

TANZANIA: POPULATION, REPRODUCTIVE HEALTH AND DEVELOPMENT



POPULATION PLANNING SECTION
MINISTRY OF PLANNING, ECONOMY AND EMPOWERMENT
DECEMBER 2006

TANZANIA: POPULATION, REPRODUCTIVE HEALTH AND DEVELOPMENT



POPULATION PLANNING SECTION
MINISTRY OF PLANNING, ECONOMY AND EMPOWERMENT
December 2006



USAID
FROM THE AMERICAN PEOPLE

TABLE OF CONTENTS

LIST OF CHARTS	iv
LIST OF IMAGES	vi
FOREWORD	vii
ACKNOWLEDGEMENTS	viii
SUMMARY	ix
ABBREVIATIONS	x
INTRODUCTION	1
I. THE TANZANIAN DEVELOPMENT VISION	2
II. POPULATION CHARACTERISTICS AND PROJECTIONS	4
Population Growth	4
Fertility	5
Contraceptive Use	6
Unmet Need	7
Gender	8
Age-Sex Structure of the Population	9
Population Projections under Different HIV and AIDS Epidemic Assumptions	10
Population Projections under Two Fertility Assumptions	11
III. POPULATION, ECONOMIC DEVELOPMENT AND POVERTY REDUCTION	13
The Example of the “Asian Tigers”	14
Fertility and Household Poverty	18
IV. IMPACT OF RAPID POPULATION GROWTH ON SOCIAL AND ECONOMIC DEVELOPMENT	19
Education	19
Health	24
Migration, Urbanization and Human Settlement	32
Economy, Labour Force and Employment	35
Agriculture, Land Use and Food Security	40
Environment	46

V. POLICY RESPONSE	48
The Future Population	48
Population Programmes and Other Development Efforts Reinforce One Another	48
Unmet Need For Family Planning Services and the Public Policy Response	49
Key Components of an Effective Family Planning Unmet Need Strategy	51
Good Demographic Outcomes Depend on Good Policies	51
GLOSSARY	52
REFERENCES	54

LIST OF CHARTS

Chart 1. Population Trend	4
Chart 2. Fertility Trend	5
Chart 3. Trend in Modern Contraceptive Use	6
Chart 4. Unmet Need for Family Planning	7
Chart 5. Women's Status and Use of Modern Contraception	8
Chart 6. Age-Sex Structure, 2002	9
Chart 7. The Impact of HIV and AIDS on Population Size	10
Chart 8. Projections Using Two Different Fertility Assumptions	11
Chart 9. Future Population Size under Two Different Fertility Assumptions	12
Chart 10. Thailand's GDP Per Capita, 1960–1990	15
Chart 11. Thailand's Fertility Rate, 1960–1990	16
Chart 12. Primary School Enrolment, 2005–2035	20
Chart 13. Primary Teachers Required, 2005–2035	21
Chart 14. Primary Schools Required, 2005–2035	22
Chart 15. Expenditures on Primary School Education, 2005–2035	23
Chart 16. Health Dispensaries Required, 2005–2035	25
Chart 17. Nurses Required, 2005–2035	26
Chart 18. Annual Health Expenditures, 2005–2035	27
Chart 19. Effects of Birth Spacing on Infant Mortality	28
Chart 20. Adolescent Childbearing	30
Chart 21. Historic Growth of the Urban Population, 1967–2002	32
Chart 22. Size of the Urban Population, 2002–2035	33
Chart 23. New Urban Housing Units Required, 2005–2035	34
Chart 24. Historic GDP and GDP Per Capita, 1967–2005	35
Chart 25. Projected GDP Per Capita, 2005–2035	36
Chart 26. Composition of the Labour Force	38
Chart 27. Annual New Job Requirements, 2005–2035	39

Chart 28. Environmental Constraints	41
Chart 29. Food Production Required, 2004–2035	43
Chart 30. Maize Production, 2002–2005	44
Chart 31. Maize Production Required, 2004–2035	45
Chart 32. Woodfuel Consumption, 2005–2035	47

LIST OF IMAGES

Image 1. Cover picture on <i>The Tanzania Development Vision 2025</i> report.	3
Image 2. Poster of a larger family.	5
Image 3. National family planning logo, the Green Star.	6
Image 4. A nurse consults with a mother at a maternal-child health clinic in Iringa.	7
Image 5. Beaded AIDS ribbon.	10
Image 6. Tanzanian youth.	13
Image 7. Map of Southeast Asia.	14
Image 8. Poster at a primary health centre promotes family planning.	18
Image 9. Primary school students in class.	19
Image 10. A primary school.	22
Image 11. Demonstrating the proper treatment and use of bednets.	24
Image 12. A nurse at a health centre dispenses medicine.	26
Image 13. A mother waits to have her new-born baby vaccinated at a maternal-child health unit.	28
Image 14. Mothers and new-born babies wait for a well-baby check-up at the maternal-child health unit in Bahi Sokoni village.	29
Image 15. Young women in Tanzania often marry early and give birth as teenagers which exposes them to many risks.	31
Image 16. The challenge of keeping urban areas clean: dumped trash piles up.	33
Image 17. Slums in Dar es Salaam.	34
Image 18. Men paving road.	36
Image 19. More workers will need employment outside agriculture with modernization.	38
Image 20. A smaller proportion of the labour force will be in agriculture with modernization.	40
Image 21. Rapid population growth contributes to land degradation.	42
Image 22. Boy carrying a bag of potatoes.	43
Image 23. A maize field at sunset in Isangha village.	44
Image 24. Mt. Kilimanjaro is an important natural resource.	46
Image 25. Mothers and their children wait for a health visit at the maternal-child health unit in Isangha village.	48
Image 26. Family planning providers in the Missungwi District hospital holding up materials.	49

FOREWORD

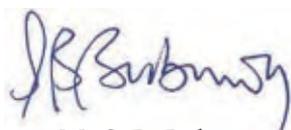
The Ministry of Planning, Economy and Empowerment is mandated to guide and coordinate strategic initiatives that address population issues and their role in the social and economic development of the nation. This new document, *Tanzania: Population, Reproductive Health and Development*, is designed to contribute to that effort. It considers the current status of the Tanzanian Mainland population and shows how population trends might affect the long-term development of the country. It is written in a readable format so that it can be widely used.

The term population planning can be used in two different ways. First, population variables need to be integrated into development planning regardless of the future size and rate of growth of the population. As the population continues to grow rapidly, the education sector needs to plan for more students, teachers and schools; the health sector has to anticipate a need for more facilities, physicians, nurses and supplies; and the agricultural sector has to plan for greater food production. With a much larger population, there will be greater pressures on the land, the forests and other natural resources. The cities will inevitably continue to grow and there will be relentless needs for more housing, water, transport, sanitation and other urban services. The economy will have to be more diversified and less dependent on agriculture to support a growing population, provide employment, improve living standards and eliminate abject poverty.

As Tanzania developed its poverty reduction approaches, the strategies initially treated population as a given, outside the realm of policy intervention. Increasing numbers had to be taken into account in planning, but population dynamics, especially the fertility and population growth rates, were not seen to be subject to influence.

Second, population planning can have an additional meaning as well. Although, as will be discussed in the document, the Tanzanian population is going to be much larger in the future than it is today no matter what happens to birth rates, the future size and rate of growth can be influenced by public policy measures taken now and in coming years. Population planning can also refer to public policy measures taken to influence the future size, growth, structure and distribution of the population. In recognition of this second meaning, in 2003 the Poverty Reduction Strategy progress report added the total number of family planning acceptors and the fertility rate to its indicator list.

Tanzania has an ambitious vision to provide a high quality of life for all the 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 should be used to that end.



Mr S. B. Buberwa

for PERMANENT SECRETARY

MINISTER OF PLANNING, ECONOMY AND EMPOWERMENT

ACKNOWLEDGEMENTS

The successful completion of *Tanzania: Population, Reproductive Health and Development* was made possible by the joint efforts of a number of organizations and individuals, whose participation we would like to acknowledge with gratitude. In particular we wish to recognize the United States Agency for International Development (USAID), which provided technical and financial support that enabled the working sessions to be undertaken.

Furthermore, it was accomplished through the collaborative efforts of staff from the Ministry of Planning, Economy and Empowerment (MPEE), the National Bureau of Statistics (NBS), the University of Dar es Salaam (UDSM), the Ministry of Health and Social Welfare, HealthScope Tanzania, Tanzania Gender Network Programme (TGNP), EngenderHealth Tanzania and the Health Policy Initiative Project.

We are especially grateful to the Director for Human Resources Planning Department, Mr S. B. Buberwa, for his contribution to the success of the exercise. We also acknowledge the special contributions and hard work of several individuals in the development of this document, in particular Ms Florence Mwanri, Ms Grace J. T. Ngallo, Mr Girson L Ntimba, Mr Majige Selemani, Mr Elisa Mjema, Mr William Rwechungura and Ms Nyangee Lugoe from MPEE, Ms Albina Chuwa from National Bureau of Statistics, Mr Clement Kihinga from Ministry of Health and Social Welfare, Ms Zippora L. Shelukindo from the Tanzania Gender Network Programme, Prof Milline J. Mbonile from the Demographic Training Unit, University of Dar es Salaam, Mr Michel Mushi from USAID Tanzania, Ms Jennifer Schlecht from EngenderHealth Tanzania, Mr Peter Riwa from HealthScope Tanzania and Dr Thomas Goliber and Ms Vicky Mayao from the Health Policy Initiative Project. Finally, we would like to thank the supporting staff whose valuable work is not always visible and acknowledged in technical documents.

SUMMARY

Tanzania continues to have high birth rates and one of the fastest growing populations in the world. At the current rate of growth, the population would double in size in about 25 years. The purpose of this document is to consider some of the implications of this rapid rate of growth for the social and economic development of the country. It is divided into five sections.

- I. ***The Tanzanian Development Vision.*** The country has a clear and ambitious vision for social and economic development and poverty reduction. The vision is forcefully articulated in *The Tanzania Development Vision 2025* and is summarized in this section.
- II. ***Population Characteristics and Projections.*** Tanzania is a high fertility, rapid population growth country with a young age structure. Contraceptive use remains low, although the unmet need for family planning is high. Gender relationships are one of the determinants of large family size. The population will continue to grow rapidly despite the HIV and AIDS epidemic. More importantly, the course of fertility will be a key determinant of the future size of the population.
- III. ***Population, Economic Development and Poverty Reduction.*** Much has been learned about the relationships between population, economic development and poverty reduction in recent years. 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 create a path out of poverty for many households.
- IV. ***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, urbanization, labour force and the economy, agriculture and the environment.
- V. ***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 contraceptives. High fertility and high population growth can be influenced by conscious public policy decisions to satisfy some of the high unmet need. One important public policy area is contraceptive security—ensuring that every person is able to choose, obtain and use quality contraceptives whenever one needs them. 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
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GNI	Gross National Income
GOT	Government of Tanzania
HIV	Human Immunodeficiency Virus
MDGs	Millennium Development Goals
NER	Net Enrolment Ratio
MKUKUTA	<i>Mkakati wa Kukuza Uchumi na Kupunguza Umasikini Tanzania</i>
MTEF	Mid-Term Expenditure Framework
SWAP	Sector-Wide Approach
Tshs	Tanzania Shillings
TDHS	Tanzania Demographic and Health Survey
TRCHS	Tanzania Reproductive and Child Health Survey
UNFPA	United Nations Population Fund
UPE	Universal Primary Education

INTRODUCTION

This book is about population, reproductive health and development. Since independence, Tanzania undertook census enumerations in 1967, 1978, 1988 and, most recently, in 2002. In addition, the country undertook Demographic and Health Surveys in 1991–1992, 1996 and 2004–2005 and the Reproductive and Child Health Survey in 1999. These census enumerations and surveys provide the basis for our understanding of national population dynamics. The incontrovertible picture that emerges is that the country continues to have one of the fastest growing populations in the world. Tanzania Mainland had an estimated population of around 36 million people in 2005, and the population growth rate was about 2.9 per cent per year. At this rate, the population would double in size in about 25 years.

The purpose of this book is to explore some of the challenges that rapid population growth poses for the national vision to emerge as a strong, middle-income economy in coming decades. The document is divided into five sections.

- ***The Tanzanian Development Vision*** – what is the national vision for social and economic development and poverty reduction
- ***Population Characteristics and Projections*** – what are some of the noteworthy demographic characteristics of the country; how will the HIV and AIDS epidemic affect population growth; how will the population grow under different assumptions
- ***Population, Economic Development and Poverty Reduction*** – what does international experience tell us about the relationship 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*** – what basic strategy can the country adopt to affect population dynamics

I. THE TANZANIAN DEVELOPMENT VISION

The Tanzania Development Vision 2025 sets the national development agenda. The major aims are to achieve a high-quality livelihood for the people, attain good governance through the rule of law and develop a strong and competitive economy. To attain the vision, Tanzania has adopted the following goals.

High-quality livelihood

- Food self-sufficiency and food security
- Universal primary education
- Gender equality
- Quality primary health care for all
- Quality reproductive health services
- Reductions in infant and maternal mortality
- Universal access to safe water
- Increases in life expectancy
- Absence of abject poverty

Good governance and the rule of law

- Desirable moral and cultural uprightness
- Strong adherence to and respect for the rule of law
- Absence of corruption
- A learning society

A strong and competitive economy

- A middle-income economy that is diversified and includes a substantial industrial sector
- Macroeconomic stability
- A high annual rate of economic growth
- Adequate physical infrastructure

The vision sees agricultural production moving from a traditional to a much more modern sector. In the process, the labour force will become more diversified, better educated and more highly skilled.

The vision also states that rapid economic growth and transformation can be pursued while, at the same time, effectively reversing current adverse trends in the degradation of the environment.

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

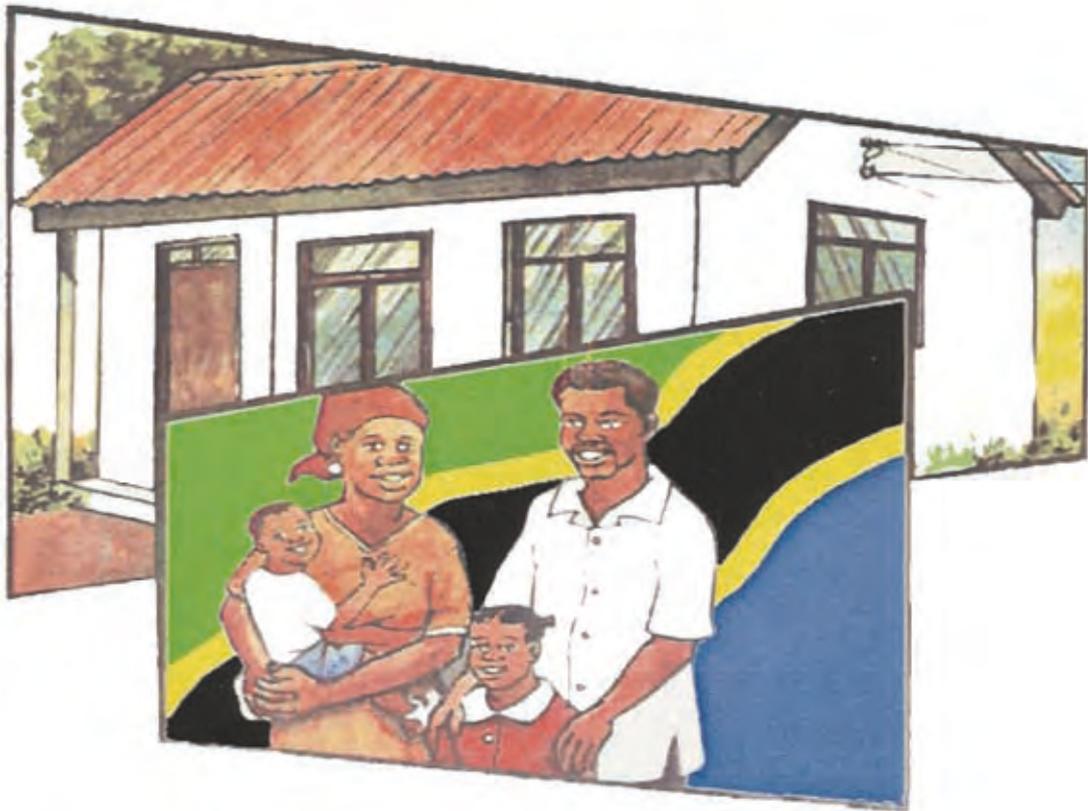


Image 1. Cover picture on *The Tanzania Development Vision 2025* report.
Source: *The Tanzania Development Vision 2025*.

II. POPULATION CHARACTERISTICS AND PROJECTIONS

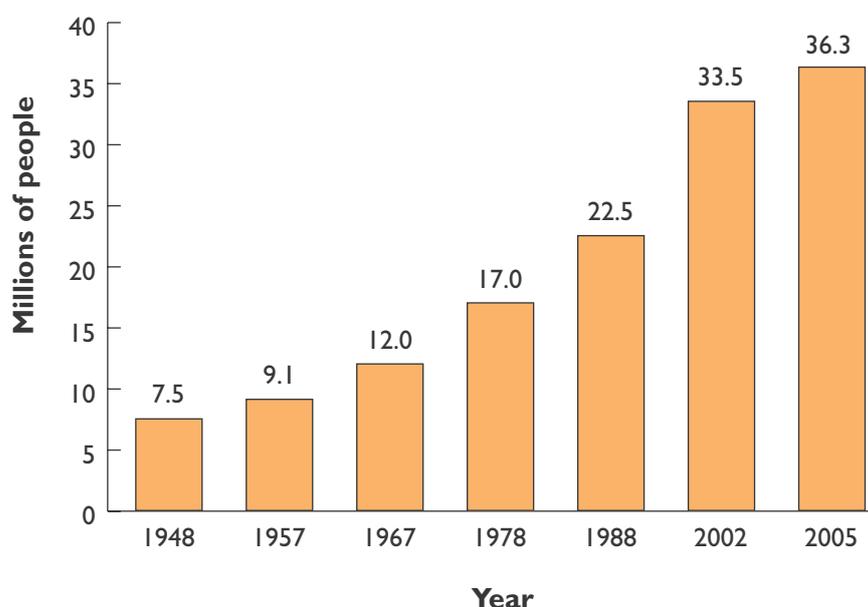
This section first looks at the population situation in the country. Importantly, it explores the impact of the HIV and AIDS epidemic on population growth. It then projects the population to 2035 using different assumptions about the future pattern of fertility.

