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Will Senegal Enjoy a Demographic Dividend?

From 2000 to 2011, economic growth in Senegal averaged 3.9 percent a year with wide fluctuations. Despite a growing economy, as of 2010–2011 an estimated 48 percent of the population lived in poverty (Dramani, Ndiaye, and Ouarmé 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. In fact, birth rates have been going down since the early 1980s, but very slowly, and fertility is still high—averaging 4.6 births per woman.

A second key contributor to a demographic dividend is job growth. The magnitude of a 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. A third key contributor is insuring that savings made possible by a first dividend

are invested productively in physical capital and in the health and education of children. Then Senegal may 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. In Senegal as elsewhere, working-age adults produce more through their labor than they consume, while children and the elderly consume more than they produce (Figure 1 left). Within this broad pattern, the economic lifecycle varies according to the structure of the economy, the level of development, public policy, and many other factors. Understanding the economic lifecycle is essential because its basic features determine the effects of population age structure on economic growth.

When the age structure of Senegal’s population is combined with this individual-level pattern, the large size of consumption by the young age group is revealed (Figure 1 right). This is not because Senegalese children have high consumption, 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 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. Those in each one-year age group are counted as more or less

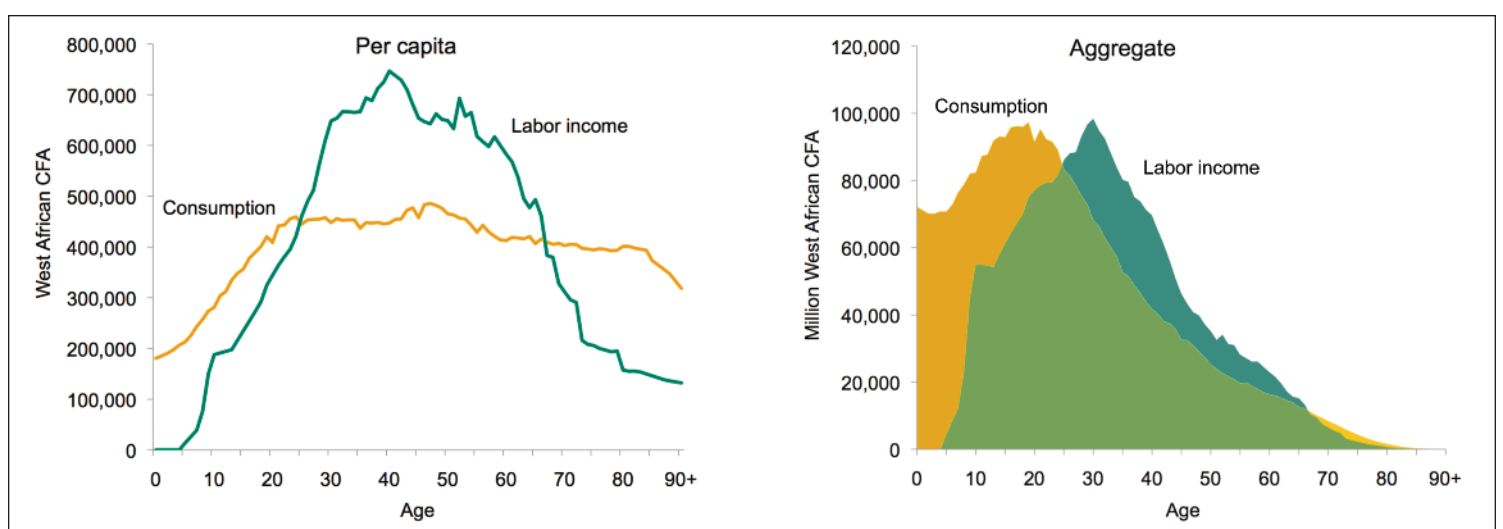


Figure 1. Per-capita (left) and aggregate (right) labor income and consumption by age in Senegal, 2005.

Source: NTA data.

