Across sub-Saharan Africa, many national development strategies include the goal of achieving economic growth that is both rapid and equitable across their populations. This growing consensus on the importance of inclusive growth and shared prosperity is reflected in the global commitment to United Nations Sustainable Development Goal 10, “Reduce inequality within and among countries.”

Lack of economic opportunity can produce multigenerational cycles of poverty, threaten social cohesion and stability, and even reduce economic competitiveness, but countries can achieve inclusive growth by implementing strategies that promote “broad-based expansion of economic opportunity and prosperity.”

Demographic changes that facilitate greater investment in human capital can accelerate progress toward greater economic opportunity and shared prosperity. The benefits of changes in population age structure—to households, communities, and economies—are well documented in the literature on the demographic dividend. Changes in a population’s age structure are important to economic growth because the working-age population (approximately ages 15 to 64) produces the income needed to provide for the health, nutrition, and education of young dependents (ages 0 to 14) and older adults who are no longer working. When the working-age population increases relative to the dependent population and jobs are available for that cohort, household income also increases. Households with fewer children can afford to make greater investments in child health and education and can build savings, which opens up previously unattainable economic opportunities.

Such economic benefits are often greatest among richer subgroups. A recent report found that differences in fertility decline within population subgroups produce imbalances in the age structure of the richest and poorest wealth quintiles. Contraceptive use is one key driver of fertility decline. Disparities in the total contraceptive prevalence rate (CPR) and the modern contraceptive prevalence rate (mCPR) between the rich and poor are well-documented. A study of data from 46 developing countries found that the CPR of the richest population quintile averages 51 percent, compared to 32 percent among the poorest quintile. Similarly, a study of 21 African countries found that women in the richest population quintile are significantly more likely to use modern contraceptive methods compared to women in the poorest quintile. These disparities can be the product of inequality (reflecting different fertility intentions) or inequity (reflecting different ability to achieve desired fertility). In most sub-Saharan African countries, both factors are involved. Addressing imbalances in population age structure across wealth quintiles will require efforts to address both equity and equality.

This policy brief explores wealth-based disparities in mCPR, total fertility rate (TFR), and demand satisfied for modern methods of family planning in four United States Agency for International Development (USAID) priority countries—Ethiopia, Ghana, Malawi, and Tanzania—and the impact of those disparities on age structure through 2050. Findings reveal that in many cases, meeting the existing demand for family planning, particularly among a country’s poorest quintile, will significantly accelerate progress in increasing overall mCPR and closing the gap between the richest and poorest quintiles. The brief highlights lessons learned in achieving equitable fertility decline and provides recommendations for each country to accelerate progress. The analysis measures inequality through differences in mCPR, and inequity through differences in demand satisfied for modern methods of family planning. The brief focuses on the extreme wealth quintiles (a population’s richest 20 percent and poorest 20 percent) to simplify the presentation and highlight disparities.

Two alternate scenarios demonstrate long-term age structure changes associated with differences in fertility decline between quintiles:

- Current rates of fertility decline continue in each wealth quintile through 2050.
- Fertility decline accelerates and becomes more equitable, resulting in the richest quintile reaching replacement level fertility by 2030 and the poorest quintile by 2035.

A detailed description of the methodology is provided in Box 3 (page 7).
Ethiopia’s Increasing Modern Contraceptive Prevalence Rate Reveals Wealth Disparities

Ethiopia has achieved rapid progress in increasing mCPR, but wide disparities between the richest and poorest quintiles may have adverse effects on economic opportunity among the poor.

Over the last two decades Ethiopia’s family planning program has enjoyed high-level commitment and leadership. In 2002, the Health Sector Development Program II introduced health extension workers (HEWs) to expand access to essential health services, including family planning, at the village level. The Government of Ethiopia invested in an ambitious expansion of health infrastructure across the country. In 2009, HEWs became the first nonprofessional healthcare workers in Africa to insert contraceptive implants.10

Ethiopia increased total mCPR from around 6 percent in 2000 to more than 35 percent in 2016 (see Table 1). This progress, however, has not been equally distributed across wealth quintiles. By 2011, the mCPR of the richest quintile was 48 percent—35 percentage points higher than the mCPR of the poorest quintile. High inequality may drive this wide gap in mCPR. In 2011, the percent of demand satisfied for modern methods was 43 percentage points higher in Ethiopia’s richest quintile compared to its poorest quintile. Since then, Ethiopia has begun to improve equity, and in 2016, the gap in demand satisfied between the richest and poorest quintiles decreased to around 33 percentage points. Of the four countries examined, Ethiopia’s family planning trajectory has been the least equitable.