Population Growth

Tanzania Mainland continues to have one of the fastest growing populations in the world. The population is estimated at about 36 million people in 2005 and is growing about 2.9 percent a year, a rate at which it would double in size in approximately 25 years.

The different censuses show that rapid population growth has characterized Tanzania for a long time. In 1948, Tanzania (Mainland) had a small population of 7.5 million people. By the time of the 1978 census, another 10 million people had been added to the size of the population. By 2005, the population was near 36 million, nearly five times larger than it had been in 1948.

Chart I. Population Trend



Source: Tanzania Population and Housing Censuses, 1948, 1957, 1967, 1978, 1988 and 2002. The 2005 estimate is based on the projections prepared for this analysis using the RAPID model and may differ modestly from estimates that use other projection methodologies.

This rapid increase in population occurred for many reasons. Traditional Tanzanian society was overwhelmingly rural, agrarian and organized along traditional kinship lines. Death rates tended to be high and went up even further during periods of crisis. This meant that, despite the high birth rates, the population grew very slowly. However, improved public health measures, medical services, hygienic practices and other factors contributed to steady declines in mortality earlier in the 20th century. Death rates dropped while birth rates remained high and the rate of population growth soared. These changes started in the 1920s, but intensified in the post-World War II era. Consequently, the Tanzanian population grew very rapidly after 1950. The same process occurred in other African countries and elsewhere in the developing world.

Fertility

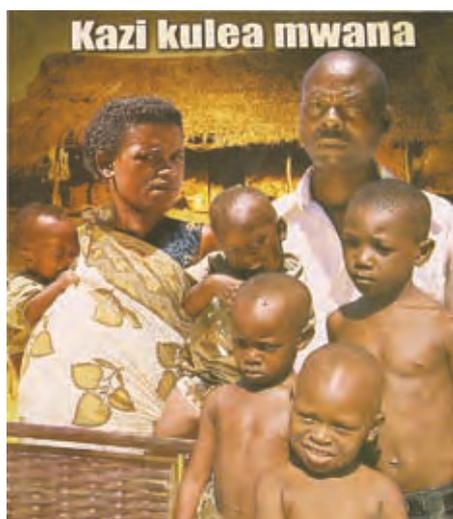
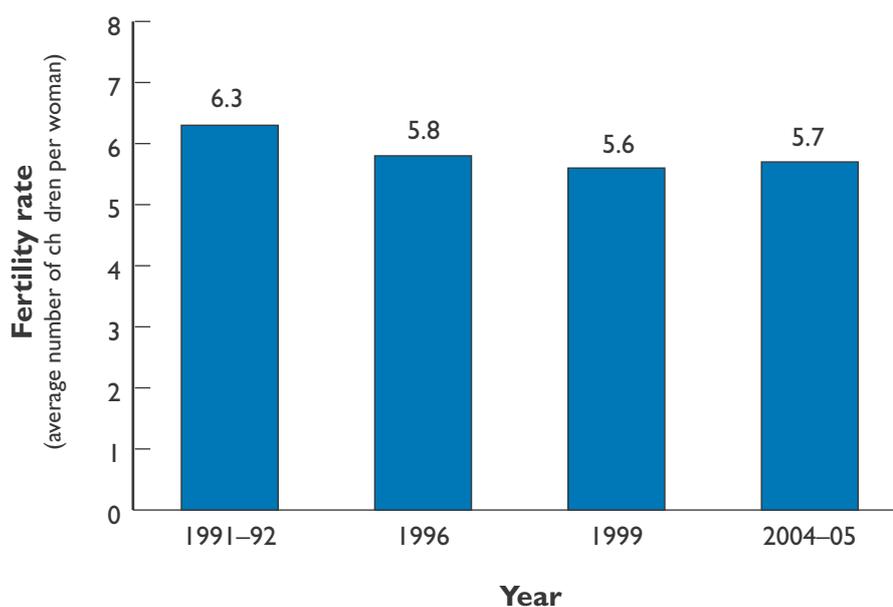


Image 2. Poster of a larger family.

Photo credit: © 2005 Alfredo L. Fort, Courtesy of Photoshare

The fertility rate is a measure used to describe the average number of children per woman during her lifetime. Fertility rates have dropped only modestly over time, and high fertility still continues to be one of the most important characteristics of the Tanzania population. At the time of independence (1961), the fertility rate was close to 6.8 children per woman. The first two Tanzania Demographic and Health Surveys (TDHSs) reported the fertility rate at 6.3 in 1991–1992 and 5.8 in 1996. However, the 1999 Tanzania Reproductive and Child Health Survey (TRCHS) and the 2004–05 TDHS, respectively, indicated fertility rates of 5.6 and 5.7 children per woman. This basically means that the fertility rate has not changed over the past decade in Tanzania.

Chart 2. Fertility Trend



Source: Tanzania Demographic and Health Surveys, 1991/92, 1996 and 2004–05. *Tanzania Reproductive and Child Health Survey, 1999.*

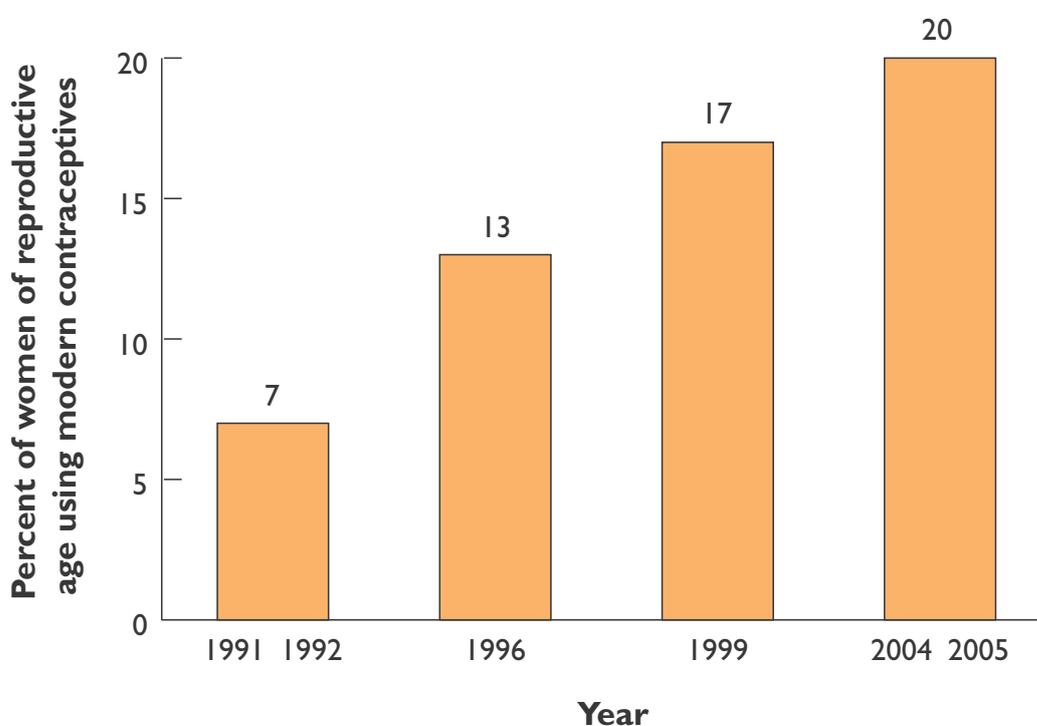
Contraceptive Use

At the same time, modern contraceptive use among married women of reproductive age has increased, but only slowly, especially in recent years. Based on the various surveys, modern contraceptive use increased from 7 percent in 1991–1992 to 13 percent in 1996, 17 percent in 1999 and 20 percent in 2004–2005. Even at 20 percent, Tanzania has one of the lowest levels of contraceptive prevalence in eastern and southern Africa. Another 6 percent of married women use a traditional method.



Image 3. National family planning logo, the Green Star.

Chart 3. Trend in Modern Contraceptive Use



Source: Tanzania Demographic and Health Surveys, 1991/92, 1996 and 2004–05. *Tanzania Reproductive and Child Health Survey, 1999.*

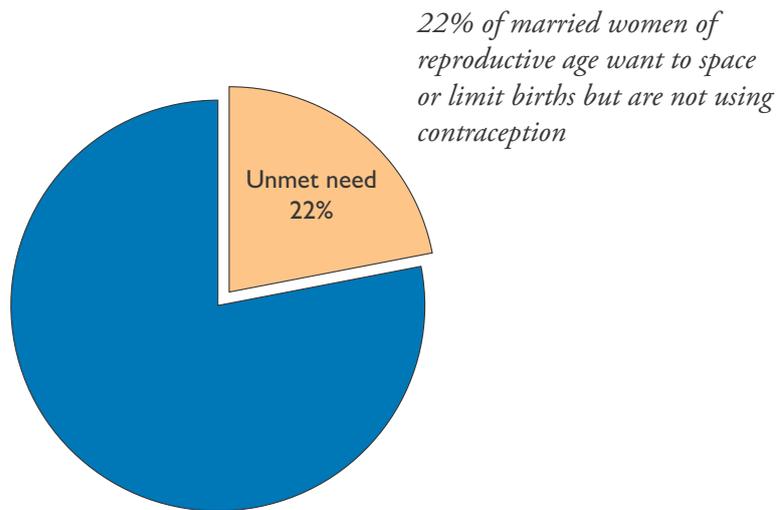
At times, inconsistent supplies of contraceptive commodities and lack of readily available services discourage use of contraceptives. On the demand side, a fear of side effects, opposition to family planning and a desire to have as many children as possible are the reasons most often cited for non-use.

For statistical purposes, the 2004–05 TDHS divides the country into zones that can be used to show variation in contraceptive use. For example, the modern contraceptive prevalence rate is 30 percent in Northern Zone (Kilimanjaro, Tanga, Arusha, Manyara), but only 11 percent in Western Zone (Tabora, Shinyanga, Kigoma).

Unmet Need

Unmet need refers to the percentage of married women of reproductive age who are able to bear children and who want to wait at least two years before their next birth or who want to stop childbearing altogether but who are not using any method of family planning. Although use of contraception is low, TDHS shows that Tanzania has a high unmet need for family planning services. Unmet need is a critical concept when considering the importance of population to achieving Tanzania's vision. In Tanzania, 22 percent of currently married women want to space or limit their births but are not using contraception. This shows that a large unmet need for family planning exists in Tanzania.

Chart 4. Unmet Need for Family Planning



Source: *Tanzania Demographic and Health Survey, 2004–05.*



Image 4. A nurse consults with a mother at a maternal-child health clinic in Iringa.

Photo credit: USAID / J. Dunlop.

Gender

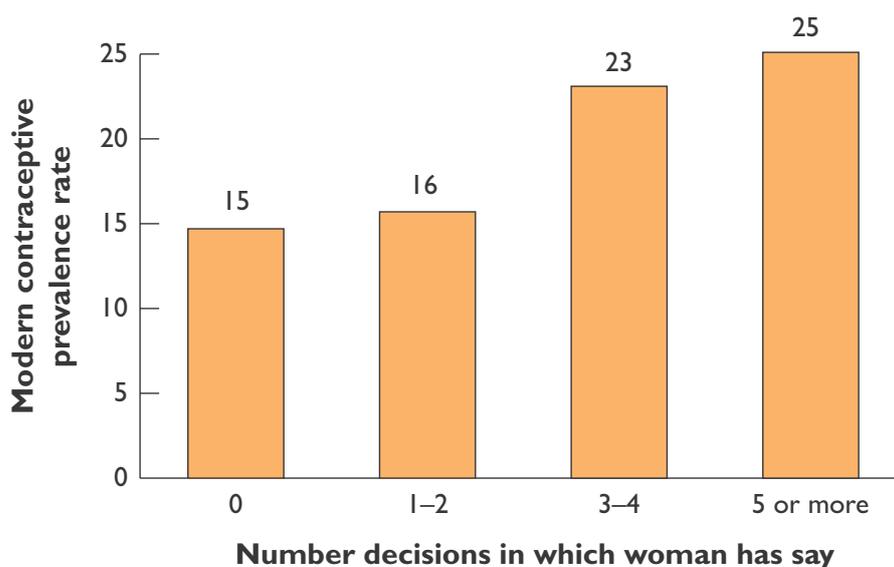
Gender relations are also an important factor in the population landscape. Gender describes the socially constructed roles, activities and responsibilities that stem from widely held beliefs, expectations and obligations associated with being a woman or man. The low status of women is associated with lack of power in decision making over their own sexual desires, needs and sexual interactions. Conversely, the status of men is associated with control over sexual relations. Examining gender roles and the relationship between women and men helps to explain the underlying gender attitudes.

The 2004–05 TDHS shows that 84 percent of women who earn cash for their work decide on their own or jointly with another person how to use their earnings. In the rural areas, 75 percent of women decide on their own or jointly on how their earnings are used. It should, however, be understood that the level of earning and type of work typically done by women relegates them to a low status. Women do not usually own assets, and they rarely have the ability or opportunity for autonomous decision making. This culture of silence is reflected also in making decisions about sex. Gender discrimination is often related to the value placed on women and girls which reflects the importance given to women’s activities and responsibilities.

Restrictions on women’s choices, opportunities and participation have direct consequences for their social and economic participation. Gender inequality holds back growth of individuals and their development. Empowering women and eliminating gender inequality increases the power of women, men, households and communities to address population and reproductive health. Working towards gender equality and women’s empowerment contributes to balanced population growth and economic development.

According to the 2004–05 TDHS, there is a strong correlation between status of women and ideal family size and family planning use. For example, only about 15 percent of women who have no say in household decisions use a modern method of family planning. By contrast, 25 percent of women who have power in decision making use a modern method.

Chart 5. Women’s Status and Use of Modern Contraception



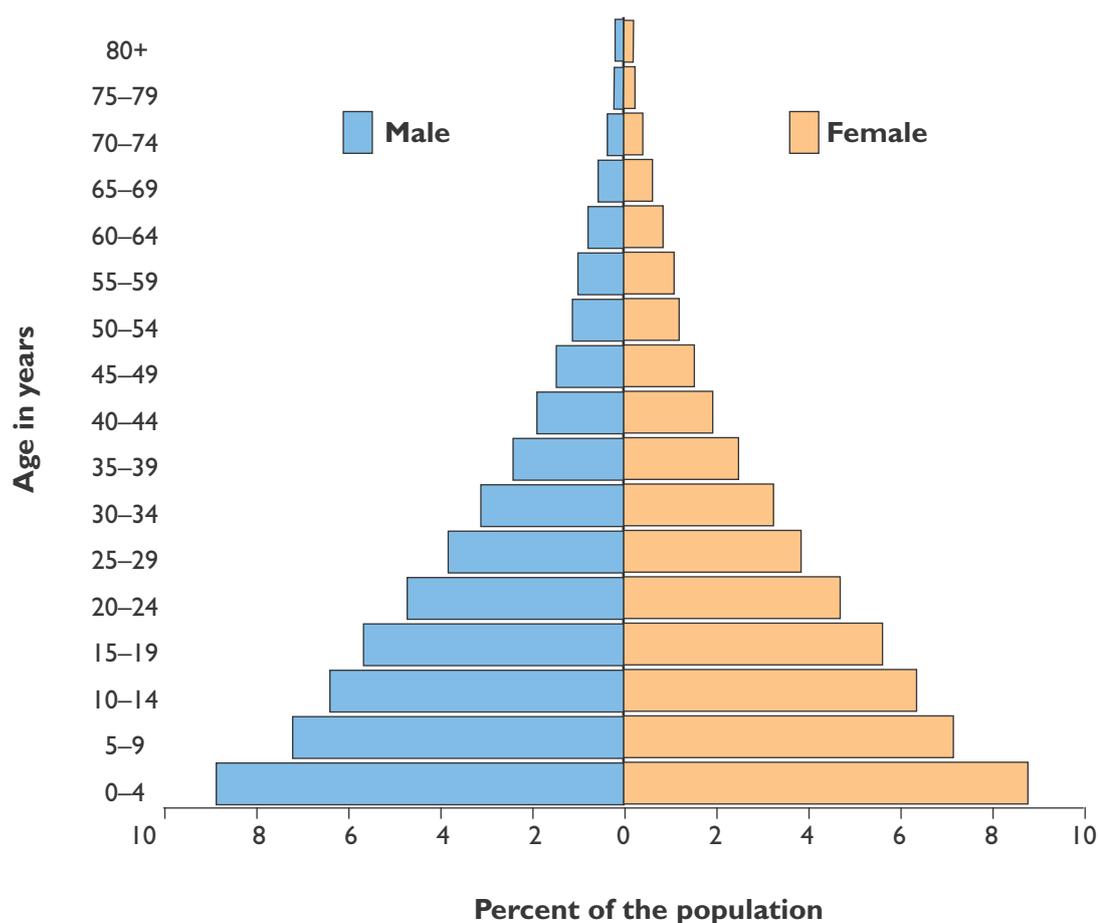
Source: *Tanzania Demographic and Health Survey, 2004–05.*

Age-Sex Structure of the Population

Tanzania has a very young population because birth rates have been so high for a long time. The 2002 census reports that about 44 percent of the population is under the age of 15. The young age structure has important population and development implications.

