability of the country to achieve its development objectives.
- Policy Response—the level of contraceptive use in the country; the unmet need for family planning services to space or limit births, and basic strategies the country can adopt to affect population dynamics.

I. The Zambia Development Vision

Vision 2030 sets the long-term national development agenda. The vision is for Zambia to become a prosperous middle-income nation by 2030. Over the next generation, the country aspires to become a strong and dynamic middle-income industrial nation that provides opportunities for improving the well-being of all its citizens. To achieve this status, the stated social and economic development objectives are to

- Achieve and sustain annual real economic growth rates of between 6 and 10 percent;
- Attain and maintain a moderate inflation rate of 5 percent;
- Decelerate the annual population growth rate from its 2005 rate of 2.9 percent to a rate of less than 1.0 percent over 25 years;
- Reduce the national poverty level to less than 20 percent of the population;
- Reduce income inequalities; and
- Provide secure access to safe potable water resources and improved sanitation facilities to 100 percent of the population.

The next sections explore what role population factors play in the attainment of this vision.

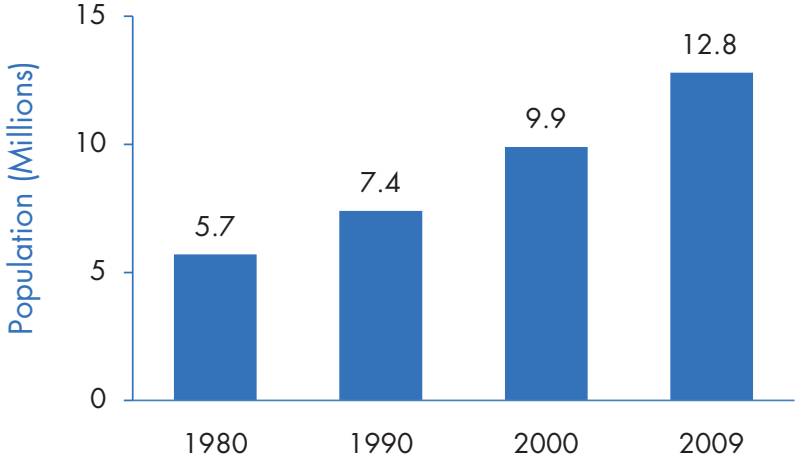
II. Population Characteristics and Projections

This section first looks at Zambia's population situation by examining trends in population growth, fertility, and age-sex structure. It then projects population growth to 2037 using different assumptions about the future patterns of fertility. These projections are used in subsequent sections to explore the impact of population growth on various socio-economic sectors.

Population Trends

Zambia's population continues to increase rapidly. According to the 2000 census, the total population was 9.9 million people—up from 5.7 million in 1980. The 2009 population was estimated to be almost 13 million people and may have been growing at about 3.0 percent per year. At that rate, the population would double in about 23 years.

Chart 1. Population Trend

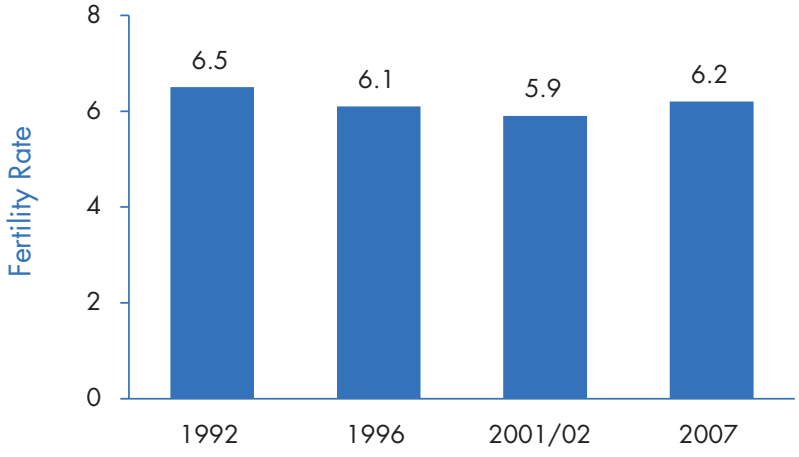


Sources: Central Statistical Office, Zambia, 2000; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Fertility

High fertility continues to be one of the most striking characteristics of Zambia's population. The fertility rate is a measure used to describe the average number of children per woman during her lifetime. The first three Zambia Demographic and Health Surveys (ZDHS) in 1992, 1996, and 2001/02 reported the fertility rate at 6.5, 6.1, and 5.9 children per woman, respectively. However, the 2007 survey found the fertility rate to be 6.2 children per woman—even higher than the level reported 11 years earlier in the 1996 survey.

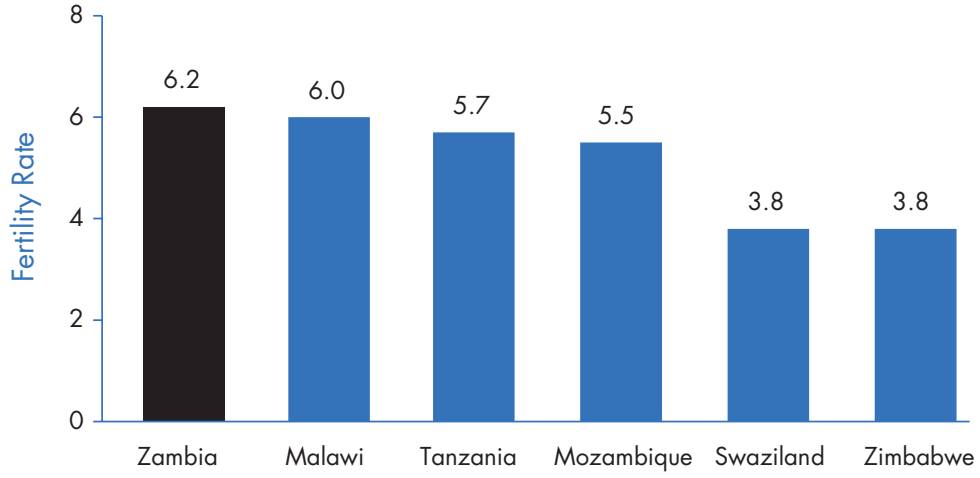
Chart 2. Fertility Trend



Source: Central Statistical Office, Zambia et al., 2009.

As shown in Chart 3, Zambia continues to have one of the highest fertility rates among the Southern Africa Development Community (SADC) countries. For example, the fertility rate is 6.0, 5.7, and 5.5 children per woman in neighbouring Malawi, Tanzania, and Mozambique, respectively. It is even lower in Swaziland and Zimbabwe (3.8 children per woman).

Chart 3. Comparative Fertility Rates



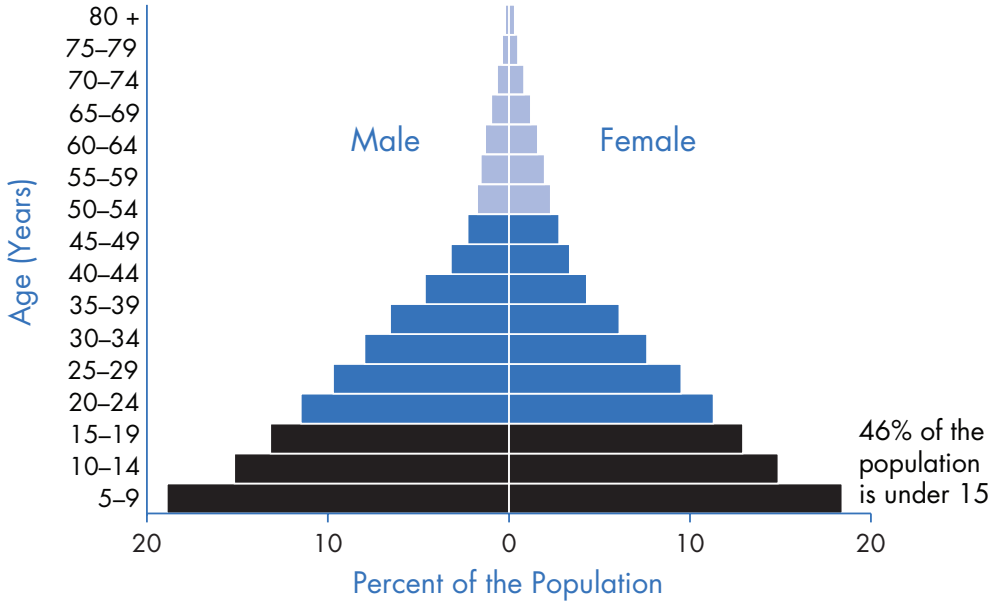
Sources: Demographic and Health Surveys (Zambia, 2007; Malawi, 2004; Tanzania, 2004–05; Mozambique, 2003; Swaziland, 2006–07; and Zimbabwe, 2005–06).

Age-Sex Structure of the Population

Zambia has a young population because birth rates have been high for a long time. An estimated 46 percent of the population is under the age of 15. Zambia's young age structure has important population and development implications. It places a heavy burden on the working age population to provide for the large number of dependants and constrains the provision of basic needs and social services.

The young age structure creates a powerful momentum for future population growth. Chart 4 provides an illustration. Today's children (indicated by the black bars) will soon grow into their reproductive years. Because so many couples will be having children, population growth will continue even if fertility declines rapidly. Due to high fertility and population momentum, it is probable that the Zambian population will continue to grow for most of the remainder of the 21st century, even if fertility rates decline.

Chart 4. Age-Sex Structure, 2007



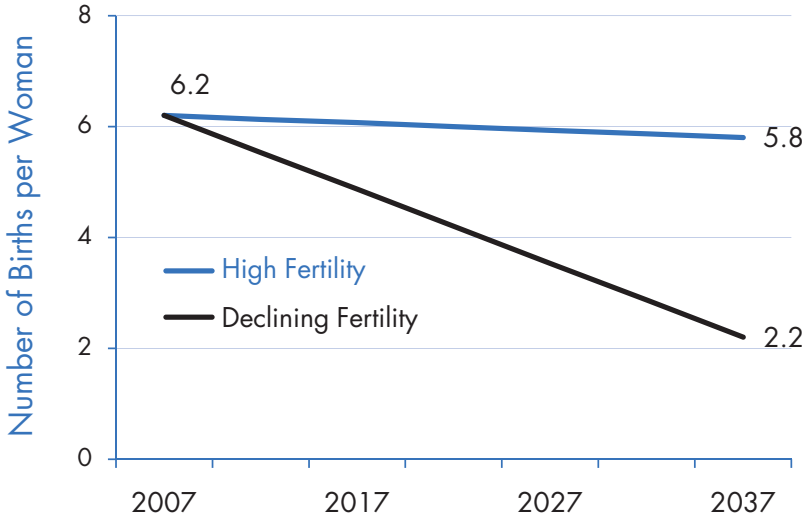
Sources: Central Statistical Office, Zambia, 2000; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Population Projections under Two Fertility Assumptions

The population of Zambia is inevitably going to be much larger in the future due to the high fertility rate. Based on historical experience from other developing countries, 30 years is about the minimal amount of time that Zambia would need to achieve a complete transition from high to low fertility. Hence, the projections made throughout this briefing book are for 30 years to give the perspective of one generation.