TABLE 1  Modern Contraceptive Prevalence Rate and Demand Satisfied for Modern Methods, Ethiopia

<table>
<thead>
<tr>
<th>Survey</th>
<th>% mCPR</th>
<th>% Demand Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Richest</td>
</tr>
<tr>
<td>2000</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>2005</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>2011</td>
<td>27</td>
<td>48</td>
</tr>
<tr>
<td>2016</td>
<td>35</td>
<td>47</td>
</tr>
</tbody>
</table>

Wealth-based disparities in mCPR can contribute to differences in fertility decline between the richest and poorest quintiles. While the richest quintile’s TFR fell from 3.6 children per woman in 2000 to 2.6 in 2010, the poorest quintile’s TFR is still more than six children per woman—a fertility rate differential of 3.8. In 2015, 53 percent of the poorest quintile was under the age of 15, compared to just 34 percent of the richest quintile (see Figure 1).

FIGURE 1  Ethiopia Age Structure (2015), Projected Quintile Age Distribution Assuming Accelerated TFR Decline

Ethiopia’s experience suggests that operating at scale is necessary for rapid progress, but in the absence of targeted programs and resources, the poor and other marginalized groups may be overlooked. The new HSTP is an important step toward improving equity. Additional steps include:

- Integrate measures of equity, such as demand satisfied for modern methods, into reproductive health policies and strategies to monitor progress.
- Review barriers to modern contraceptive method use among the poor to develop a rigorous approach to closing the equity gap, which remains wide at 33 percentage points. Demographic and Health Survey (DHS) data indicate that the population’s knowledge of implants (76 percent) and intrauterine devices (48 percent) is low relative to other high-performing countries.
- Increase investment in demand creation. Wealth-based disparities in fertility appear to be partially driven by poorer women’s desire for more children.

FIGURE 2  Ethiopia (2050), Current TFR Decline

Figure 3 illustrates that if fertility decline accelerates and becomes more equitable, Ethiopia could achieve dramatic age structure changes in the poorest quintile by 2050. Ethiopia is already taking steps to address equity. Its new Health Sector Transformation Plan (HSTP) 2015/16-2019/20 focuses on quality and equity, and sets ambitious goals for improved coverage and quality of health services. However, neither the HSTP nor the Costed Implementation Plan for Family Planning 2015-2020 articulate a clear strategy for further reducing wealth-based disparities in access and use.

FIGURE 3  Ethiopia (2050), Accelerated TFR Decline

Ethiopia’s age structure. While fertility in the richest quintile reaches replacement level (2.1) by 2050, fertility in the poorest quintile will remain high (5.8 children per woman). The richest quintile’s age structure is projected to mature, resulting in 67 percent of its population being of working age, while the poorest quintile remains young, with 45 percent of its population in the young dependent ages.
Ghana’s Slow But Equitable Progress in Family Planning Has Not Produced Equitable Fertility Decline

Ghana has achieved largely equitable increases in contraceptive use, but progress has been comparatively slow and wide disparities in fertility persist.

In 1969 Ghana became one of the first countries in the region to adopt a population policy. However, political commitment has been erratic over the years and coverage of services has been relatively low. While public knowledge of family planning is high, demand remains somewhat low. Uptake of modern methods has been moderate, with an mCPR of 22 percent in 2014—nearly the same in the richest (20 percent) and poorest (21 percent) quintiles. This equity is a result of both progress in the poorest quintile and stagnation in the richest quintile. The overall percent of demand satisfied in Ghana is the lowest of the four countries examined, but it is also the most equitable (see Table 2). Demand satisfied in the poorest quintile (40 percent) is actually higher than in the richest quintile (37 percent).

| TABLE 2  | Modern Contraceptive Prevalence Rate and Demand Satisfied for Modern Methods, Ghana |
|-------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Survey            | % mCPR              | % Demand Satisfied | Survey            | % mCPR              | % Demand Satisfied | Survey            | % mCPR              | % Demand Satisfied |
|                   | POOREST            | RICHEST            | POOREST            | RICHEST            | POOREST            | RICHEST            | POOREST            | RICHEST            |
| 1993              | 10                 | 19                 | 5                 | 18                 | 30                 | 10                 | 13                 | 18                 | 8                 | 24                 | 31                 | 16                 |
| 1998              | 13                 | 18                 | 8                 | 24                 | 31                 | 16                 | 19                 | 26                 | 9                 | 31                 | 44                 | 16                 |
| 2003              | 17                 | 21                 | 12                | 28                 | 37                 | 23                 | 19                 | 26                 | 9                 | 31                 | 44                 | 16                 |
| 2008              | 20                 | 20                 | 21                | 39                 | 37                 | 40                 | 22                 | 20                 | 21                | 39                 | 37                 | 40                 |