- It creates a high child dependency ratio that places a heavy burden on the working age population and constrains the provision of basic needs and social services. The child dependency ratio, the number of child dependants under the age of 15 for every 100 adults in the working ages, is about 85 in Tanzania.
- The young population also means that there is an in-built momentum for future population growth. Population momentum is a difficult concept, but an important one. Today's children will soon grow into their reproductive age. Because there will be so many couples having children, the population growth rate will stay high even if fertility starts to fall. Even at replacement level fertility (slightly over a 2-child per woman average), the population will continue to grow for another 40–50 years because of the in-built momentum. Although the concept is difficult, the important lesson is clear. Due to high fertility and population momentum, it is probable that the Tanzanian population will continue to grow for most of the remainder of the 21st century, even if fertility rates decline.

Chart 6. Age-Sex Structure, 2002



Source: 2002 Population and Housing Census.

Population Projections under Different HIV and AIDS Epidemic Assumptions

AIDS is a killer disease. In the 1990s, death rates started going up in Tanzania after many decades of mortality decline. Many thoughtful people have wondered whether rising death rates as a consequence of the HIV and AIDS epidemic mean that population growth is no longer such a fundamentally important issue to Tanzanian development.

This analysis used two different population projections for the Mainland to explore this question. Both projections are for 30-year periods, 2005–2035. Both use the same set of assumptions about fertility (high fertility continued) and mortality from causes other than AIDS. The first projection is strictly hypothetical and assumes that there never was an HIV and AIDS epidemic. The second projection assumes that adult HIV prevalence remains near present levels until 2020 and then tapers off afterwards. It also assumes increasing access to antiretroviral treatment.

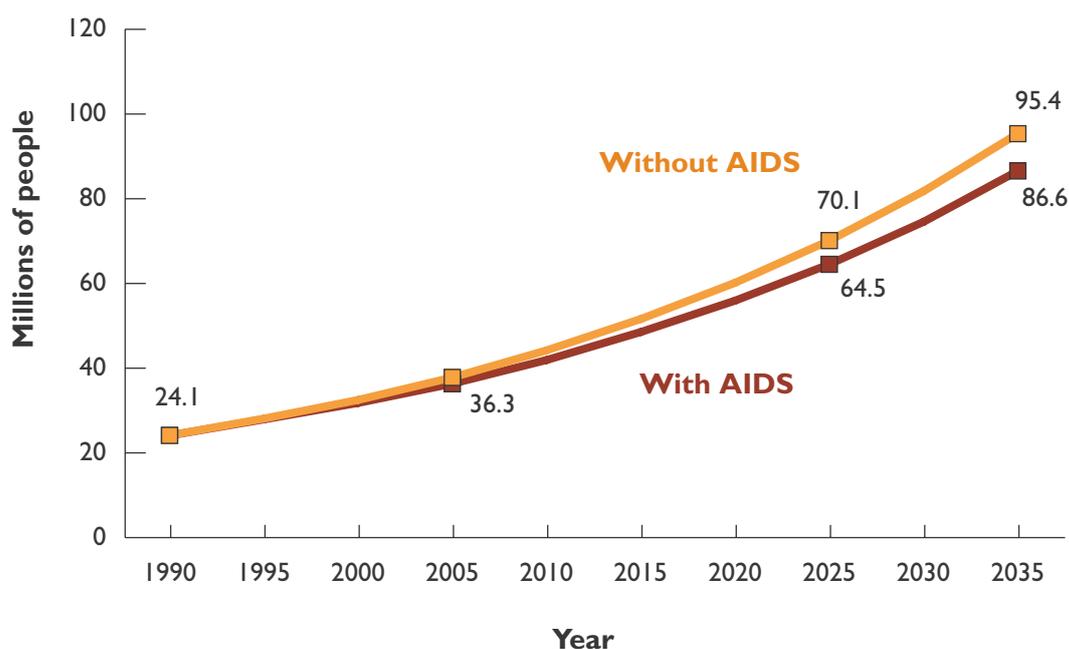


Image 5. Beaded AIDS ribbon.

In 2025, the population would be 70.1 million under the “Without AIDS” projection versus 64.5 million under the “With AIDS” projection, a difference of 5.6 million people or 8 percent of the population. In 2035, the population would be 95.4 million people under the “Without AIDS” projection as against 86.6 million under the “With AIDS” projection, a difference of 8.8 million people. Clearly, the HIV and AIDS epidemic will have an important demographic impact on the Tanzanian population over time.

However, even with HIV prevalence continuing at a high level, the population would grow from about 36 million people in 2005 to 64.5 million people in 2025 and 86.6 million in 2035. High birth rates are much more important in determining the future population size of Tanzania than are rising death rates from AIDS.

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



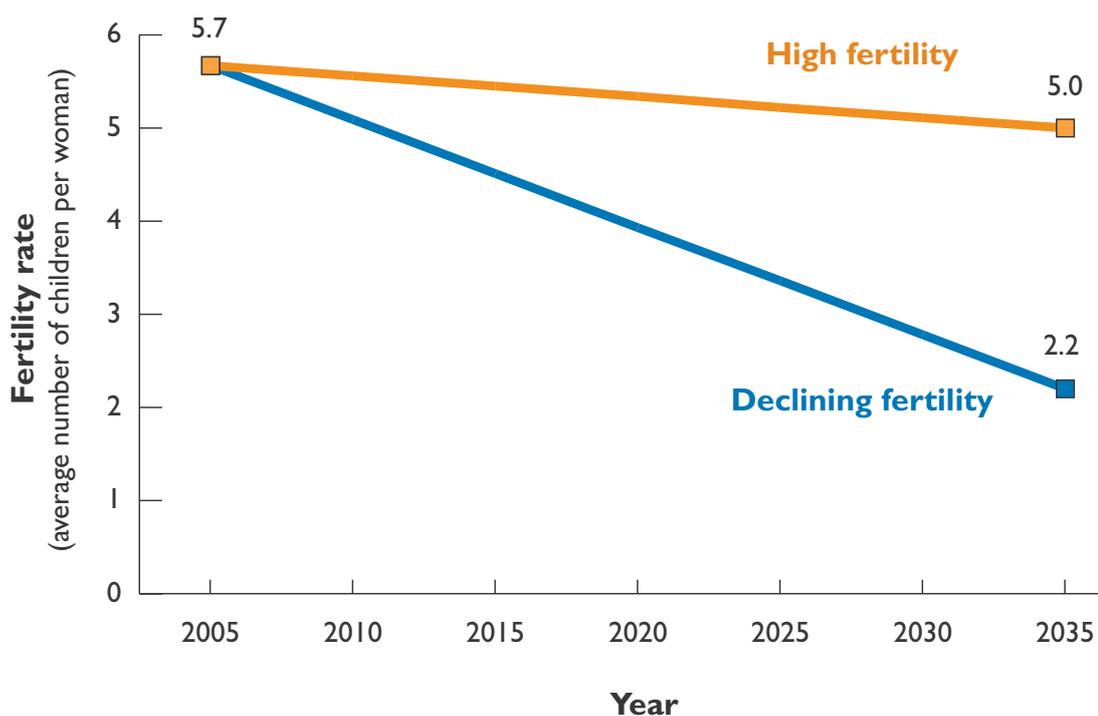
Source: Projections prepared for this analysis using RAPID model.

Population Projections under Two Fertility Assumptions

Primarily because the fertility rate is high, the Tanzanian population is inevitably going to be much larger in the future. Nonetheless, what happens to fertility will have a powerful impact on the future size of the population. Based on historical experience elsewhere in the developing world, 30 years is about the minimal amount of time that Tanzania would need to achieve a complete transition from high to low fertility.

Here, this analysis again uses two population projections to look at the impact of different fertility rates on the future size of the population. The projection period is for 30 years, 2005–2035. Both projections use the same assumptions about HIV prevalence. The other assumptions in these projections are also the same except for the fertility rate. In the first case, the fertility rate stays high, declining only from 5.7 children per woman in 2005 to 5.0 children per woman in 2035. In the second projection, fertility declines to just slightly over two children per woman by 2035, or what demographers term replacement level fertility (see Glossary). 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.

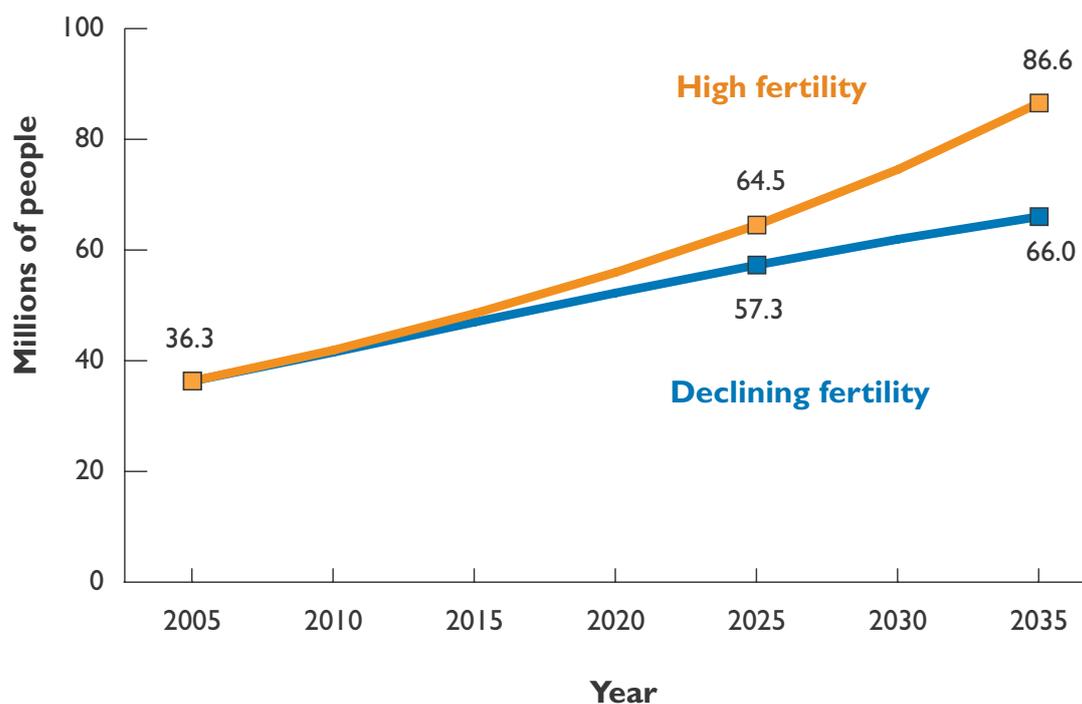
Chart 8. Projections Using Two Different Fertility Assumptions



Source: *Tanzania Demographic and Health Survey, 2004–05* and RAPID model assumptions

In the high fertility projection, the population of Tanzania Mainland would grow from about 36 million people in 2005 to 64.5 million people in 2025 and 86.6 million in 2035. By contrast, in the declining fertility projection, the population would increase from nearly 36 million people in 2005 to 57.3 million in 2025 and 66.0 million in 2035. By the end of the projection period, there would be 20.6 million fewer people in the population in the low fertility scenario.

Chart 9. Future Population Size under Two Different Fertility Assumptions



Source: Projections prepared for this analysis using RAPID model.

III. POPULATION, ECONOMIC DEVELOPMENT AND POVERTY REDUCTION

Tanzania remains a poor country. Definitions of poverty and subsequent estimates of poverty levels can vary significantly from one another. The *Poverty and Human Development Report 2005* concludes that Tanzania's poverty line is low by international and regional standards and, therefore, underestimates the true level of poverty in the country. The report says: "If one were to calculate poverty in Tanzania using the international dollar a day poverty line . . . poverty incidence would be around 57.5 percent of the population" (p. 114).

Poverty reduction is the heart of the Tanzanian development effort. The *National Strategy for Growth and Reduction of Poverty*, MKUKUTA in the Kiswahili version, emphasizes rapid economic growth as the fundamental poverty-reducing approach. The country aspires to become a middle-income economy with no abject poverty.

A number of recent analyses have summarized the state-of-the-art thinking on the relationships between population growth and economic development.¹ 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.



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.

Image 6. Tanzanian youth.

Photo credit: USAID / M. Douglas.

¹ See, for example, Nancy Birdsall et al., 2001.

The Example of the “Asian Tigers”



Image 7. Map of Southeast Asia.

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. Forty-five years ago, many East Asian countries were poor with limited resources and rapidly growing populations. Living standards were no higher than in Tanzania 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.

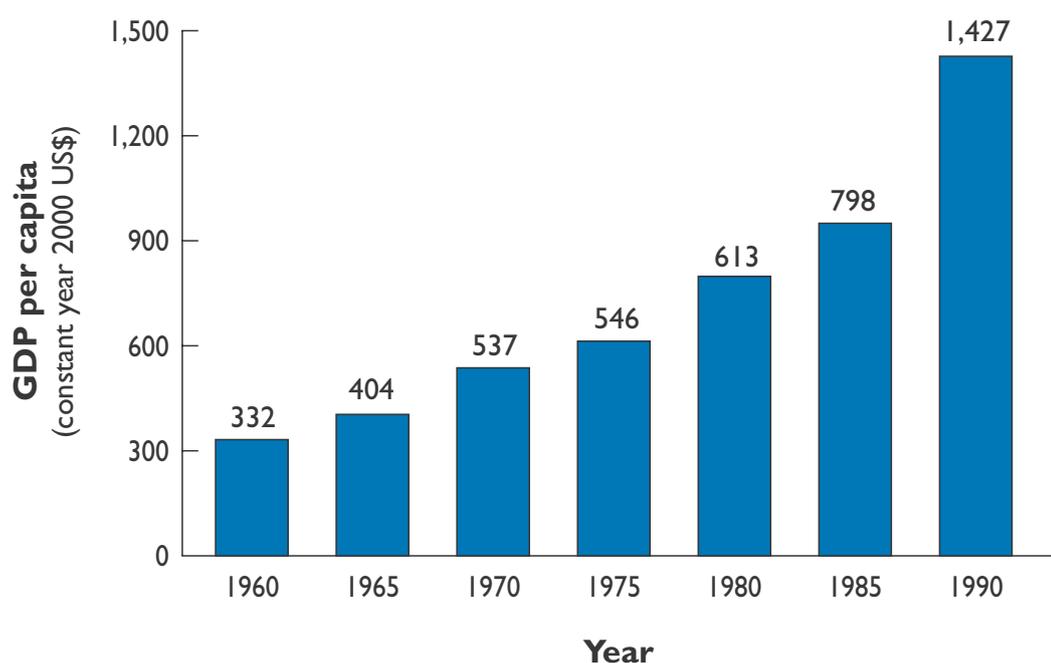
Each of the Tigers experienced a fertility transition from high to low birth rates in a single generation, and this rapid drop in fertility created a “demographic dividend” that helped to drive rapid economic expansion.² This happened for several reasons. With declining fertility, more resources were 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, 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 characterized the economic miracle of the Asian Tigers.

² 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 low-income status 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\$330, very close to the Tanzanian GDP per capita today. By 1990, however, Thai GDP per capita had risen to nearly US\$1,430 and Thailand has moved well into the ranks of the middle-income countries.

Chart 10. Thailand's GDP Per Capita, 1960–1990



Source: World Bank Development Indicators.

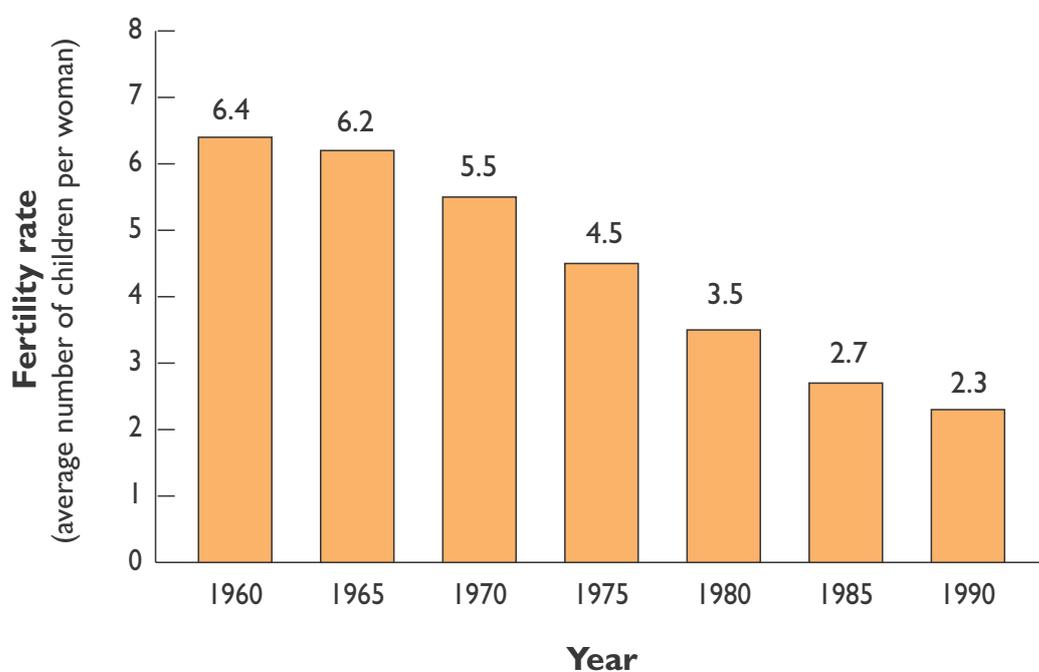
Thai Fertility Declined From High to Low Levels

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, even higher than what exists in Tanzania today (5.7 children per woman).

By 1990, however, the Thai fertility rate had declined to 2.3 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. Declining fertility provides an opportunity for rapid economic expansion, and other policies and investments are needed to take full advantage of the opportunity. However, it is also improbable that Tanzania can achieve its economic aspirations without declining fertility.

Chart 11. Thailand's Fertility Rate, 1960–1990



Source: World Bank Development Indicators.

