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Family Planning Makes a Difference

Technical Brief • October 2015



Photo by Raul Pires

INEQUITY, FERTILITY, AND ECONOMIC OPPORTUNITY

Family Planning Makes a Difference

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This technical brief explores the impact of differential trends in fertility decline among wealth quintiles on the population age structure of four countries in Sub-Saharan Africa (SSA) and the possible trajectory of these trends through 2050. It further explores the impact of these trends on demographic indicators such as population growth, median age, and dependency, as well as access to economic opportunity for the poorest segments of society. Countries in the region have significant fertility disparities across income quintiles; the richest quintile (20 percent of the population) has largely achieved low fertility while the poorest quintile continues to have high fertility. Fertility trends directly impact the age structure of the population, which, in turn, determines the critical ratio of the number of dependents to the number in the

working ages. This analysis suggests that continued high fertility in the poorest quintile in most countries in SSA creates high dependency ratios, thereby compromising the ability of the poor to access economic opportunities. This has the potential to lock the poor into a cycle of poverty for generations. In contrast, the richest quintile has experienced historical fertility declines that have produced low dependency, creating greater opportunity for investments in the health and education of young dependents and savings and capital accumulation (cashing in on the so-called “demographic dividend”). If fertility decline is not accelerated across wealth quintiles, the resulting inequities could limit the realization of economic benefits for the country as a whole. Fertility decline should be considered a critical element of inclusive and sustained economic growth in Africa.

Introduction

Across Sub-Saharan Africa, national development policies and long-term vision strategies aim for the twin goals of rapid and inclusive economic growth. The continent has enjoyed a sustained period of rapid economic growth spurred by economic diversification and better fiscal policies. Moreover, the region has made considerable progress in poverty reduction relative to growth rates in the last two decades (Fosu, 2015). Optimism about the possibility of a demographic dividend has attracted attention from the highest levels of leadership in many African countries and the African Union. However, economic and social inequality persists, compromising the degree to which economic growth will continue to translate into broad poverty reduction.

This brief draws attention to high fertility as a key demographic driver of social and economic inequality. Fertility directly affects both population growth and the population age structure (the way population is distributed across age groups). Age structure has profound impact on economic growth. In particular, the total dependency ratio (TDR), defined as the ratio of the number of dependents (population ages 0-14 and 65 or older) to the working age population

(ages 15-64), has a strong relationship to both household and national patterns in resource utilization. Countries with high dependency, especially high young-age (0-14) dependency, require significant investments in the health, nutritional, and educational needs of the dependent population. As fertility declines, the proportion of young-age dependents shrinks and the proportion of people in the working age increases, allowing for potential increases in income, savings, and capital accumulation (Bloom, 2003). As such, total dependency and young-age dependency have significant impact on both household and national economics.

In most countries in SSA, the wealthiest segment of the population has already attained relatively low fertility, while the poorest continue to have very high fertility (over 5 children per woman in most cases). This disparity could be the product of inequality (driven by different fertility preferences) or inequity (driven by access and information); in SSA, the data suggest that it is both (Creanga, 2011). However, this brief will refer to wealth-based disparities in fertility as “inequity” as the poor consistently have fertility which is higher than desired.

Methodology

This brief examines disparities in fertility decline and the association with access to economic opportunity. In order to demonstrate the age structure changes associated with differential patterns of fertility decline among quintiles, two alternate scenarios of fertility decline for the lowest and highest income quintiles have been constructed. The projections were generated using data from the most recent Demographic and Health Surveys (DHS) and the 2015 UN Population Projections. The 2015 baseline age structure for each country was generated using trends in fertility decline between the last two surveys.¹ The two alternative scenarios are:

1. Current rates of total fertility rate (TFR) decline

continue: In this scenario, fertility decline continues at current rates, established on the basis of the rate between the last two DHS in each country. In countries where the TFR of the poorest quintile increased between the last two surveys, gradual decline was assumed to take place, based on earlier rates of decline that the specific country experienced.

2. Rates of TFR decline accelerate and become more

equitable: In this scenario, the richest quintile achieves replacement fertility by 2030 and the poorest quintile by 2035. Although these assumptions are very ambitious, the experiences of Rwanda between 2005 and 2010 and Kenya between 2003 and 2014 demonstrate that rapid TFR decline can be achieved in just a few years.

The two scenarios are examined in four countries that represent variations in family planning program performance and are categorized by yearly percentage point increment in modern contraceptive prevalence rates (MCPRs):

- **Rwanda** (with 2.9 average annual percent point increment between 2007-2014) and **Kenya** (with average annual 2.8 percent point increment between 2008-2014) are both defined as achieving “rapid progress”, but represent different historical patterns of equity in MCPR between quintiles;
- **Uganda** (average annual 1.6 percent point increment between 2006-2011) has achieved “encouraging progress”;
- **Nigeria’s** MCPR has stagnated.

The quintile population projections for the alternate scenario were generated using the DemProj software in Spectrum.² Projected MCPRs were estimated using the FamPlan software.

The pyramids show the shape of the population age structure and also give key demographic factors such as TFR, MCPR, and TDR, as well median ages and proportion of persons in working ages and below working ages. The analysis defines a favorable age structure as one in which:

- Young dependent ages 0-14 comprise 30 percent or lower
- Working ages 15-64 comprise 66 percent or higher
- The median age is 25 years or older

These recommended age structure parameters are defined based on the experience of the “Asian Tigers”, where age structure shifts had critical impact on access to economic opportunity. Thailand, for example, saw its TFR decline from 6 births per woman in 1960 to 2.1 by 1990.³ As a result, the age structure shifted such that the young dependent ages 0-14 comprised 30 percent of the total population while one-third were in the working ages 15-64. Similar age structure changes occurred in South Korea in the 1980s and Malaysia in the 2000s. Such shifts, along with investments in education and job creation, contributed to these countries’ rapid economic growth.

