

---

## Education

### *Investing in Girls to Advance Equality Long-Term*

For most girls growing up in Ethiopia in the early 1990s, going to school was not the norm, with lifelong impacts on the job opportunities available to them. At the beginning of the 1994 school year, just 20 percent of primary-school-age girls nationwide had enrolled. Boys also faced long odds, but were over 50 percent more likely than their sisters to be signed up for school. In rural areas, children's chances of school attendance were even lower. In the largely pastoral state of Afar, for example, primary enrollment rates were just 10 percent for boys and 7 percent for girls.<sup>1</sup>

A decade later, things had changed drastically. Overall primary enrollment had tripled from a mere 26 percent to 80 percent. Girls were making steady gains, with gender parity rising from sixty-one girls enrolled in school for every 100 boys to seventy-nine girls per 100 boys.<sup>2</sup> While enrollment rates in rural states remained low, they were increasing faster than in other areas. Between the 2000/2001 and 2004/2005 school years, enrollment in Afar grew on average by 17 percent per year, compared to 13 percent annual growth nationwide. Moreover, even among students in rural areas, girls' access increased more quickly than boys'. And in the years since, the gender gap has continued to narrow: as of 2020, 91 percent of boys and 83 percent of girls were enrolled in primary education.<sup>3</sup>

What accounts for this dramatic shift? By many accounts, the single greatest contributor was the government's decision to eliminate tuition for all government-administered primary schools beginning in 1995. The Education and Training Policy of 1994, implemented in the following school year, ended tuition for grades 1–10, with the goal of “providing basic education for all.”<sup>4</sup> While the imposition of tuition and fees does not directly discriminate against girls, when layered on top of discriminatory norms and broader gender inequalities, tuition and fees disproportionately harm girls. In Ethiopia as elsewhere, when it costs money to go to school, girls are more likely to miss out; in many households, girls' education continues to be viewed as less important than boys', since boys are expected to

become the family breadwinner and have greater earning potential in adulthood, in part due to broader discrimination in the economy. In this way, restrictive gender norms within the family and gender discrimination in employment reinforce each other. Yet when the tuition barrier is removed, both gender and socioeconomic disparities in access to education narrow.<sup>5</sup>

Despite these steps forward, gender gaps in education remain. In Ethiopia, for example, advances at the primary level have not been matched by equivalent progress at higher levels: at the secondary level, over two-thirds of girls are out of school.<sup>6</sup> Moreover, the rapid gains in enrollment have also threatened the quality of education in government schools, as average class sizes doubled during the first decade of fee-free schooling, highlighting one of the common challenges when countries remove tuition without taking broader steps to assure quality and affordability.

Further, as of this writing, the gains achieved on girls' education in Ethiopia are facing new threats. Like many countries that ordered school closures to contain the COVID-19 pandemic, Ethiopia has struggled to meet the needs of students learning remotely; a 2020 report found that less than half of students nationwide, including even fewer students in rural areas, were able to access any support for distance learning, while girls were 50 percent less likely than boys to have access to private tutors during the lockdown.<sup>7</sup> Meanwhile, girls who are out of school are facing higher risks of child marriage as well as increased work obligations due to the economic consequences of the crisis—developments that threaten their likelihood of returning to the classroom. These impacts compound the broader ramifications of COVID-19 on gender equality in the economy, as women worldwide have suffered disproportionate job loss due to the fields in which they're concentrated and the increased care burdens the pandemic has created.

Globally, how can countries maintain their momentum on gender equality in education and close these remaining gaps? Aside from eliminating fees, how have countries approached barriers that disproportionately affect girls, such as child marriage, discrimination, and sexual harassment? And how can they address the disproportionate burden on girls of extensive household labor in many settings that impedes their education?

#### GENDER GAPS IN EDUCATION GLOBALLY

Gender gaps in education have narrowed in many countries. Overall, the number of girls enrolled in primary and secondary school has grown by a remarkable 180 million since 1995, while young women's enrollment at universities has tripled.<sup>8</sup> Over half the world's countries have now achieved gender parity in enrollment at the primary and lower secondary levels.

This progress merits recognition. Nevertheless, gender disparities in access, completion, and attainment persist worldwide. At the primary level, five million more girls are out of school than boys.<sup>9</sup> Girls also account for three-quarters of all

children who never attend primary school.<sup>10</sup> Further, in many countries, gaps tend to widen at the secondary level. In twenty-two countries, fewer than eighty girls complete upper secondary school for every 100 boys.<sup>11</sup>

Girls from marginalized groups are even worse off. Among students from lower-income families, overall enrollment rates are generally lower, and gender gaps in enrollment are wider. In Pakistan, for instance, among households at the bottom of the income distribution, just seventy girls were attending primary school for every 100 boys in 2018.<sup>12</sup> Girls in rural settings also face higher barriers; in twenty countries, less than 1 percent of poor, rural girls complete secondary school.<sup>13</sup> Likewise, girls with disabilities have especially low rates of educational access, which contributes to lifelong gender inequalities. In Mozambique, for instance, the literacy rate of men with disabilities is 49 percent, compared to just 17 percent for women with disabilities.<sup>14</sup>

Gender bias—and the policies that reinforce it—continues to drive these gaps, and surveys reveal the persistence of discriminatory beliefs about education worldwide. While there is some evidence that norms are shifting to value girls' basic education more highly, this is not universal. In Brazil, for instance, the share of adults strongly agreeing that boys' higher education is more important than girls' dropped from 13 percent to 2 percent between 1997 and 2018.<sup>15</sup> In contrast, in Bangladesh, 38 percent agreed or strongly agreed that boys' education was more important in 1996, compared to 43 percent in 2018. Altogether, in the latest wave of the World Values Survey, which asked people in fifty-seven countries and territories around the world about their views on social issues, nearly a quarter—23 percent—agreed or strongly agreed with the statement that “a university education is more important for a boy than for a girl.”<sup>16</sup> In some countries, the proportion was much higher. In Indonesia, 48 percent believed that boys' education was a higher priority; in Kyrgyzstan, Myanmar, Pakistan, and Tajikistan, over half of respondents shared this view.