China and India: Economic Development and Fertility Decline

In 2005, China had a population of 1.3 billion people while India had a population of 1.1 billion. Together, these two demographic giants accounted for about 37 percent of the population of the entire world. Both China, one of the Asian Tigers, and India have been experiencing rapid economic growth and declining fertility.

China has had sustained high rates of economic growth since the late 1970s. In 2005, for example, the economy grew by more than 9 percent. In the process, China has emerged from a low-income economy to a middle-income economy with the second largest GDP in the entire world. Concurrent with this economic leap, China pursued a rigorous population policy, including adoption of a one-child policy in 1979. Between the 1960s and the early 1990s, the country underwent a complete transition from high to low fertility. The current fertility rate averages below 2-children per woman, although the population continues to grow because of the in-built momentum.

While trailing China, India has also been experiencing rapid economic growth, especially since the reforms in the early 1990s. In 2005, the economy grew by an estimated 7.6 percent. The fertility rate has also been declining in India, although the fertility transition has been slower than in China. India first launched a family planning programme in the early 1950s. Subsequently, the fertility rate has declined from just under 6 children per woman in the mid-1960s to about 3 children per woman at present. For the most part, economic development has been greatest in those Indian states with the largest fertility decline, such as Kerala.

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.

(1) 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.

(2) High fertility can limit educational opportunities for children in poor families, especially girls. Low levels of educational attainment perpetuate family poverty.

(3) Smaller families are in a better position to care for the health and nutrition of their children. Malnutrition is widespread in Tanzania. The most recent Tanzania Demographic and Health Survey reports that 38 percent of children were stunted in 2005. Malnutrition results in mental and physical underdevelopment, making it harder to break the poverty cycle.

(4) Smaller family size can mean that family income is shared among fewer people, making more resources available for each.

In Tanzania, the fertility rate is highest among women in the poorest households³ (7 children per woman) while contraceptive use is lowest among the poorest women (12 percent of married women of reproductive age use a modern method). At the same time, unmet need for family planning services among women in the poorest households (23 percent) is just as high as it is among women in other households (21 percent). Increased access to family planning services by poor women could be one effective poverty-alleviation strategy.



- Fewer and better-spaced pregnancies result in lower maternal and child death and sickness rates.
- High fertility can limit educational opportunities for children in poor families, especially girls.
- Smaller families are in a better position to care for the health and nutrition of their children.
- Smaller family size can mean that family income is shared among fewer people.

Image 8. Poster at a primary health centre promotes family planning.
Photo credit: © 2005 Alfredo L. Fort, Courtesy of Photoshare.

³ The TDHS divides households into five wealth groups of equal size. The reference is to the two lowest groups, which represent the poorest 40 percent of all households.

IV. IMPACT OF RAPID POPULATION GROWTH ON SOCIAL AND ECONOMIC DEVELOPMENT

This section explores the difference a lower rate of population growth would have on the ability of Tanzania to achieve its social and economic development objectives and to emerge as a middle-income economy. It uses the two different population projections to consider the importance of population factors to Tanzania's vision to provide a high quality of life for its people and to eliminate abject poverty.

Education

The Tanzania Development Vision 2025 identifies universal primary education (UPE) as a fundamental goal for the development of the nation. UPE is also one of the Millennium Development Goals (MDGs). Education is seen as a path to poverty reduction and the improvement of human capabilities. To that end, Tanzania abolished primary school fees in 2000. Enrolments subsequently soared, straining available resources for education. According to statistics from the then Ministry of Education and Culture (now Ministry of Education and Vocational Training), the gross enrolment ratio⁴ (GER) went up from 78 percent in 2000 to 99 percent in 2002 and 110 percent in 2005. The net enrolment ratio⁵ (NER) rose from 59 percent in 2000 to 81 percent in 2002 and 95 percent in 2005. Primary enrolments for Tanzania Mainland in both government and non-government schools increased from 4.4 million pupils in 2000 to 7.5 million in 2005. Males accounted for 51 percent of enrolled students and females for 49 percent.



Image 9. Primary school students in class.

Photo credit: Worldviewimages.com

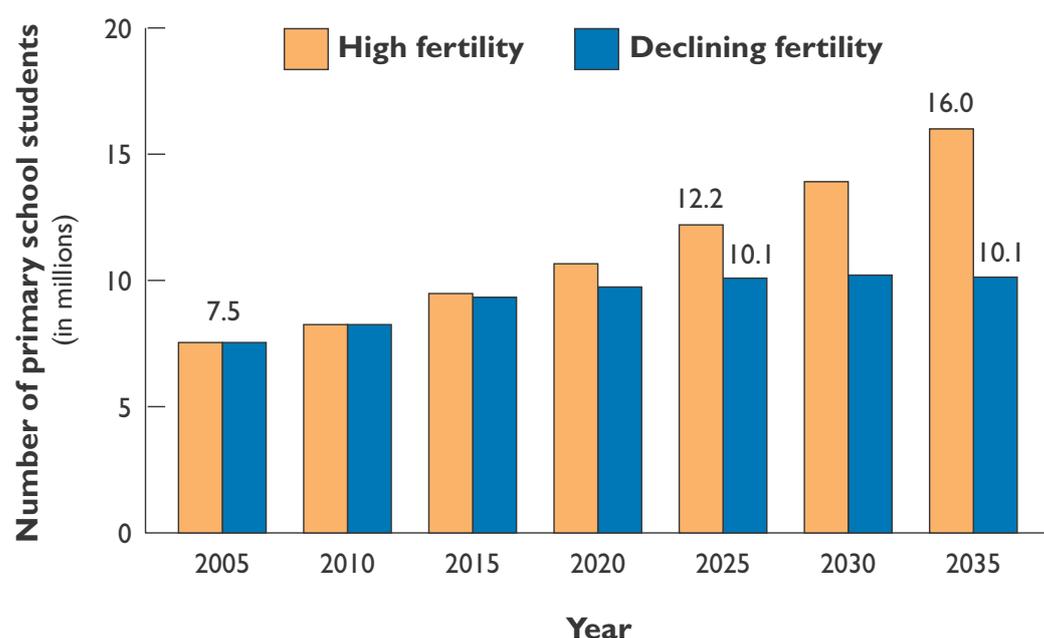
⁴ Gross enrolment ratio is the number of primary students of all ages divided by the total number of children aged 7–13 years old.

⁵ Net enrolment ratio is the number of primary students aged 7–13 divided by the total number of children aged 7–13 years old.

Primary School Enrolment

Assuming universal primary education, the rate of population growth will affect educational needs and challenge available resources over time. In the high fertility projection, the number of primary school students in Tanzania would increase from 7.5 million in 2005 to 12.2 million in 2025 and 16.0 million in 2035. By contrast, in the declining fertility projection, the number of primary students would be 10.1 million in 2025 and also 10.1 million in 2035, or 5.9 million fewer students than would be the case with the first projection. Educational planning and resource allocation will depend on the future demographic trends of the country.

Chart 12. Primary School Enrolment, 2005–2035



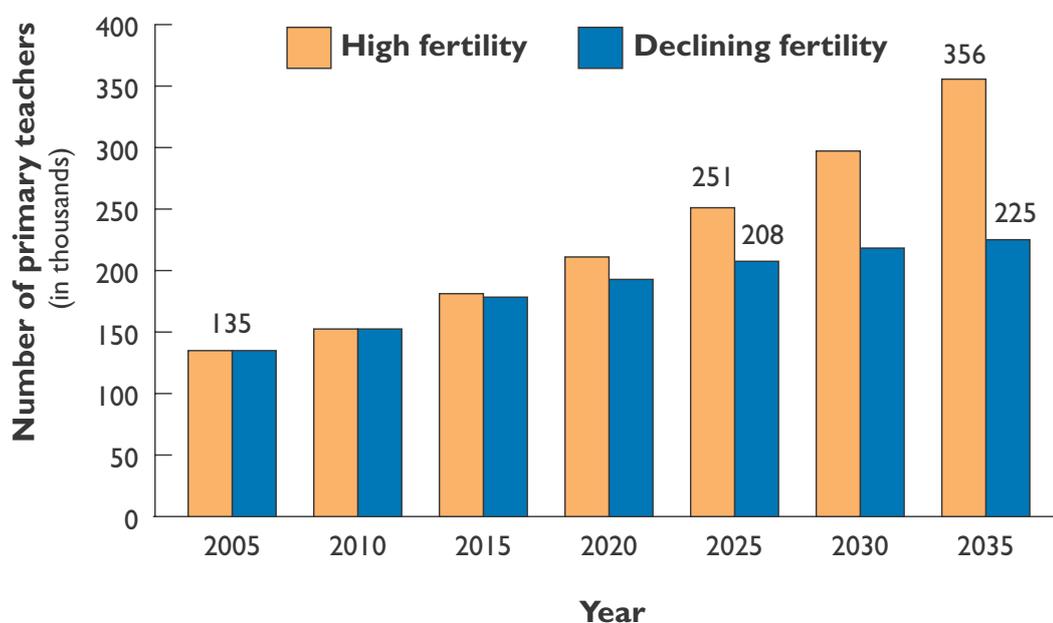
Source: *Basic Education Statistics in Tanzania (BEST), 1995–2005: National Data* and projections prepared for this analysis using RAPID model.

Primary Teachers

Adequate numbers of trained teachers will be required to sustain educational reform and expansion. Ministry of Education and Vocational Training reports a ratio of 56 primary students per teacher in 2005. Not surprisingly, the primary student/teacher ratio has gone up over time with rapidly increasing enrolments after 2000. In 2000, there was one teacher for every 41 primary students, and the ratio was even lower in earlier years.

The following projections assume that the primary pupil/teacher ratio falls back again over the projection period from about 56 to 45 students per teacher. In this case, the required number of primary teachers would increase from around 135,000 in 2005 to 251,000 in 2025 and 356,000 in 2035 in the high fertility projection. As a point of comparison, the required number of primary teachers would be 208,000 in 2025 and 225,000 in 2035 under the declining fertility projection. By the end of the projection period, about 131,000 fewer teachers would be required under the lower fertility projection.

Chart 13. Primary Teachers Required, 2005–2035

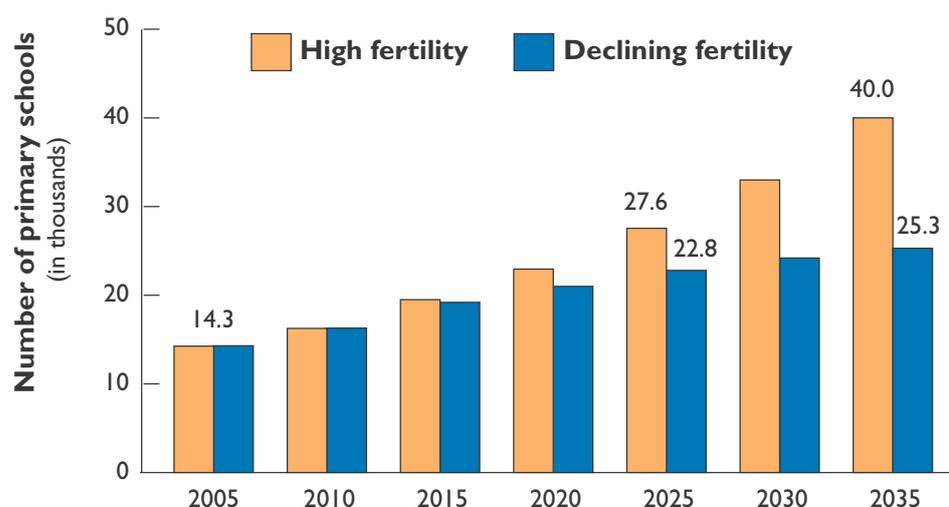


Source: *Basic Education Statistics in Tanzania (BEST), 1995–2005: National Data* and projections prepared for this analysis using RAPID model.

Primary Schools

In 2005, there were about 529 primary students per school, considerably higher than the ratio of 376 students per primary school that existed in 2000. These projections assume that the student/school ratio drops to about 400 primary students per school by the end of the projection period. With this assumption, the required number of primary schools for the country would increase from about 14,300 in 2005 to 27,600 in 2025 and 40,000 in 2035, if fertility stays high. With fertility decline, however, the needed number of primary schools would be 22,800 in 2025 and 25,300 in 2035.

Chart 14. Primary Schools Required, 2005–2035



Source: *Basic Education Statistics in Tanzania (BEST), 1995–2005: National Data* and projections prepared for this analysis using RAPID model.



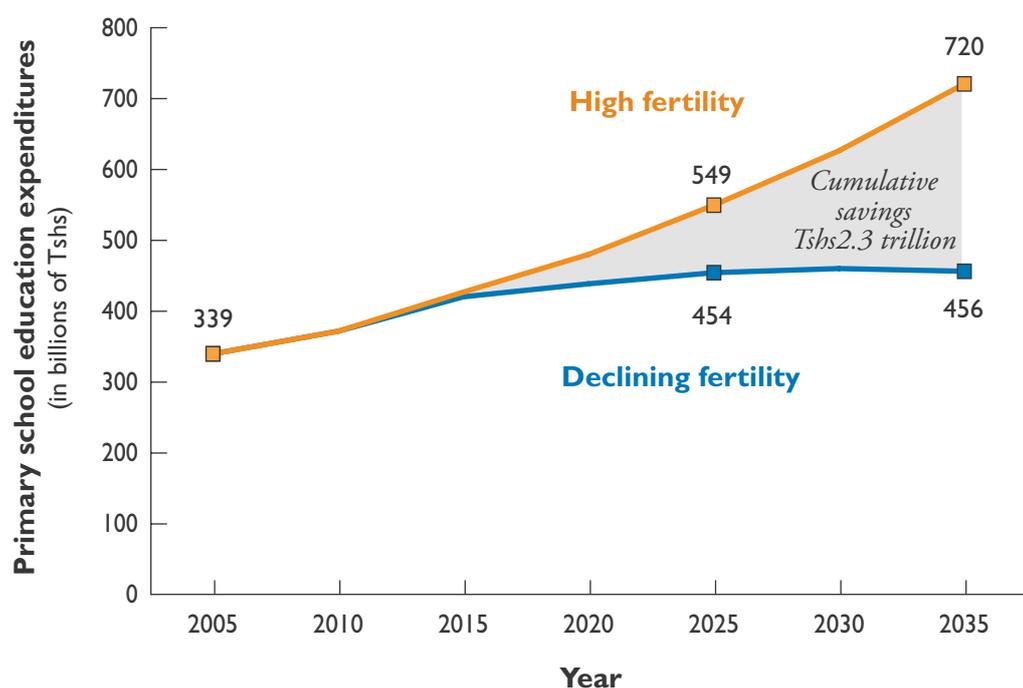
Image 10. A primary school.

Photo credit: 2006 HealthScope Tanzania.

Expenditures on Primary Education

In 2004, Tanzania spent about Tshs45,000 per primary student. Were that level of expenditure to continue (in constant values), primary expenditures would reach about Tshs549 billion in 2025 and Tshs720 billion in 2035 with continued high fertility. With fertility decline, however, the budget would rise more slowly to Tshs454 billion in 2025 and Tshs456 billion in 2035. Over the projection period, the cumulative difference between the two projections would be Tshs2.3 trillion. Some of the savings could be used to increase expenditures to achieve and sustain universal primary education, enhance teacher training and strengthen rural schools.

Chart 15. Expenditures on Primary School Education, 2005–2035



Source: *Basic Education Statistics in Tanzania (BEST), 2005: Regional Data* and projections prepared for this analysis using RAPID model.

Health

A fundamental goal of *The Tanzania Development Vision 2025* is “access to primary health care for all.” The main priorities of the first Poverty Reduction Strategy were basic education and health. The *Poverty and Human Development Report 2005* was able to note some significant achievements in improving the health of young children. Based on reporting from the 1996 and 2004–05 Tanzania Demographic and Health Surveys, infant mortality (number of infants who die before their first birthday for every 1,000 live births) declined from 88 to 68 and under-five mortality (number of children who die before their fifth birthday for every 1,000 live births) declined from 137 to 112. The impressive declines can largely be attributed to improved malaria control, including greater use of preventive bednets and more effective malarial drug treatment.

Major challenges remain, however. For example, maternal mortality showed no evidence of decline between the 1996 and the 2004–05 Tanzania Demographic and Health Surveys. Malaria remains the leading cause of sickness and death. Most child deaths result from preventable causes, such as malaria, pneumonia, diarrhoea, malnutrition, complications of low birth weight and mother-to-child transmission of HIV. Most often, children die at home, and without contact with formal health services. In addition, the HIV and AIDS epidemic is placing intense strains on the health system. Tuberculosis and cholera are on the increase. Tanzania is hindered in its efforts to meet the health needs of the population by insufficient financing, severe shortages of trained personnel and inadequate facilities, supplies and equipment. The high rate of population growth is one of the factors that needs to be taken into account as Tanzania strives to ensure universal access to primary health care and improve health outcomes.



Image 11. Demonstrating the proper treatment and use of bednets.

