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## Mozambique at the Start of a Demographic Dividend

In 1992, Mozambique emerged from 15 years of civil war, began reestablishing democratic institutions, and restarted the development process. Between 2000 and 2011, economic growth averaged more than 7 percent a year, but more than one-half of the population still lived below the poverty line (IMF 2011).

Improvements in child health combined with persistently high fertility have resulted in rapid population growth and a large population of dependent children. As of 2010, total fertility averaged 4.7 births per woman, and 44 percent of the population was under the age of 15 (United Nations 2012).

A demographic dividend, based on falling fertility, could help raise living standards and boost economic growth. With fewer children to support, the working-age population would have more resources, both to increase current consumption and to save and invest for the future.

Apart from fertility decline, a demographic dividend requires job growth. The

magnitude of Mozambique's first demographic dividend will depend largely on the speed of fertility decline and on whether the working-age population can earn an adequate labor income. Today, the unemployment rate in Mozambique is 23 percent (Instituto Nacional de Estatística 2013).

A third key factor is to insure that savings made possible by a first dividend are invested productively in physical capital and in the health and education of children. With all three factors in place, Mozambique would be in a good position to achieve a second demographic dividend, leading to long-term economic growth.

### The economic lifecycle

The changes in population age structure that accompany fertility decline are important because people earn income and consume at very different levels over the course of their lives. Understanding the economic lifecycle is essential because its basic features determine the effects of population age structure on

economic growth. In Mozambique, as in other countries, per-capita consumption exceeds labor income for two long periods at young and old ages (Figure 1 left). Labor income exceeds consumption for 32 years, between age 27 and 59.

Combining the age structure of Mozambique's population with the individual-level pattern of consumption and labor income reveals very high consumption for the young age group (Figure 1 right). This is not because Mozambican children consume at high levels, but rather because there are so many children.

### The balance between workers and consumers

The National Transfer Accounts (NTA) project is compiling data and developing methodologies to measure shifts in the balance between workers and consumers due to changes in population age structure. NTA uses comprehensive estimates of labor income that include earnings of individual

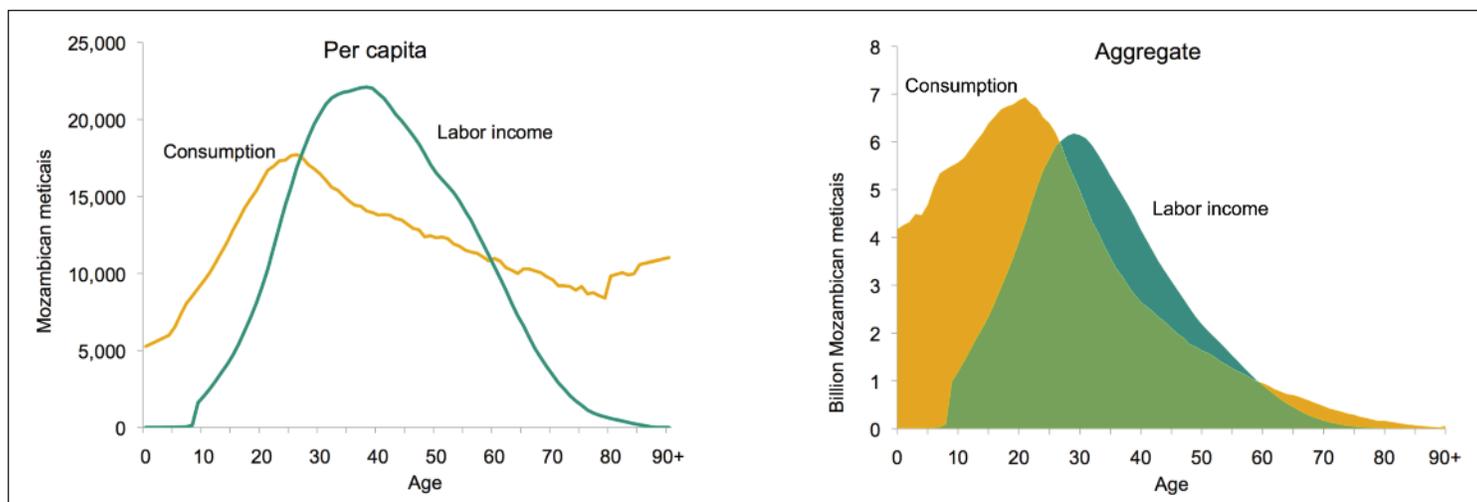
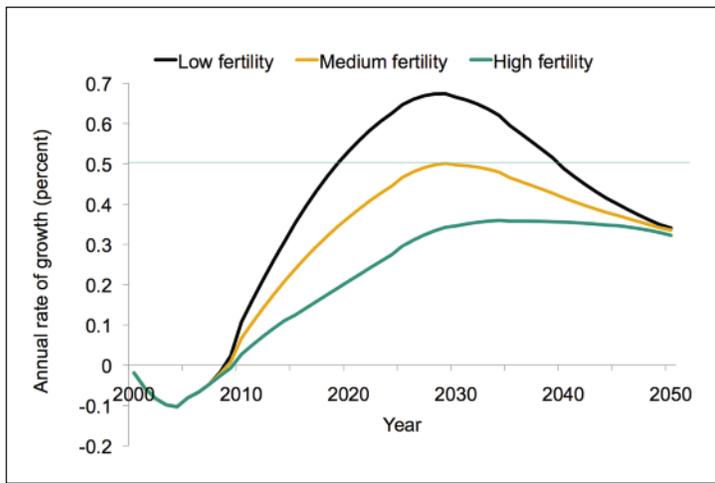