In addition to threatening girls' access to education overall, these views affect girls' opportunities within education, and thus their future careers. Both implicit bias and overt discrimination, alongside “stereotype threats” and inhibiting norms, can diminish girls' access to specific fields of study and thereby contribute to gender segregation in the labor market, with women relegated to more poorly remunerated occupational fields (as well as fields that become more poorly paid when they become more female). For example, across the Organisation for Economic Co-operation and Development, women account for just one in five computer science graduates; likewise, just a quarter of those holding bachelor's degrees in engineering, manufacturing, or construction are women.<sup>17</sup>

#### ADDRESSING GENDERED BARRIERS TO EDUCATION: CRITICAL FIRST STEPS

Advancing gender equality in the economy on a long-term basis requires changing the underlying beliefs that lead to the devaluing of girls' schooling—and changing

the laws and policies that reinforce these beliefs and create needless barriers to girls' educational access and attainment. Educating girls is key to shifting norms and ensuring equal opportunities not just for girls in school today but for their equal opportunities in the economy as adults, and for the opportunities of their children and grandchildren.

While the challenge of ensuring all girls can access and complete their education remains substantial, many effective policy solutions and critical first steps toward realizing greater gender equality in education are known. Among these are eliminating tuition and other fees, prohibiting discrimination and harassment, banning child marriage, and ensuring governments commit to making education available to all, including by making education compulsory. How common are these approaches worldwide, what barriers are they designed to address, and what difference have they made?

### *Eliminating Tuition and Providing Financial Support to Families*

Tuition fees and other costs—including uniforms, books, transportation, and meals—reduce access to education across the board. For example, a study of education policies over forty years in seven sub-Saharan African countries found that the introduction of school fees was associated with a 17 percentage-point reduction in primary school enrollment overall.<sup>18</sup> While affecting all students, the costs of education can have an outsized effect on girls' prospects for attending school; due to the persisting societal norms that place a greater priority on boys' education, when families cannot afford to send all children to school, daughters are more likely to miss out. One study based in the Mtwara region of Tanzania, for instance, found that nearly two-thirds of parents agreed that in difficult economic circumstances, they would educate boys over girls; half also indicated that providing a school uniform for their sons was a greater priority than for their daughters.<sup>19</sup>

Evidence from a wide range of countries has shown that eliminating tuition has direct and indirect benefits for children's educational outcomes. Countries including Uganda, Mauritius, Ethiopia, and Malawi have witnessed marked increases in enrollment and a substantial narrowing of the gender gap after removing the tuition barrier.<sup>20</sup> Eliminating tuition has had particularly significant impacts on the enrollment of girls as well as all children from lower-income families.

Moreover, the benefits of free tuition are long-term for girls and women and transcend health, family, and work. For example, eliminating tuition and fees has been found to reduce rates of child marriage, likely because girls can stay in school longer.<sup>21</sup> Further, reforming laws to eliminate tuition has benefits for reproductive health and family planning. In a study led by our center, we merged our longitudinal policy data on tuition-free education with survey data from the Demographic and Health Surveys about married women's need for and use of contraception as well as their ability to make their own health decisions, using a sample that included over 300,000 women across seventeen low- and middle-income coun-

tries (LMICs).<sup>22</sup> By comparing the experiences of women who had been covered by a tuition-free primary education policy as children with those who had not, while controlling for other factors, we were able to rigorously examine whether eliminating tuition made a difference for women's future reproductive autonomy. What we found was that married women who had access to tuition-free education the entire time they were in primary school were 152 percent more likely to report using modern methods of contraception compared to women who had not had access to tuition-free education. What's more, the impacts go beyond early marriage and reproductive health to broader issues of autonomy: married women who had access to tuition-free education were also 43 percent more likely to report that they had a say in decisions about their own health.<sup>23</sup>

How far has the world come in making tuition-free education universally accessible? Our most recent research shows 97 percent of countries have eliminated tuition at the primary level. However, only 84 percent have ended tuition for the beginning of secondary school, and only 68 percent have eliminated tuition through the completion of secondary. Low- and middle-income countries are less likely than high-income countries to have eliminated tuition fees in secondary school.

At the same time, countries at all income levels have demonstrated that it's feasible to make secondary school tuition-free, though doing so does require investment and political will. While international funds also have a role to play in financing education in countries with limited resources, adequate national investment is critical to the development of an accessible, equitable, and sustainable education system. International and regional bodies have made recommendations about minimum government spending on education. For example, the United Nations Educational, Scientific, and Cultural Organization's Education 2030 Framework recommends that governments invest 4 to 6 percent of GDP in education, and that 15 to 20 percent of government spending be directed to education. Likewise, the Africa Network Campaign for Education for All has urged countries to spend 20 percent of their total budgets on schooling. Globally, however, seventeen of forty-one countries that haven't yet made secondary education tuition-free have yet to invest even 4 percent of their GDP in education, and data on spending are unavailable for an additional twenty-one.<sup>24</sup>

### *Making School Compulsory*

A second policy that can support girls' enrollment is making school compulsory for a certain number of years or until a certain grade level (though if school is required by law, it is essential that it is free). A range of studies have found that compulsory schooling increases enrollment rates and attainment, and that in some cases, the impacts are specifically gendered. For example, an examination of policy reforms lengthening compulsory schooling in twelve European countries between 1949 and 1983 found that the changes boosted educational attainment and wages, with especially notable impacts for women.<sup>25</sup> In Turkey, a study found