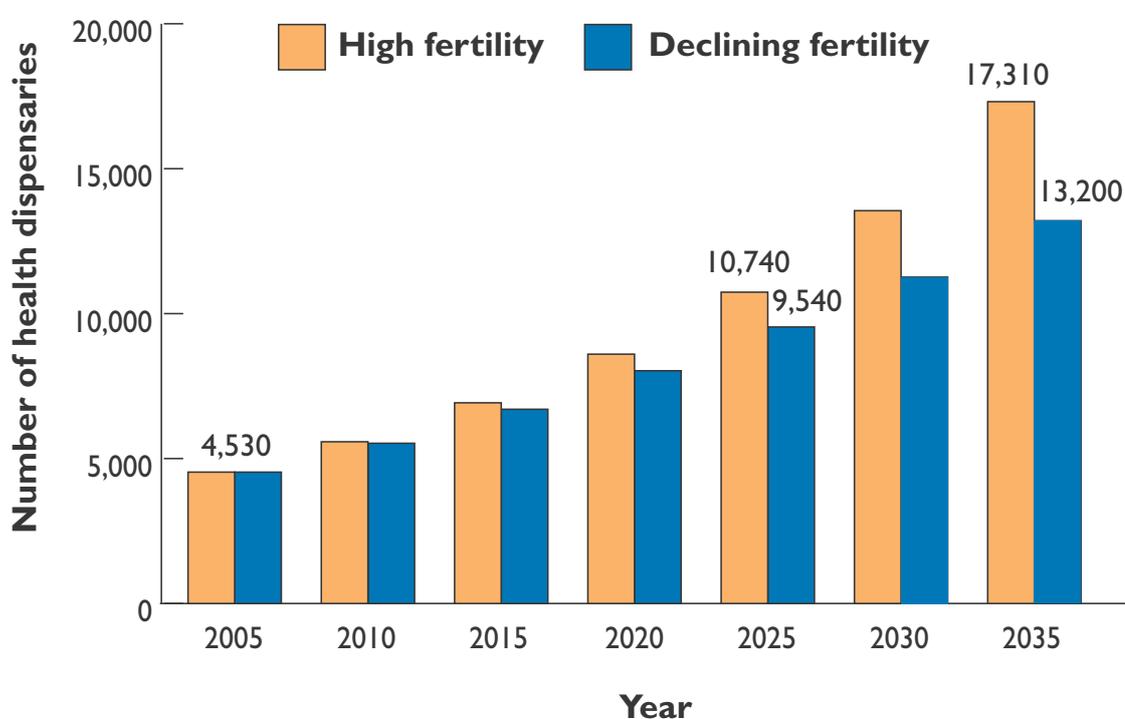
Photo credit: USAID.

Health Care Facilities

The need for health facilities in Tanzania Mainland will increase with the continued rapid growth of the population and better health-seeking behaviour. In 2004, there were 434 health centres, or one for about every 81,500 people. The general goal is one health centre for about 50,000 people.

Also, in 2004, there were about 4,400 health dispensaries, or one for every 8,020 people. According to the 2003 *National Health Policy*, a dispensary is supposed to cater for 5,000 people and oversee all village health services. If the population per health dispensary declines to 5,000 by the end of the projection period, the country would need 10,740 health dispensaries in 2025 and 17,310 dispensaries in 2035 with continuing high fertility. In contrast, about 9,540 health dispensaries would be needed in 2025 and 13,200 in 2035 with declining fertility.

Chart 16. Health Dispensaries Required, 2005–2035



Source: *The Economic Survey, 2004* and projections prepared for this analysis using RAPID model.

Health Personnel



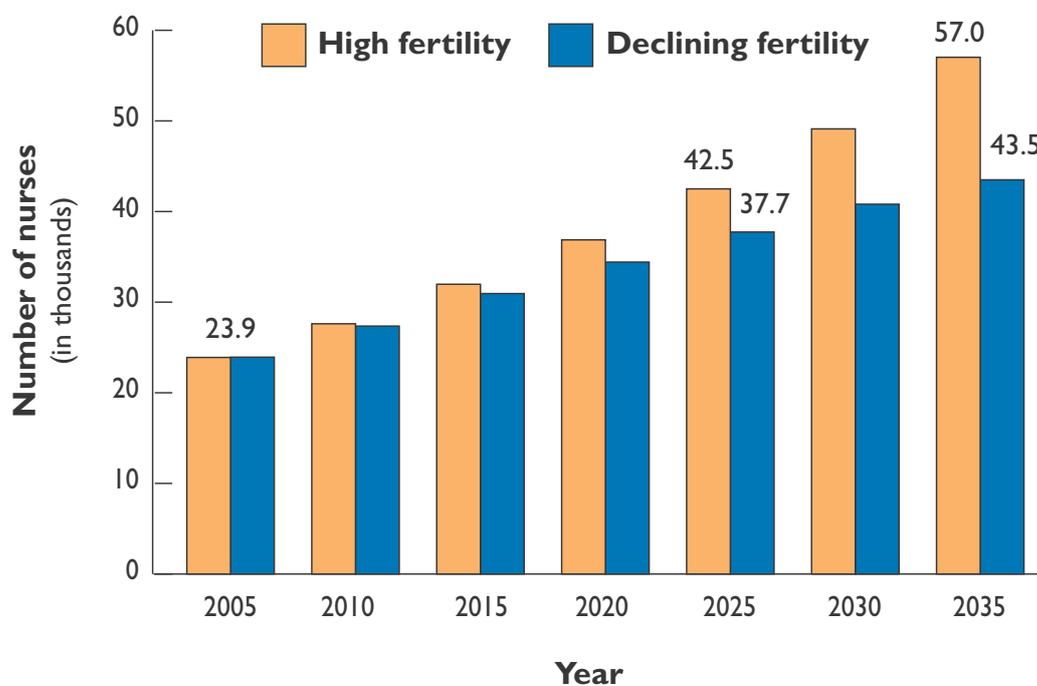
Image 12. A nurse at a health centre dispenses medicine.

Photo credit: IFAD / Christine Nesbitt.

High population growth also has implications for the number of health personnel required. These implications are especially important because the decline in the number of health workers has been a matter of concern. A long-term hiring freeze in the public sector along with normal attrition meant that the size of the health labour force actually declined from about 67,600 in 1994–1995 to about 49,900 in 2001–2002. In turn, the population probably increased by more than 6 million people between 1994 and 2002. In 2005, Ministry of Health reported that only about one-third of medical officer positions and about 23 percent of assistant medical officer and public health nurse positions were actually occupied.

The growth of the population will affect needs for health personnel. In 2002, for example, there were about 22,000 Grade A and Grade B nurses/midwives, or one nursing person for every 1,520 people in the population. If this ratio were to continue into the future, Tanzania would need about 42,500 nursing persons in 2025 and 57,000 in 2035. In comparison, the country would require 37,700 nursing persons in 2025 and 43,500 in 2035 if fertility were to decline.

Chart 17. Nurses Required, 2005–2035



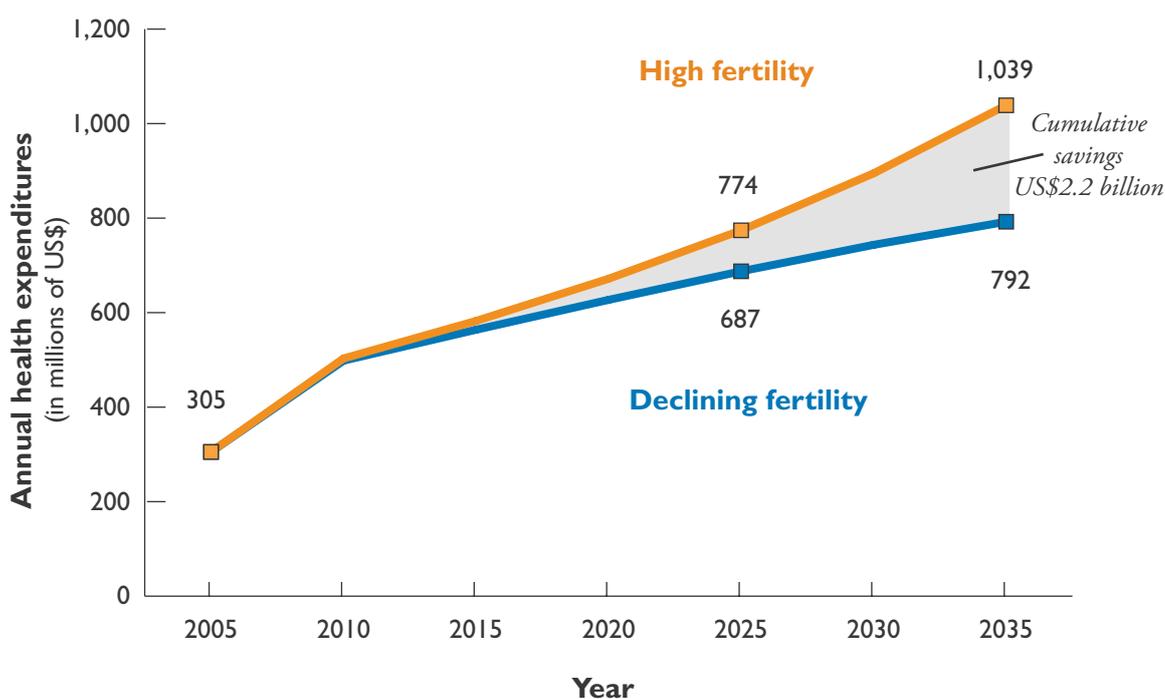
Source: *The Economic Survey, 2004* and projections prepared for this analysis using RAPID model.

Annual Health Expenditures

According to *Poverty and Human Development Report 2005*, budgeted public health expenditures (both national and local government) equaled about Tshs8,700 per person for 2004–2005, or about US\$8.40. This level of expenditure is inadequate for provision of a minimal level of services. Cost-sharing measures designed to mobilize additional resources have in reality hindered access to and use of health services. When modern services are inaccessible or unavailable, some people turn to traditional healers.

The 2003 *National Health Policy* expresses national goals in terms of US dollars. The stated goal was to reach a per capita public health expenditure of US\$9 by 2004 and US\$12 thereafter. The projections assume a per capita public health expenditure of US\$12 by 2010. In that case, public health costs (in constant values) would rise to US\$774 million in 2025 and US\$1 billion in 2035 with high fertility continued. In comparison, under the declining fertility assumptions, health expenditures would be US\$687 million in 2025 and US\$792 million in 2035. Over the 2005–2035 projection period, the cumulative savings under the lower fertility projection would be about US\$2.2 billion in today's values.

Chart 18. Annual Health Expenditures, 2005–2035



Source: *Poverty and Human Development Report 2005* and projections prepared for this analysis using RAPID model.

Maternal and Child Health



Image 13. A mother waits to have her new-born baby vaccinated at a maternal-child health unit.

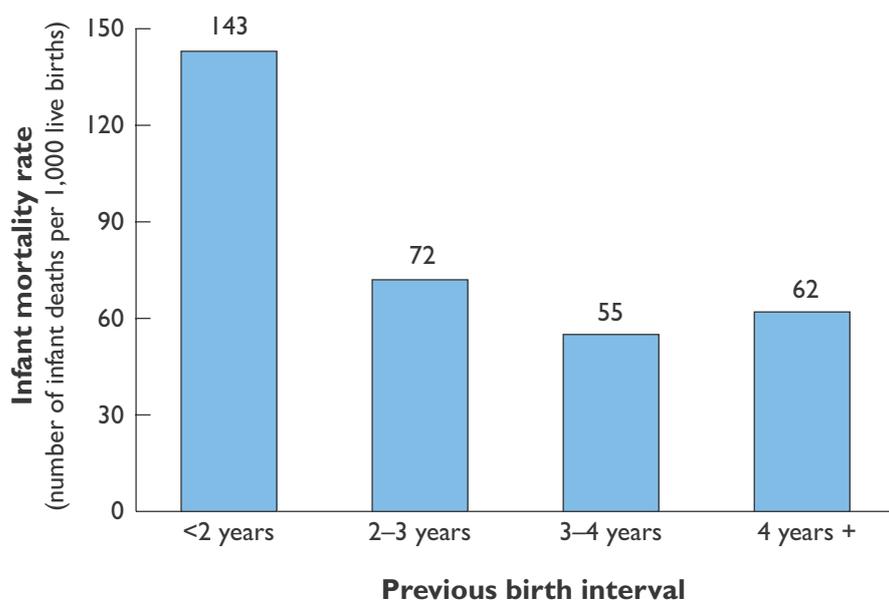
Photo credit: IFAD / Christine Nesbitt.

One argument sometimes heard in African countries is that governments should address high levels of maternal and child sickness and death before worrying about family planning. In fact, family planning itself can be an effective maternal and child health strategy. The risks of maternal, child and infant sickness and death increase with certain high-risk pregnancies. High-risk births include births that are too early (births to mothers under 20 years), too close (birth interval of less than two years), too many (more than four previous births) and too late (pregnancies after age 35). In Tanzania, about 55 percent of all births are in an avoidable high-risk category.

TDHS 2004–05 reports a maternal mortality ratio of 578 deaths per 100,000 live births, indicating no change since TDHS 1996. Even this level may be an underestimate. In addition, for every woman who dies in childbirth, estimates suggest that another five live with chronic illness or permanent disability.

The graph below shows that the risk of infant mortality in Tanzania is more than twice as high when births are spaced less 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 19. Effects of Birth Spacing on Infant Mortality



Source: *Tanzania Demographic and Health Survey, 2004–05.*

Family planning can help couples to delay, space or avoid unplanned and risky pregnancies for the health benefit of mothers, children and families. The benefits of family planning, of course, go beyond health. Well-spaced families mean children have better opportunities for education, good nutrition and adequate care. As the Asian Tigers found out, this investment in “human capital” is critical to long-term poverty reduction.



Image 14. Mothers and new-born babies wait for a well-baby check-up at the maternal-child health unit in Bahi Sokoni village.

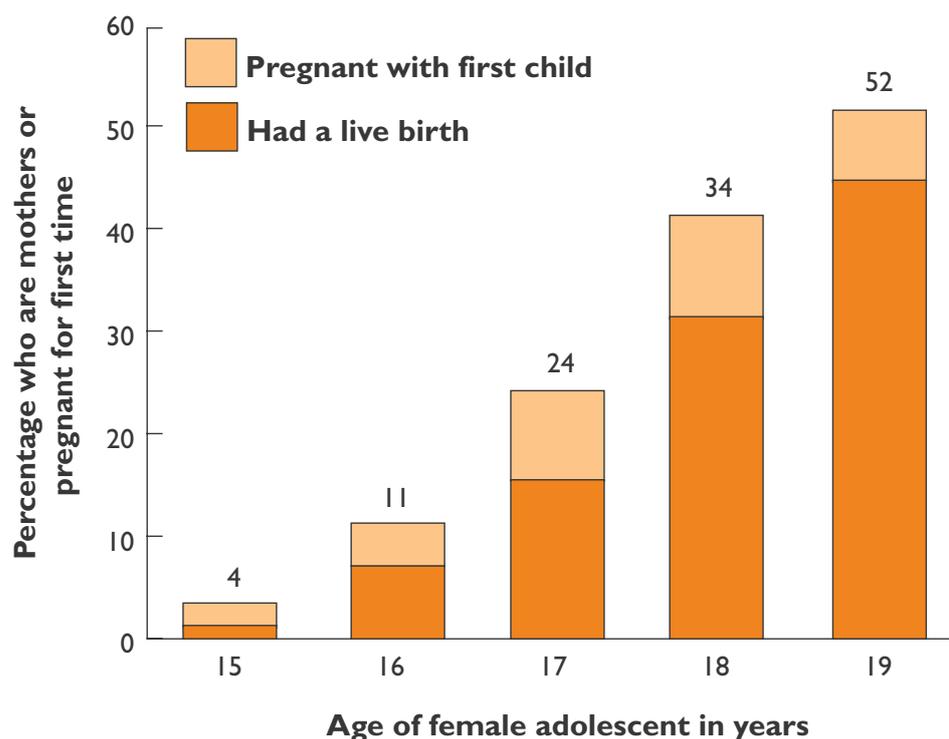
Photo credit: IFAD / Christine Nesbitt.

Teenage Pregnancy

Adolescence is a transitional period from childhood to adulthood that is characterized by emotional, psychological, biological and physiological changes. Consequently, young people have special reproductive health problems and needs. The reproductive health needs of young people are especially important because Tanzania has such a young population. (See age pyramid on p. 9). Nearly two out of every three Tanzanians are under the age of 25 and one out of three is between the ages of 10 and 24. The number of young people aged 10–24 will increase from 12.2 million in 2005 to 21.1 million in 2025 under the high fertility scenario and to 19.6 million under the declining fertility projection. As a consequence of their large numbers and their particular health risks, the reproductive health status of young people will have a profound impact on the Tanzanian vision for a healthy and prosperous society.

Teenage pregnancy in Tanzania is high. According to TDHS 2004–05, about 52 percent of 19 year-olds were already mothers or pregnant for the first time. Only about 7 percent of 15–19 year-olds who are married use some form of modern contraception, and only 30 percent of 15–19 year-olds who are unmarried but sexually active use modern contraception. Appropriate and gender-sensitive family planning/reproductive health programmes can help protect the health of adolescents and young people, assist in their emotional and psychological development and reduce unwanted pregnancies and abortions.

Chart 20. Adolescent Childbearing



Source: *Tanzania Demographic and Health Survey, 2004–05.*



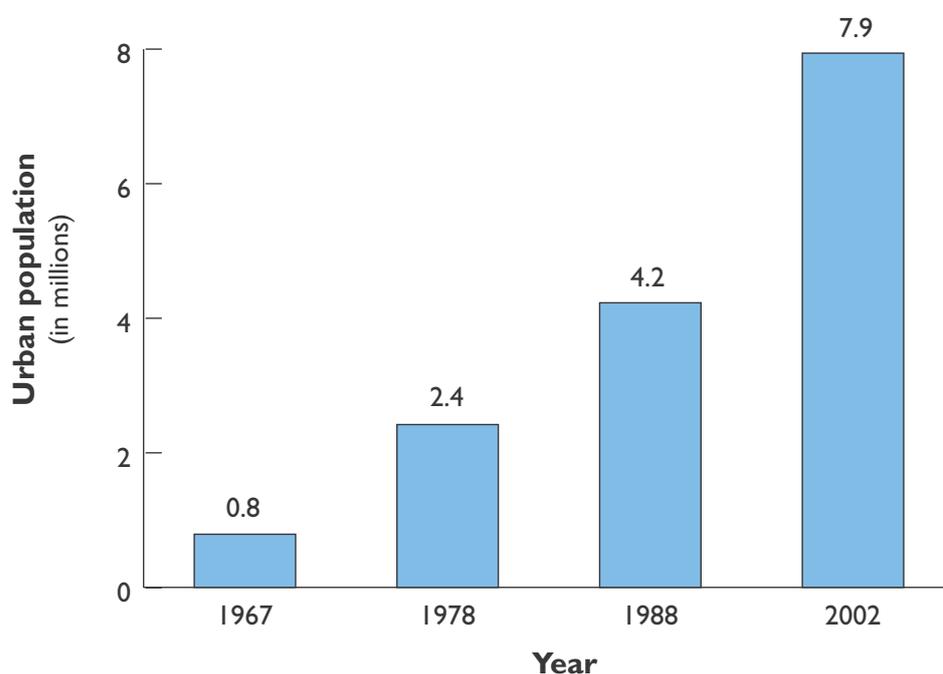
Image 15. Young women in Tanzania often marry early and give birth as teenagers which exposes them to many risks.