This analysis uses two population projections to look at the impact of different fertility rates on the future size of the population—and, subsequently, the potential effect this will have on achieving national development goals. The projections start in 2007, which is the year of the most recent ZDHS. The overall projection period is for 30 years (2007–2037). The assumptions in these two projections are the same except for the fertility rate. In the first case, the fertility rate stays high, declining only from 6.2 children per woman in 2007 to 5.8 children per woman in 2037 (see Chart 5). In the second projection, fertility declines to just slightly more than two children per woman by 2037—or what demographers term replacement-level fertility. (At replacement levels, the population will continue to grow for another 40–50 years because of the in-built population momentum and will only stop increasing late in the 21st century.)

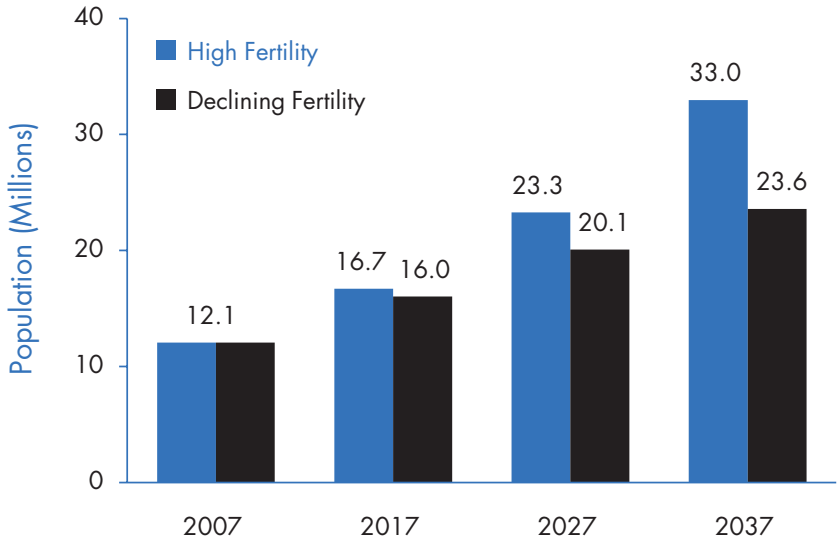
Chart 5. Different Fertility Assumptions



Source: Projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

In the high-fertility projection, the Zambian population would grow from about 12 million people in 2007 to 23.3 million people in 2027 and 33.0 million in 2037 (see Chart 6). By contrast, in the declining-fertility projection, the population would increase from 12.1 million people in 2007 to 20.1 million in 2027 and 23.6 million in 2037. By the end year of the projection, there would be 9.4 million fewer people in the population in the declining-fertility scenario.

Chart 6. Future Population Size under Two Different Fertility Assumptions



Source: Projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

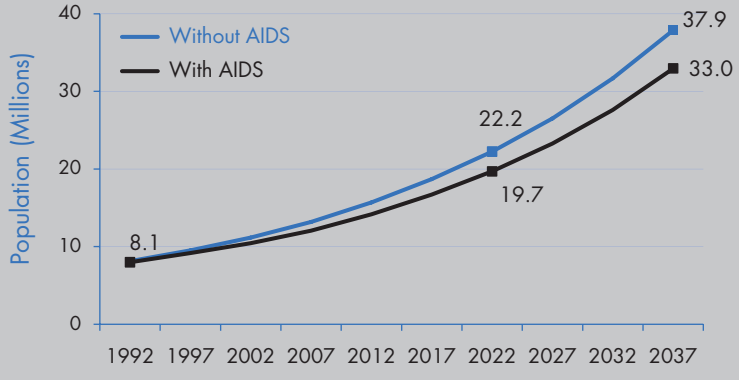
Population Projections under Different Assumptions about the HIV and AIDS Epidemic

The 2007 ZDHS reported adult HIV prevalence at 14 percent. Although HIV prevalence has dropped modestly in recent years, Zambia continues to have one of the most severe epidemics in the world. Since the beginning of the epidemic, AIDS-related deaths have steadily climbed. Despite increased access to antiretroviral treatment and other prevention, care, and treatment programmes, many people have continued to wonder whether population growth is no longer a fundamentally important issue given the high mortality due to the HIV epidemic.

Thus, it is important to consider the relationship between population growth and HIV. This analysis uses two different population projections for Zambia. Both projections have the same set of assumptions about fertility (high fertility continued) and death from causes other than AIDS. The key differences in these two projections are (1) the first projection assumes that there never was an HIV epidemic and (2) the second projection assumes that adult HIV prevalence remains near present levels until 2022 and then tapers off afterwards. It also assumes increasing access to antiretroviral treatment.

In 2022, the population would be 22.2 million under the "Without AIDS" projection versus 19.7 million under the "With AIDS" projection—a difference of 2.5 million people (see Chart 7). In 2037, the population would be 37.9 million people under the "Without AIDS" projection versus 33.0 million under the "With AIDS" projection—a difference of almost five million people. Clearly, the HIV epidemic will have an important demographic impact on Zambia's population over time. However, even if HIV prevalence continues at a high level, the population would grow from about 12 million people in 2007 to 19.7 million people in 2022 and 33.0 million in 2037. High birth rates are much more important in determining the future population size of Zambia than are the high death rates from AIDS-related causes.

Chart 7. The Impact of HIV and AIDS on Population Size



Source: Projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

III. Population, Economic Development, and Poverty Reduction

Zambia remains a poor country. In 2003, about three-quarters of the population lived in poverty, while two-thirds were food insecure.[1] According to the Human Development Index, which considers a country's life expectancy, education level, and standard of living, Zambia ranked 163rd out of 179 countries assessed.

As recognised in Vision 2030, poverty reduction is at the heart of Zambia's development effort. A number of recent analyses have summarised the state-of-the-art thinking on the relationships between population growth and economic development.[2] Two major messages have emerged from these studies: (1) slower population growth creates the potential to increase the rate of economic growth and (2) rapid fertility decline helps to create a path out of poverty for many families. In brief, lowering the rate of population growth can be a crucial strategy for both macroeconomic development and alleviation of household poverty.

Photograph courtesy of the Africa Bureau of the United States Agency for International Development.

Two major messages in recent analyses . . .

- Slower population growth creates the potential to increase the rate of economic growth.
- Rapid fertility decline at the country level helps create a path out of poverty for many families.

1 United Nations Development Programme, 2003.

2 See, for example, Birdsall et al., 2001.

The Example of the "Asian Tigers"

In pursuing its vision of middle-income status, the country looks to the example of other developing countries, especially the "Asian Tigers," which have developed rapidly since the 1960s. Much of the recent analysis of the relationship between population and development has focused on the stunning economic achievements that Thailand, Malaysia, South Korea, Taiwan, Indonesia, and others achieved in a few decades. Fifty years ago, many East Asian countries were poor, with limited resources and rapidly growing populations. Living standards were no higher than in Zambia and most other African countries today, and many experts felt that these countries had few opportunities for social and economic development. In ensuing decades, however, the Tigers achieved an economic miracle and emerged to be among the strong economies of the world.

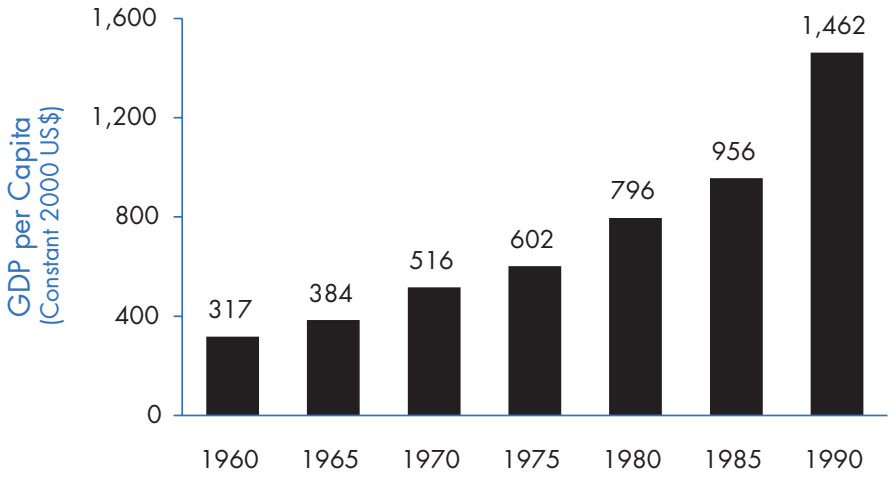
Each of the Tigers experienced a fertility transition from high to low birth rates in a single generation, and this rapid drop in fertility created a "demographic dividend" that helped to drive rapid economic expansion.[3] This happened for several reasons. With declining fertility, more resources were available for education, and expenditures per student rose dramatically. This led to more educational opportunities and a better educated labour force. Economic dependency ratios changed with declining fertility. The working-age population became a larger proportion of the overall population, while the percentage of child and elderly dependants needing to be supported by the working-age population went down. Because a larger proportion of the population was engaged in economically productive activities, the Gross Domestic Product (GDP) per capita was able to rise much more rapidly than would have been the case with continued high fertility. Also, as East Asian families had fewer children, they could afford to save a greater proportion of family income. These savings are the source of investment capital to drive the growth of the economy. High savings rates were partially a result of declining birth rates and characterised the economic miracle of the "Asian Tigers."

3 See, for example, UNFPA, 2004.

Thailand Emerged as a Middle-Income Country in a Single Generation

Thailand is a good example of an "Asian Tiger." In a single generation, Thailand moved from a low-income nation to a much more prosperous middle-income nation. In 1960, Thailand had a GDP per capita (using constant year 2000 US$ to permit comparison over time) of about US$320—lower than Zambia's GDP per capita today (see Chart 8). By 1990, however, Thailand's GDP per capita had risen to about US$1,460, and Thailand had moved well into the ranks of the middle-income countries.

Chart 8. Thailand's GDP per Capita, 1960–1990



Source: World Bank, 2008.

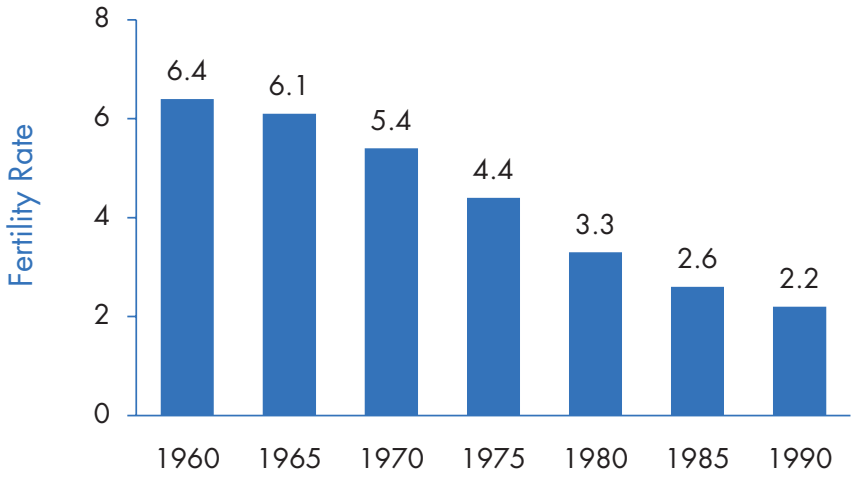
Thai Fertility Declined From High to Low Levels

Fertility declined at the same time that the economy grew rapidly. In 1960, Thailand was a high-fertility country. The fertility rate was 6.4 children per woman (see Chart 9)—about the level in Zambia today (6.2 children per woman).