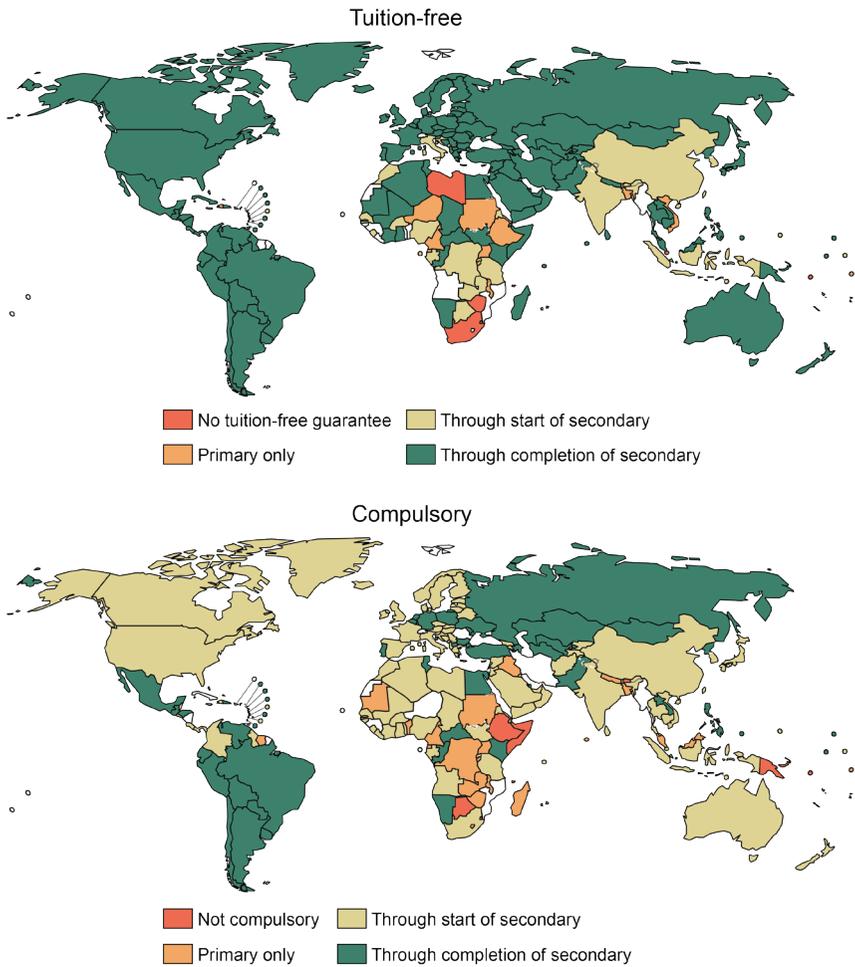


FIGURE 20. Do national policies, laws, or constitutions make education tuition-free and compulsory?

that the extension of compulsory education from five to eight years increased girls' attendance and reduced child marriage.<sup>26</sup> Likewise, a subsequent analysis reported that the Turkish reform increased women's average educational attainment by 1–1.5 years and made it more likely that they would work outside the home in jobs that provided benefits; further, the reform particularly improved outcomes for rural women.<sup>27</sup>

Compulsory schooling signals a government's clear commitment to make sure public schools are accessible to all. Making school compulsory can thus have the indirect effect of supporting increased school construction, which can support greater access by girls by reducing transportation barriers.

Overall, 97 percent of countries make primary school compulsory. Eighty-four percent explicitly establish that at least some secondary education is compulsory, whereas only 28 percent provide for compulsory secondary education through completion. High-income countries are more likely than low- or middle-income countries to have made at least some of secondary education compulsory, but having compulsory education through the completion of secondary school is slightly more common in middle-income than in high-income countries.

#### *Prohibiting Gender Discrimination and Sexual Harassment*

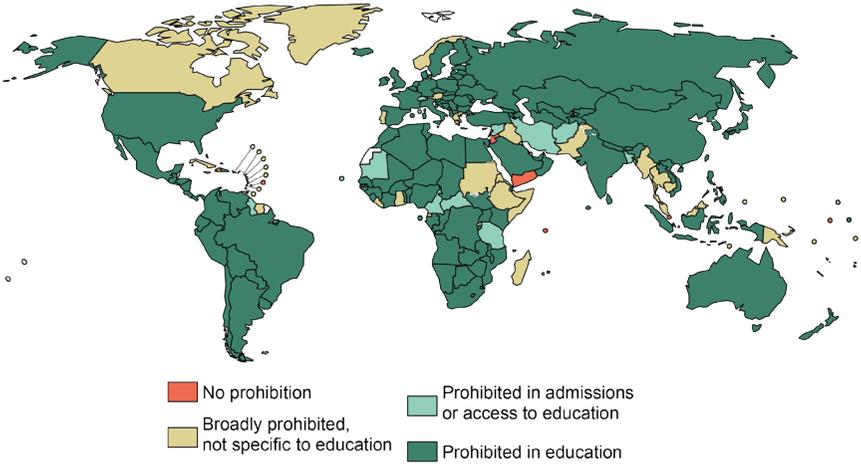
Prohibiting discrimination and sexual harassment within schools, and by teachers in particular, is essential to achieving greater equality in education. Altogether, 65 percent of countries prohibit discrimination in education on the basis of sex and/or gender, and another 8 percent take an approach to ensuring girls' right to access education. There is little difference between these protections across country income level, demonstrating their immediate feasibility across countries.