The median age of the population is included in the analysis based on Cincotta and Doces’ 2012 study that showed that a young median age is associated with social and political instability. Countries at or below a median age of 25 years infrequently achieve full liberal democracy. Those that do are likely to decline to more limited models of democracy within ten years, and half of those that declined experienced political violence.

1. Wealth quintile data of the DHSs of SSA countries were obtained using the website http://dhsprogram.com/data/index.cfm#CP_JUMP_13446

2. Spectrum is a system of projection models designed to support policy decision-making. Developed and maintained by Avenir Health, Spectrum includes DemProj (population projection software) and FamPlan (software to estimate fertility/FP requirements).

3. Source: UN World Population Prospects, 2015 Revision.



Rwanda, by Todd Shapera

Limitations

The analysis presented in this brief is exploratory and not comprehensive, as it deals only with four countries. However, the authors are preparing projections of the poorest and richest quintiles for other SSA countries in order to illustrate further the impact of fertility inequities on age structure and potential access to economic opportunities in the region.

The methodology used in the analysis has several limitations. The first limitation is that the analysis does not address all of the direct and indirect determinants of fertility. In SSA, three key determinants are contraceptive prevalence (especially modern contraceptive prevalence), age at marriage, and desired family size. This analysis focuses specifically on modern contraceptive prevalence, rather than overall contraceptive prevalence rate (CPR) as the traditional methods included in CPR are not as effective in regulating fertility. Additionally, in order to simplify the model for projecting fertility trends over time, the projections retain the same modern contraceptive method mix reported in the latest DHS for each country, attributing changes in fertility primarily to increasing use of modern contraceptives. More

complex models, which account for the possibility of changes in method mix towards highly effective modern methods, such as the IUD, could show accelerated fertility decline.

Furthermore, this analysis only refers to the extreme quintiles (the top 20 percent and bottom 20 percent). Poverty in Sub-Saharan African countries is pervasive and many of those included in the middle wealth quintiles are also poor. While it is possible to create age structure pyramid for each quintile, in order to simplify the analysis and presentation of the projections, only the extreme quintiles were modeled.

Finally, the projections are attempts to follow the 2015 quintile over time. As such, these are not projections of what the actual top and bottom 20 percent of the population would be in 2050, but how the 2015 quintile (or cohort) population would change over time based on assumptions about the cohort's fertility behaviors. Future populations will have different numbers of people and socio-economic groupings with disparate growth rates.

RWANDA

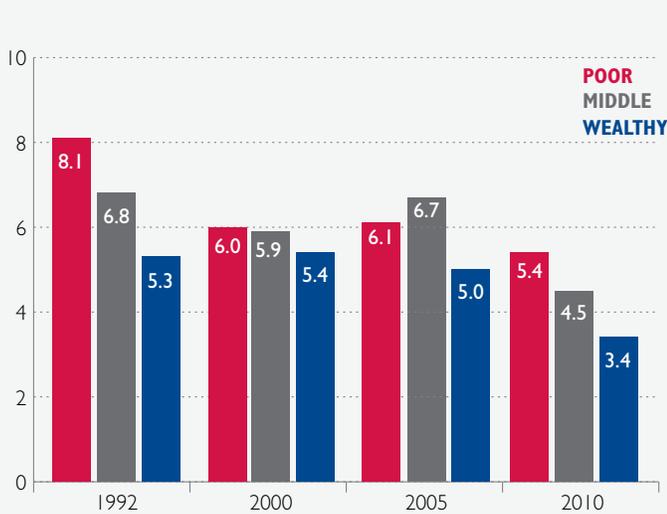


Figure 1. Rwanda, total fertility rate by wealth status

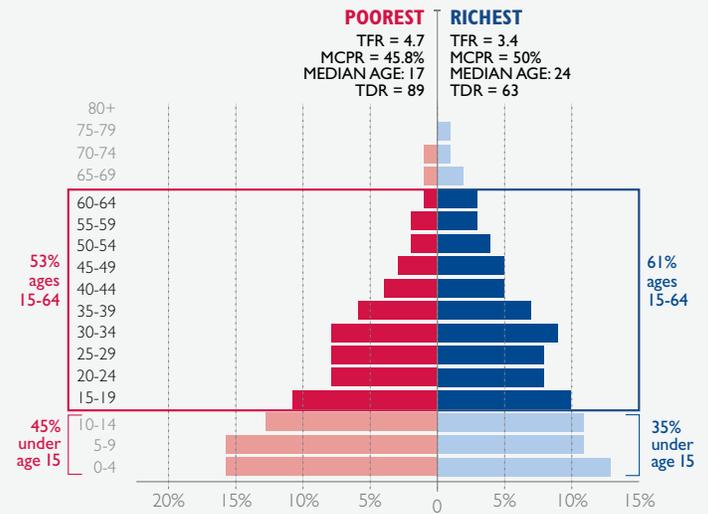


Figure 2. Rwanda 2015, percent in age/sex grouping (actual)