By 1990, however, Thailand's fertility rate had declined to 2.2 children per woman, representing a transition from high to low fertility in a single generation. The decline in the fertility rate was one of the key factors helping Thailand emerge as a middle-income economy in a single generation.

East Africa is very different from East Asia, and patterns of development will vary in different parts of the world. Regardless, declining fertility provides an opportunity for rapid economic expansion—though other policies and investments are needed to take full advantage of the opportunity. Still, it is improbable that Zambia can achieve its economic aspirations without a decline in fertility.

Chart 9. Thailand's Fertility Rate, 1960–1990



Source: World Bank, 2008.

Fertility and Household Poverty

Besides creating potential for a more rapid rate of economic growth for the country, a lower fertility rate can also help many families escape poverty. The United Nations Population Fund (UNFPA) points out the following ways that family planning can affect household poverty:

- The clearest impact is on the health of mothers and children. Fewer and better-spaced pregnancies result in lower maternal and child death and sickness rates. The loss or disability of the mother blocks opportunities for some households to escape poverty and drives others into poverty. Conversely, women with smaller families often have more economic opportunities, and their earnings can help families escape poverty.
- High fertility can limit educational opportunities for children in poor families, especially girls. Low levels of educational attainment perpetuate family poverty.
- Smaller families are in a better position to care for the health and nutrition of their children. (Malnutrition is widespread in Zambia. The most recent ZDHS reports that in 2007, more than 45 percent of children under 5 were stunted. Malnutrition results in mental and physical underdevelopment, making it harder to break the poverty cycle.) Smaller family size can also mean that family income is shared among fewer people, making more resources (food, schooling, clothing, etc.) available for each.

In Zambia, the fertility rate is highest among women in the poorest households[4] (which have 8 children per woman on average), while contraceptive use is the lowest among the poorest women (fewer than 10 percent of married women of reproductive age in lowest income households use a modern method). At the same time, unmet need for family planning services among women in the poorest households (46 percent) is higher than unmet need among women in other households. Increased access to family planning services, especially by poor women, could be one effective poverty alleviation strategy.

4 The ZDHS divides households into five wealth groups of equal size. This reference is to the two lowest groups, which represent the poorest 40 per cent of all households.

IV. Impact of Rapid Population Growth on Social and Economic Development

As projected, with continued high fertility, Zambia's population would increase to 33 million people by 2037—two and a half times what it is today. What impact will this have on Zambia's ability to achieve its social and economic goals? This section explores the difference between continued high fertility versus declining fertility on Zambia's development over the next 30 years. The date of the most recent ZDHS, 2007, will be the starting point. The final projection year will be 2037. This 30-year timeframe allows us to look at the horizon of one generation. The major sectors considered are education, health, urbanisation, economy, and agriculture and the environment.

Education

Education and skills building are significant aspects of social economic development. A major focus of Zambia's Vision 2030 is "investing in people through education and training to ensure job creation and socio-economic transformation." In recent years, education indicators have improved in Zambia, in part due to the introduction of free primary schooling in 2002. The net enrolment ratio[5] for grades 1–9 went up from 68.1 in 2000 to 92.3 in 2005; the gross enrolment ratio[6] increased from 75.1 to 104.6 over the same period of time.

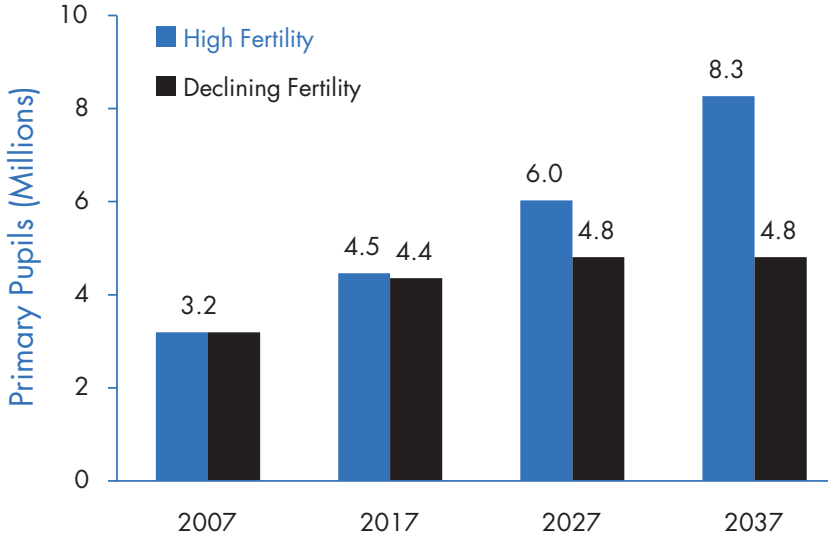
> "I firmly believe that good education is the passport out of poverty. We must make sure that our next generation is equipped with the skills to prosper in the modern world."
>
> — Rupiah Banda, Inaugural Speech (November 2008)

5 Net enrolment ratio is the number of primary students ages 6–14 divided by the total number of children ages 6–14.
6 Gross enrolment ratio is the number of primary students of all ages divided by the total number of children ages 6–14.

Primary School Enrolment

With high fertility, and assuming eventual full enrolment of the primary age group, the number of primary pupils would increase from 3.2 million children in 2007 to 8.3 million in 2037 (see Chart 10). In fact, by 2037, with continued high fertility, Zambia would enroll nearly 1.7 times as many primary pupils compared to the number of pupils under the declining-fertility scenario—8.3 million versus 4.8 million, respectively.

Chart 10. Primary School Enrolment, 2007–2037

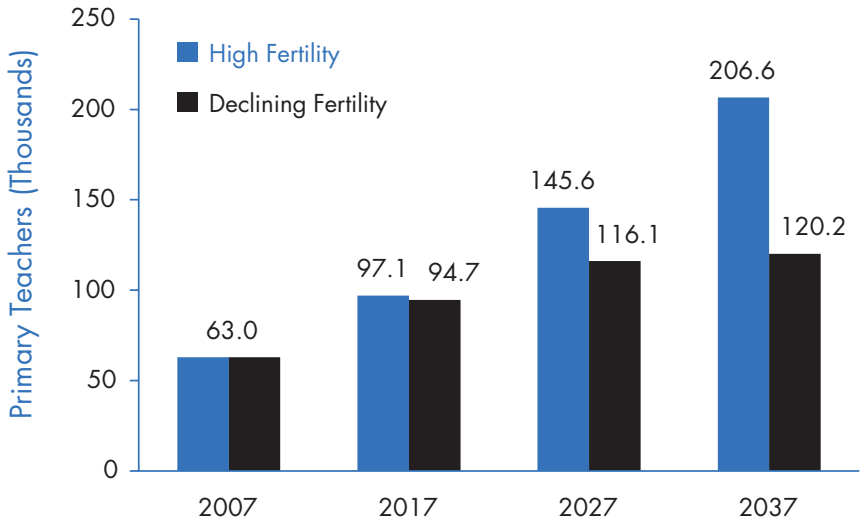


Sources: MOFNP, 2007a; MOFNP, 2008a; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Primary Teachers

As a result of the rapid increase in enrolments, the student-to-teacher ratio is high, and many teachers must work extra shifts. To correct this situation, the goal is to recruit more teachers and to eventually reduce the pupil-teacher ratio to 40 students per primary school teacher. In that case, with continued high fertility, the required number of primary teachers would expand from 63,000 in 2007 to 206,600 in 2037 (see Chart 11). In comparison, the required number of primary teachers would be 120,200 in 2037 with declining fertility.

Chart 11. Primary Teachers Required, 2007–2037

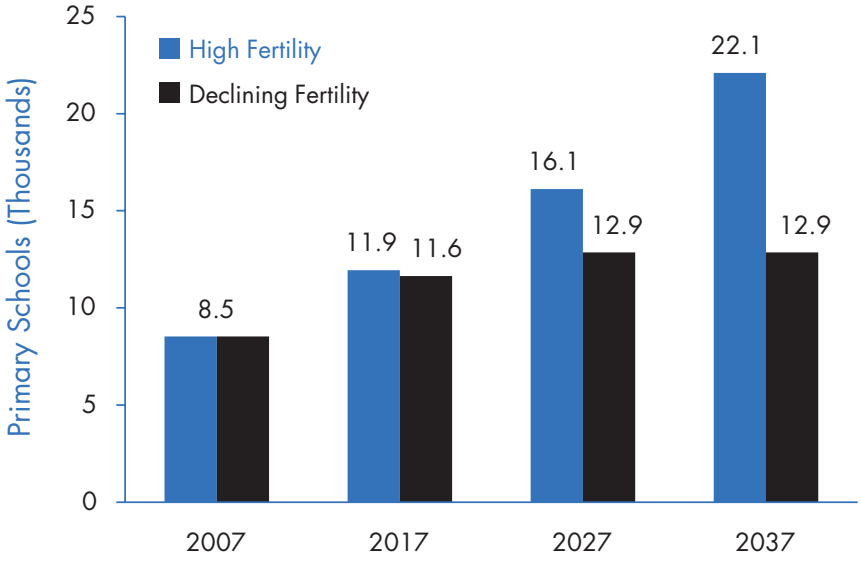


Sources: Ministry of Education, 2007; Republic of Zambia, 2006a; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Primary Schools

High fertility not only creates a challenge for the government to recruit skilled teachers, but it also has implications for infrastructure development. For example, Zambia currently averages about 374 students per primary school. Should that ratio continue into the future, Zambia would need about 22,100 schools in 2037 if high fertility continued—or about two and a half more times the number of schools that exist today (see Chart 12). In comparison, about 12,900 primary schools would be needed in 2037 under the declining-fertility scenario.

Chart 12. Primary Schools Required, 2007–2037

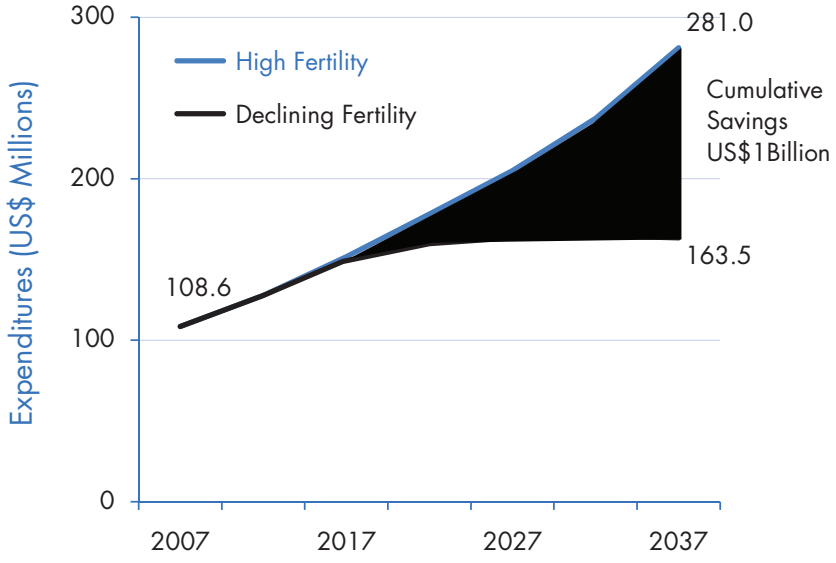


Sources: Ministry of Education, 2007; Republic of Zambia, 2006a; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Expenditures on Primary Education

Vision 2030 points out that Zambia spends a lower proportion of its GDP on education than neighbouring countries, such as South Africa and Botswana. However, if rapid population growth continues, more financial resources will be needed to accommodate the growing numbers of primary school students. According to a study conducted by the United Nations Educational, Scientific and Cultural Organisation, the projected minimal recurrent costs to meet the barest requirements are about US$34 per primary student. That number can be used to illustrate the impact of varying levels of population growth on educational expenditures. By 2037, the annual education expenditures would be close to US$281 million under the high-fertility scenario, compared with US$163 million with declining fertility (see Chart 13). Over the projection period, the country would save about US$1 billion with declining fertility. The projections do not consider infrastructure or quality improvements—in which case, the annual costs and cumulative savings would be even higher.