The United Nations Girls' Education Initiative estimates that 246 million children experience violence in and around schools each year.<sup>28</sup> Marginalized girls face even greater risks. One survey of 11- to 14-year-olds in Uganda found that 24 percent of girls with disabilities, compared to 12 percent of girls without disabilities, reported experiencing sexual harassment at school.<sup>29</sup>

While every country has at least some protection from sexual violence, fewer than half (47 percent) of all countries explicitly prohibit sexual harassment in schools against both girls and boys. Only 36 percent of countries explicitly define sexual harassment to cover both sexual advances and conduct that creates a hostile environment for learning or undermines students' dignity. In 25 percent of countries, the definition of sexual harassment is more narrow and covers only sexual advances or quid pro quo. Only 20 percent of countries prohibit sex-based harassment, as well as sexual harassment, in education.

Provisions to protect students from harassment by any employee in a school environment are also rare. Just 12 percent of countries use explicit or broad language that ensures protection from harassment by all school staff. For example, Belize's Protection against Sexual Harassment Act states: "No person who is a

### Gender discrimination



### Sexual harassment

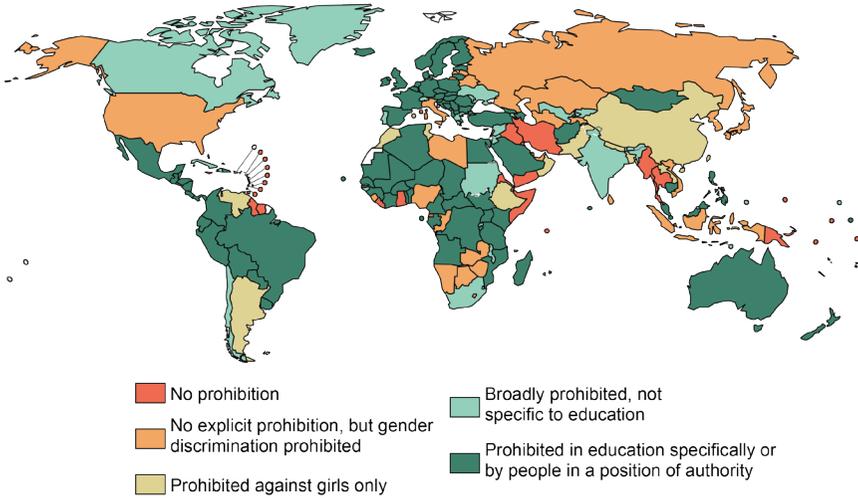


FIGURE 21. Are gender discrimination and sexual harassment prohibited in education?

member of staff or in a position of authority at an institution shall harass sexually a person who is a student . . . or is seeking admission to that institution.”

These provisions have had an impact in the courts. For example, in a 2018 case from El Salvador, laws prohibiting sexual harassment by someone in a position of authority and specifically designating sexual harassment by teachers a “serious offence” provided the foundation for justice for an underage girl who received harassing messages from her fifty-year-old teacher on WhatsApp.<sup>30</sup> In Hong Kong, the High Court invoked a law prohibiting sex discrimination in education, alongside the Convention on the Elimination of All Forms of Discrimination against Women, to prohibit the director of education’s practice of systematically evaluating boys’ performance on standardized tests according to a lower standard than girls’, which had resulted in a higher share of boys being placed in top secondary schools.<sup>31</sup>

Finally, expelling pregnant students discriminates against girls, since their male partners rarely face equivalent consequences, while undermining girls’ long-term opportunities. When girls are pregnant, their education should not be impeded. Yet only a minority of countries explicitly guarantee that pregnant youth will be able to continue their education. Only 18 percent of countries take explicit affirmative measures to legally prohibit the expulsion of pregnant students, and an additional 2 percent aspire to do so or provide accommodations to support pregnant students’ continued learning. In 14 percent of countries, there are also explicit legal provisions to ensure new mothers are allowed to return to school after they’ve given birth.

However, some countries continue to have laws or regulations on the books that limit educational opportunities for pregnant girls. For example, Equatorial Guinea’s Law on Education makes pregnancy a serious offense punishable by expulsion. Jamaica’s education regulations stipulate that pregnant students must be excluded or suspended from school. A 2007 decree in Senegal suspends pregnant girls from school until their delivery due to “security reasons.” Notably, data show that removing these bans does not increase teenage pregnancies—but keeping them in place has long-term consequences.<sup>32</sup> Sex education, settings that ensure girls are not pressured or coerced into sexual activity, protections from harassment and violence, and access to contraception for consensual relations are essential to reduce unwanted pregnancies.

### *Child Marriage*

Fourth, policies are needed to address and prevent child marriage, which continues to disrupt millions of girls’ schooling. Around the world, nearly twelve million girls are married every year.<sup>33</sup> While boys are also affected by child marriage, the effects are disproportionately felt by girls, who are five times more likely than boys to be married by the age of eighteen. While child marriage affects girls in lower-income countries in larger numbers, underage marriage is a global phenomenon;

our center's recent analysis of the United States found that nearly 80,000 children ages fifteen to seventeen were or had been married over a four-year period.<sup>34</sup>

Surveys of parents confirm that early marriage is a key driver of school dropout for girls. Recent estimates from the World Bank and the International Center for Research on Women suggest that child marriage is responsible for up to a third of girls' dropout rate, depending on the country,<sup>35</sup> and that each year of marriage before the age of eighteen is associated with a 4 to 6 percentage-point reduction in girls' chances of completing secondary school.<sup>36</sup> In Nepal, for example, 32 percent of parents of adolescent girls who had left school reported that child marriage was a reason. Likewise, 23 percent of parents in Niger with daughters who had dropped out of secondary school pointed to child marriage as a cause.<sup>37</sup> With 33,000 girls married as children daily, the collective impacts on girls' schooling can hardly be overstated.

