

“Fertility decline and a maturing age structure typically prove more indicative of future human development . . . than do shifts toward economic or political liberalization. Why should it be any different south of the Sahara?”

Africa’s Reluctant Fertility Transition

RICHARD CINCOTTA

Whether or not they choose to acknowledge it, academics, global businesses, and international agencies place a great deal of stock in the United Nations Population Division’s biennial series of population estimates and projections—and justifiably so. For more than three decades, a surprisingly small group of UN demographers has done remarkably well at predicting trends in childbearing and mortality in each of the world’s nearly 200 countries and geographically distinct territories.

Demographic Dilemmas

Eighth in a series

Among their best predictions to date are some that have been the toughest to fathom: projections for the large group of low- and medium-income countries, many of them still struggling with post-colonial statehood, that entered the last few decades of the twentieth century with relatively high birth and death rates. When the UN demographers have missed the mark, it is usually because they were too conservative in predicting the pace of decline in annual mortality or in the total fertility rate (the average expected lifetime number of births per woman based on current age-specific rates). Across much of the world, these rates have fallen dramatically.

Sub-Saharan Africa, however, has proved exceptional. It has defied the most basic fertility and mortality assumptions that UN demographers have relied on to project the population future elsewhere. For countries in this region, unlike in most of their developing-country cousins in East Asia, Latin America, and the Caribbean, the transition to lower fertility has gone slowly and

haltingly. Meanwhile, over the past two decades in the southern and eastern reaches of the continent, the emergence of human immunodeficiency virus (HIV) and the consequential mortality associated with acquired immunodeficiency syndrome (AIDS) erased gains in child survival and produced reproductive-age mortality rates the likes of which have not been sustained elsewhere in centuries.

Sub-Saharan Africa’s nearly monolithic lack of progress in the transition toward lower fertility—a transition quite rapid elsewhere in the developing world—has important consequences for human security and state stability in the region. Population growth, for example, has deepened sub-Saharan states’ dependence on an increasingly volatile international grain market. And in some countries an insufficient focus on preventing HIV transmission may have sown the seeds for a future of treatment dependency that African states and Western donors can ill afford.

FINISHING LAST

In each of the world’s regions, one country or another has lagged in its fertility transition even as others have bolted toward replacement level (around 2.1 children per woman in populations with European-level childhood mortality). In Europe the late ones were Ireland and Albania. Haiti was the Caribbean holdout, while Cambodia and Laos were, for years, Southeast Asia’s laggards. But sub-Saharan Africa—with the exception of the island state of Mauritius, where fertility is slightly below 2 children per woman, plus several countries in the continent’s southern cone—is a region composed of high-fertility stragglers. Demographers have spent a lot of time hashing out the reasons.

For development economists in the early 1960s, the “low-income, high-fertility trap” explained both the economic and demographic setbacks ex-

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perienced in Africa and elsewhere in the postcolonial world. Anthropologists noted that African farmers relied on their own children for farm labor; they sent them to nearby cities or abroad to generate remittances and buffer their risks; and ultimately, they depended on their children for old-age support. This need for large families, it was reasoned, created a demand for modern education and health services that neither cash-strapped African governments nor rural households could afford.

Development economists argued that the failure by both families and governments to invest in children—to build “human capital,” as social scientists call it—guaranteed the transmission of poverty into the next generation. The answer? Boosting income growth, most development donors agreed, provided the quickest and most actionable escape from the low-income, high-fertility trap.

Trends that unfolded in East Asia during the next decade, however, seemed to prove proponents of the trap theory terribly wrong. In the late 1960s and early 1970s, a handful of East Asian governments decided to invest in programs that made modern contraception widely available and affordable to low-income families. The governments of South Korea, Taiwan, Thailand, and Indonesia proved the most successful at organizing these services, and at acquiring financial and technical assistance from foreign aid donors (particularly the US Agency for International Development, which went on to build the largest international family planning assistance program).

China in the early 1970s directed provincial governments to launch a voluntary family planning campaign that was, in fact, quite successful. But when surveys sensed fertility decline stalling near 3 children per woman in the early 1980s, ardent social engineers seized on the opportunity to lock in a coercive one-child-per-couple policy.