Chart 13. Illustrative Expenditures on Primary School Education, 2007–2037



Source: Roca, 2005.

Health

A healthy population is fundamental to a country's economic development. In Zambia, poor preventative health practices are common and the disease burden is high. Malaria is the leading cause of sickness and death, and tuberculosis places a huge stress on the public health system. HIV prevalence has shown a modest decline, but it is still high. About 14 percent of adults ages 15–49 are HIV positive. According to the ZDHS, child mortality has declined, but about 12 percent of children still die before their fifth birthday. Maternal mortality remains high. The National Health Strategic Plan sets priority objectives to improve Zambian health (see box below). However, continued rapid population growth will place additional pressures on an already overburdened health system, including human resources, health infrastructure, and health spending.

National Health Strategic Plan (NHSP) 2006–2010

10 Priority Objectives

1. Train, recruit, and retain appropriate and adequate staff at all levels
2. Reduce mortality rate among children under five
3. Reduce maternal mortality ratio
4. Halt and reduce the spread of HIV, tuberculosis, and sexually transmitted infections through effective interventions
5. Reduce the incidence and mortality due to malaria
6. Improve public health surveillance and control of epidemics
7. Promote and implement appropriate interventions aimed at improving hygiene, access to basic sanitation, safe water, and safe food
8. Ensure availability of essential drugs and medical supplies at all levels
9. Ensure availability of appropriate infrastructure and equipment at all levels
10. Strengthen existing integrated operational systems, financing mechanisms, and governance arrangements for effective policy implementation and delivery of health services

Health Personnel

Photograph by © 2000 Harvey Nelson, Courtesy of Photoshare.

The Zambian health system is already severely understaffed. Economic Report 2008 indicated that there were about 870 public health doctors in the system in 2008 (see Chart 14); yet, 2,300 doctors were recommended. Similarly, there were 9,560 public health nurses on staff; however, 22,330 were recommended.

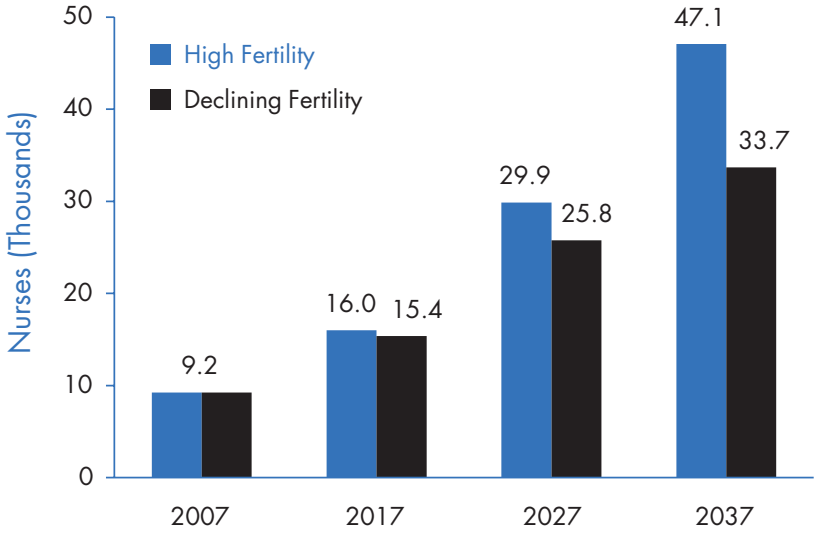
Chart 14. Actual and Recommended Number of Healthcare Professionals, 2008

	Actual number of healthcare professionals	Recommended number of healthcare professionals	Difference (deficit)
Doctors	870	2,300	(1,430)
Nurses	9,560	22,330	(12,770)

Source: MOFNP, 2009.

Vision 2030 sets a long-term goal of one nurse for every 700 persons in the population. Were that goal to be achieved, the number of nurses would increase from 9,200 in 2007 to 47,100 in 2037—five times as many as today (see Chart 15). In comparison, 33,700 nurses would be needed in 2037 with declining fertility—a difference of more than 13,000 in the number of nurses required.

Chart 15. Number of Nurses Required, 2007–2037



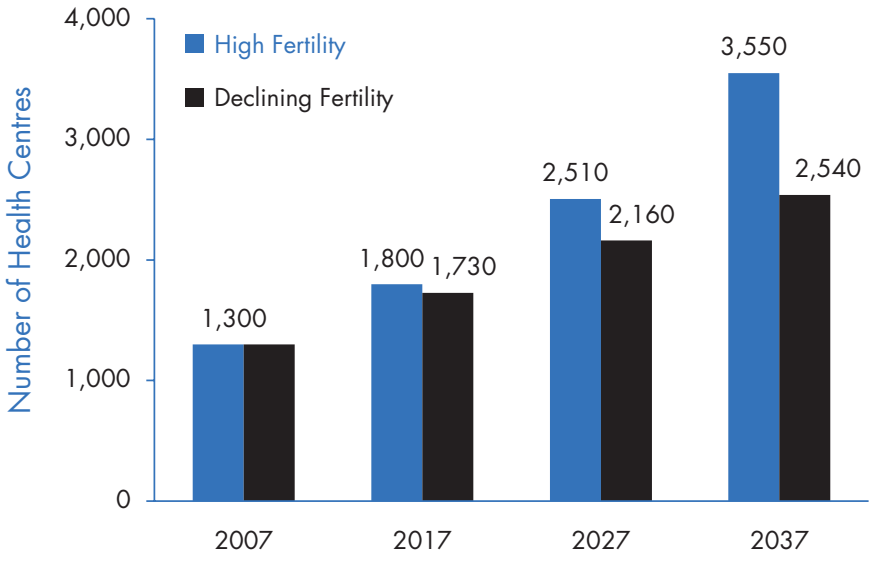
Sources: MOFNP, 2008a; Republic of Zambia, 2006a; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Healthcare Facilities

In Zambia, healthcare is provided through the government, churches, mining companies, the private sector, and other sources. The public health sector consists of health posts, health centres, and hospitals.

In 2007, there were about 1,300 health centres operated by all the health providers—or about one per 9,165 persons. (Urban health centres can have a more populous catchment area because of higher density.) The projections assume that this ratio continues over time. In that case, Zambians would require approximately 3,550 health centres by 2037 with continued high fertility versus 2,540 health centres in 2037 with declining fertility (see Chart 16).

Chart 16. Number of Health Centres Required, 2007–2037



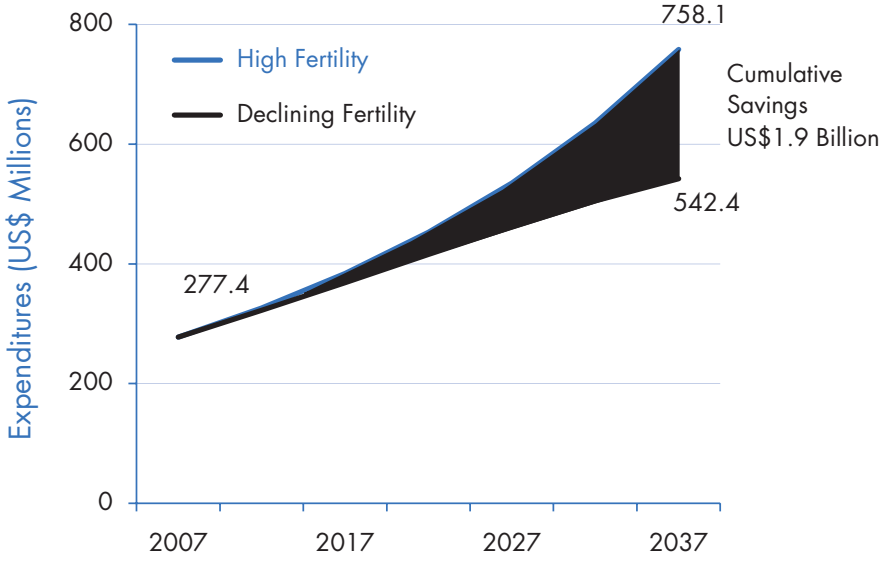
Sources: Ministry of Health, 2008; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Expenditures on Healthcare

To meet the various health goals that Zambia is working towards, it is essential that clients have access to a health system with an adequate number of qualified staff, as well as a consistent supply of drugs and other commodities. However, making advancements in healthcare delivery requires that sufficient financial resources be made available to ensure access to health goals in Zambia's Vision 2030 and National Health Strategic Plan (NHSP).

Health expenditures per capita from all sources were a reported US$23[7] in 2007. At this level of per capita spending, annual health expenditures would increase from US$277 million in 2007 to US$758 million in 2037 with continued high fertility (see Chart 17). If fertility were to decline, health expenditures would rise to US$542 million in 2037. The black area represents cumulative savings of nearly US$1.9 billion over the projection period.

Chart 17. Annual Health Expenditures, 2007–2037



Sources: Independent Review Team, 2008; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

7 Vision 2030 notes that health expenditures per capita will eventually have to be US$150 per annum to be comparable with middle-income economies.

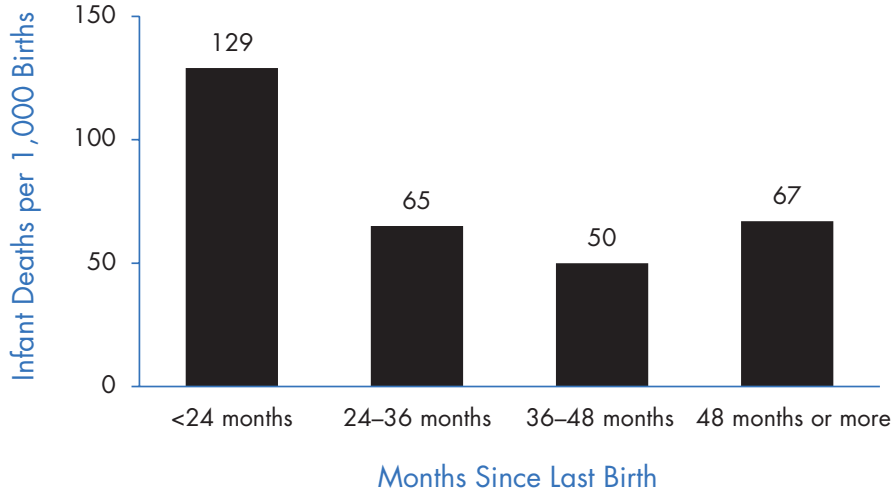
Maternal and Child Health

Photograph by Edwin Huffman/The World Bank.