The increased risk of early childbearing is one way that child marriage affects girls' ability to stay in school. Recent estimates suggest that around 75 percent of births to mothers under age eighteen in LMICs can be attributed to child marriage.<sup>38</sup> As already discussed, there are countries and school systems—across low- and high-income countries alike—in which pregnant girls and young women are expelled or explicitly prohibited from enrolling, creating an even higher barrier to their persistence.

The relationship between schooling and marriage cuts both ways: girls who marry young are at greater risk of dropping out of school, while girls who leave school early are more likely to be married before age eighteen. Conversely, extending girls' time in school can reduce their early marriage risks. In Burkina Faso, for instance, each additional year a girl stays in secondary school reduces the likelihood that she'll marry before age eighteen by 7 percent and cuts the risks of early childbearing by 11 percent.<sup>39</sup>

Beyond the effects on education, child marriage has extensive consequences for girls' health and autonomy. In general, giving birth as an adolescent poses higher risks to both the mother and the child. For example, one study of twenty-nine low-income countries found that girls who gave birth before the age of eighteen have significantly higher rates of eclampsia and infections;<sup>40</sup> globally, pregnancy complications are the leading cause of death among girls ages fifteen to nineteen.<sup>41</sup> Meanwhile, babies born to adolescent mothers are more likely to be premature and underweight, which can increase the likelihood of chronic health issues.<sup>42</sup> One study of forty-five LMICs found that in some regions, risks of neonatal mortality were over twice as high for babies born to girls ages sixteen or younger compared to women in their twenties.<sup>43</sup> Even in higher-income settings, adolescent mothers' babies face much higher mortality risks.

And in addition to the health risks linked to childbirth, girls who marry as children are more likely to experience violence in their relationships. For example, a study of thirty-four countries found that 29 percent of young women who

had been married as children had experienced sexual or physical violence in their relationships in the preceding year.<sup>44</sup> Experiences of violence can in turn inhibit girls' participation in public life, including their access to education and eventual employment. Further, the violation, isolation, deprivation of autonomy, and higher prevalence of birth injuries linked to early marriage can increase rates of depression and suicidal thoughts.<sup>45</sup>

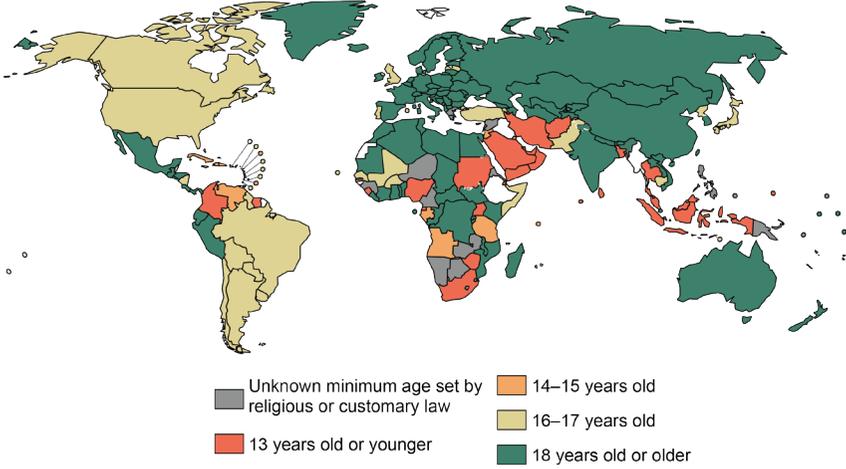
Laws comprehensively prohibiting child marriage are a first step toward ending the practice and represent an important public commitment by governments to doing so. Moreover, laws prohibiting child marriage can shift norms about its legitimacy and reduce violence. In a recent study led by our center, we merged longitudinal data on the minimum age of marriage in nineteen LMICs with survey data about women's experiences of intimate partner violence as well as both men's and women's perceptions of its acceptability. We found that among countries that strengthened their child marriage laws, women's risks of experiencing violence in their relationships dropped by a larger margin than in countries that did not. In addition, the enactment of a law prohibiting child marriage was associated with a greater likelihood that both men and women would view intimate partner violence as "unacceptable."<sup>46</sup>

We analyzed laws in all countries to determine how many establish eighteen years as the minimum legal age of marriage. As of 2019, nearly one in ten countries had yet to take this fundamental step, including 4 percent that failed to provide any legal protection for 13-year-old girls.

Further, in many countries, minimum age laws carve out exceptions for parental consent or marriages performed under customary or religious law. These exceptions can greatly undermine the potential impact of child marriage laws. The vast majority of child marriages take place with parental involvement or permission, while girls from many religious communities are at higher risk.<sup>47</sup> Globally, 40 percent of countries have legal loopholes allowing early marriage to occur with parental consent. Twenty-two percent of countries allow for exceptions under religious or customary law. Accounting for these loopholes, half of countries do not prohibit child marriage for girls. While protections from early marriage are weaker in low- and middle-income countries, substantial gaps in laws prohibiting child marriage can be found across all country income levels and regions. Forty-three percent of high-income countries allow girls to be married before age eighteen with parental consent or under religious or customary law. Encouragingly, these loopholes have been closing over time. In 1995, just 19 percent of 113 studied LMICs prohibited girls from being married with parental consent; by 2019, 58 percent of those countries did. Some regions have shown particularly significant progress. In Central America, for example, five out of seven countries reformed their child marriage laws between 2013 and 2019 to eliminate any legal loopholes allowing marriage before eighteen.