Fertility has been essentially stagnant in Ghana’s richest and poorest quintiles since 1998. Notably, while contraceptive use is relatively equitable in Ghana, fertility decline is not. In the richest quintile, fertility increased slightly between 2008 and 2014, but remains quite low at 2.8 children per woman—substantially lower than expected given the mCPR of 20 percent. Fertility in the poorest quintile has remained high, at 6.3 children per woman, creating a differential of 3.5 children per woman between the two quintiles. Studies exploring the reason for Ghana’s persistent discrepancy in TFR and mCPR identify a number of potential factors: counting days to avoid sex when the risk of conception is high; the use of contraceptives only during high-risk days; decreased use of contraceptives during postpartum amenorrhea, a period when women are unlikely to conceive; increases in age at sexual debut and first marriage; and induced abortion among urban and better-educated women.

Figure 4 shows that low fertility in the richest quintile has produced a maturing age structure, with 34 percent of the population in the young dependent ages and 64 percent of the population in the working ages. In the poorest quintile, 47 percent of the population is under the age of 15, and 48 percent is of working age. Looking forward, projections for Ghana assume that fertility will follow the pattern seen in other countries, where fertility decline temporarily stalled in the richest quintile before continuing a trajectory of decline. In this scenario, depicted in Figure 5, the difference in the age structure of the extreme quintiles is less than in Ethiopia, but remains pronounced. In the richest quintile, 66 percent of the population is projected to be in the working ages by 2050, compared to 54 percent of the poorest quintile.

If fertility decline accelerates and becomes more equitable, as depicted in Figure 6, more than 65 percent of the population of both quintiles would be in the working ages in 2050.

To achieve rapid and equitable fertility decline, Ghana could pursue the following strategies:

- Systematically review and address other disparities in demand satisfied for modern methods, especially pronounced gaps across age groups and regions.
- Increase investment in demand (for modern methods) creation. Wealth-based disparities in fertility appear to be partially driven by poorer women’s desire for more children.
- Scale up provision of contraceptive implants by community health nurses, and explore other opportunities for task shifting.
- Integrate contraceptive counseling, including for long-acting methods, into postabortion care.
Malawi’s Rapid Progress May Lead to Earlier, Equitable Demographic Change

If sustained, Malawi’s rapid progress in mCPR and targeted efforts to improve equity could produce drastic population changes in both quintiles by 2035.

Among the four countries examined, Malawi stands out with its rapid and sustained progress in increasing uptake of modern methods (58 percent among married women in 2016) and reducing wealth-based disparities (see Box 1). Inequality in mCPR between the richest and poorest quintiles peaked at 16 percentage points in 2000, but fell steadily to a 7 percentage point difference in 2016. Equity has also improved: The gap in demand satisfied fell from 22 percentage points to just 6 percentage points during the same period (see Table 3).

TABLE 3 Modern Contraceptive Prevalence Rate and Demand Satisfied for Modern Methods, Malawi

<table>
<thead>
<tr>
<th>Survey</th>
<th>% mCPR</th>
<th>% Demand Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Richest</td>
</tr>
<tr>
<td>1992</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>2000</td>
<td>26</td>
<td>36</td>
</tr>
<tr>
<td>2004</td>
<td>28</td>
<td>38</td>
</tr>
<tr>
<td>2010</td>
<td>42</td>
<td>48</td>
</tr>
<tr>
<td>2015-16</td>
<td>58</td>
<td>61</td>
</tr>
</tbody>
</table>

Malawi’s decline in TFR has been slower than expected, given the country’s exceptional progress in the mCPR. The comparatively weak relationship between mCPR and TFR in Malawi—especially for those in the poorest quintile—appears to be a result of a combination of factors, including early childbearing, redundant coverage (use of contraception during postpartum amenorrhea), discontinuation of contraceptive methods, and inconsistent use of methods (especially for injectables, the most popular method in Malawi). Despite these factors, Malawi has experienced substantial reductions in fertility. The 1992 DHS indicated high fertility in Malawi, even among the richest quintile, but between 1992 and 2004, fertility in the quintile fell rapidly from 6.1 to 4.1 children per woman. At the same time, it remained essentially stagnant in the poorest quintile (more than 7 children per woman). Since 2010, Malawi has achieved a rapid rate of fertility decline in both quintiles, reaching a TFR of 2.9 in the richest quintile and 5.7 in the poorest quintile. This fertility differential (2.8) is the smallest of the four countries.