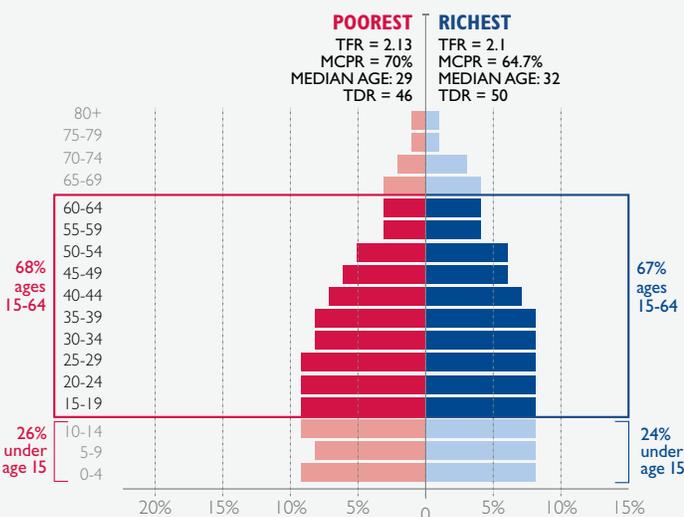


Figure 3. Rwanda 2050, percent in age/sex grouping assuming current TFR decline

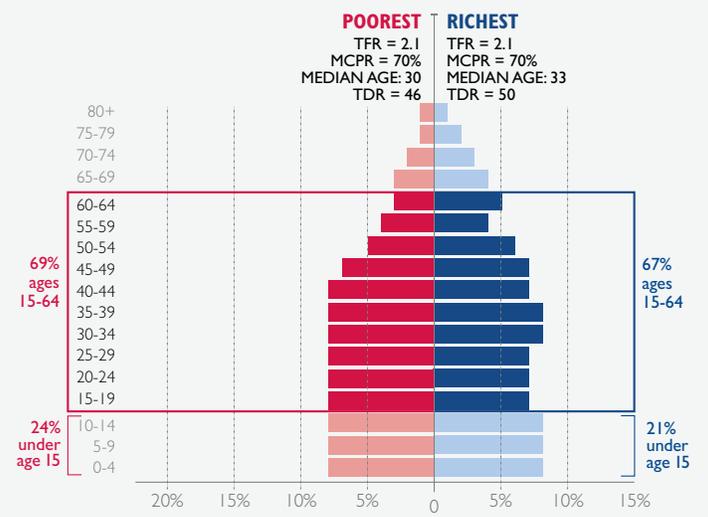


Figure 4. Rwanda 2050, percent in age/sex grouping assuming accelerated TFR decline

RWANDA: Setting the Standard for Equitable Progress

Rwanda has achieved an unprecedented rate of progress in improving access to modern contraception and translating that progress into fertility decline.

Rwanda achieved impressive declines in TFR, decreasing from 6.1 in 2002 to 4.1 in 2014. Significant increases in MCPRs occurred across all wealth quintiles, indicating a strong program that made efforts to reach various sectors and groups. As a result, fertility decline has occurred relatively equitably across wealth quintiles. The fertility differential between the highest and the lowest quintile is the smallest among the four countries at 2 children per woman.

At present, the age structure of the richest quintile is still predominantly young (Figure 2), with expanding cohorts towards the base of the pyramid. However, the proportion of the population age 0-14 years is approaching the “ideal” in which young dependents comprise 30% or less of the population. The TDR of the poorest quintile in Rwanda, at 89, is still high, but the proportion of the population in the working ages is larger than the proportion in the young dependent ages.

Rwanda’s rapid and relatively equitable trends in fertility decline are expected to produce a favorable age structure in both quintiles, even under the scenario where current TFR trends continue (Figure 3). In the second scenario, assuming accelerated TFR decline (Figure 4), the gap in the median age of the poorest and richest quintiles, shrinks to just three years. This indicates that the quintiles are maturing, or becoming increasingly dominated by populations in the middle age groups, relatively equitably.

Table I provides a snapshot of the demographic outcomes in Rwanda based on the two projected scenarios. Rwanda’s relatively equitable fertility trends are expected to produce

relatively similar demographic indicators between wealth quintiles compared to other countries in the analysis. For example, the population in the working ages will reach 3.65 million assuming current rates of fertility decline compared to 3.47 million under the accelerated fertility scenario. The median age of the poorest quintile will be about 30 by 2050 under either scenario. In the poorest quintile, the working age population is two times the size of the dependent population; this implies greater potential for increased economic productivity and savings accumulation as well as greater resources to improve the quality of healthcare and education.

In 2005, Rwanda had one of the highest rates of economic inequality in the world, despite rapid economic growth of around 5 percent annually since 2000. In 2008, Rwanda’s second Poverty Reduction Strategy specifically highlighted reductions in total fertility that could be achieved by meeting the unmet need for family planning and the potential effect on poverty reduction.⁴ In 2012, Rwanda’s third Integrated Household Living Conditions Survey showed both significant poverty reduction and a decrease in the Gini coefficient of economic inequality, leading many economists to praise the country for achieving broad-based economic growth (Verpoorten, 2014). Notably, this trend from highly inequitable to broad-based economic growth has coincided with the country’s equitable fertility decline although further research is needed to ascertain the specific contribution of fertility change to Rwanda’s inclusive economic growth.

4. <http://www.imf.org/external/pubs/ft/scr/2008/cr0890.pdf>

Table I. Demographic indicators of the poorest and richest quintiles under two TFR scenarios, Rwanda, 2015–2050*

Demographic indicators, Rwanda	Assuming continuing past trends (slow TFR decline)						Assuming accelerated TFR decline					
	Poorest Quintile			Richest Quintile			Poorest Quintile			Richest Quintile		
	2015	2035	2050	2015	2035	2050	2015	2035	2050	2015	2035	2050
Projected population (in millions)	2.77	4.37	5.35	2.63	3.57	4.13	2.77	4.18	5.07	2.63	3.41	3.90
Median age	17	23	29	24	27	32	17	24	30	24	29	33
Population in young dependent ages 0 to 14 (in millions)	1.24	1.46	1.37	0.91	0.98	0.97	1.24	1.28	1.27	0.91	0.85	0.91
Population in working ages 15 to 64 (in millions)	1.47	2.77	3.65	1.62	2.36	2.76	1.47	2.76	3.47	1.62	2.33	2.60

*Quintile projections were estimated using Avenir Health’s Spectrum models, DHS wealth quintile data, and the UN’s 2015 population projections.