In addition, despite overwhelming evidence that child marriage primarily affects girls, some countries still legally allow girls to be married at younger ages

### Minimum age of marriage for girls



### Gender parity in minimum age of marriage

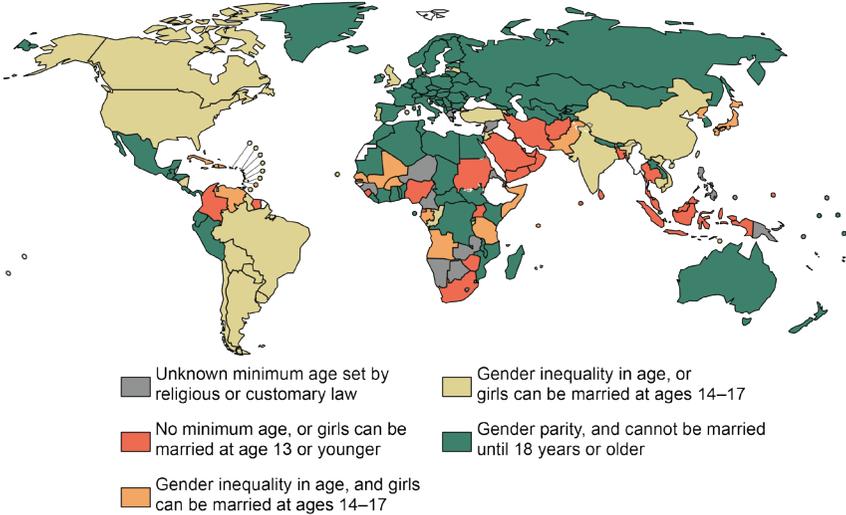


FIGURE 22. Do laws prohibit early marriage and ensure girls have as much legal protection as boys when loopholes are taken into account?

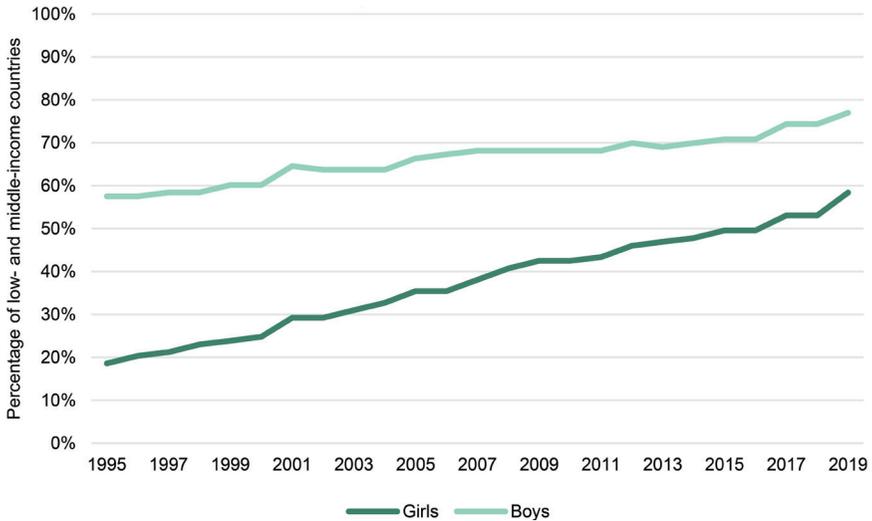


FIGURE 23. Have low- and middle-income countries increased the minimum age of marriage to 18 years old with parental consent?

than boys, directly exacerbating their vulnerability to the practice. This gender inequality embedded in the law gives a stamp of approval to the early marriage of girls and lays the foundation for lifelong gender disparities. In 21 percent of countries, girls can be married at a younger age than boys with parental consent; in 8 percent of countries, the gender gap in the minimum age is three years. While fewer high-income countries have a gender gap in the legal minimum age of marriage with parental consent (11 percent), a quarter of LMICs legally allow girls to be married at younger ages than boys with parental consent. Still, trends over time are promising, and legal gender disparities have diminished. Whereas only 25 percent of 113 studied LMICs provided girls with as much legal protection as boys from early marriage with parental consent in 1995, by 2019, 70 percent had established gender equality in the minimum age of marriage.

## MUCH MORE TO ACCOMPLISH

### *Affordable Quality Education*

For families with limited resources, the cost of sending all children to school is one consideration, but the likely economic return of the education available is another. Consequently, when decent quality schools are inaccessible or have unaffordable associated costs, girls' chances of staying in school further decline.

To that end, sufficient government investment is critical not just for making education tuition-free, but for ensuring its quality remains adequate as

enrollment rates increase and ensuring nontuition costs are low. Some countries that have eliminated tuition have seen tremendous gains in access followed by drops in quality as classrooms swell to unmanageable capacity. With sufficient funding, countries can ensure they are able to build enough schools, hire enough trained teachers, and invest in adequate infrastructure to make schools accessible to everyone.

These investments matter to girls. In Kenya, for example, a study analyzing the impacts of primary school quality on girls' and boys' outcomes in three districts found that having teachers with higher average credentials significantly increased girls' odds of staying in school, as did modest increases in schools' budgets for materials. Further, each 10 percent increase in the share of teachers who agreed that studying math was "important" for girls decreased girls' likelihood of dropping out by 47 percent.<sup>48</sup> Prioritizing education financing also matters to entire economies. According to projections from the African Development Bank, permanently increasing funding for basic education, upper-level education, and physical infrastructure by a collective 1 percent of GDP would boost GDP by 28 percent, formal workers' wages by 16 percent, and informal workers' wages by 29 percent in the long term.<sup>49</sup>

Low quality of education at public schools can also undermine the impact of eliminating tuition and other fees, as education is increasingly privatized and a high share of families pay fees even when there is a free option available. The share of secondary students globally who are enrolled in private schools increased from 19 percent in 1998 to 27 percent in 2019; in a wide range of countries—such as Bangladesh (94 percent), Belgium (58 percent), Guatemala (63 percent), and Liberia (58 percent)—over half of secondary students are in private institutions.<sup>50</sup> The global shift toward privatization is likely to further widen both socioeconomic and gender inequalities in access to quality schooling.<sup>51</sup>