The rest is history: Fertility in these East Asian states declined at unprecedented rates, leaving economic development to play catch-up—which it did, with roaring vitality. Savings skyrocketed, the entry-level workforce grew increasingly smarter and more skilled, and foreign firms flocked to invest capital, technology, and expertise. By the early 1990s, the region was financing its own development and exporting capital back to the West.

Not all developing countries followed East Asia's “fertility-first” pattern. In Brazil and Mexico, fertility declined and per-capita income grew somewhat in tandem, while the tracks of other Latin American states, such as Chile and Colombia, fell between this “tit-for-tat” pattern and “fertility-first.” Notably, however, within the wave of newly industrializing states across the world, an “income-first” income-fertility pattern—a pattern still presupposed by many political scientists—was conspicuously absent.

By the mid-1990s, fertility decline had taken root in North Africa, Iran, Bangladesh, Turkey, and the southern states of India, leaving demographers confident that if a low-income, high-fertility trap truly did exist, it was fairly weak. Yet, despite this consensus, high fertility persisted south of the Sahara, with only a few isolated cases of decline.

Family planning organizations reported a lack of political commitment on the part of African rulers and a chain of setbacks caused by the region's frequent political upheavals. In response, aid agencies directed the family-planning service providers that they funded to place greater emphasis on training staff and improving the quality of their clinics.

Lately, the destabilizing properties of what political scientists call a “youth bulge” have received increased attention from defense and intelligence analysts.

NOT ACCORDING TO PLAN

Then things got complicated. Throughout the late 1990s and early 2000s, public health programs in sub-Saharan Africa were overwhelmed by immediate needs stemming from the spread of HIV/AIDS. Although the two public health efforts seemed complimentary, initial attempts to integrate family planning and HIV/AIDS-related services proved difficult.

Nonetheless, demographers and international donors were encouraged by upticks in contraceptive use in South Africa, Botswana, Zimbabwe, Kenya, and Ghana. Many became convinced that once fertility in these countries descended from very high levels, the trend would continue smoothly, as it had in East Asia and the Caribbean, until reaching near-replacement levels and then dropping considerably below.

Five years into the twenty-first century, however, health surveys were making it clear that sub-Saharan Africa's transition was not proceeding as

donors hoped. While the total fertility rate declined in South Africa and Botswana, this measure of childbearing remained unimaginably high in countries across the midriff of the continent: well over 7.5 children per woman in Niger in 2005, and more than 6 in the Democratic Republic of Congo and Uganda that same year. In 15 sub-Saharan countries, including Kenya, Ghana, and Zimbabwe, a nascent fertility transition had stalled after a brief period of fertility decline. In most nations, indicators of contraceptive use virtually plateaued.

Some survey results baffled demographers. While it is usual to find that women in high-fertility populations desire a family size of about one child lower than the current total fertility rate, in several countries in western and middle Africa—Niger, Nigeria, Chad, Cameroon, and Gabon—surveys suggested that, on average, women would prefer to have more children. The extraordinarily high risk of maternal death or serious injury associated with high-birth-order pregnancies in several of these countries makes such responses remarkable, if not death-defying.

These data forced a few demographers to admit that the low-income, high-fertility trap, while absent in either northern or southern Africa, seemed firmly ensconced almost everywhere in between. That is when feminists cried, “I told you so.” Some had long ago warned that childbearing patterns in sub-Saharan Africa would be maintained by a gendered set of reinforcements: by the low traditional and legal status of women; by discrimination in schooling and jobs; and by African leaders’ deep-seated reluctance to champion girls’ education, women’s rights, or family planning.

One need not be a radical feminist to observe that in many rural African societies, the only path to a modicum of security and social status for women is through early marriage and childbearing. Moreover, even if states in Africa’s midsection have laws that prohibit female genital cutting, underage marriage, domestic violence, polygamy, or overt discrimination against women in the formal-sector workplace, they generally avoid vigorous enforcement. Almost all turn a blind eye to customary practices that limit women’s ability to own or inherit property, initiate divorce, or assume custody of their children following marital separation.