The age structure of the richest and poorest quintiles, shown here in Figure 7, reflects historical differences in fertility decline. In the poorest quintile, 52 percent of the population is under age 15, compared to 40 percent of the richest quintile. Looking to the future, Malawi’s recent progress in achieving both rapid and equitable fertility decline sets it apart from other countries in the region. Since Malawi’s rate of fertility decline occurs more rapidly than the assumptions in the accelerated population projection model, only one future scenario is presented (see Figure 8). If Malawi can sustain current rates of fertility decline, its richest quintile may reach replacement level fertility (2.1) by 2032, with an mCPR of 73 percent. The poorest quintile is projected to reach replacement level fertility shortly thereafter, by 2035, with an mCPR of 78 percent. As a result, the age structure of each quintile will mature. By 2050, the two sides of the pyramid are nearly balanced, with the majority population in both quintiles in the productive working ages and low dependency.

To sustain and accelerate its current progress, Malawi can:

- Strengthen effective contraceptive use and reduce high rates of contraceptive discontinuation by improving the quality of family planning service delivery, particularly counseling on consistent use and promotion of method switching rather than discontinuation.
- Improve interministerial communication and engagement on the effects that demographic changes have on accelerated economic growth within the Ministry of Finance, Economic Planning, and Development.

BOX 1

Malawi’s Systematic Approach to Enhancing Equity

Malawi’s 2004 Demographic and Health Survey showed improvements in its mCPR and TFR overall, but revealed significant disparities by residence, education, and wealth quintile. The Government of Malawi (GoM), with supporting development partners, has taken efforts to address these disparities. The Ministry of Health adopted a bold task-shifting strategy, allowing nurses to provide long-acting contraceptive methods and introducing community-based distribution of injectable contraceptives through health surveillance assistants. The GoM and development partners studied and systematically addressed barriers to access for the poor, such as service reliability and waiting times. Extensive demand generation efforts through mass media and other means produced near-universal knowledge of family planning. As a result, demand for family planning has continuously increased; total demand in the poorest quintile now exceeds that in the richest quintile. The GoM implemented a total market approach allowing nongovernmental organizations to complement public service provision, especially in hard-to-reach areas, and marshaled domestic and international resources through its sector-wide approach to provide family planning services free of charge. These efforts have had a dramatic impact on overall contraceptive prevalence and nearly closed the prevalence gap between rich and poor.
Tanzania Struggles With Inequity in Family Planning and Fertility

Inequity in family planning and fertility in Tanzania may compromise important development objectives, but opportunities exist to rapidly accelerate progress in the poorest quintile.

During the 1990s, Tanzania enjoyed a period of strong government commitment to family planning and achieved rapid increases in contraceptive prevalence. In the early 2000s, however, the government rolled out ambitious decentralization reforms that affected budgets and family planning program management, and international funding and commitment shifted to the HIV/AIDS epidemic. Momentum behind the family planning program slowed. Since then, Tanzania has struggled to ensure a consistent and adequate supply of contraceptive commodities and, despite a critical shortage of health workers, it has not implemented a formal community health worker system.14 Tanzania’s mCPR has increased from just over 13 percent in 1996 to 32 percent in 2016. Inequality in mCPR between the richest and poorest quintiles decreased from its peak of nearly 27 percentage points in 1999 to 15 percentage points in 2016. Like Ghana, this decrease is a result of both progress in the poorest quintile and stagnation in the richest quintile. The equity gap (demand satisfied) steadily declined from 32 percentage points to about 15 percentage points during the same period (see Table 4).

Table 4 shows the modern contraceptive prevalence rate and demand satisfied for modern methods, Tanzania.