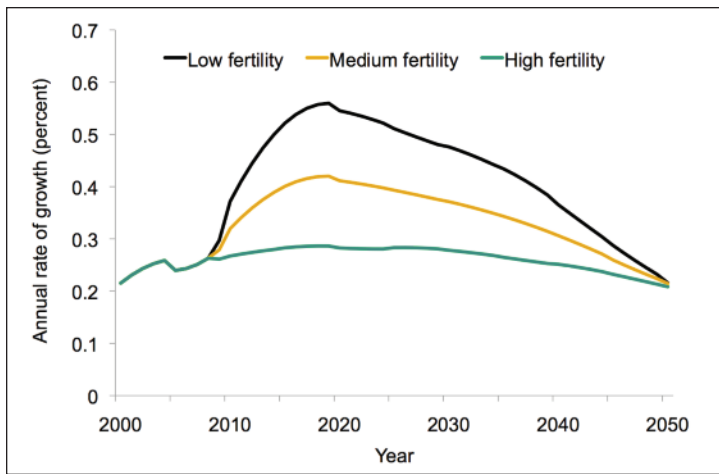


Figure 2. Annual rate of growth of the support ratio in Senegal based on United Nations low-, medium-, and high-fertility variants, 2010–2050.

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

than one effective worker based on their average labor income relative to the average for prime-age workers.

The effective number of consumers is calculated by comparing the average per capita consumption at each age with average consumption at ages 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 or increase saving and investment. In 2010, Senegal had a high support ratio, primarily because labor income was very high for young workers. This helped reduce the dependency burden of the large child population.

Generating a first and second demographic dividend

The United Nations' medium-variant fertility projection suggests that Senegal will benefit from a demographic dividend over the next decades (Figure 2). Annual economic growth should be higher by 0.3 to 0.4 percent due to favorable changes in population age structure.

Senegal 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 several years. If fertility decline follows the high variant, the demo-

graphic dividend is still positive, but the growth rate is much 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. Human-capital spending is relatively low in Senegal (Figure 3) compared with other NTA member countries (Lee and Mason 2010). 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 Senegal's population in the elderly age group will expand. As a whole, elderly people in Senegal continue earning some labor income well into old age (Figure 1) but not enough to support their consumption. Analysis of current consumption levels among the elderly suggests that Senegal's workers need to set aside 5.1 percent of their labor income every year if they are to meet all of their consumption needs in old age out of their own savings (Mason and Lee 2012).

Public pension and healthcare coverage for the elderly is very likely to expand in the years ahead, but policies and programs need to help individuals accumulate assets that reduce their dependence on families and taxpayers. As a key component of the second demographic dividend, asset accumulation and investment play a strong role in promoting economic growth.

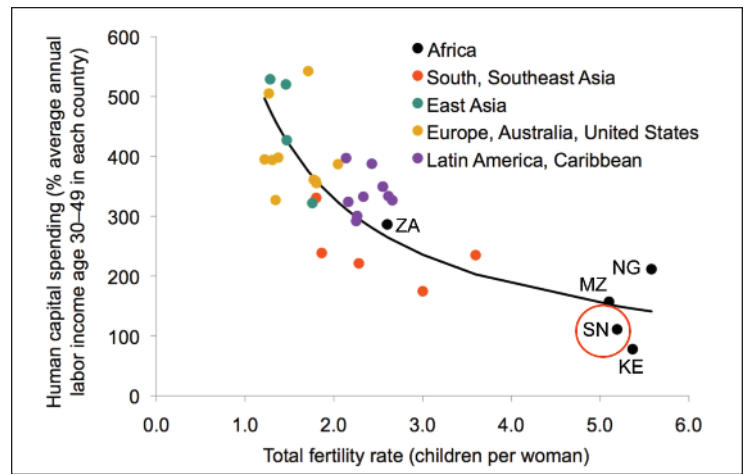


Figure 3. Tradeoff between human-capital spending and fertility.

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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