Photo credit: © D. Hinrichsen, Courtesy of Photoshare.

Migration, Urbanization and Human Settlement

Tanzania remains a predominantly rural country. The 2002 Census reported that 77 percent of the population lives in rural areas, while just over 23 percent resides in urban communities. Nonetheless, the cities and towns continue to grow in size and as a proportion of the overall population because of natural increase and migration from the countryside to the urban areas. The urban population increased from under 1 million people in 1967 to 2.4 million in 1978, about 4.2 million people in 1988 and to over 7.9 million in 2002. The urban areas grew by about 4.5 percent per year between 1988 and 2002, higher than the overall rate of population growth though lower than anticipated in some projections.

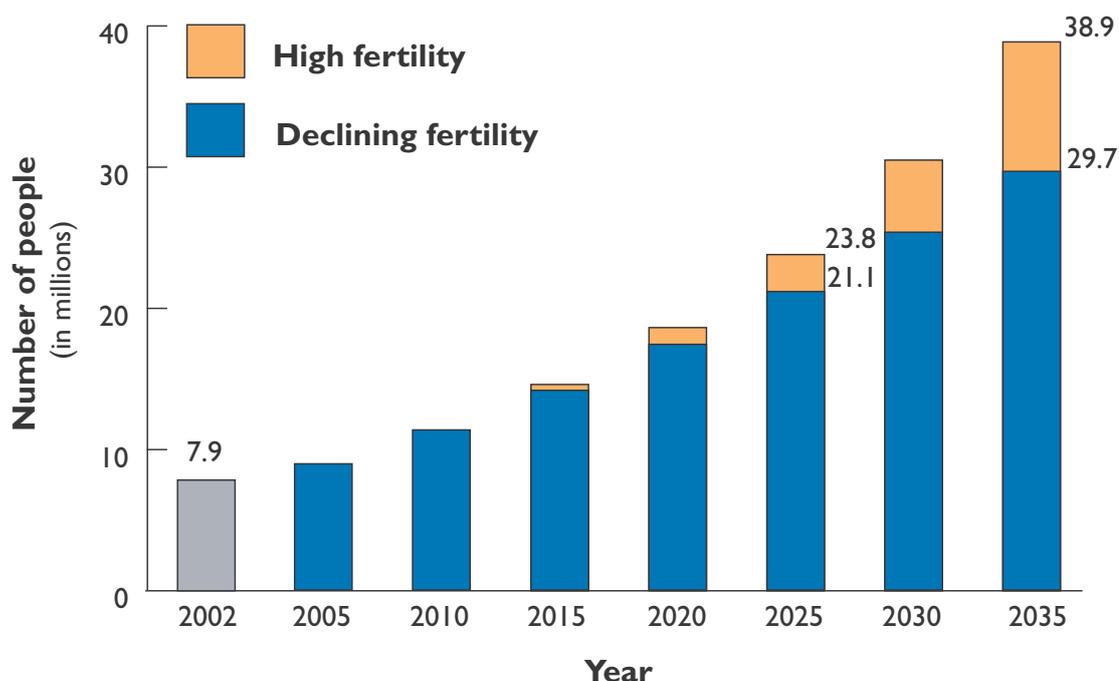
Chart 21. Historic Growth of the Urban Population, 1967–2002



Source: Tanzania Population and Housing Censuses, 1967, 1978, 1988 and 2002.

The following projections assume that the proportion of the total population that is urban increases to 45 percent by the end of the projection period. In that case, the urban population would grow from just under 8 million people at the time of the 2002 census to 23.8 million urban residents in 2025 and 38.9 million in 2035 with high fertility continued. With declining fertility, however, the size of the urban population would be 21.1 million people in 2025 and 29.7 million in 2035.

Chart 22. Size of the Urban Population, 2002–2035



Source: 2002 Population and Housing Census and projections prepared for this analysis using RAPID model.



Image 16. The challenge of keeping urban areas clean: dumped trash piles up.

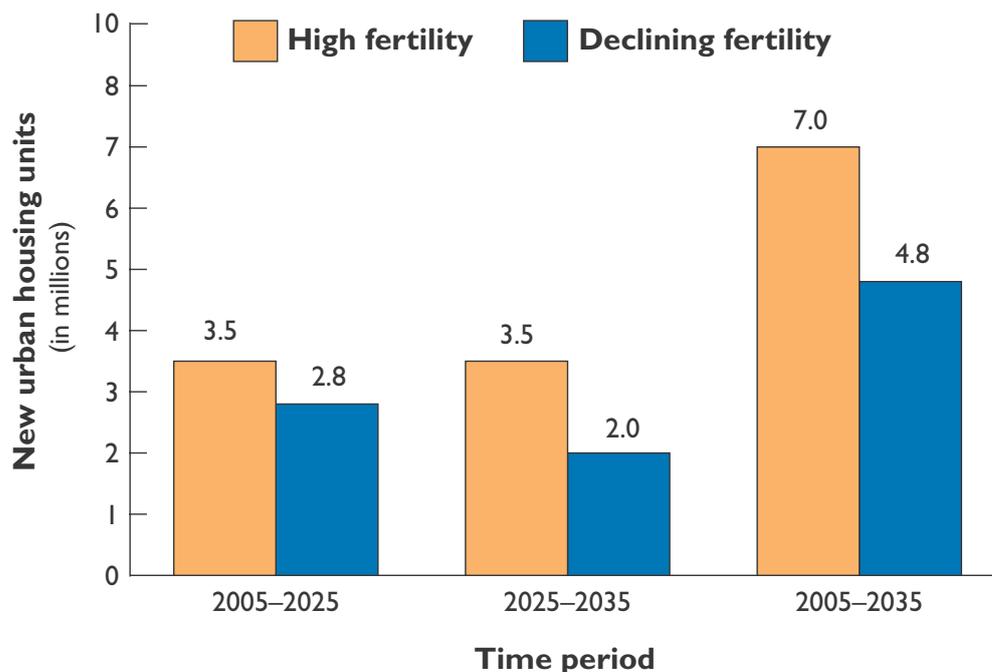
Photo credit: © 2005 Alfredo L. Fort, Courtesy of Photoshare.

The rapid growth of the cities and towns places ever increasing pressure on the urban infrastructure (transport, housing, water and sanitation, energy, for example) and the need for urban employment. Transport, water and sanitation, energy and other urban services are already severely strained and highly inadequate. The situation may well worsen as urban areas continue to grow.

Urban housing is a good example of the pressures that fast population growth will place on the social and physical infrastructure of the towns and cities. *The National Poverty Eradication Strategy* points out that a high proportion of urban residents (70 percent or more) in Dar es Salaam and elsewhere is living in poor quality houses, often in squatter settlements. Yet, if fertility

remains high, Tanzania would need 3.5 million new urban housing units between 2005 and 2025 and 3.5 million more between 2025 and 2035—a total of 7.0 million housing units—to accommodate the growth of the population. This would be the rough equivalent of building more than 12 new cities equal to the size of Dar es Salaam in 2002, one every 2 ½ years. With declining fertility, however, the country would require 4.8 million new units over the same period of time.

Chart 23. New Urban Housing Units Required, 2005–2035



Source: *Tanzania Demographic and Health Survey, 2004–05* and projections prepared for this analysis using RAPID model.



Image 17. Slums in Dar es Salaam.

Photo credit: 2006 HealthScope Tanzania.

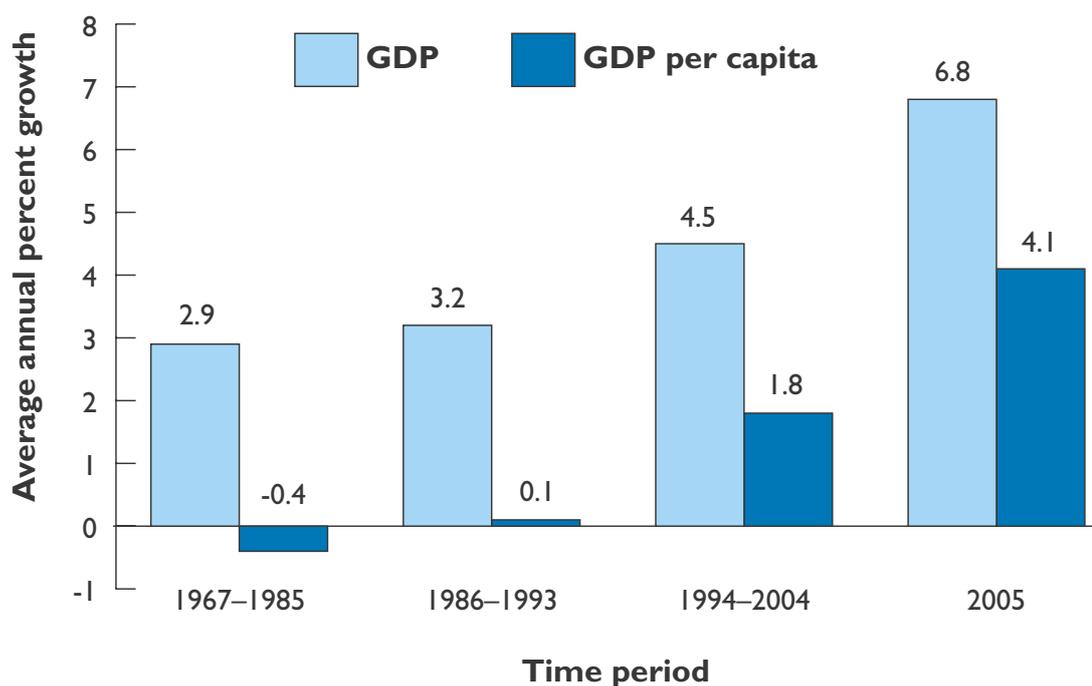
Economy, Labour Force and Employment

Economy

The Economic Survey, 2004 reports that the earliest possible data on macroeconomic performance began about 1965. In 1965–1966, the economy grew by 6.7 percent per annum in real terms (taking into account inflation to permit comparisons over time). Centralized planning policies dominated the long period from 1967 to 1985, and economic growth fell to an average of 2.9 percent per year. This rate of economic growth was lower than the rate of population growth over that period so that there was no improvement in GDP per capita over a two decade span.

Tanzania then entered an era of mixed economy reform. During the initial phase, 1986–1993, the economy grew by an average of 3.2 percent per year, very close to the rate of population growth over the same period of time. For the 1994–2004 decade, however, the economy grew by an annual average of 4.5 percent, which was higher than the rate of population growth. Of particular note, the economy grew by 6.2 percent in 2002, 5.7 percent in 2003, 6.7 percent in 2004 and a reported 6.8 percent in 2005. The current Poverty Reduction Strategy goal is to achieve an 8 percent annual growth rate by 2010.

Chart 24. Historic GDP and GDP Per Capita, 1967–2005



Source: *The Economic Survey, 2004* and *The Economic Survey, 2005*.

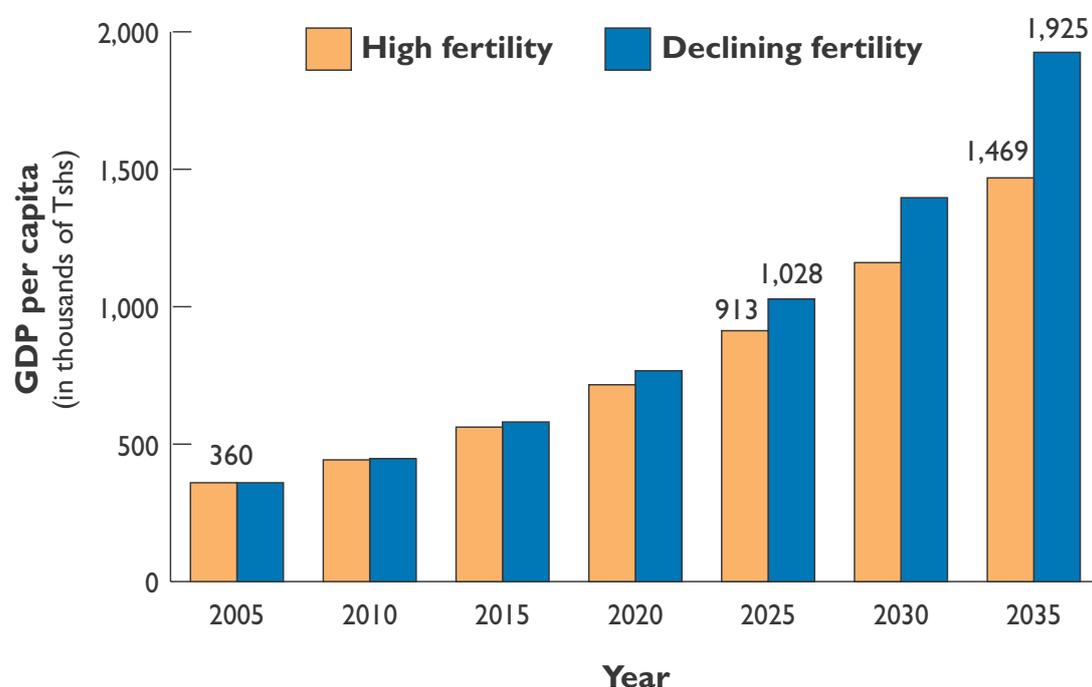
As with the Asian Tigers, rapid economic transformation will be largely dependent on improvements in the quality of the labour force, rather than on increases in the number of workers. Tanzania can have a higher rate of economic growth with a smaller, but better educated and more skilled labour force.



Image 18. Men paving road.
Photo credit: © European Community.

The projections assume the rate of economic growth reaches 8 percent per year in 2010 and stays at that level for the duration of the projection period, a very high rate of growth for a sustained period of time. In 2005, GDP per capita was about Tshs360,000. With high fertility continued, GDP per capita would rise (in constant values) to Tshs913,000 in 2025 and Tshs1,469,000 in 2035. In comparison, with declining fertility, GDP per capita would increase more quickly to Tshs1,028,000 in 2025 and Tshs1,925,000 in 2035.

Chart 25. Projected GDP Per Capita, 2005–2035
(assumes an 8% economic growth rate per annum after 2010)



Source: World Bank Development Indicators and projections prepared for this analysis using RAPID model.

The World Bank classified economies as either high, upper middle, lower middle or low income for 2004. High-income countries had a gross national income (GNI)⁶ per capita of more than US\$10,065. Upper middle-income countries had a GNI per capita of US\$3,256–US\$10,065, while lower middle-income countries had a GNI per capita of US\$826–US\$3,255. Low-income countries had a GNI per capita of US\$825 or less.

The projections use the same assumption that the rate of economic growth rises to 8 percent per year in 2010 and continues at that level for the remainder of the projection period, except the results are now presented in US\$.⁷ With high fertility continued, the GDP per capita would increase to \$841 in 2025 and US\$1,354 in 2035. In 2025, GDP per capita would barely reach lower middle-income status. If Tanzania is unable to achieve and sustain an 8 percent growth rate, it will fall short of the vision of middle-income status by 2025. In comparison, GDP per capita would be US\$947 in 2025 and US\$1,775 in 2035 with declining fertility.

⁶The World Bank uses GNI per capita to classify economies, whereas the *Economic Review* uses GDP per capita. The two are very close in Tanzania and are sometimes used interchangeably. The World Bank benchmarks, therefore, serve as a useful reference.

⁷Tshs are converted to US\$ using a three-year average exchange rate, 2003–2005.

Labour Force

Employment creation is a key component of the Poverty Reduction Strategy. However, unemployment (especially in urban areas) and underemployment are persistent problems that result in low incomes and poverty. Overall, labour quality and productivity are poor.



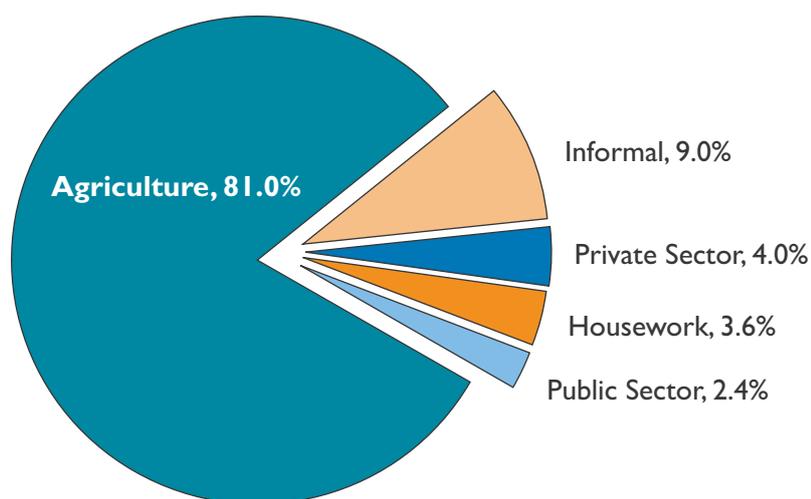
Image 19. More workers will need employment outside agriculture with modernization.

Photo credit: © 2005 Peter Verbiscar-Brown, Courtesy of Photoshare.

Another 9 percent of workers were engaged in informal activities. About 2.4 percent of workers were employed by the public sector or parastatals. However, public sector employment was way down from a decade earlier because of structural adjustment. Finally, formal private sector employment accounted for 4 percent of the labour force.