From 2001 through 2008 the United States, operating from a health-policy rulebook written by the George W. Bush administration’s religious constituency, sent mixed signals to Africa’s cash-

strapped health ministries. Even as US funding for AIDS treatment and HIV prevention vigorously expanded in Africa, the administration shied away from condom promotion, favoring abstinence instead, and backtracked on prior US financial commitments to international family planning.

Reinstating the Ronald Reagan-era “Mexico City Policy,” the United States cut off funds to foreign nongovernmental service providers that refused to sign an agreement prohibiting them from providing abortions, referring clients to legal abortion providers, or discussing abortion in research or communications materials. In Africa, the policy effectively eliminated US funding for the International Planned Parenthood and Marie Stopes International family planning networks.

During the first two years of the Barack Obama administration, US reproductive health policies and programs reversed course; family planning and maternal-and-child health funding was vastly expanded in sub-Saharan states. However, control of the House of Representatives swung from the Democrats to the Republicans after the 2010 elections, signaling a reignition of budget battles in which social conservatives will surely seek to restrict family planning activities and funding and eliminate contributions to the UN Population Fund.

WHOSE PROBLEM?

Two products of sub-Saharan Africa’s sustained high fertility tug naggingly at the attentions of US defense and intelligence analysts. At the front of the queue these days is the region’s chronic youthfulness, which has led to rapid workforce growth and is associated with the risk of political instability and civil conflict. Right behind this concern—and intricately tied to youthfulness—is the region’s continued rapid population growth, and the effects of this growth on food and service needs, urbanization, and environmental changes.

To the average household in Africa, these issues have little meaning compared with the more immediate health burdens related to high fertility that are borne by African women and children. According to the World Health Organization, 1 in 31 women south of the Sahara dies from largely preventable pregnancy-related causes.

The region’s riskiest conditions for childbearing are in Chad and Somalia, where 1 in 14 women dies in pregnancy, childbirth, or complications from unsafe abortion, compared with 1 in 2,100 in the United States and 1 in 4,700 in Britain. Ac-

According to one estimate, Africa's maternal mortality could be reduced by 25 to 40 percent if women were able to avoid all unwanted pregnancies.

Infant survival and health are also affected by short intervals between birth and the next pregnancy. In low-income countries, babies who are born less than two years after another birth are twice as likely to die as those born after a three-year interval. Just eliminating high-risk pregnancies and satisfying the unmet need for contraception (the number of married women who say that they do not want to have a child in the next two years but are not using either a modern or traditional method of contraception) would push most sub-Saharan African countries well along their fertility transition.

YOUNG AFRICA

After more than a half-century of academic indifference to the persistence of "population youthfulness" in Africa, this age-structure condition has recently garnered a basketful of attention. Many analysts and international donors are increasingly aware that fertility decline would benefit African states economically.

This is not a new idea. The notion that fertility decline and age-structural change in low-income countries would precipitate economic and social progress was first proposed in 1958 by Ansley Coale, a demographer, and Edgar M. Hoover, an economist. Their thesis (which would come to be known as the Coale-Hoover hypothesis) had little to say—unlike prior analyses, and unlike much that would follow—about population numbers or growth. Instead, for Coale and Hoover, the demographic engines of economic change were family size and age structure.

Developing economies would be better off, they argued, with a larger proportion of the population in their adult working years and relatively fewer children. Today, Coale and Hoover's view is widely accepted—but acceptance took a while.

When pondering why a fertility decline might be good for sub-Saharan Africa, four effects suggested by Coale and Hoover are worth considering. The first, and probably the most difficult to refute of the four, is the production effect. With more people of working age and fewer childhood and elderly dependents, one can expect more production per capita than in youthful populations.

The second effect may be the most important, however: an age structure's capacity to boost savings rates. Parents with small families save more. With a large proportion of workers, taxes collected on production and wages can exceed public spending—so governments can save, too.

The third is a human-capital effect. Small families allow parents to invest more in each child, both financially and in care. Likewise, with smaller cohorts entering school, governments can invest more educational resources in each student. It can also invest more in each child's health care.