KENYA

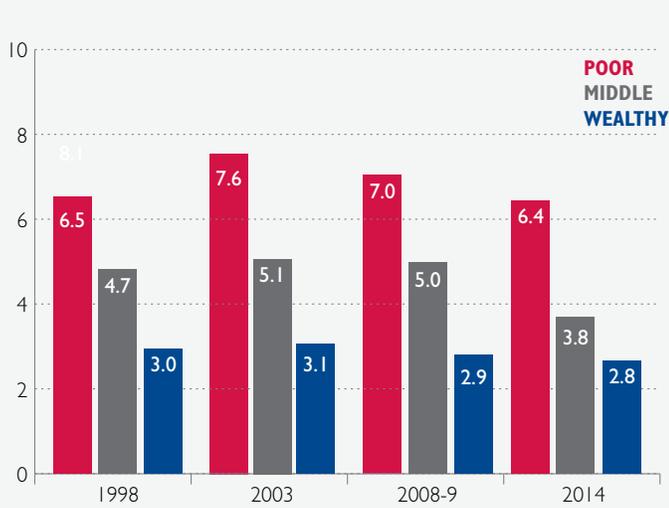


Figure 5. Kenya, total fertility rate by wealth status

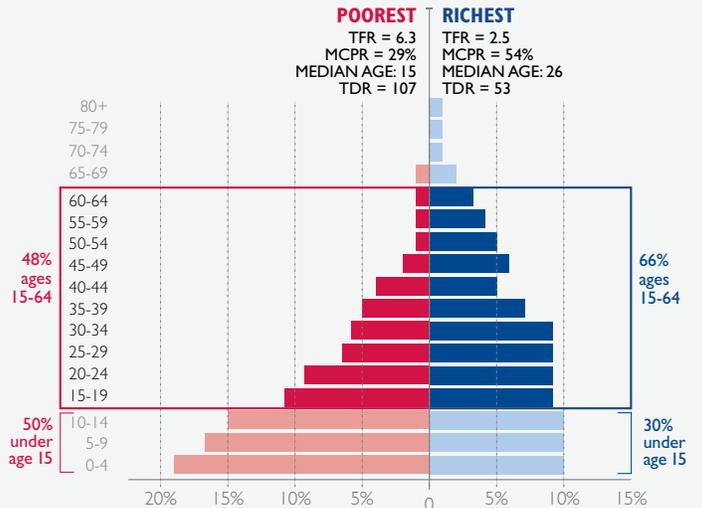


Figure 6. Kenya 2015, percent in age/sex grouping (actual)

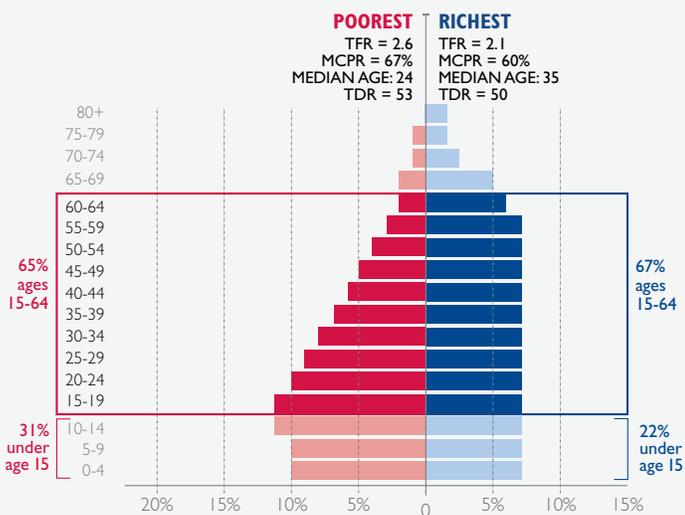


Figure 7. Kenya 2050, percent in age/sex grouping assuming current TFR decline

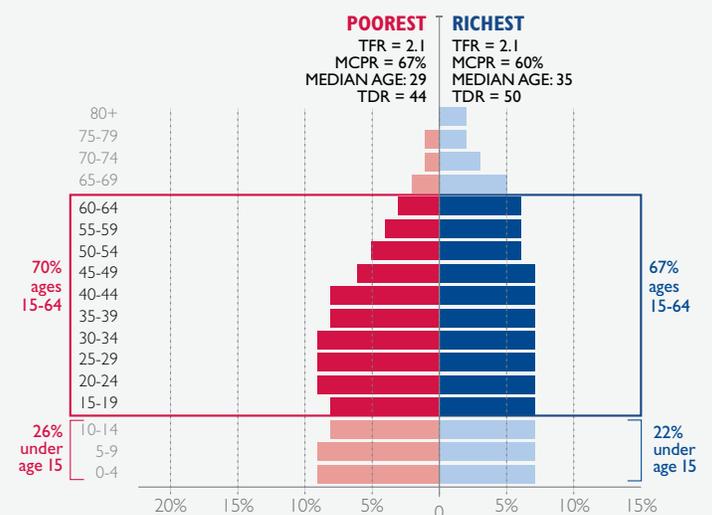


Figure 8. Kenya 2050, percent in age/sex grouping assuming accelerated TFR decline

KENYA: Correcting the Course in Equitable Fertility Decline

With its rapid progress in modern contraceptive use since 2008, Kenya demonstrates that it is possible to overcome both historical stagnation and inequitable trends in fertility decline.

In 2007, the Government of Kenya recognized the emerging, deeply inequitable pattern of fertility decline and adopted measures to alter its course by making progress more equitable. Kenya has achieved steady declines in TFR, from 4.9 in 2003 to 3.9 in 2014 (Figure 5). However, until very recently, progress in expanding access to modern contraceptives was highly inequitable in Kenya. As such, fertility decline has not been equitable: the TFRs of the richest and poorest quintiles are 2.8 and 6.4 respectively, a fertility differential of 3.5.

The TDR of the poorest quintile in Kenya (107) indicates that there are more young-age dependents than working age adults. The age structure remains broad-based, with expanding cohorts towards the bottom of the pyramid (Figure 6). By contrast, Kenya is experiencing progress towards a favorable age structure in the richest quintile, with growing proportions in the middle age groups of the pyramid, and a narrowing of the base.