According to the *Integrated Labour Force Survey, 2000/01*, most of the labour force (81 percent overall and 90 percent in rural areas) were still engaged in agriculture, and most of these workers were subsistence farmers earning meager incomes. Smallholdings range between 0.9 and 3.0 hectares in size. An additional 3.6 percent of the labour force were engaged in economically productive (but often unpaid) household work, such as gathering firewood or fetching water.

Chart 26. Composition of the Labour Force

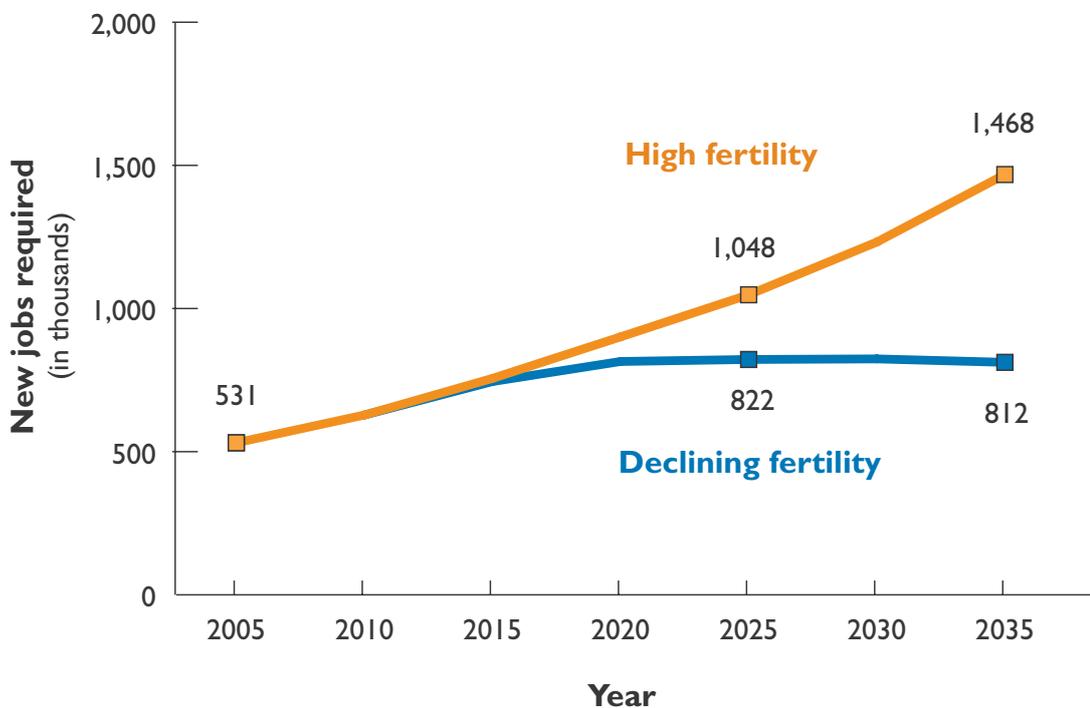


Source: *Integrated Labour Force Survey, 2000/01 – Analytical Report*.

Employment

Tanzania has many more people looking for employment, especially in the modern sector of the economy, than it has available jobs. *Macroeconomic Policy Framework for the Plan/Budget, 2005/06–2007/08* reports that the economy has been creating 30,000–40,000 new jobs per annum, apart from self-employment in agriculture and the informal sector. The graph shows the number of new jobs required in the economy each year to accommodate growth of the labour force. With persistent high fertility, annual new job requirements would increase from 531,000 in 2005 to 1,048,000 in 2025 and 1,468,000 in 2035. By contrast, with declining fertility, annual new job requirements would be 822,000 in 2025 and 812,000 in 2035. The ability of the economy to meet these requirements has important implications for long-term poverty eradication goals.

Chart 27. Annual New Job Requirements, 2005–2035



Source: *Integrated Labour Force Survey, 2000/01: Analytical Report* and projections prepared for this analysis using RAPID model.

Agriculture, Land Use and Food Security

Agriculture

Agriculture remains the cornerstone of the Tanzanian economy, accounting for about half the national income, three-quarters of foreign exports and more than 80 percent of employment. The performance of the sector is critical to the entire *National Strategy for Growth and Reduction of Poverty* (MKUKUTA). At the same time, *The Tanzania Development Vision 2025* notes that the sector remains largely untransformed. It is still dominated by millions of smallholders working on small plots, often less than a hectare, who are dependent on rainfall and hand hoe technology. The result is that agricultural productivity is low and often erratic.

The vision is an ambitious one. The adopted strategy is to transform the economy “from a predominantly agricultural one with low productivity to a diversified and semi-industrialized economy with a modern rural sector and high productivity in agricultural production which generates reasonably high incomes and ensures food security and food self-sufficiency” (*The Tanzania Development Vision 2025*, p. 22). Tanzania has great, untapped potential in the agricultural sector. A lower rate of population growth could help the country realize some of that potential.



Image 20. A smaller proportion of the labour force will be in agriculture with modernization.

Photo credit: USAID / W. Creighton/DAI.

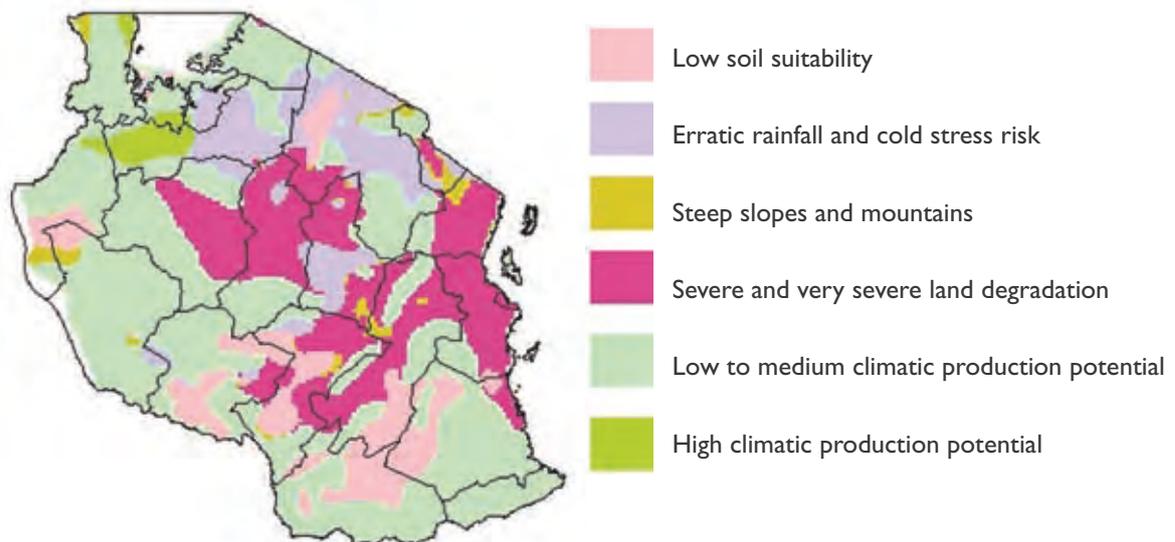
The goal to modernize and mechanize the agricultural sector is in line with what happened with the Asian Tigers. Agricultural modernization was a key component of their economic miracle. In the process, the proportion of the labour force engaged in agriculture dropped dramatically over time and eventually the size of the rural population began to go down. As traditional technology is replaced by machines, modern inputs such as fertilizers and irrigation, fewer workers can achieve much higher productivity. Even with a lower rate of population growth, Tanzania will have a sufficient agricultural labour force for a highly productive modern sector. Alternatively, the continued high rate of growth of the population can impinge on the modernization effort because of pressures to use the land for smallholdings to absorb the larger number of workers who would be dependent on the agricultural sector.

Land Use

Much of Tanzania Mainland is sparsely settled with low population densities, and there is an overall abundance of unused cultivable land. This leads the *Agricultural Sector Development Strategy* to observe that expansion and diversification of the sector is unlikely to be hindered by the availability of natural resources.

While Tanzania has abundant arable land, much of it is not accessible, either immediately or in the long-term. *National Land Policy* estimates that about 75 percent of the land area is either uninhabited or hard to manage because of difficult terrain, tsetse flies, unreliable rainfall or because it is committed to national parks or reserves. Other land is forested and can only be used for cultivation by removing the tree cover. The *Agricultural Sector Development Strategy* also notes that accessibility to land resources may be a constraint in some cases. Lack of infrastructure, especially transport, hinders land use in some parts of the country.

Chart 28. Environmental Constraints



Source: FAO Country Profiles and Mapping Information System.

A large part of Tanzania Mainland is dry. About 60 percent of the land area is classified as dry lands, threatened by desertification. Early estimates from the 1990s indicated that around 300 to 400 thousand hectares are turning to desert each year. The high rate of growth of both the human and animal population has been identified as the leading contributing factor.

Because labour productivity has not increased and because the use of modern inputs such as fertilizer or machinery remain limited, increases in productivity have been achieved by extending the amount of land under cultivation. This in turn has resulted in soil erosion, deforestation, deterioration of the natural resource base and land conflicts.

Available land resources are an important pillar for the country as it strives to build a middle-income economy. Land and soil degradation needs to be checked, however, to preserve these resources for the development of the nation. The rapid rate of population growth is an important factor contributing to the erosion of those resources and needs to be taken into account in conservation strategies.



Image 21. Rapid population growth contributes to land degradation.

Photo credit: © Dan L. Perlman, Ecolibrary.org.

Food Security



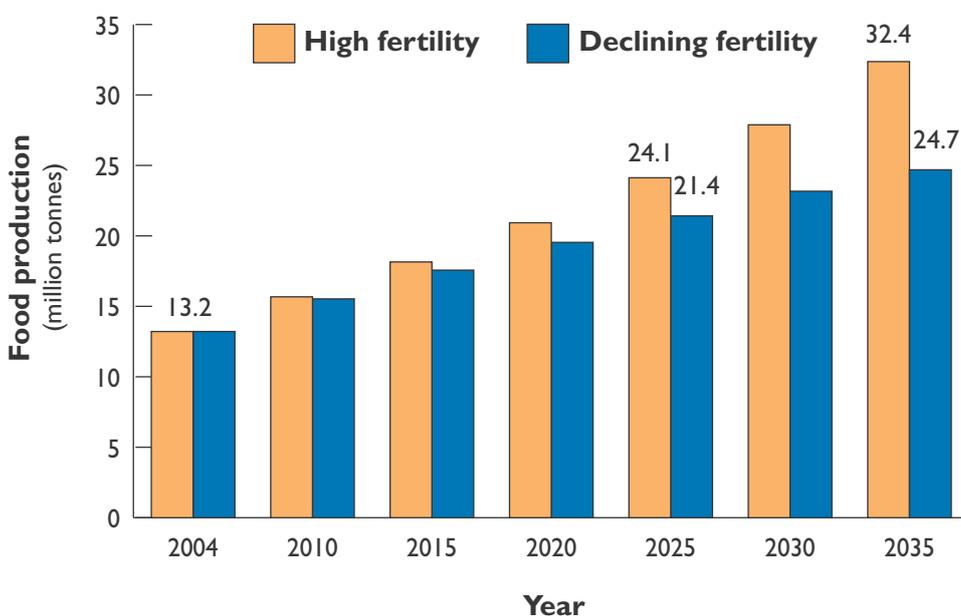
Image 22. Boy carrying a bag of potatoes.

Photo credit: USAID.

Food security remains an important issue in Tanzania and is a fundamental goal stated in *The Tanzania Development Vision 2025*. Food security requires sufficient food crop production, food reserves to draw upon in times of shock and adequate incomes to purchase food when needed. *Poverty and Human Development Report 2005* indicated that 19 percent of the population is below the food poverty line, which means that many households have insufficient income to ensure adequate nutrition. Since most Tanzanian agriculture is dependent on rainfall, a much higher proportion of the population becomes food insecure in times of drought.

Rapid population growth will increase the demand for food. At 2004 per capita production levels, food production would need to increase to 24.1 million tonnes in 2025 and 32.4 million in 2035 with high fertility continued. In contrast, food production would have to rise to 21.4 million tonnes in 2025 and 24.7 million tonnes in 2035 under the declining fertility projection.

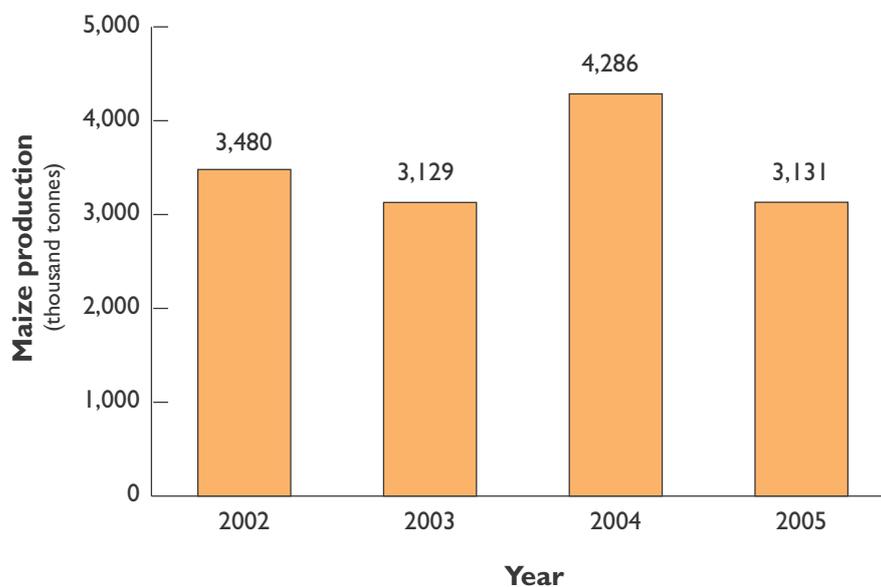
Chart 29. Food Production Required, 2004–2035



Source: *The Economic Survey, 2004* and projections prepared for this analysis using RAPID model.

It is also helpful to consider individual crops. Maize, for example, is the single most dominant food crop and the most important to food security in Tanzania. Most maize production is rain-fed, and output has fluctuated dramatically in recent years. Reported maize production rose from 3,129,000 tonnes in 2003 to 4,286,000 tonnes in 2004, but then dropped back to 3,131,000 tonnes in 2005.

Chart 30. Maize Production, 2002–2005



Source: *The Economic Survey, 2004* and *The Economic Survey, 2005*.

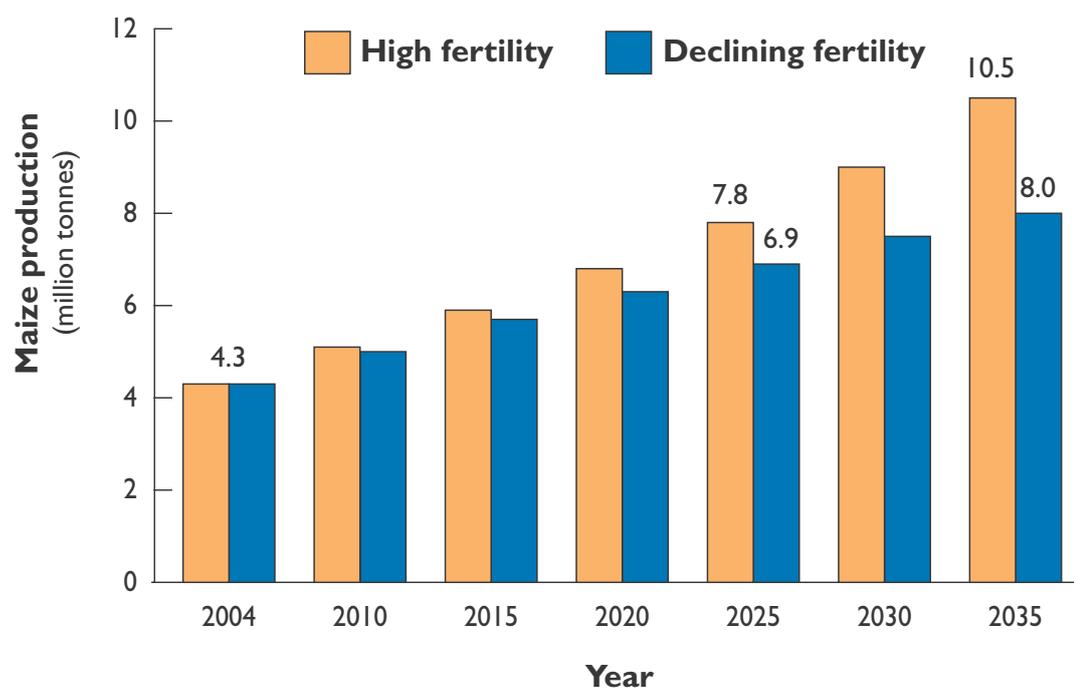


Image 23. A maize field at sunset in Isangha village.

Photo credit: IFAD / Christine Nesbitt.

Using per capita production for 2004, a year of peak production, as the standard, the projections show that maize production would need to reach 7.8 million tonnes in 2025 and 10.5 million tonnes in 2035 under the high fertility projection. In contrast, required maize production would be 6.9 million tonnes in 2025 and 8.0 million tonnes in 2035 under the low fertility projection.

Chart 31. Maize Production Required, 2004–2035



Source: *The Economic Survey, 2004*, *The Economic Survey, 2005* and projections prepared for this analysis using RAPID model.

Environment

Conserving natural resources is fundamental for Tanzanian development and for meeting the needs of both present and future generations. However, *The Tanzania Development Vision 2025* cautions that the current trend is a loss and degradation of environmental resources, such as forests, fisheries, fresh water, soils and biodiversity. *National Strategy for Growth and Reduction of Poverty* also observes that the present use of natural resources is unsustainable, and cites uncontrolled cutting of the forests and farming methods that foster erosion as examples. The speed with which Tanzania is looking to achieve an economic transformation to modern agriculture will put an added burden on the environment.