Finally, a fourth—a wage effect—should emerge as workforce growth slows. Relatively cheap labor costs provide an advantage for export-oriented industrial development, but wages ultimately are likely to rise for smaller, better-educated cohorts entering the workforce. This is part of progress. It means a country will soon have domestic consumers, as well as educated workers who can perform technical tasks more efficiently, who can innovate, and who thereby will earn higher wages.

Parental responses to small families—higher household savings and greater investment in each child—were never in doubt. However, economic demographers who continue to explore Coale-Hoover effects stress that the governmental contribution to the "demo-

graphic bonus" tends to be conditional and is limited to a window of opportunity several decades long.

Thus, whenever sub-Saharan states enter this demographic window, the extent—if any—of the bonus derived from lower fertility will depend on the answers to a number of questions. Will the savings be wisely invested, and those investments protected? Will governments boost educational and health funding for children, and how widely, in geographical terms, will those funds be spread? Will policies and practices foster an inviting environment for private-sector investment, technology transfer, and scientific and technological development? Or will sub-Saharan states fritter away their potential demographic bonus in the way that many have misspent the proceeds from their natural resources?

SECURITY RISKS

Lately, the destabilizing properties of sustained population youthfulness (what political scientists

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call a “youth bulge”)—whether in Africa, the Middle East, or South Asia—has received increased attention from defense and intelligence analysts. A principal worry is the legitimacy of sub-Saharan states. Burdened by large and rapidly growing infant and school-age cohorts, and by escalating needs for childhood and maternal health care, these states struggle, and generally fail, to provide adequate services.

Meanwhile, high rates of workforce growth and unemployment in the region tend to increase young men’s dependence on extended-family networks, on local “big men,” and on the largesse of political entrepreneurs. This feeds into more extensive patronage networks and into tensions among ethnicities and regions. For a significant proportion of sub-Saharan states, particularly across the continent’s midriff—including Somalia, the Democratic Republic of Congo, Liberia, Sierra Leone, Ivory Coast, Rwanda, and Burundi—recurring political violence has proved the most daunting of all development constraints.

Historically, states have required political stability to sustain economic and social progress. For this reason, military and political elites in countries with restive, youthful populations typically seek stability using pseudo-democratic and authoritarian political systems. Freedom House, the non-profit group that rates the world’s political systems according to the civil liberties and political rights they grant, finds freedom lacking in most sub-Saharan states.

In 2010, among 43 continental sub-Saharan states plus Madagascar, 21 could be classified as partial democracies (assessed by Freedom House as partly free); 17 were authoritarian regimes (not free); and 6 could be considered liberal democracies (free). Each of Africa’s six liberal democracies—Mali, Benin, Ghana, South Africa, Botswana, and Namibia—have youthful populations, and therefore can be expected to be somewhat fragile. In fact, this group was a third larger two years ago; since then, Senegal and Lesotho have fallen out of Freedom House’s “free” category.

THE BIG “IF”

Would completed fertility transitions within all sub-Saharan nations, followed by their populations’ transformation into more mature age struc-

tures, help reduce the risk of civil conflict and increase the chances for liberal democracy? Yes, on both counts, but with a big if—if the fertility transitions of large ethnic minorities in each country proceed at a pace close to, or faster than, that of the majority. Historically, this is rare.

The classic lesson on the dangers of delayed ethnic transitions comes from Lebanon, where fertility among Christian groups declined first, and many Christians emigrated to the West. Next, Sunnis and Druze entered their fertility transitions, leaving behind the Shiites—the most rural, the most pious, and the most economically and politically marginalized of Lebanon’s four major ethno-religious groups. Despite recent fertility declines among Shiites, the age structure of that group’s population remains the youngest in Lebanon, and its growth rate the fastest. As the theory goes, among all groups, Shiite young men should be the easiest to recruit into militant organizations. Thus, Lebanon and the region reckon with Hezbollah.

Christian Leuprecht of the Royal Military College of Canada has called this, and similar cases, such as Northern Ireland and Fiji, the demographic security dilemma. That is, the more a state politically, economically, and socially marginalizes an ethnic group, the more

likely that group is to grow demographically. Will some sub-Saharan states experience this phenomenon? Undoubtedly—but several might be able to minimize the effect by working hard to bring minorities into the political, economic, and secular-social mainstream.