Even if current fertility trends persist, the richest quintile will achieve a favorable age structure by 2050, with 22 percent of the population in the young dependent ages and 67 percent in the working ages by 2050. The poorest quintile is also expected to progress towards a more favorable age structure, but does not reach the "ideal" by 2050. As a result, the age pyramids of the richest and poorest quintiles are asymmetrical. As shown in Figure 7, as young-age dependency in the richest quintile shrinks, the population becomes equally distributed across age brackets from age 0-44; at the same time, the population in the poorest quintile expands in the adolescent and young-adult ages (10-24). Moreover, there is an 11-year

difference between the median age of the richest and poorest quintiles. Assuming accelerated fertility decline, both quintiles have more than two-thirds of the quintile populations in the working ages in 2050 and the gap in the median ages of the richest and poorest quintile is narrowed to 6 years.

Summary indicators shown in Table 2 suggest that the total population of the poorest quintile will double by 2035 if TFR trends continue. Such rapid population growth is a concern in Kenya, which is already classified as water-scarce and has seen drastic increases in the population requiring emergency food aid. The median ages of both quintiles will mature, but differences between the median ages of the richest and poorest quintiles remain about the same over time. In the accelerated scenario, the total population in the poorest quintile in 2050 will be 21 percent lower than if TFR trends continue. The population in the working ages would be nearly three times the population of young dependents. The median age would increase to over 25 in both quintiles, potentially reducing vulnerability to political instability.

The projections for Kenya illustrate that it is possible for a country to alter its demographic course and significantly reduce the fertility differential between the richest and poorest quintile. In 2007, Kenya launched its ambitious National Reproductive Health Policy: Enhancing Reproductive Health Status for All Kenyans, with the specific goal of reducing "inequalities in health resource allocation and improve access to RH (reproductive health) services by poor, 'hard to reach' and vulnerable groups."⁵

5. http://hivhealthclearinghouse.unesco.org/sites/default/files/resources/kenya_National_Reproductive_Health_Policy_booklet_2007.pdf

Table 2. Demographic indicators of the poorest and richest quintiles under two TFR scenarios, Kenya, 2015–2050*

Demographic indicators, Kenya	Assuming continuing past trends (slow TFR decline)						Assuming accelerated TFR decline					
	Poorest Quintile			Richest Quintile			Poorest Quintile			Richest Quintile		
	2015	2035	2050	2015	2035	2050	2015	2035	2050	2015	2035	2050
Projected population (in millions)	11.51	21.45	28.81	10.06	12.48	13.75	11.51	19.14	23.84	10.06	12.41	13.65
Median age	15	19	24	26	32	35	15	22	29	26	32	35
Population in young dependent ages 0 to 14 (in millions)	5.81	8.70	8.85	3.01	2.97	2.98	5.80	6.50	6.15	3.01	2.91	2.95
Population in working ages 15 to 64 (in millions)	5.55	12.40	18.85	6.60	8.43	9.16	5.55	12.29	16.58	6.60	8.42	9.09

*Quintile projections were estimated using Avenir Health's Spectrum models, DHS wealth quintile data, and the UN's 2015 population projections.

UGANDA

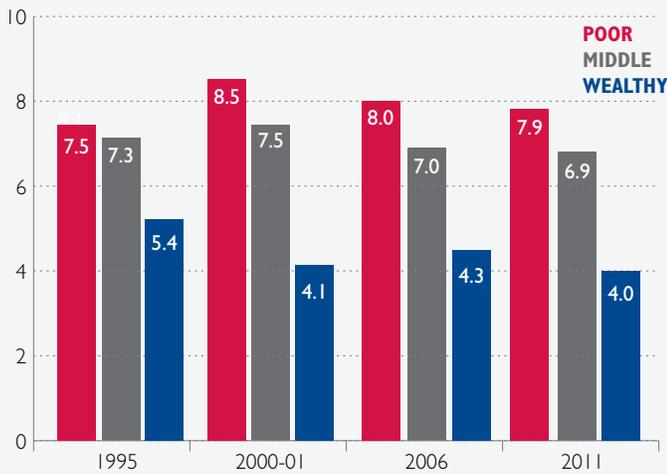


Figure 9. Uganda, total fertility rate by wealth status

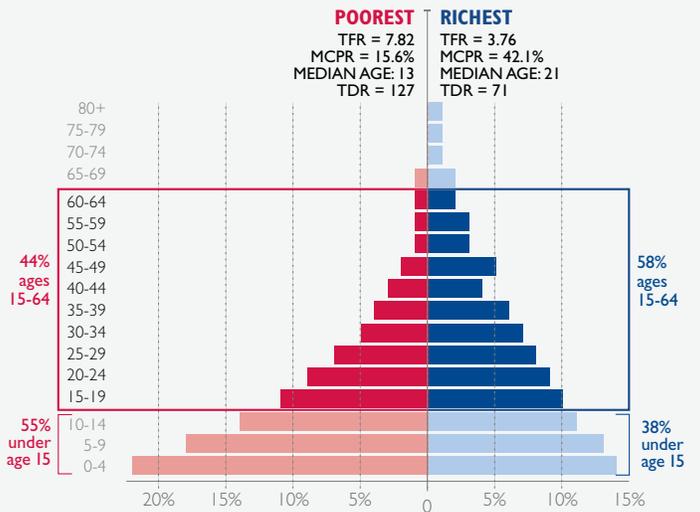


Figure 10. Uganda 2015, percent in age/sex grouping (actual)