The demand for wood and land, often leading to deforestation, is a good example of how the rate of population growth affects the ability of the country to preserve its natural resources. While Tanzania has large and valuable forests, deforestation and forest degradation continue at a rapid pace. In part, with the rapid growth of the population, the forests are cut to satisfy basic requirements, including the need for woodfuel, building materials and new agricultural land. The forests are also cut to provide land for livestock grazing. *National Forest Programme in Tanzania, 2001–2010* reports deforestation at a rate of between 130,000 and 500,000 hectares per year. In turn, deforestation contributes to soil erosion and erratic rainfall.

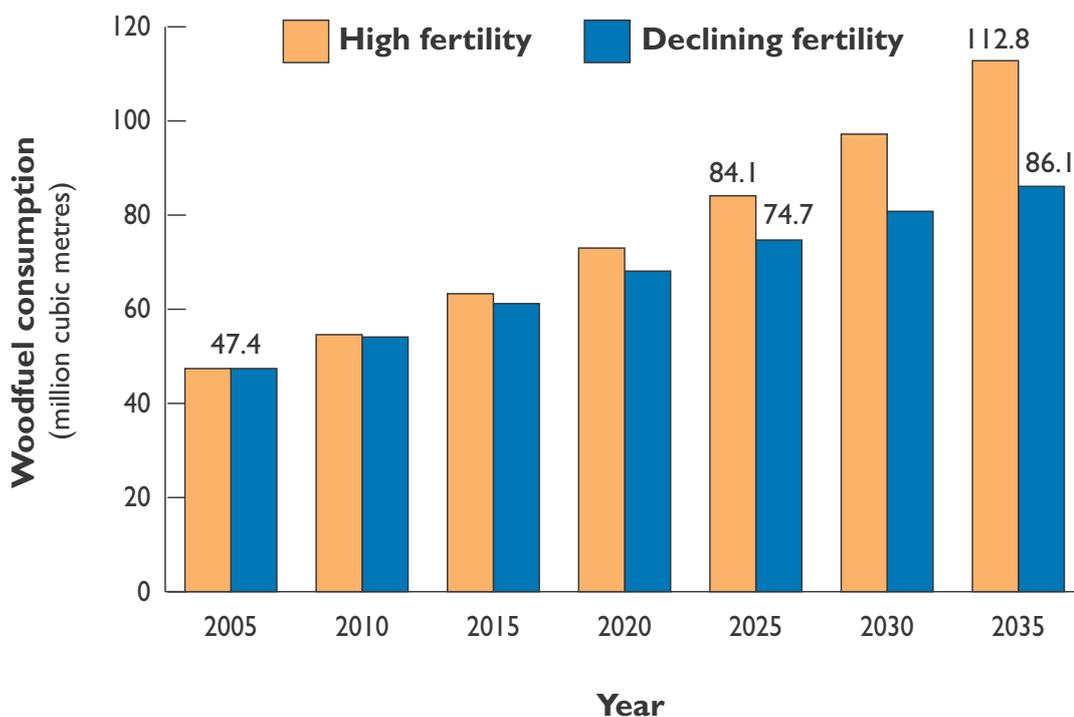


Image 24. Mt. Kilimanjaro is an important natural resource.

Photo credit: USAID / R. Strickland.

Woodfuel accounts for more than 90 percent of energy use (*National Forest Programme in Tanzania, 2001–2010*). Based on recent consumption patterns, the demand for woodfuel would increase to 84.1 million cubic meters in 2025 and 112.8 million cubic meters in 2035 under the high fertility projection. The demand for woodfuel would increase more slowly to 74.7 million cubic meters in 2025 and 86.1 million cubic meters in 2035 under the declining fertility projection.

Chart 32. Woodfuel Consumption, 2005–2035



Source: *National Forest Programme in Tanzania, 2001–2010* and projections prepared for this analysis using RAPID model.

V. POLICY RESPONSE

The Future Population



Image 25. Mothers and their children wait for a health visit at the maternal-child health unit in Isangha village.

Photo credit: IFAD / Christine Nesbitt.

The population of Tanzania is going to be much larger in the future than it is today. This is inevitable. Nonetheless, a slower rate of population growth could help the country achieve its national vision for development and poverty reduction. There are realistic steps that can be taken to improve reproductive health and to bring population growth into balance with the social and economic development of the nation.

In summation, Tanzania continues to have a high fertility rate (an average of 5.7 children per woman) that has not changed over the past decade. As a result, and despite the HIV and AIDS epidemic, the population continues to grow rapidly. At its present rate, the population will double in size in approximately 25 years. The rapid growth of the population in such a short period of time has serious implications for the national vision to achieve a high quality of life and eliminate severe poverty.

Population Programmes and Other Development Efforts Reinforce One Another

Structural or underlying factors contribute to high birth rates in Tanzania. Widespread poverty, the low social and economic status of women, low educational levels, poor access to health care and many other social conditions influence reproductive behaviour. Population programmes are not meant to substitute for development; rather, Tanzania will need to advance on many fronts to reduce poverty and build the country. The dilemma is that the high level of fertility and the rapid rate of population growth impede poverty reduction efforts, while, at the same time, poverty hinders efforts to reduce the fertility rate. A strategy to satisfy the unmet need for family planning services can help to break the circle and move Tanzania closer to its development vision.

Unmet Need For Family Planning Services and the Public Policy Response

At the same time that the population growth rate is high and impeding development, Tanzania has a high unmet need for family planning services. About 22 percent of currently married women want to space or limit their births but are not using contraceptives. This means that the country could reduce its fertility and population growth rates just by meeting the already established need for family planning services. In fact, strong evidence exists from other developing countries that progress towards satisfying the unmet need for family planning inevitably results in lower fertility and population growth rates, even when the goal is to space births rather than to limit their number.

To satisfy unmet need, a realistic strategy is to ensure that all Tanzanian couples and individuals 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 that are consistently available and accessible. By improving access to and use of high-quality family planning services, the country can help to satisfy some of the high level of unmet need. In turn, progress towards satisfying some of the high level of unmet need will contribute to lower fertility and slower population growth. In turn, these changes will support achievement of *The Tanzanian Development Vision 2025*.



To satisfy unmet need, a realistic strategy is to ensure that all Tanzanians 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 that are consistently available and accessible.

Image 26. Family planning providers in the Missungwi District hospital holding up materials.
Photo credit: © 2000 Megan Drennan, Courtesy of Photoshare.

Contraceptive Security

Contraceptive security is an important public policy issue in Tanzania and elsewhere in Africa. It simply means that every person is able to choose, obtain and use quality contraceptives whenever she or he needs them. Contraceptive shortages and inconsistent access discourage use and pose an increased health risk. In fact, evidence suggests that supply shortages and stockouts hindered expanded family planning use in recent years.

At one time, development partners donated many of the contraceptive commodities used in the public sector programme. However, in fiscal year 2002/2003, Tanzania initiated a Sector-Wide Approach (SWAP) and Basket Funding in the health sector. Under this system, most donors make an annual contribution to the health “basket” and the Government of Tanzania (GOT) decides how best to allocate funds at the yearly Mid-Term Expenditure Framework (MTEF) meetings. United Nations Population Fund (UNFPA), for example, used to be an important supplier of contraceptive commodities, but it now contributes to the health basket.

For MTEF planning purposes, there are two separate funding streams that flow into the contraceptive procurement budget. The first is the GOT funding, which is generated from revenues collected through the Tanzania Revenue Authority. The second, as noted, is the Basket Funding, which consists of contributions from the development partners.

Funds Mobilized for Public Sector Contraceptive Procurements, 2002/2003–2006/2007

Fiscal year	Amount in Tshs	Type of contraceptive procured
2002/2003	1.5 billion (all Basket)	Injectables
2003/2004	3.8 billion (all Basket)	Orals and Injectables
2004/2005	7.7 billion (all Basket)	Orals, Injectables and Implants
2005/2006	6.9 billion (all GOT)	Orals, Injectables and Implants
2006/2007	5.8 billion (1.3 Basket, 4.5 GOT)	Orals, Injectables and Implants

Source: The Deliver Project.

In 2002/2003, the first year of the SWAP, the government allocated Tshs 1.5 billion for public sector contraceptive procurement. This amount rose to Tshs 7.7 billion in 2004/2005, but then declined the ensuing two fiscal years. Given the rapidly increasing size of the reproductive age population and the high level of unmet need for family planning services, this is not an encouraging trend. The MTEF for 2007/2008 will require an increased contraceptive procurement allocation to help meet the needs of Tanzanian women and men.

Key Components of an Effective Family Planning Unmet Need Strategy

Several factors can contribute to a successful strategy to satisfy the unmet need for family planning services. Some of these are

- Sustained commitment and support from leaders at national and district levels
- Improved access to high-quality, affordable services
- Increased private sector participation in service provision
- Guaranteed availability of contraceptive commodities
- Sustained donor support
- Increased participation of civil society and faith-based organizations
- Consistent messages and support from opinion leaders about the need to make family planning services readily available for those who wish to use them

Good Demographic Outcomes Depend on Good Policies

As noted by United Nations Population Fund: “Good demographic outcomes depend on good policies . . . Successful action depends above all on empowering individuals and communities” (UNFPA 2002, p. 6). It is important to consider the strategic role of population for attaining the national vision and develop an effective policy response.

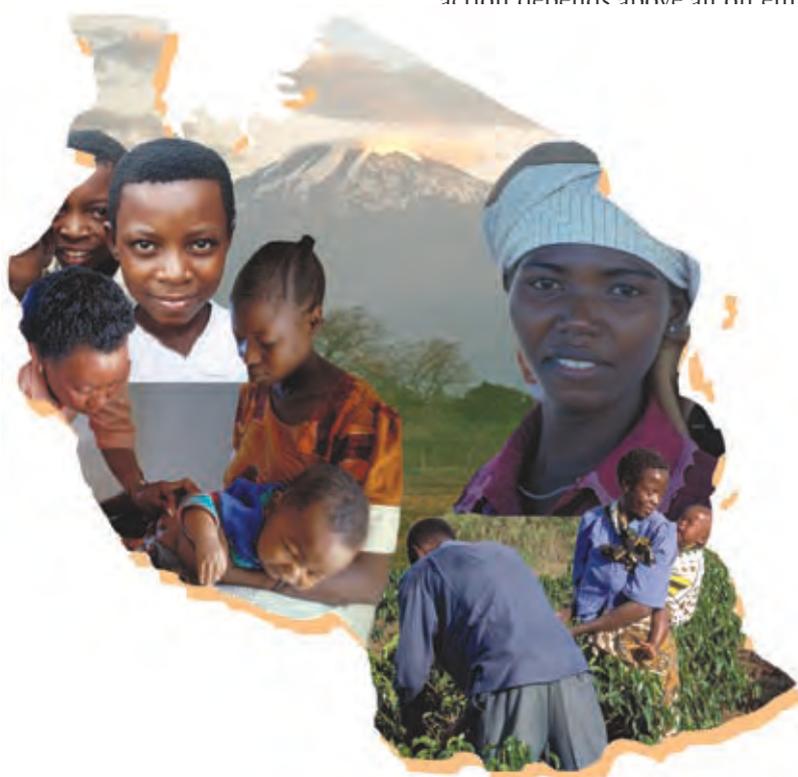


Photo credits: IFAD / Christine Nesbitt and Robert Grossman and USAID.

GLOSSARY

Acquired Immune Deficiency Syndrome (AIDS)

AIDS is the most severe manifestation of HIV infection. People with full-blown 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.

Antiretrovirals (ARV)

ARVs are drugs that suppress the replication of HIV in a person's body, thereby delaying the onset of full-blown AIDS and prolonging life. They do not kill or eliminate the virus.

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.

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 (or all women) ages 15 to 49.

Demographic and Health Survey (DHS)

The DHS is a large national survey that generates information on key demographic and health issues, including HIV and AIDS. This type of survey is undertaken in developing countries throughout the world. Tanzania now has results from three in-depth Demographic and Health Surveys in 1991–1992, 1996 and 2004–2005 and from a similar survey, the Reproductive and Child Health Survey, in 1999.

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 describe the average number of children per woman.

Gross Domestic Product

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.

$GDP = \text{consumption} + \text{investment} + \text{government spending} + (\text{exports} - \text{imports})$

Gross Domestic Product Per Capita

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

Gross Enrolment Ratio (GER)

Gross enrolment ratio in this document refers to the number of primary students of all ages divided by the total number of children aged 7–13 years old.

Gross National Income (GNI)

Gross National Income is the total value of goods and services produced within a country (i.e., its GDP), together with its income received from other countries (notably interest and dividends), less similar payments made to other countries.

Human Immunodeficiency Virus (HIV)

HIV is the virus that causes AIDS. It acts by weakening the immune system, 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 in the numerator of the prevalence calculation.

Mother-to-Child Transmission (MTCT)

MTCT is the transmission of HIV from infected women to their infants during pregnancy or delivery or while breastfeeding.

MKUKUTA

The *National Strategy for Growth and Reduction of Poverty* in Kiswahili.

Net Enrolment Ratio (NER)

The NER is the number of primary students ages 7–13 divided by the total number of 7–13 year-olds.

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 is the situation where couples have 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 above 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 TDHS, 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 or more years before having another child (spacers) but are not using contraception.

REFERENCES

- Abel, Ed (1999). *RAPID: Computer Programs for Examining the Socioeconomic Impacts of Population Growth (Version 4)*. Washington: The Futures Group International, POLICY Project. Both the manual and the software can be downloaded from www.policyproject.com.
- Beegle, Kathleen (1995). *The Quality and Availability of Family Planning Services and Contraceptive Use in Tanzania*. Washington: World Bank.
- 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.
- Food and Agriculture Organization of the United Nations (FAO) (2006). FAO Country Profiles and Mapping Information System. <http://www.fao.org/countryprofiles/Maps/TZA/04/ec/index.html> (accessed November 6, 2006).
- Haupt, Arthur and Thomas T. Kane (2004). *Population Handbook, 5th Edition*. Washington: Population Reference Bureau.
- Ministry of Agriculture and Food Security, Participatory Agricultural Development and Empowerment Project (PADEP) (2003). *Resettlement Policy Framework*.
- Ministry of Agriculture and Food Security, Statistics Unit (2005). *Basic Data for Agriculture Sector, 1995/9–2002/2003: Tanzania Mainland*.
- Ministry of Education and Culture (2005). *Basic Education Statistics in Tanzania (BEST), 1995–2005: National Data*.
- Ministry of Education and Culture (2005). *Basic Education Statistics in Tanzania (BEST), 2005: Regional Data*.
- Ministry of Health (1990). *National Health Policy*.
- Ministry of Health (2003). *National Health Policy*.
- Ministry of Health (1992). *The Food and Nutrition Policy for Tanzania*.
- Ministry of Labour and Youth Development (1997). *The National Employment Policy*.
- Ministry of Lands and Human Settlements Development (2000). *National Human Settlements Development Policy*.
- Ministry of Lands and Human Settlements Development (1997). *National Land Policy*.
- Ministry of Natural Resources and Tourism, Forestry and Beekeeping Division (2001). *National Forest Programme in Tanzania, 2001–2010*.
- Ministry of Planning, Economy and Empowerment, United Republic of Tanzania (2006). *The Economic Survey, 2005*.
- National Bureau of Statistics (Tanzania). *2002 National Population and Housing Census*. <http://www.tanzania.go.tz/census/>.
- National Bureau of Statistics (Tanzania) and Macro International Inc. (2000). *Tanzania Reproductive and Child Health Survey, 1999*. Calverton, Maryland: National Bureau of Statistics and Macro International Inc.

-
- National Bureau of Statistics and Ministry of Labour, Youth Development and Sports (2003). *Integrated Labour Force Survey, 2000/01 – Analytical Report*.
- National Bureau of Statistics (Tanzania) and ORC Macro (2005). *Tanzania Demographic and Health Survey, 2004–05*. Dar es Salaam, Tanzania: National Bureau of Statistics and ORC Macro.
- President's Office, The Planning Commission (1992). *National Population Policy*.
- President's Office, The Planning Commission (1999). *The Tanzania Development Vision 2025*.
- President's Office – Planning and Privatization (2005). *The Economic Survey, 2004*.
- President's Office – Planning and Privatization (2005). *Macroeconomic Policy Framework for the Plan/Budget, 2005/06–2007/08*.
- Prime Minister's Office, United Republic of Tanzania (2001). *Rural Development Strategy*.
- Research on Poverty Alleviation (REPOA) (2003). *Poverty Reduction Strategy: Are Population Parameters Overlooked?*
- Tanzania Socio-Economic Database (TSED)*, Version 3. www.tanzania.go.tz
- The Research and Analysis Working Group (2005). *Poverty and Human Development Report 2005*. Dar es Salaam, Tanzania: Mkuki Nyota Publishers.
- United Nations Population Fund (UNFPA) (2002). *State of World Population 2002. People, Poverty and Possibilities*. New York: United Nations Population Fund.
- 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: United Nations Population Fund.
- United Republic of Tanzania (2001). *Agricultural Sector Development Strategy*.
- United Republic of Tanzania (2000). *Tanzania Assistance Strategy (A Medium Term Framework for Promoting Local Ownership and Development Partnerships)*.
- Vice President's Office, The United Republic of Tanzania (1997). *National Environmental Policy*.
- Vice President's Office, The United Republic of Tanzania (2005). *National Strategy for Growth and Reduction of Poverty (NSGRP)*.
- Vice President's Office, The United Republic of Tanzania (1998). *The National Poverty Eradication Strategy*.
- World Bank (2005). *Tanzania: Second Poverty Reduction Support Credit and Grant. Simplified Implementation Completion Report*.
- World Bank (2006). World Bank Development Indicators. <http://publications.worldbank.org/subscriptions/WDI/> (accessed November 19, 2006).