A second scenario is perhaps more serious and certainly more open-ended: an Afro-Pakistan or an Afro-Yemen. This would be a poor, youthful, densely populated country where economic, social, and demographic progress occurs primarily in and around a few urban areas. To avoid wrestling with the problems of intransigent, hard-to-develop rural enclaves, states like Yemen and Pakistan have granted local leaders the latitude to maintain arcane institutions, letting religious education and customary institutions substitute for more costly state-run institutions and the rule of law.

And if the region breeds militancy, elements of the state may encourage regional leaders to use their groups’ militancy to further the state’s goals

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or to take their anger elsewhere—that is, to spill over into the surrounding region, or further. This is not a pretty picture, and it could be the dead end street into which Nigeria is heading.

Nigeria's 2008 Demographic and Health Survey estimated that, on average, Nigerian women bear 5.7 children. All evidence of a fertility decline comes from the country's Christian-majority south, whereas across the Muslim north, fertility remains above 7 per woman. The adoption of Islamic law a decade ago by the 12 northern states provides a clue to the deteriorating reach of the Nigerian state and the politicization of Islam.

However, the most salient threat to national and West African stability may be the chronic youthfulness of Nigeria's population (now topping 160 million and growing by leaps and bounds), coupled with the government's inability to keep up with jobs, education, health care, or infrastructure, despite windfall petroleum profits.

GRAIN FUTURES

For many poor African urbanites, 2007 and 2008 were bad years. An abrupt dip in global grain supplies led to heavy speculation in the international grain market, causing an unprecedented spike in food prices worldwide. While the world's major grain stocks have since declined from peak prices, agricultural economists remain worried. The global aggregate demand for grain over the coming decade (2010 to 2020) promises to surge because the population of Asia, Africa, and Latin America will grow by 700 million people; because of increasing dietary preferences for protein in Asia; and because, in all likelihood, demand for grain-based biofuels will grow.

In sub-Saharan Africa alone, population growth will top 200 million people during this decade. Meanwhile, on the supply side, global warming trends are likely to depress agricultural productivity in some regions—and parts of sub-Saharan Africa are likely to be among them.

What is wrong with importing grain? Nothing at all, unless one lives in a low-income country whose meager foreign currency reserves would be better spent on importing job-creating machinery, energy, expertise, and technology. Yet, for sub-Saharan Africa, food aid (which can depress domestic production) and grain imports are likely to increase, assuming efforts are made to meet nutritional needs.

The US Department of Agriculture's global food assessment concludes that, while Asia and Latin

America are showing remarkable progress in reducing food insecurity, agriculture south of the Sahara continues to struggle as the region urbanizes. The USDA's Economic Research Service projects that during this decade (2010 to 2020) the region's food-insecure population will increase by 23 percent, or an additional 123 million people.

Even some countries with substantial foreign currency reserves perceive their exposure to a volatile grain market as a national security risk. State-financed companies and sovereign wealth funds from Saudi Arabia, the United Arab Emirates, India, South Korea, and China—countries that are either already experiencing low-per-capita cropland levels or are due for substantial population increases over the coming decades—have recently acquired rights to farmland in sub-Saharan Africa.

Given the increasing power of technology, trade, communications, and transport, the future growth of populations is an unlikely cause of either mass starvation or warfare. Rather, starvation will probably reemerge in the wake of Sahelian drought as a product of political marginalization and neglect. Or it will be wielded ruthlessly as a weapon of warfare and repression, as it has been in Sudan most recently, in Somalia in the prior decade, and in Ethiopia in the early 1990s.

The population doubling that is likely to occur in about 25 sub-Saharan countries over the coming three to four decades will surely pressure governments and international development agencies to seek greater agricultural efficiencies, but these probably will not be enough. In the future, the world's major grain producers will have to bear the brunt of the costs by heavy-handedly intervening in international markets to guarantee an equitable pattern of distribution of affordable grain.