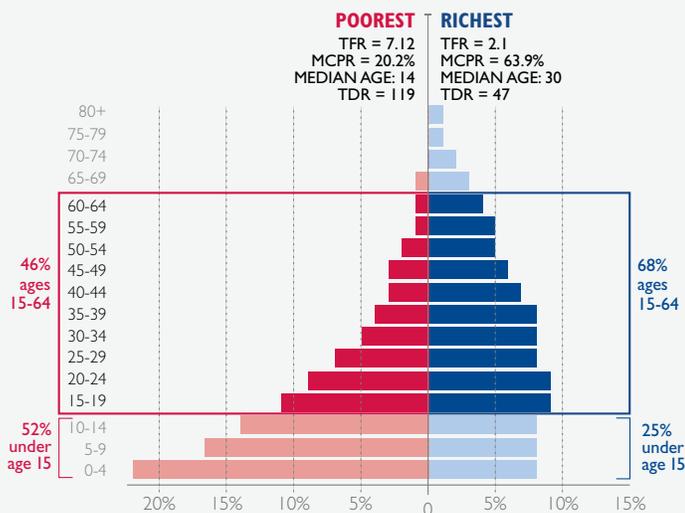


Figure 11. Uganda 2050, percent in age/sex grouping assuming current TFR decline

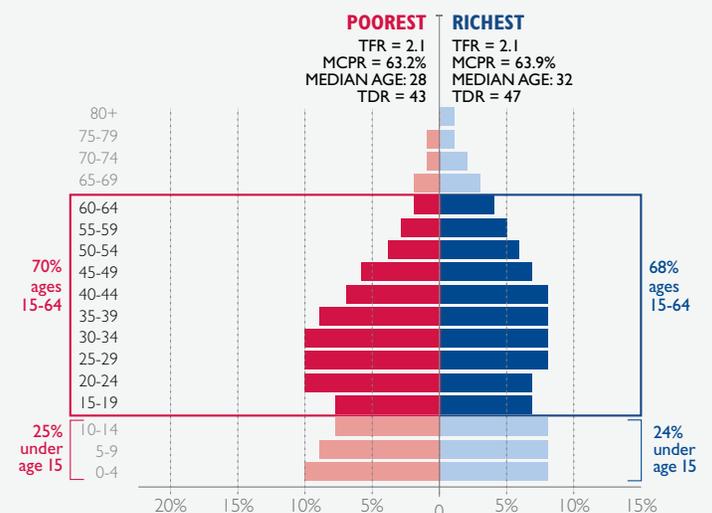


Figure 12. Uganda 2050, percent in age/sex grouping assuming accelerated TFR decline

UGANDA: Inequitable Fertility Decline Not Enough

Uganda demonstrates that delayed, inequitable progress in fertility decline can have alarming consequences on a country's demographic trajectory.

Uganda's recent progress (since 2011) in expanding access to modern contraception is encouraging. However, these recent increases in MCPHR have not yet manifested in fertility decline; TFR stands at 6.1 children per woman, one of the highest rates in the region. With a TFR of 4 in the richest quintile and 7.9 in the poorest quintile (Figure 9), Uganda has the largest fertility differential of the four countries at 3.9 children per woman.

Uganda has made very limited progress towards a favorable age structure, even in the richest quintile. With a current TDR of 127, Uganda's poorest quintile has the highest TDR of the four countries. Similarly, at 14 years of age, the median age of the poorest quintile in Uganda is the youngest of all four countries.

At current rates of fertility decline, Uganda will have very asymmetrical population pyramids in the poorest and richest quintiles. The poorest quintile has a broad-based age structure, with 22 percent of the population in just the 0-4 age bracket and 52 percent under the age of 15. By contrast, the age structure of the richest quintile has a constricted base and is nearly flat (indicating an even population distribution across age cohorts). The differential between the median age of the poorest and richest quintile is large, at 16 years. By contrast, the age structure in the accelerated model is fairly symmetrical between quintiles. Both quintiles experience a bulge in the most productive working ages, a key opportunity to maximize the benefits of a demographic dividend.

The demographic outcomes of the future trends (Table 3) in Uganda are, perhaps, the most extreme. At current rates of fertility decline, the population of the poorest quintile will nearly triple by 2035, and then double again by 2050. The median age in the poorest quintile remains alarmingly low at 14 years of age (compared to 30 in the richest quintile). Moreover, the number of dependents in the poorest quintile will remain larger than the working age population even beyond 2050. In the accelerated scenario, the total population of the poorest quintile in 2050 would be halved and the working age population would exceed the number of dependents by 2035. The gap between the median age of the richest and poorest quintiles would narrow to just four years.

Uganda is faced with an urgent need to rapidly improve access to family planning for the poorest quintile. Ideal family size among the poorest is higher than the richest (5.8 and 3.3 respectively), but it is also two children fewer than current TFR, indicating that poor women would prefer to have fewer children. If Uganda is to avert continued disparities between the poorest and the richest, with continued high fertility and rapid population growth in the poorest quintile, it must target disparities in access to family planning.

Table 3. Demographic indicators of the poorest and richest quintiles under two TFR scenarios, Uganda, 2015–2050*

Demographic indicators, Uganda	Assuming continuing past trends (slow TFR decline)						Assuming accelerated TFR decline					
	Poorest Quintile			Richest Quintile			Poorest Quintile			Richest Quintile		
	2015	2035	2050	2015	2035	2050	2015	2035	2050	2015	2035	2050
Projected population (in millions)	9.40	23.98	48.09	8.59	12.57	15.04	9.27	17.90	20.99	8.56	11.68	13.71
Median age	13	14	14	21	25	30	14	20	28	21	27	32
Population in young dependent ages 0 to 14 (in millions)	5.13	12.84	25.41	3.25	3.87	3.72	5.00	6.03	5.63	3.22	3.10	3.28
Population in working ages 15 to 64 (in millions)	4.14	10.88	21.94	5.02	8.02	10.22	4.14	10.24	14.63	3.28	7.90	9.34

*Quintile projections were estimated using Avenir Health's Spectrum models, DHS wealth quintile data, and the UN's 2015 population projections.