The risks of maternal, child, and infant sickness and death increase with certain high-risk births. Avoidable high-risk births include births that are too early (mothers under the age of 18), too close (birth intervals of fewer than two years), too many (more than three previous births), and too late (mothers older than 34 years). In Zambia, about 58 percent of all births are in an avoidable high-risk category.

Chart 18 shows that the risk of infant mortality in Zambia is almost twice as high when births are spaced fewer than two years apart than when they are spaced two or more years apart. This happens, in part, because closely spaced pregnancies result in short breastfeeding durations. Overall, birth spacing is the single most cost-effective child survival intervention.

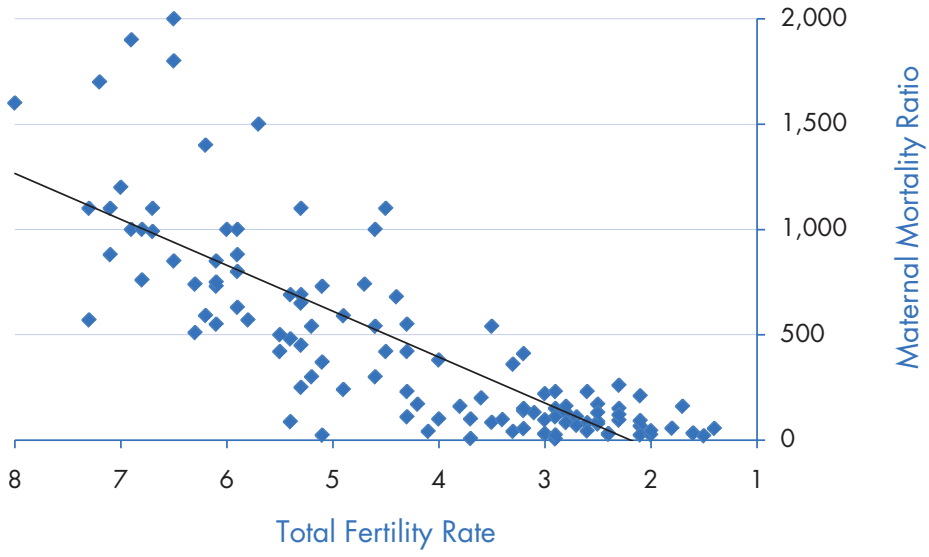
Chart 18. Birth Spacing Improves Child Health



Source: Central Statistical Office, Zambia et al., 2009.

The 2007 ZDHS reports a maternal mortality ratio (MMR) of 591 deaths per 100,000 live births. In addition, for every woman who dies in childbirth, estimates suggest that another five live with chronic illness or permanent disability. It is also important to consider that the death or illness of the mother will also affect the survival and development of her children. Notably, as fertility declines, maternal mortality also declines. Chart 19 is based on 115 Demographic and Health Surveys from around the world and illustrates the relationship between declining fertility and maternal mortality. Like other countries, Zambia can also make considerable strides in reducing its high MMR through lower fertility.

Chart 19. Maternal Mortality Falls as Fertility Declines (115 developing countries)



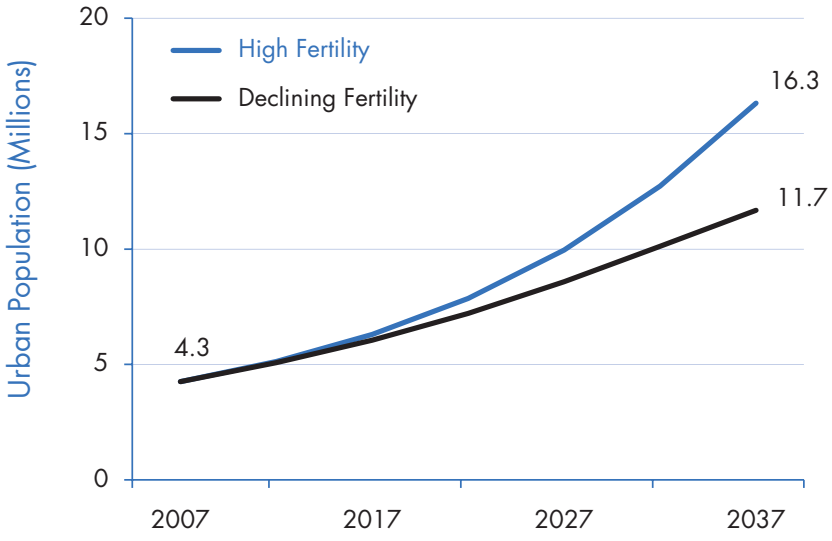
Source: 115 Demographic and Health Surveys.

Urbanisation and Housing

Zambia is one of the most urbanised sub-Saharan African countries, with 35 percent of the population living in urban areas. It is important to consider the effects of urbanisation and the strains it puts on services and resources.

According to United Nations Population Division estimates, the proportion of the population that is urban is projected to rise from 35.3 percent in 2007 to 49.5 percent in 2037. Based on this assumption, with continued high fertility, the urban population would rise nearly four-fold from 2007 to 2037—from 4.3 million people to 16.3 million (see Chart 20). By contrast, the urban population would be 11.7 million in 2037 with declining fertility.

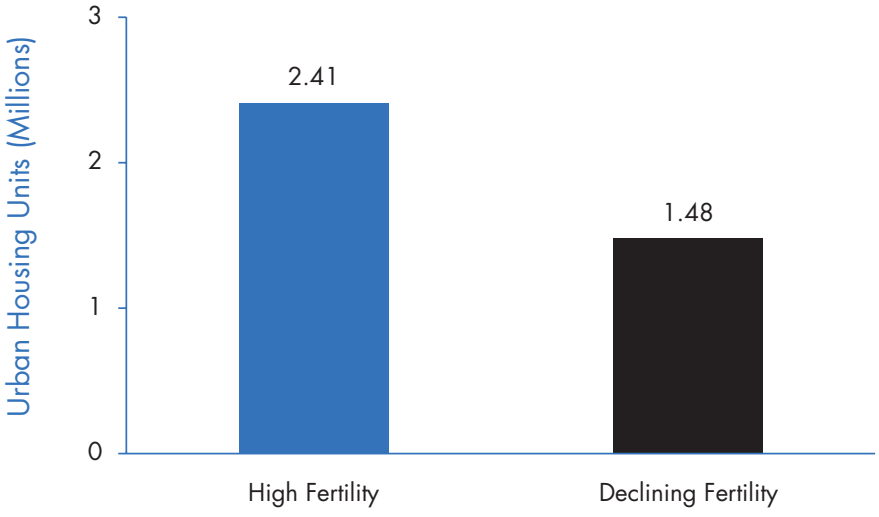
Chart 20. Urban Population, 2007–2037



Sources: United Nations Population Division, 2007; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

This rapid growth puts continuous pressure on urban infrastructure—water and sanitation, roads and transport, energy, and housing, for example. Vision 2030 reports a current shortfall of 1 million housing units in urban and rural areas. In addition, Zambia will require 2.41 million new urban housing units between 2007 and 2037 if high fertility continues (see Chart 21). This would be the equivalent of building nine new Lusakas and does not consider the current shortfall or the need to replace current housing stock. With declining fertility, 1.48 million additional urban housing units would be needed over the projection period—or 930,000 fewer units than under the projection based on continued high fertility.

Chart 21. Required New Urban Housing Units, 2007–2037



Sources: Central Statistical Office, Zambia et al., 2009; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Economy, Labour Force, and Employment

Economy

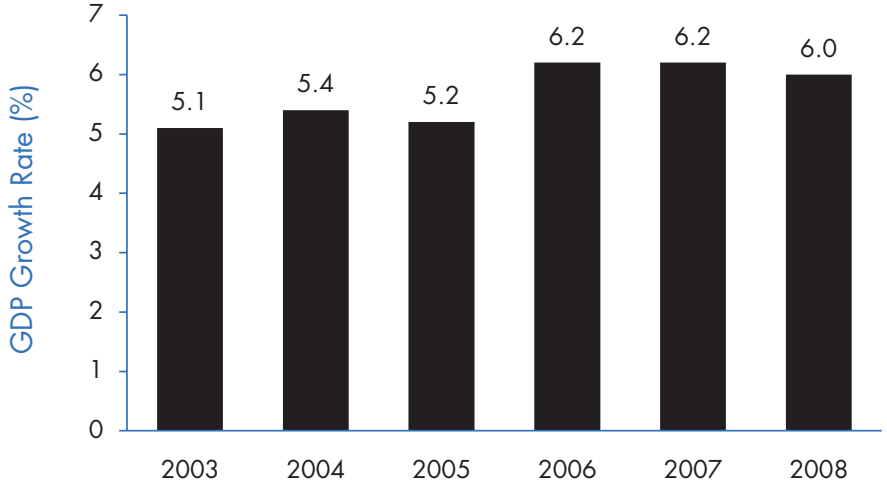
Zambia's first long-term socio-economic plan is based on the country's vision to become "a prosperous, middle-income nation by 2030." Vision 2030 is being implemented through national development plans, which serve as frameworks for various social and economic sectors. While all sectoral strategies work towards addressing their own specific objectives, economic development represents a cross-cutting goal towards which each sector will contribute.

> "The growth, size, composition, and distribution of a population are a big challenge for any country as they have a bearing on socio-economic development. Uncontrolled population growth results in inadequate and inequitable economic growth."
>
> — Mr. Ng'andu Magande,
> Former Minister of Finance
> July 2006, World Population Day

Gross Domestic Product per Capita

Zambia's GDP has been steadily rising. Between 1998 and 2001, the GDP grew, on average, 2.2 percent per year and then started to climb steadily thereafter. Chart 22 shows the annual GDP growth rate between 2003 and 2008. Over that period, the economy grew by an average of about 5.7 percent per annum. The Fifth National Development Plan attributes this positive growth trend to several factors, including favorable global economic conditions and the overall impact of the economic reforms that started in the early 1990s. The rapid expansion of mining and construction were the key drivers of growth during the period.

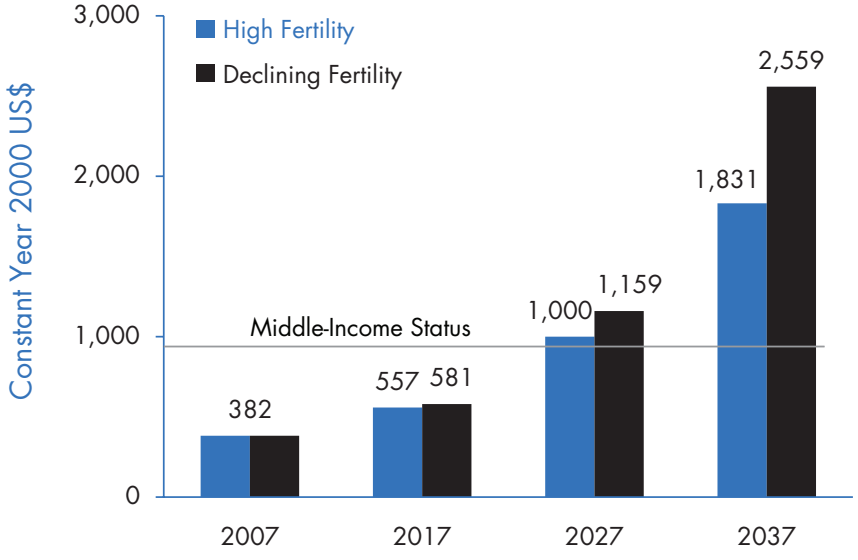
Chart 22. GDP Growth Rates, 2003–2008



Sources: MOFNP, 2006, 2007a, 2008a, 2009.