With respect to households' total education costs, removing tuition is a critical first step, but countries can also support greater access to schooling by girls and other marginalized students by subsidizing costs for uniforms, meals, books, transportation, and other necessities. Research has shown that addressing these specific costs makes a difference. For example, a study in Kenya found that the provision of free uniforms to primary school students reduced girls' dropout rate from 19 percent to 16 percent over three years; a program eliminating fees for textbooks reported similar results.<sup>52</sup> Likewise, in India, the 2001 expansion of the mid-day meal program, which provided a free lunch to school students nationwide, boosted girls' first-grade enrollment by 10 percent annually—meaning that nearly 2.5 million girls newly enrolled in school because of the program over a six-year period.<sup>53</sup> Beyond these targeted interventions, direct cash transfers to families with school-age children show promise for improving educational outcomes and families' overall economic circumstances, depending on the details of their design.<sup>54</sup>

*School Sanitation, Transportation, and Infrastructure*

An important piece of school quality is the physical condition of schools and whether they provide safe and adequate learning environments. Countries' investments in school infrastructure—including sanitation and transportation—can make a significant impact on accessibility for all children, with outsized impacts on girls.

Indeed, the quality of sanitation available in schools can have a significant influence on girls' attendance, especially once they reach adolescence. Globally, 335 million girls worldwide are enrolled in primary and secondary schools that lack adequate facilities for menstrual hygiene.<sup>55</sup> In the absence of adequate sanitation at school, girls lack privacy and commonly face higher risks of violence when they seek out private spaces outside of school grounds. Investments in sanitation infrastructure can improve perceptions and experiences of safety at school, increasing girls' attendance and reducing the likelihood that they will stay home from school during their periods. In India, a large-scale latrine construction program launched in 1999 improved school enrollment rates, test scores, and persistence for all children, but girls in particular; a study of nearly 140,000 schools across the country found that sex-specific latrines were especially important for older girls' attendance.<sup>56</sup> A related strategy is to supply girls with free sanitary products; in Ghana, for example, provision of sanitary pads and puberty education increased girls' attendance by 9 percent.<sup>57</sup>

Similarly, inadequate access to safe and affordable transportation to school is another infrastructural barrier that often has disproportionate consequences for girls, particularly since girls who must travel a long distance to school face higher risks of violence and harassment along their commute. Meanwhile, when schools are closer to girls' homes, access is often easier. For example, in the early 2000s, the government of Sierra Leone initiated a nationwide effort to rebuild schools that had been destroyed during the civil war and ensure education was free and widely accessible, which resulted in the construction of approximately 1,400 new schools over five years. According to one analysis, the program increased girls' average educational attainment by 0.5 years.<sup>58</sup> Specific provision of subsidies for transportation can make a difference as well. As just one example, in Bihar, India, the provision of bicycles to secondary-school-age girls boosted their enrollment by 32 percent, narrowing the gender gap by 40 percent.<sup>59</sup>

*Community Infrastructure and Changing Expectations  
about Girls' Household Work*

Beyond school infrastructure, investing in physical infrastructure in rural communities—including water and sanitation systems, rural electrification, and low-cost energy sources—can play a critical role in supporting girls' access to school by reducing hours spent on household labor—from fetching water to firewood. Too often, governments deprioritize investment in the types of

infrastructure that would make the biggest difference for women and girls—illustrating yet another way that unpaid female labor is taken for granted.<sup>60</sup> A 2019 World Health Organization analysis, for example, found that only 15 percent of countries had devoted sufficient financial resources to implement their national sanitation and/or drinking water plans; many more lacked plans altogether.<sup>61</sup> When these basic services that are essential to all communities are privatized or unavailable, the consequences for gender equality in the economy can begin at very young ages.

For example, one 2016 study of twenty-four sub-Saharan African countries found that a total of 3.4 million children had primary responsibility for collecting water in contexts where doing so would require more than thirty minutes per day.<sup>62</sup> Across countries, girls represented 62 percent of all children responsible for fetching water for at least thirty minutes per day, while in some countries the gender gap was much larger. In Guinea, for instance, girls were thirteen times as likely as boys to be their households' primary water collectors. Collectively, according to the United Nations Children's Fund, women and girls spend 200 million hours each day obtaining water for their families.<sup>63</sup>

Compounding the impacts of these tasks, girls across countries are often expected to care for younger children within the household so that their parents can work. Studies from individual countries have long confirmed that these and other responsibilities affect girls' education. In Bangladesh, a study documented that 13 percent of children ages five to seventeen who had left school did so because of the need for their labor at home, and that girls were more likely than boys to combine work and schooling when work was defined to include paid and unpaid household labor.<sup>64</sup> Likewise, in Egypt, research found that girls' domestic tasks accounted for a substantial share of their weekly work hours, and that a 10 percent increase in the likelihood of working at least fourteen hours per week resulted in a 6 percent decrease in the likelihood of school attendance.<sup>65</sup>

Changing the gendered expectations that lead to these disparities—while strengthening families' economic circumstances so they don't feel compelled to rely on child labor in the first place—remains one of the most critical areas for ongoing action. Adequate public service provision and prioritization of rural infrastructure development represent one critical piece of the solution. In Peru, for instance, a study found that having running water at home increased girls' time in school by about eighty minutes per week.<sup>66</sup> Similarly, in India, a study of informal settlements found that the provision of basic services—including water and sanitation systems, road surfacing, storm drainage, and electricity—was associated with a 66 percent increase in girls' school attendance, along with a 62 percent increase in literacy and 36 percent increase in income.<sup>67</sup>

### *Addressing Family Poverty*

Finally, poverty exacerbates the barriers to girls' education identified throughout this chapter. Indeed, according to an analysis of five African countries, household wealth remains the top predictor of whether a child is attending school.<sup>68</sup> Poverty makes it more likely that families will be unable to afford school fees for all children, increases the burden of household work, and reduces the likelihood that children will have access to high-quality schools in their neighborhood.