NIGERIA

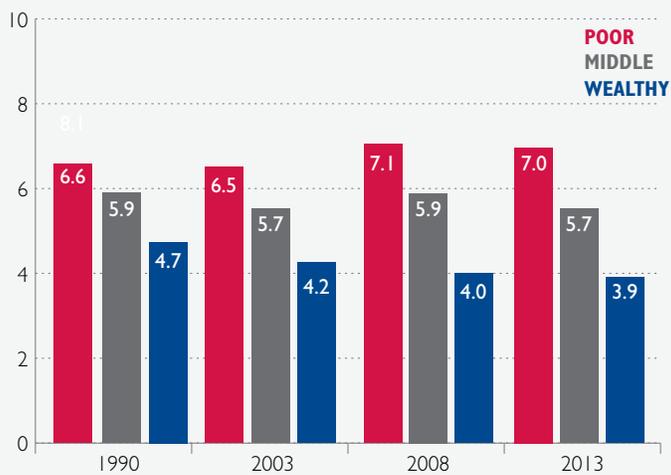


Figure 13. Nigeria, total fertility rate by wealth status

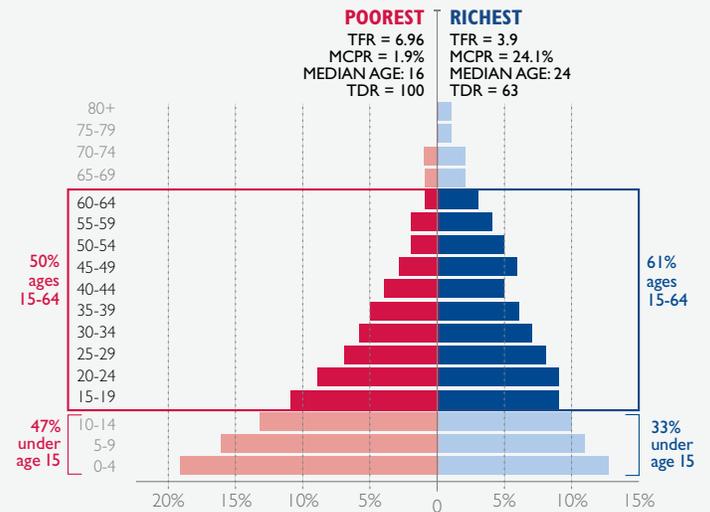


Figure 14. Nigeria 2015, percent in age/sex grouping (actual)

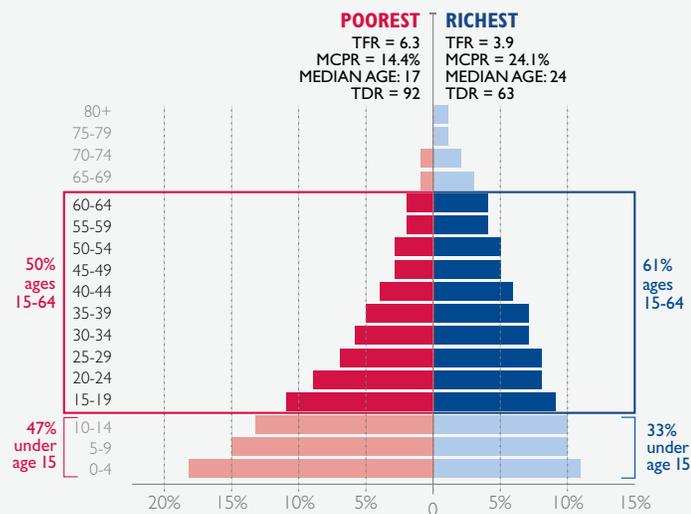


Figure 15. Nigeria 2050, percent in age/sex grouping assuming current TFR decline

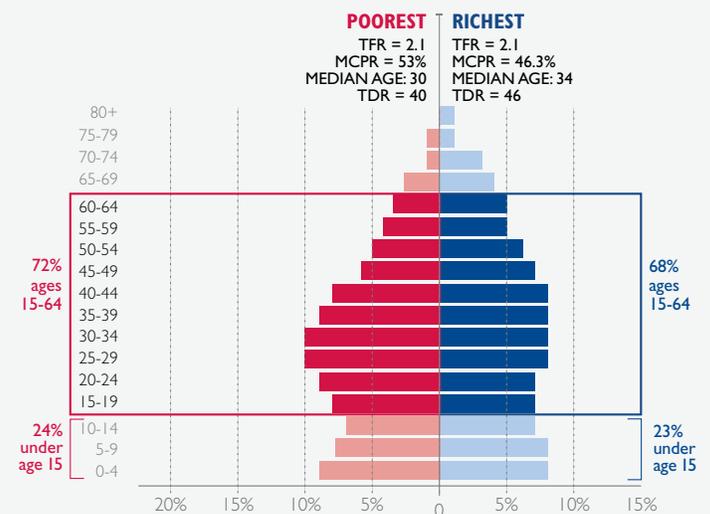


Figure 16. Nigeria 2050, percent in age/sex grouping assuming accelerated TFR decline

NIGERIA: Stagnancy and Inequity

In Nigeria, MCPR and total fertility in both wealth quintiles have been practically stagnant since 1990.

Nigeria continues to have a high TFR of 5.5, unchanged since 2003. The TFRs of the poorest and richest quintiles are 7 and 3.9 respectively, resulting in a 3 child fertility differential (Figure 13).

Nigeria's history of relatively high fertility levels in both the poorest and rich quintiles are reflected in the age pyramid for 2015, with high dependency in both quintiles (Figure 14). However, the richest quintile shows small signs of maturation, with the proportion of the population under the age of 15 approaching 30 percent. The median age of the richest quintile is 24, whereas the median age of the poorest quintile is 16 years.

If trends persist into the future, neither quintile will achieve a favorable age structure by 2050 (Figure 15). The median ages of the richest (26) and poorest quintiles (17) reflect very slow progress toward significant fertility decline and aging of the population. If fertility declines in either quintile accelerate significantly, both quintiles could attain more favorable age structures by 2050.

As shown in Table 4, if fertility trends persist in Nigeria, the population of the poorest quintile in 2015 (39 million) will nearly double by 2035 and be close to 120 million by 2050. The median age of the poorest quintile will only be 26 years

of age in 2050, and the number of young-age dependents will be only a little less than the working age population (53.99 and 61.79 million respectively).

In the accelerated scenario, the total population in the poorest quintile will be 65 million in 2050, certainly a sizable number but much smaller than the projected figure of 120 million under the current trend scenario. Additionally, the median age will be 30 in the poorest quintile, with the population in the young dependent ages down to a third of the number of working age adults, a favorable ratio for increased savings and investment.