<table>
<thead>
<tr>
<th>Survey</th>
<th>Total</th>
<th>Richest</th>
<th>Poorest</th>
<th>Total</th>
<th>Richest</th>
<th>Poorest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>13</td>
<td>39</td>
<td>5</td>
<td>30</td>
<td>52</td>
<td>13</td>
</tr>
<tr>
<td>1999</td>
<td>17</td>
<td>32</td>
<td>6</td>
<td>39</td>
<td>56</td>
<td>24</td>
</tr>
<tr>
<td>2004-05</td>
<td>20</td>
<td>36</td>
<td>11</td>
<td>40</td>
<td>56</td>
<td>26</td>
</tr>
<tr>
<td>2010</td>
<td>27</td>
<td>38</td>
<td>19</td>
<td>48</td>
<td>58</td>
<td>39</td>
</tr>
<tr>
<td>2015-16</td>
<td>32</td>
<td>35</td>
<td>20</td>
<td>53</td>
<td>53</td>
<td>39</td>
</tr>
</tbody>
</table>

Fertility has fallen, albeit slowly, in Tanzania’s richest quintile, from a TFR of 3.9 in 1996 to 3.1 in 2016. In the poorest quintile, fertility remains stagnant at very high levels (7.5 children per woman), creating the widest fertility differential of the four countries (4.4).

Figure 9 shows the impact of this fertility difference on Tanzania’s age structure. In the poorest quintile, 53 percent of the population is under age 15, compared to 43 percent in the working ages. In the richest quintile, 63 percent of the population are already working age, and 34 percent are under age 15. This imbalance in the quintiles’ age structures may inhibit progress on national development priorities. The Government of Tanzania has invested heavily in efforts to achieve universal primary education, including nearly doubling the budget allocation for public education. Despite this investment, the continued growth of Tanzania’s school-age population means that increased enrollment is already straining the capacity of the public education system to provide a quality education.

If these inequitable trends persist through 2050, more than half the population of the poorest quintile would remain under age 15, while the richest quintile will continue to mature and see 65 percent of its population in the working ages (see Figure 10). If fertility decline accelerates and becomes more equitable, Tanzania could achieve huge increases in the poorest quintile’s working age population, reaching 68 percent in 2050 (see Figure 11).

To achieve rapid and equitable progress, Tanzania could pursue the following strategies:

- Integrate community health workers into the formal health system, with permanent funding to ensure reliable family planning access in rural areas.
- Implement a task-shifting strategy to enable provision of injectable contraceptive methods by community health workers and provision of long-acting methods (implants and intrauterine devices) by nurses.
- Prioritize equitable access and use of contraception, measured by demand satisfied for modern methods, across wealth quintiles, education levels, and residence in the next National Family Planning Costed Implementation Program.
Inclusive Growth Requires National Attention on Reducing Wealth-Based Disparities in Fertility Decline

To gain a clearer understanding of the unique influence of wealth, trends in demand satisfied by wealth quintile were also modeled to control for the influence of other key factors, including education, marital status, and residence. The modeled results appear to confirm the equity trends in all four countries. They also indicate that in countries with a relatively small equity gap (Malawi and Ghana), education may have a bigger impact on the odds of demand for modern family planning being satisfied. In countries struggling with wide disparities between the richest and poorest quintiles (Ethiopia and Tanzania), it appears wealth is a more important factor.

All countries striving for inclusive economic growth should prioritize reducing wealth-based fertility disparities. The degree to which different countries prioritize family planning equity in national strategies varies (see Box 2). In many cases, meeting the existing demand for family planning, particularly among a country’s poorest quintile, will significantly accelerate progress in increasing overall mCPR and closing the gap between the richest and poorest quintiles. Although rigorous studies on approaches that specifically target the equity gap are limited, several important lessons are emerging:

- **An enabling policy environment, including robust political commitment and a specific, targeted focus on reaching the poor, is strongly associated with more equitable use of reproductive health care, including family planning.** Malawi’s recent success likely results from the government’s prioritization of equity at all levels of the health sector policy framework, from the national strategy to service provider guidelines and protocols. Equitable access and use should be essential components of national development and economic growth strategies.

- **Task-shifting to primary-level and community health workers can expand access to contraception in underserved populations.** Research indicates that interventions delivered at the community level are more likely to achieve equitable outcomes, suggesting that well-designed, community-based delivery can result in more equitable use of family planning.

- **Strengthening data collection and utilization can help countries accelerate efforts to enhance equity.** A long-term commitment to using data to make strategic programming decisions enabled Malawi to systematically address disparities in contraceptive access and use. Both Family Planning 2020 and the Sustainable Development Goals (through target 3.7, “ensure universal access to sexual and reproductive health-care services”) will track demand satisfied for modern methods by region, age, education, and wealth to monitor family planning equity.