Vision 2030 lays out a "preferred scenario" for the level of real economic growth to be achieved over 25 years: 6 percent between 2006 and 2010; 8 percent between 2011 and 2015; 9 percent between 2016 and 2020; and 10 percent thereafter. The projections first assume achievement of the preferred scenario (see Chart 23). GDP per capita is given in terms of constant 2000 US$ to permit comparisons over time and with the Thailand example. If high fertility were to continue, GDP per capita would increase from US$382 in 2007 to US$1,831 in 2037. In contrast, GDP per capita would be much higher (US$2,559) in 2037 under the projection based on declining fertility. In both cases, Zambia would have achieved middle-income status under the preferred scenario.

Chart 23. GDP per Capita Based on Vision 2030 Economic Growth Goals

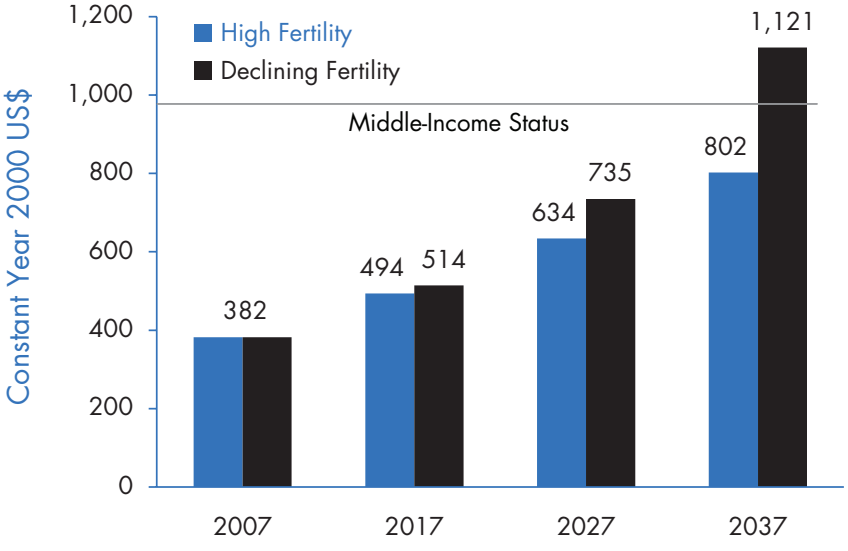


Sources: Republic of Zambia, 2006a; World Bank, 2008; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

However, as pointed out in Vision 2030, ". . . few countries have achieved and maintained real economic growth rates in excess of 6 percent or more over a quarter century." Alternatively, Vision 2030 offers a baseline scenario that assumes a constant real growth rate of 6 percent per annum (again expressed in constant 2000 US$ to permit comparisons). This assumption also happens to be in line with recent economic performance.

At that rate of growth, GDP per capita would rise only to US$802 in 2037 with continued high fertility, and Zambia still would not have achieved middle-income status. In comparison, with declining fertility, GDP per capita would increase more rapidly to $610 in 2022 and $1,121 in 2037, with the country at least reaching the bottom rungs of middle-income status (see Chart 24).

Chart 24. GDP per Capita Based on 6% Economic Growth Rate



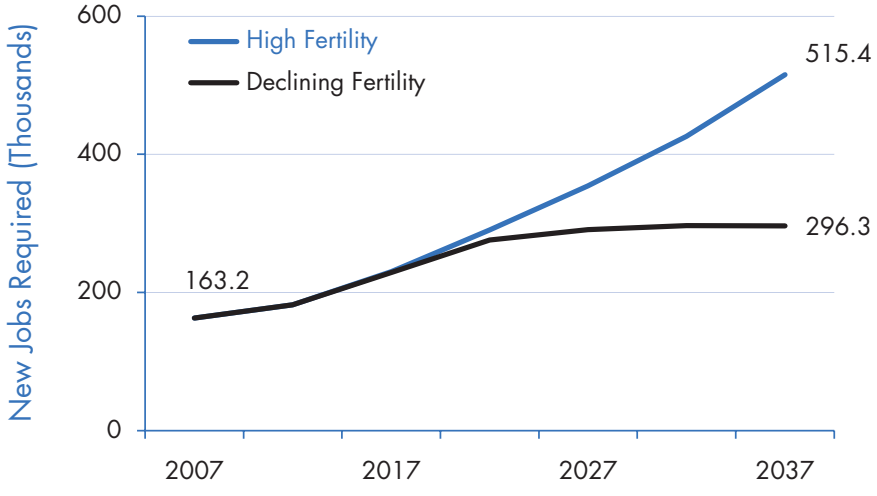
Sources: World Bank, 2008; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Labour Force and Employment

Employment presents a considerable challenge to Zambia. According to the 2005 Labour Force Survey, about 80 percent of the working age population (ages 15 and above) is economically active. However, three-quarters of all employed persons are working in the agriculture, forestry, and fisheries industries, where employment is often seasonal. Of all employed persons in Zambia, 72 percent are classified as part-time workers, and 84 percent are considered to be under-employed.

The Fifth National Development Plan notes that poor long-term economic performance since the mid-1970s has limited the ability of the economy to generate employment opportunities for the labour force. This situation is aggravated by the continued rapid growth of the workforce, creating "a mismatch between the increasing labour force and the rate at which the economy can absorb this increasing labour force." The situation may well worsen with the continued high rate of population growth. Chart 25 shows the overall increase in the number of jobs required in the economy each year. With continued high fertility, annual new job requirements would rise continuously from 163,200 in 2007 to 515,400 in 2037. In contrast, annual new job requirements would be 296,300 in 2037 with declining fertility.

Chart 25. Annual New Jobs Requirements, 2007–2037

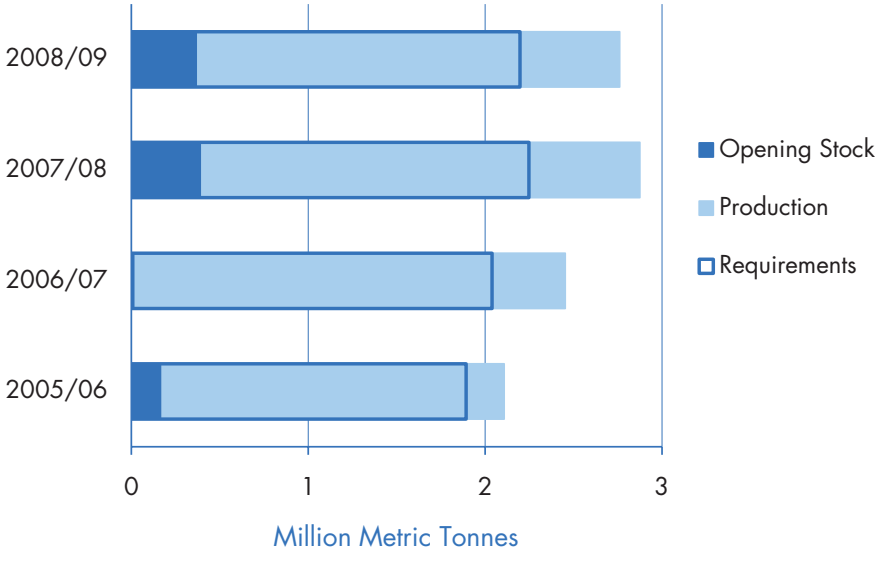


Sources: Central Statistical Office, Zambia, 2005; and projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

Agriculture and Environment

Agriculture makes up 24 percent of the GDP, and along with forestry and fisheries, accounts for 73 percent of the workforce. Productivity has fluctuated over time, due to dependence on rain-fed production, inconsistent investments, and climate change. In recent years, Zambia has been able to produce sufficient quantities of major food crops to meet domestic requirements (see Chart 26).

Chart 26. Zambia Has Achieved Food Security in Recent Years

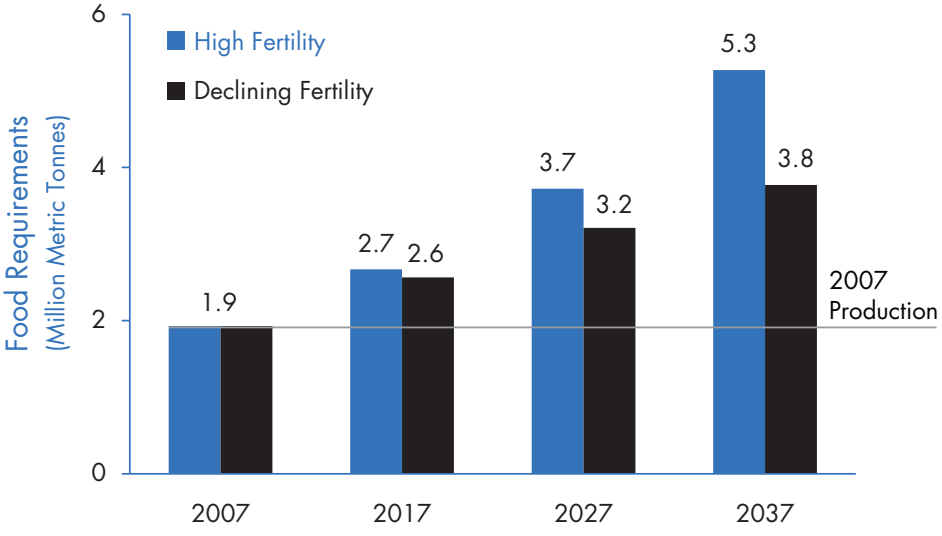


Source: MOFNP, 2006, 2007a, 2008a, 2009.

Food Security

Population growth will still be a major determinant of demand for major food crops in the future and the ability of the country to achieve and sustain food security. For example, if fertility were to remain high over the 2007–2037 projection period and per capita food requirements were to remain the same, then basic food requirements would increase from 1.9 million metric tonnes of maize equivalent in 2007 to 5.3 million metric tonnes in 2037. With declining fertility, food requirements would need to expand more slowly from 1.9 to 3.8 million metric tonnes between 2007 and 2037—almost 1.5 million fewer metric tonnes than with continued high fertility.

Chart 27. Minimum Food Requirements,* 2007–2037



*Assumes 0.157 MT of maize equivalent per capita.

Sources: MOFNP, 2006, 2007a, 2008a, 2009.

Environmental Degradation

Many of the gains in agricultural productivity are the result of expanding the area under cultivation. For example, the area planted in maize expanded from 699,000 hectares in 2002/03 to 928,000 hectares in 2007/08. According to the Fifth National Development Plan, this rapid expansion of land under cultivation has led to deforestation, soil erosion, and land degradation in most parts of the country, which in turn threatens sustainable economic growth and household poverty alleviation.