Rapid population growth represents a serious challenge in both wealth quintiles in Nigeria. Fertility decline is still not evident and equitable fertility decline between quintiles is another dimension of the country's demographic challenge. Strong political commitment and focused, customized family planning and development programs are needed, particularly given the cultural differences between northern and southern Nigeria and outbreaks of political tension that the country faces.

Table 4. Demographic indicators of the poorest and richest quintiles under two TFR scenarios, Nigeria, 2015–2050*

Demographic indicators, Nigeria	Assuming continuing past trends (slow TFR decline)						Assuming accelerated TFR decline					
	Poorest Quintile			Richest Quintile			Poorest Quintile			Richest Quintile		
	2015	2035	2050	2015	2035	2050	2015	2035	2050	2015	2035	2050
Projected population (in millions)	38.78	73.29	118.72	37.88	52.37	65.55	38.78	56.98	64.86	37.82	46.13	50.87
Median age	16	17	17	24	25	26	16	23	30	24	29	34
Population in young dependent ages 0 to 14 (in millions)	18.41	33.77	53.99	12.63	16.73	20.10	18.41	18.22	15.50	12.56	11.11	11.53
Population in working ages 15 to 64 (in millions)	19.40	38.07	61.79	23.20	32.04	40.86	19.40	37.30	46.42	23.20	31.42	34.75

*Quintile projections were estimated using Avenir Health's Spectrum models, DHS wealth quintile data, and the UN's 2015 population projections.

Table 5. Current disparities in key aspects of economic opportunity

Country	Survey	Children Stunted		Net Secondary School Attendance Rate, total		Men's occupation: Professional, technical, managerial		Men's occupation: Agriculture	
		Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
Rwanda	2010 DHS	54.0%	25.8%	-	-	0.2%	9.1%	77.4%	27.5%
Kenya	2008-09 DHS	44.4%	24.5%	6.4%	44.7%	8.2%	40.2%	58.6%	7.4%
Uganda	2011 DHS	37.3%	20.8%	-	-	0.8%	16.5%	91.0%	47.2%
Nigeria	2013 DHS	53.8%	18.0%	12.5%	76.1%	1.4%	26.1%	68.5%	3.2%

Policy and Program Implications

The income-based fertility differentials and the resulting demographic trajectories described above will have an adverse effect on the goal of rapid poverty reduction in SSA. Disparities in fertility (and the resulting differences in age structure) among income quintiles are already associated with reduced access to economic opportunity. Table 5, above, shows current disparities in key aspects of economic opportunity. The poorest quintile has a much higher rate of stunting, which is associated with cognitive delays, poorer school performance, and lower economic productivity during adulthood. The poor are significantly less likely to attend secondary school and are much more likely to work in low-wage agricultural jobs. Should current rates of population growth and high dependency persist in the poorest quintile, these indicators are unlikely to improve and may even worsen.

Family planning is the most important tool for changing the age structure of the population. In two of the case studies presented in this brief, progress in expanding access to family planning has been slow in the poorest quintile. Quintile projections using two alternative scenarios similar to those in this brief are being prepared for other SSA countries. Based on past trends, many will likely move along inequitable patterns of fertility decline. However, Rwanda and Kenya offer models of more equitable declines in fertility by improving access to family planning. Country projections like those in this brief can help illustrate what could happen if fertility decline accelerates or becomes more equitable.

In countries with stalled or inequitable fertility decline, government leaders particularly of Ministries of Planning, Science and Technology, Youth, and Health, could consider:

- **Incorporating regular analysis of population growth, age structure, and future fertility trends (and possible shifts related to the implementation of voluntary family planning programs) into national development programs and strategies.** In Kenya, the National Council for Population and Development in the Ministry of Planning has provided instrumental leadership in undertaking such analysis and effectively translating it into advocacy, policy, and program development.
- **Increasing customization of family planning programs and improving access for under-served, hard-to-reach populations.** Sub-regional analysis of trends can help countries determine the most effective utilization of resources. Innovative tools, such as geographic information systems (GIS), will allow countries to identify hard-to-reach populations and analyze existing needs and resources in order to develop effective strategies to meet the needs of those populations. In Nigeria, satellites and GIS have been utilized to generate more accurate population projects (indicating that population growth has been overestimated).

■ **Prioritizing expansion of access to family planning for the poorest quintile in view of persistent, disproportionately high rates of unwanted fertility and unmet need.** Rwanda and Kenya have set examples in this respect, through programs to reach the poor including voucher systems and community-based distribution.

■ **Including family planning in development programs oriented towards poverty reduction.** These should be coordinated in order to improve synergies and reduce costs. Rwanda has continued to make population and demographics a key consideration in its five-year poverty reduction strategies.

■ **Exploring adoption of a total market approach in family planning distribution,** with differential pricing of contraceptive commodities for different income quintiles in order to improve affordability, sustainability, and accessibility of services. Evidence suggests that those in the wealthier quintiles disproportionately benefit from subsidized contraceptives in the public sector, despite willingness to pay (Winfrey, et al., 2000).

■ **Strengthening family planning programs through adoption and expansion of use of mobile and information technology,** particularly for improving management of financial and human resources, for technical updates and technical and administrative supervision, and for tracking progress through use of data and stronger communication systems. Kenya's establishment of an electronic human resource management system has contributed to improved efficiencies in management of human resources for health.

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Rwanda and Kenya offer models of more equitable declines in fertility by improving access to family planning. Country projections like those in this brief can help illustrate what could happen if fertility decline accelerates or becomes more equitable.



Photo by Todd Shapera



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ABOUT ASH

African Strategies for Health (ASH) is a five-year project funded by the U.S. Agency for International Development's (USAID) Bureau for Africa and implemented by Management Sciences for Health. ASH improves the health status of populations across Africa through identifying and advocating for best practices, enhancing technical capacity, and engaging African regional institutions to address health issues in a sustainable manner. ASH provides information on trends and developments on the continent to USAID and other development partners to enhance decision-making regarding investments in health.

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