- **In most countries, closing the equity gap will not be sufficient to eliminate disparities in mCPR and total fertility.** Demand creation is a critical component of programmatic efforts to achieve equal progress across wealth quintiles. Malawi has demonstrated that with robust political commitment, systematic use of data, and targeted programs, countries can achieve rapid progress in closing the disparities in contraceptive use. In all four countries, family planning programs have achieved progress in improving both equality and equity of contraceptive use. These efforts will help ensure that the benefits of smaller families are available to households regardless of socioeconomic status and accelerate progress toward inclusive economic growth and shared prosperity.

**BOX 2**

**Addressing Equity in Health Strategies**

Each of the countries profiled in this policy brief has established a national strategy to achieve inclusive economic growth. While those strategies have historically included family planning, none address equitable access and use among the poor. Other national health and gender policies vary in the extent to which they prioritize equitable access and use of family planning.

- **Ethiopia:** Health Sector Development Programs III (2005/06-2009/10) and IV (2010/11-2014/15) contained limited reference to equity, outside of equitable financing. The National Reproductive Health Strategy makes no reference to equitable access to and use of family planning. However, the Health Services Extension Program was designed to help the country realize universal health coverage.

- **Ghana:** The Second Health Sector Five Year Programme of Work: 2002-2006 emphasized expanding geographical and financial access to basic services. The 2007 National Health Policy, however, only addressed equitable financing. The Reproductive Health Strategic Plan 2007-2011 prioritized increased access but did not specifically address equity.

- **Malawi:** Malawi made equity the primary objective of its 2011-2016 Health Sector Strategic Plan. It also made gender equality, including the right to sexual and reproductive health information and services, a priority in its 2012 Gender Equality Bill.

- **Tanzania:** The Health Sector Strategic Plan III (June 2009-June 2015) included equity as a priority crosscutting issue, but did not specifically reference equitable access to and use of family planning. However, equity was a guiding principle of the National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn, and Child Deaths in Tanzania (2008-2013), and its monitoring framework tracks progress in modern contraceptive prevalence rates by age and socioeconomic status.
Box 3

Methodology

Two alternate scenarios for the poorest and richest quintiles have been constructed using data from the most recent Demographic and Health Survey (DHS) and 2015 United Nations Population Prospects. The scenarios are:

1. Current rates of fertility decline continue: Fertility decline continues at current rates or at the rate recorded between the last two DHS in each country. In Ghana, where the total fertility rate (TFR) of the richest quintile increased slightly between the last two surveys, it is assumed that TFR decline will resume at earlier rates of decline.

2. Rates of fertility decline accelerate and become more equitable: The richest quintile achieves replacement level by 2030 and the poorest quintile by 2035.

Because Malawi's current fertility decline is more rapid than the accelerated scenario, only the first scenario was projected for Malawi.

To assess whether demand satisfied for modern methods of family planning is equitable between the richest and poorest quintiles, we used DHS data in each country from 1998 to 2016. We conducted multilevel mixed effects logistic regression modeling to determine the probability of demand for modern family planning being satisfied based on a set of independent variables. Independent variables included household wealth quintile, survey number, education, age, marital status, and residence (urban versus rural).

Limitations

This analysis is illustrative and has several limitations. The modern contraceptive prevalence rate (mCPR) and fertility projections do not address or incorporate all the determinants of fertility. The age structure analysis focuses exclusively on mCPR as fertility's key determinant, and the projections maintain the same contraceptive method mix reported in the most recent DHS. Changes in other key fertility determinants, such as desired family size or age at marriage, or changes in the method mix toward highly effective, long-acting contraceptive methods could show accelerated fertility decline even at a lower overall mCPR. To simplify the analysis and presentation of the age structure charts, this analysis refers only to the richest 20 percent and the poorest 20 percent of the population. Finally, the projections are not estimates of richest and poorest quintiles in 2050; rather, they follow how the baseline (2015) quintile could change over time if fertility declines.

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References


5 The contraceptive prevalence rate (CPR) includes all contraceptive methods, including traditional methods. The modern contraceptive prevalence rate (mCPR) is comprised of methods with evidence of efficacy, including some fertility awareness methods, lactational amenorrhea, diaphragms, condoms, contraceptive pills, injectables, implants, intrauterine devices, and sterilization.


9 Demand satisfied for modern methods is calculated by dividing the number of women of reproductive age using modern methods by the number of women of reproductive age with demand for family planning (demand for family planning is a sum of those with unmet need and current family planning users).


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