Figure 1. Per-capita (left) and aggregate (right) labor income and consumption by age in Mozambique, 2008.

Source: NTA data.



**Figure 2. Annual rate of growth of the support ratio in Mozambique based on United Nations low-, medium-, and high-fertility variants, 2000–2050.**

Source: Calculated from NTA data; population estimates and projections from United Nations 2012.

employees, return to labor in family businesses, income from self-employment, and other types of income. One effective worker is defined as a person earning the average labor income of a person in the prime working ages 30–49.

Similarly, one effective consumer is defined as a person consuming at the average level of someone age 30–49. Consumption includes goods and services from both the private and public sectors.

The effective number of workers per consumer is the support ratio. If the support ratio increases, each effective worker is supporting fewer effective consumers, freeing up resources that can be used to raise consumption and increase saving and investment.

### Generating a first and second demographic dividend

In Mozambique, the support ratio declined between 2000 and 2008, but it is expected to increase rapidly over the next 20 years, providing a strong basis for economic growth (Figure 2). By 2030, according to United Nations' medium-variant fertility estimates, Mozambique's economy will be growing nearly 0.5 percent faster due to favorable changes in population age structure (Norte and Chipembe 2013). In later years, the demographic boost to economic growth slows down but remains positive.

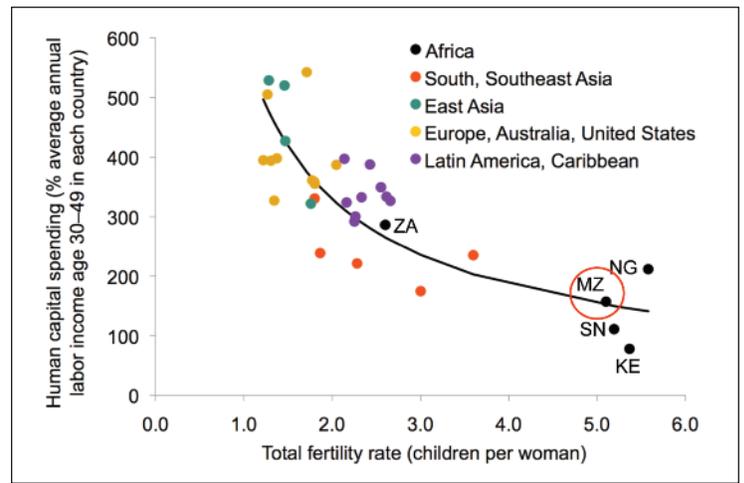
Mozambique could enjoy an even greater demographic dividend if fertility declines more rapidly. Projections based on the United Nations low-fertility variant

show an annual boost to economic growth of 0.5 percent or more for 20 years from 2019 to 2039. If fertility follows the high variant, the demographic dividend is still positive, but the growth rate is slower.

A demographic dividend frees up resources that can be invested in the health and education of children. As the children grow older and enter the labor force, these earlier investments will have a favorable impact on the economy by increasing worker productivity, contributing to a second demographic dividend. Compared with other NTA member countries, human-capital spending in Mozambique is about what would be expected for the current fertility level (Figure 3). Raising investment in children is critical to realizing a second demographic dividend, but it will be difficult without significant fertility decline.

In the long term, the proportion of Mozambique's population in the elderly age group will expand. As a whole, elderly people in Mozambique continue earning some labor income well into old age (Figure 1) but not enough to support their consumption.

Policies and programs are needed to help individuals accumulate assets that will reduce their dependence on families and taxpayers in their old age. As a key component of the second demographic dividend, asset accumulation and investment by individuals preparing for retirement play a strong role in promoting economic growth.



**Figure 3. Tradeoff between human-capital spending and fertility.**

Source: Update of estimates presented in Lee and Mason (2010).

Note: Human-capital spending combines per-capita health spending at age 0–17 and per-capita education spending at age 3–26. African countries are Kenya (KE), Mozambique (MZ), Nigeria (NG), Senegal (SN), and South Africa (ZA).

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