In many parts of the country, rapid expansion of land under cultivation has led to

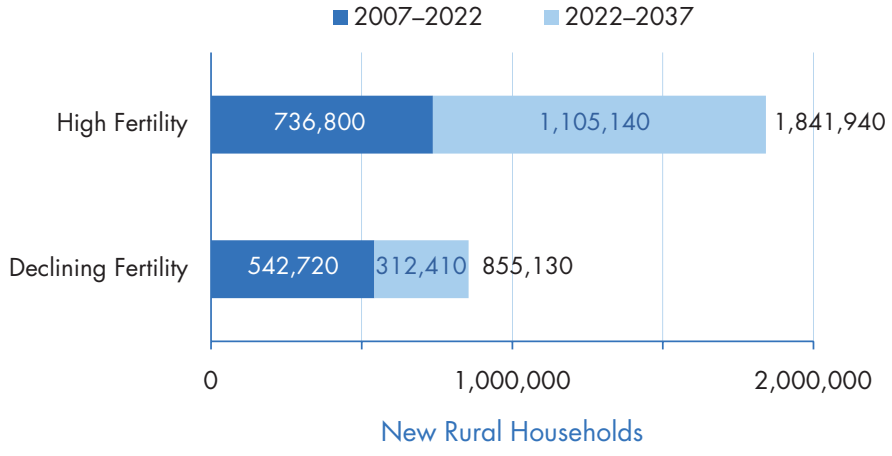
- Deforestation
- Soil erosion
- Land degradation

Photo credit: Trees for the Future, 2008.

The Fifth National Development Plan particularly notes that the country's forests are under tremendous pressure, mainly due to wood harvesting for fuel and timber and forest clearance for agriculture and human settlement.

The continued growth of the rural population will mean additional pressures on the land and forests. Even with migration to the urban areas, the number of new rural households will expand rapidly. Under the high-fertility projection, Zambia will add more than 1.8 million households over the projection period, as compared to 855,000 additional rural households with the declining-fertility projection.

Chart 28. New Rural Households, 2007–2037



Source: Projections prepared for this analysis using the Spectrum System of Policy Models, 2009.

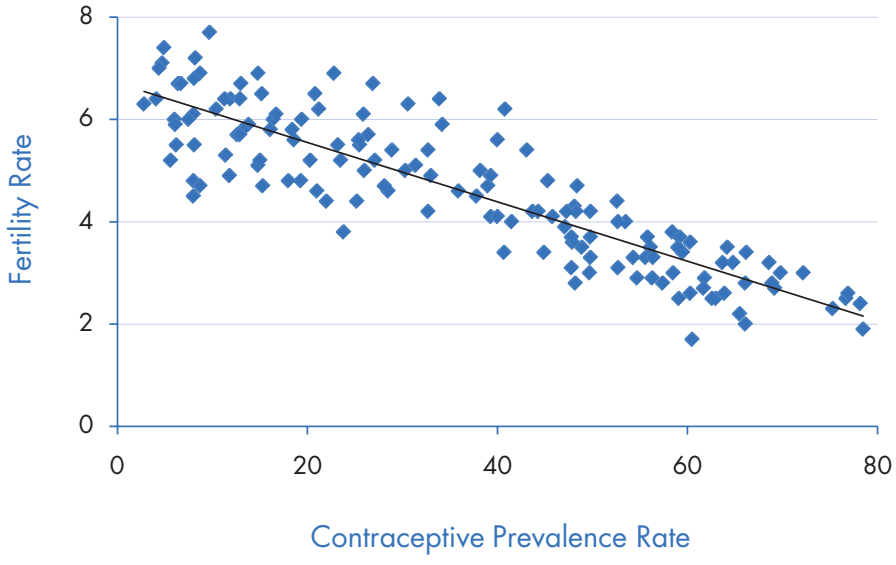
V. Policy Response

Population growth has an impact on the ability of Zambia to achieve its national vision. Zambia can adopt policies and programmes to increase relatively low contraceptive use and address the high level of unmet need for family planning services. This last section looks at the public policy response.

Contraceptive Use

Contraceptive use will be one of the more important immediate determinants of future levels of fertility in Zambia. Chart 29 shows the relationship between contraceptive prevalence and fertility rates based on 146 Demographic and Health Surveys around the world. As expected, the fertility rate in a country is closely related to its level of contraceptive use.

Chart 29. Contraceptive Prevalence Rates in Relation to Fertility Rates

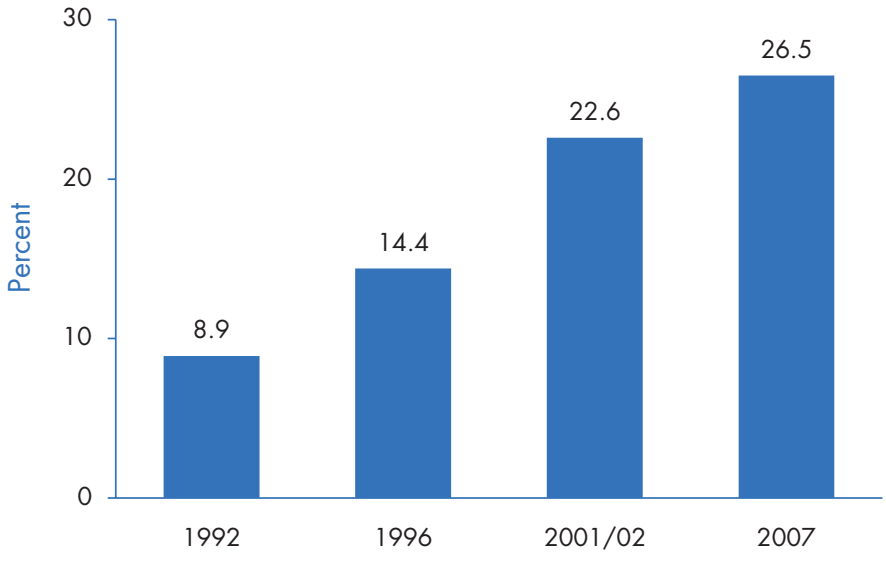


Source: 146 Demographic and Health Surveys.

Given the strong relationship between contraceptive use and fertility, it is important to look at the family planning situation in Zambia. Public health experts usually divide contraceptives into modern and traditional methods. Modern contraceptive methods are considered much more effective in preventing pregnancy than traditional methods. Modern contraception includes methods such as injectables, oral contraceptives (pills), intrauterine devices, condoms, and voluntary sterilization.

Modern contraceptive use has been steadily increasing but is still relatively low. Over the last 15 years, modern contraceptive use[8] among married women of reproductive age (15 to 49) in Zambia went from 8.9 percent in 1992 to 14.4 percent in 1996, 22.6 percent in 2001/02, and 26.5 percent in 2007 (see Chart 30). Disparities exist among provinces. The percentage of married women using modern contraception, for example, is higher in Copperbelt (38.1), Lusaka (36.7), and Southern (33.1), and is lower in Northern (15.8) and Luapula (10.4).

Chart 30. Trend in Modern Contraceptive Use

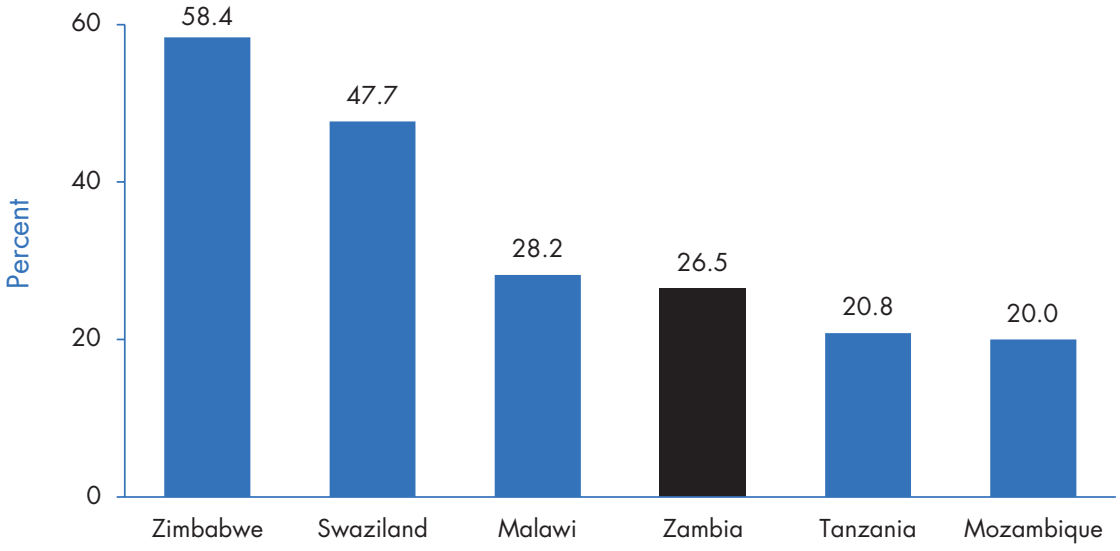


Source: Central Statistical Office, Zambia et. al., 2009.

8 Note that these data exclude lactational amenorrhea method as a modern method to ensure comparability between earlier and later surveys.

Chart 31 indicates that Zambia's prevalence rate, at 26.5 percent, is one of the lower rates among selected SADC countries. For example, in Zimbabwe, 58.4 percent of married women of reproductive age use a modern method of contraception, while, in Swaziland, 47.7 percent of married women of reproductive age use modern contraception.

Chart 31. Comparative Modern Contraceptive Use Rates

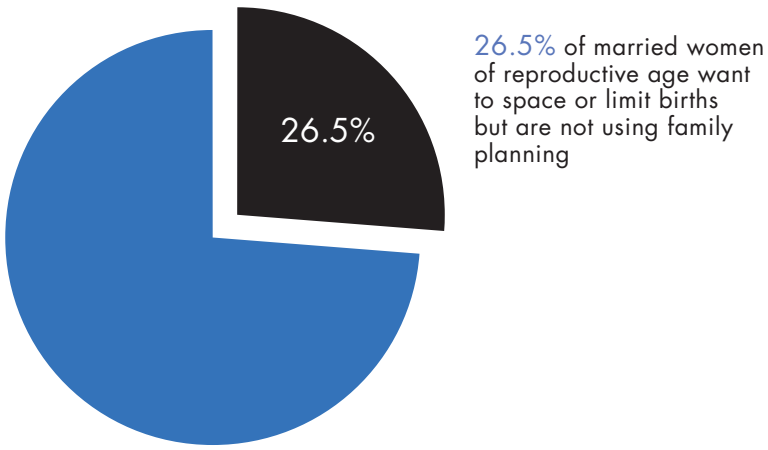


Sources: Demographic and Health Surveys (Zimbabwe, 2005–06; Swaziland, 2006–07; Malawi, 2004; Zambia, 2007; Mozambique, 2003; and Tanzania, 2004–05).

Unmet Need for Family Planning Services and the Public Policy Response

To understand the potential demand for contraceptives, it is important to look at the unmet need for family planning. Unmet need is defined as the proportion of married women of reproductive age who either do not want any more children (known as limiters) or who want to wait at least two years before having another child (spacers) but who are not using contraception. In countries with adequate reproductive health services for women and men, unmet need tends to be low. In countries with inadequate services, unmet need tends to be high. The ZDHS reports that Zambia has a high unmet need for family planning. In Zambia, more than one out of four married women of reproductive age want to space or limit their births but are not using contraceptives (see Chart 32).

Chart 32. Unmet Need for Family Planning



Source: Central Statistical Office, Zambia et al., 2009.