THE AIDS CHALLENGE

The reach of HIV is global, but Africans disproportionately remain its victims. Today about 22.5 million people in sub-Saharan Africa live with HIV, about two-thirds of the global total. Approximately 1.3 million AIDS-related deaths occurred in the region in 2009, about 70 percent of the global total. This toll has fallen from a peak of 1.6 million in 2004. Much of this change is credited to new programs that facilitate HIV testing and distribute antiretroviral therapy—drugs that have both life-extending effects and help reduce the chance of transmission—and to a scaling-up of efforts to reduce mother-to-child transmission of HIV.

Nonetheless, the vast majority of new HIV infections in the world continues to occur south of the Sahara. A 2009 tally by UNAIDS (the United Nations initiative targeting HIV/AIDS) estimated that 1.8 million Africans were infected that year. This is not to discount the progress that has been made against the disease. Annual infections in the region are down by about one-fifth since the beginning of the decade.

It is clear that the epidemic's momentum has been stunted by a six-fold increase in financing for HIV programs since 2000, including funding through the US President's Emergency Plan for AIDS Relief, begun under the George W. Bush administration. UNAIDS also notes documented changes in sexual behavior in some (mostly eastern) African states, and the stabilization of HIV prevalence in southern Africa, albeit at very high levels.

Despite the extraordinary hardships endured by HIV-infected individuals and their families and communities, several of the countries hit hardest by the pandemic—particularly Botswana, South Africa, and Namibia—have registered rates of economic growth well above that of the rest of sub-Saharan Africa.

Western analysts largely overestimated the impact of low-skill labor losses in Africa's labor-abundant societies, underestimated the region's capacity to produce young professionals, and fretted over the operational readiness of militaries in places where the military's role in political stabilization has historically been ambiguous. Just as important, analysts failed to comprehend how the stigma of an HIV-positive diagnosis would deter those living with the disease from turning their shared grievances into political action.

What Western analysts got right, however, was the social and financial cost of delays or missteps in HIV prevention. These programs sorely need a boost. If HIV prevention efforts and their effectiveness remain at current levels, by 2025 the HIV-positive population in sub-Saharan Africa could top 35 million, around 50 to 60 percent of whom would need antiretroviral therapy to survive.

An alternative scenario suggests that if fully scaled-up prevention programs—consistent with best practices, and unencumbered by political constraints—were in place by 2015, these efforts could hold the therapy-dependent population to nearly half that number.

WHAT'S NEEDED

The sub-Saharan demographic transition remains very far from finished. To date, real progress in the region's fertility transition has largely been confined to the continent's southern cone—to South Africa, Botswana, Namibia, and Zimbabwe; and to a few small island states—Mauritius, Seychelles, and Cape Verde.

Meanwhile, another two dozen states drift between the Scylla of a near-vacancy in African leadership on women's issues, and the Charybdis of swings in external funding from politically fickle and economically hamstrung Western donors. What each corner of sub-Saharan Africa could use most is a leader modeled after Tunisia's late Habib Bourguiba: an in-your-face advocate for women's rights and women's participation in a secular society.

Despite the promising turnaround in the trend in AIDS-related deaths south of the Sahara, progress toward eradicating HIV in the region is a long way off. No effective HIV vaccine is on the horizon. And while a self-administered microbicide is a possibility, this is unlikely to be widely disseminated by the end of this decade. Only a near-revolution in HIV prevention in sub-Saharan Africa is likely to deter treatment costs from spinning out of control as more people obtain the access they need to life-extending drugs.

A last thought: Africa-watchers should try their hand at a bit of economic demography. Be wary of the pronouncements, based on economic policies and political liberalization alone, that periodically predict economic turnaround south of the Sahara. Those who worked in the region during the late 1970s and 1980s are sure to recall the conventional wisdom of the time: Ivory Coast, Kenya, Liberia, Senegal, and post-Idi Amin Uganda were Africa's development hopefuls. Since then, each has descended—one time or another—into a bout of political troubles and bloodshed that set back its development clock.

African leaders and development policy makers would be better off heeding the lesson that economic demographers learned elsewhere. Fertility decline and a maturing age structure typically prove more indicative of future human development in low-income countries than do shifts toward economic or political liberalization. Why should it be any different south of the Sahara? ■