To satisfy unmet need, a realistic strategy is to ensure that all Zambian couples who want to space or limit their births have access to high-quality reproductive health information and services, including a full range of contraceptives consistently available at affordable prices. By improving access to and use of family planning services, the country can make progress towards satisfying the high level of unmet need. This progress will, in turn, contribute to lower fertility and slower population growth and move Zambia closer to achieving its national vision.

To satisfy unmet need, a realistic strategy is to ensure that all Zambians who want to space or limit their births have access to high-quality reproductive health information and services, including a range of family planning methods consistently available and accessible.

Photograph by Edwin Huffman/The World Bank.

Components of an Effective Family Planning Unmet Need Strategy

Several factors can contribute to a successful strategy to make progress to satisfy the high unmet need for services. Some of these are

Photograph by © 2006 Jane Brown/CCP, Courtesy of Photoshare.

- Sustained political and financial commitment and support from leaders at national and district levels;
- Expanded access to high-quality, affordable services and guaranteed availability of contraceptive commodities;
- Increased commercial private sector and civil society participation; and
- Sustained donor support.

A few special areas of emphasis include the following:

Contraceptive security is an important public policy issue to be addressed in any unmet need approach. It means that couples and individuals are able to obtain and use high-quality contraceptives when they are needed. Contraceptive shortages and erratic access discourage use and create an increased health risk. In fact, supply shortages and stockouts may have hindered expanded family planning use in Zambia.

Improved management systems and provider skills, especially at the district level, are required. This emphasis area is closely related to contraceptive security. To address unmet need, family planning systems need to be functioning at the district level and provide consistent, high-quality services.

Expanded Information, Education, and Communication (IEC) initiatives are needed so couples understand how to access family planning services and are informed about the benefits, risks, and side effects of various family planning methods. Unmet need does not always translate into an immediate demand for family planning services. Couples need to understand options, know how to access services, and have a realistic understanding of the risks and benefits of using modern contraception.

Leaders Can Make a Difference

There are many feasible actions leaders can undertake to address the unmet need for family planning services. Here are some examples.

What could a Parliamentarian do to help address the unmet need for family planning and promote good reproductive health in Zambia?

- Share knowledge about family planning and promote its use among constituents
- Engage in policy dialogue to ensure that population and development issues are placed high on the national agenda
- Participate in strategic planning at the regional level, including assessments of the extent of unmet need and the availability of family planning and reproductive health services
- Support the reproductive health programmes of nongovernmental organisations (NGOs)
- Use influence of his/her position to support women's empowerment
- In his/her legislative and political capacity, support measures to ensure strong and well-funded family planning and reproductive health programmes

What could a district planner do to help address the unmet need for family planning and promote good reproductive health in Zambia?

- Promote an understanding of the importance of population factors to district development
- Help ensure that district budgets adequately support reproductive health and family planning programmes
- Promote strategic planning at the district level, including assessments of unmet need, availability of services, and ways to improve services
- Encourage a broad range of government agencies and NGOs to participate in reproductive health and family planning advocacy and programmes

What could an NGO/community leader do to help address the unmet need for family planning and promote good reproductive health in Zambia?

- Integrate messages and information about family planning and reproductive health into ongoing activities, such as youth and adult education
- Develop IEC messages and programmes that stress the importance of family and moral values to good reproductive health
- Participate in strategic planning activities at district level
- Identify and serve as an advocate for vulnerable groups, such as young women and orphan children subject to sexual exploitation or abuse

Good Demographic Outcomes Depend on Good Policies

As noted by the United Nations Population Fund:

"Good demographic outcomes depend on good policies . . . successful action depends above all on empowering individuals and couples to make free choices."

With unmet need so high, empowering people to make free choices and to act upon them will lead to favourable demographic outcomes and move Zambia closer to its national vision.

Glossary

Acquired Immune Deficiency Syndrome (AIDS)

AIDS is the most severe manifestation of HIV infection. People living with AIDS often have infections of the lungs, brain, eyes, and other organs and frequently suffer from debilitating weight loss, diarrhoea, and cancers. AIDS can be diagnosed by blood tests to evaluate the CD4 cell count or by evaluating the extent of opportunistic infections and cancers that develop with the collapse of the immune system.

Age-Sex Structure

The age-sex structure is the composition of the population, often described in five-year age groups, as determined by the number or proportion of males and females in each age category.

Contraceptive Prevalence

Contraceptive prevalence is the number of married women (or all women) in their reproductive years, ages 15 to 49, using a contraceptive method divided by the total number of married women ages 15 to 49.

Child Dependency Ratio

The child dependency ratio is the number of child dependants under the age of 15 for every 100 adults in the working ages.

Fertility Rate or Total Fertility Rate (TFR)

The TFR is the average number of children that would be born alive to a woman during her lifetime if she were to bear children conforming to the age-specific fertility rates of a given year. It is a measure often used to represent the average number of children per woman.

Gross Domestic Product (GDP)

The GDP of a country is defined as the market value of all final goods and services produced within a country in a given period of time.

GDP = consumption + investment + government spending + (exports – imports)

Gross Domestic Product per Capita

GDP per capita or per person is the Gross Domestic Product divided by the total population.

Human Immunodeficiency Virus (HIV)

HIV is a virus that weakens the immune system, ultimately leading to AIDS and making the body susceptible to and unable to recover from other diseases.

Infant Mortality Rate (IMR)

The IMR is the number of deaths of infants under age 1 per 1,000 live births in a given year.

Maternal Mortality Ratio (MMR)

The MMR is the number of women who die as a result of complications of pregnancy or childbearing in a given year per 100,000 live births in that year.

Modern Contraceptive Prevalence

Modern contraceptive prevalence includes just those women using a modern method of contraception.

Population Momentum

Population momentum describes the tendency for population growth to continue beyond achievement of replacement-level fertility because of the relatively high concentration of people in the childbearing years.

Replacement-level Fertility

Replacement-level fertility describes the situation of couples having just the number of children needed to replace themselves in the population. If the TFR stays constant at replacement level, a country's population will eventually stop growing because births and deaths will reach equilibrium. The TFR is about 2.1 children per woman in developed countries but it can be higher in countries with higher mortality and lower life expectancies. Replacement-level fertility is higher than 2 children per woman because there are slightly more male than female births and because not all females survive until their childbearing years.

Unmet Need

According to the basic definition used in the Zambia Demographic and Health Survey, married women of reproductive age who are able to bear children have an unmet need if they report that they do not want to have any more children (limiters) or that they want to wait two years or longer before having another child (spacers) but are not using contraception.

Selected Sources

Birdsall, Nancy, Allen C. Kelley, and Steven W. Sinding. 2001. *Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World*. New York: Oxford University Press.

Central Statistical Office, Swaziland and Macro International Inc. 2008. *Swaziland: Demographic and Health Survey, 2006–07*. Mbabane, Swaziland: Central Statistical Office and Macro International Inc.

Central Statistical Office, Zambia. 2000. *2000 Census Report*.

Central Statistical Office, Zambia. 2005. *Labour Force Survey, 2005. Summary Report*.

Central Statistical Office, Zambia and Macro International. 1993. *Zambia: Demographic and Health Survey, 1992*. Lusaka, Zambia: University of Zambia, Central Statistical Office and Columbia, Maryland, USA: Macro International Inc.

Central Statistical Office, Zambia and Macro International. 1997. *Zambia: Demographic and Health Survey, 1996*. Lusaka, Zambia: University of Zambia, Central Statistical Office and Columbia, Maryland, USA: Macro International Inc.

Central Statistical Office and Central Board of Health, Zambia and ORC Macro. 2003. *Zambia: Demographic and Health Survey, 2001–2002*. Lusaka, Zambia: Central Statistical Office and Central Board of Health and Calverton, Maryland, USA: ORC Macro.

Central Statistical Office, Ministry of Health, and University of Zambia; Tropical Diseases Research Centre; and Macro International. 2009. *Zambia: Demographic and Health Survey, 2007*. Lusaka, Zambia: Central Statistical Office, Ministry of Health, University of Zambia; Ndola, Zambia: Tropical Diseases Research Centre; and Calverton, Maryland, USA: Macro International Inc.

Central Statistical Office, Zimbabwe and Macro International. 2007. *Zimbabwe: Demographic and Health Survey, 2005–6*. Harare, Zimbabwe: Central Statistical Office and Calverton, Maryland USA: Macro International Inc.

Gender in Development Division, Office of the President. 2000. *National Gender Policy*.

Independent Review Team. 2008. *Report of the Mid Term Review of the Zambia National Health Strategic Plan NHSP IV, 2006–2010*, First Draft.

Instituto Nacional de Estatistica and Ministerio da Saude and ORC Macro. 2005. *Mozambique: Demographic and Health Survey, 2003*. Instituto Nacional de Estatistica and Ministerio da Saude and Calverton, Maryland, USA: ORC Macro/DHS Program.

Livingstone City Council and Environmental Council of Zambia. *Livingstone District State of Environment Outlook Report*.

Ministry of Education. 2007. *Zambia Annual School Report*.

Ministry of Finance and National Planning. 2009. *Economic Report 2008*.

Ministry of Finance and National Planning. 2008a. *Economic Report 2007*.

Ministry of Finance and National Planning. 2008b. *Zambia Millennium Development Goals: Progress Report 2008*.

Ministry of Finance and National Planning. 2007a. *Economic Report 2006*.

Ministry of Finance and National Planning. 2007b. *National Population Policy*.

Ministry of Finance and National Planning. 2007. *Annual Fifth National Development Plan Progress Report 2007*.

Ministry of Finance and National Planning. 2006. *Economic Report 2005*.

Ministry of Health. 2008. *Joint Annual Review for 2007: Main Report*.

Ministry of Health. 2005. *National Health Strategic Plan, 2006–2010*.

National Bureau of Statistics and ORC Macro. 2005. *Tanzania: Demographic and Health Survey, 2004–2005*. Dar es Salaam, Tanzania: National Bureau of Statistics and Calverton, Maryland, USA: ORC Macro.

National Statistical Office and ORC Macro. 2005. *Malawi: Demographic and Health Survey, 2004*. Zomba, Malawi: National Statistical Office and Calverton, Maryland, USA: ORC Macro.

Republic of Zambia. 2006a. *Vision 2030: A Prosperous Middle-income Nation by 2030*.

Republic of Zambia. 2006b. *Fifth National Development Plan, 2006–2010*.

Roca, J. 2005. *UNESCO Report on Zambia*. Retrieved August 20, 2009 from http://portal,unesco.org/education/en/files/40027/11178023673ZAMBIA.doc/ZAMBIA.doc.

United Nations Population Division. *World Urbanization Prospects: The 2007 Revision Population Database*. Available at www.un.org/esa/population/.

United Nations Development Programme. 2003. *Zambia Human Development Report, 2003*.

United Nations Population Fund (UNFPA). 2004. *State of World Population 2004. The Cairo Consensus at Ten: Population, Reproductive Health and the Global Effort to End Poverty*. New York: UNFPA.

UNFPA. 2002. State of World Population 2002. *People, Poverty and Possibilities*. New York: UNFPA.

World Bank. 2008. World Development Indicators.

World Bank. 2006. *Zambia: Education Sector Public Expenditure Review*.

For more information, please contact

Ministry of Finance and National Planning
P.O. Box 50062
Lusaka

260 211 252107
260 211 250886

Photos on Cover: David Bjorgen (large), Michael Mistretta (top), Ogwen (middle), Bread for the World (Bottom)