The role of socioeconomic status in driving child marriage is also evident from the data on how girls' likelihood of early marriage varies by their level of household wealth. For example, among women ages eighteen to twenty-two in Peru, 38 percent of those in the lowest wealth quintile report having been married before their eighteenth birthday, compared to just 5 percent in the top quintile. Similarly, in Zambia, 48 percent of girls in the lowest quintile marry by eighteen, compared to 9 percent in the highest. In India, the gap is a full 50 percentage points: 63 percent of girls at the bottom of the wealth distribution marry by eighteen, compared to just 13 percent at the top.<sup>69</sup>

While a wide range of steps need to be taken to address poverty and reduce economic inequality, critical to addressing family poverty is accelerating the equal educational attainment, autonomy, and options of women and girls. Investing in gender equality will reduce family poverty—and reducing family poverty will accelerate achieving gender equality.

#### WHAT STANDS TO BE GAINED

##### *Labor Force Participation and Employment*

A range of studies have shown that when girls have greater access to education, they enter the labor force in greater numbers.<sup>70</sup> In Zimbabwe, for example, a study found that each additional year of education led to a 3 percent increase in the likelihood that a woman worked for pay.<sup>71</sup> Similarly, a report from the United Nations Educational, Scientific, and Cultural Organization found that women with higher levels of educational attainment in middle-income countries were significantly more likely to have paid employment; in Mexico, for instance, women with a secondary education were 9 percentage points more likely to be employed than women with only a primary education.<sup>72</sup> While economic circumstances in some settings and households demand that women participate in the labor market regardless of educational attainment, in contexts in which women are less likely to work in the labor force, greater education can tip the scales. Higher educational attainment is typically associated with lower rates of unemployment, though the specific relationship between education and employment depends on the jobs available in a given national economy. Meanwhile, reduced access to education makes women's labor force participation less likely.

*Wages, Poverty Rates, and Job Availability*

Educational attainment also directly influences women's earnings and the types of jobs they are able to access. According to estimates from World Bank economists analyzing trends in education from 1950 to 2018, each additional year a girl remains in school translates into around a 10 percent increase in her wages as an adult, 2 percentage points higher than the returns for boys.<sup>73</sup> In the aggregate, these increases can narrow the gender wage gap. In Ghana, for example, women without formal education earn 57 percent less than men, while those with a secondary education earn just 16 percent less.<sup>74</sup> In contrast, gender disparities in access to education reinforce gender segregation in the labor market, gender gaps in pay, and women's higher risks of poverty globally.

*Health, Well-Being, and Educational Attainment*

Women's access to education, or lack thereof, has profound effects on health across genders and generations. A study of eighty LMICs found that gains in women's educational attainment explained 30 percent of the decrease in adult female mortality, 31 percent of the decrease in adult male mortality, and 14 percent of the decrease in under-five mortality between 1970 and 2010.<sup>75</sup> Specific policies increasing education access can directly advance these health improvements. For example, in a study of twenty-three LMICs undertaken with colleagues, we merged data on tuition-free education policies with survey data from the Demographic and Health Surveys about women's access to health services and children's health outcomes. Controlling for a wide range of other variables that could affect outcomes—including rural/urban residence, marital status, per-capita GDP, unemployment rate, and the gender and birth order of children—we compared the experiences of women who had benefited from tuition-free primary education as children with those who had not. We found that making primary school tuition-free increased the likelihood of having a skilled attendant at birth by 22 percent, of modern contraceptive use by 62 percent, and of up-to-date immunization of children by 16 percent.<sup>76</sup>

Other research has documented the intergenerational impacts on education. A study of fifty-six countries found that the children of mothers with six years of education stayed in school 2.8 years longer than those whose mothers had no formal education, whereas the children of mothers with twelve years of schooling stayed in school 4.1 years longer.<sup>77</sup> In short, ensuring girls can go to school and succeed there has not only immediate benefits but long-term effects and shapes the outcomes of their entire households and the next generation.

*Consequences—and Opportunities—for Countries and Economies*

Finally, beyond the impacts on individuals and families, barriers to girls' education have consequences for entire countries. According to a 2018 World Bank report, the costs of failing to ensure all girls can complete their secondary

education amount to \$15–30 trillion in lost earnings and productivity.<sup>78</sup> Meanwhile, closing the gender gap in education can have profound economic benefits. In the Organisation for Economic Co-operation and Development, for example, increases in educational attainment—primarily driven by greater access to education by girls—accounted for nearly half the economic growth across thirty countries from 1960 to 2008.<sup>79</sup>

Now more than ever, finishing secondary school and higher education is often essential for securing a job that pays an adequate wage. Over the past several decades, countries have made substantial progress toward reducing the gender gap in primary education, but that is barely a beginning.

While some barriers to secondary are similar to those for primary—such as tuition and fees—girls often face higher hurdles as they get older with respect to restrictive gender norms, demands to carry out unpaid household and care work, safety, and direct discrimination. Yet compelling evidence clearly demonstrates that governments can rapidly accelerate gender equality in education—if they have the political will. The tools are within the reach of all nations.

TABLE 7 Legal approaches to supporting girls' education, by country income level

	Low-income countries	Middle-income countries	High-income countries
<i>Is primary education tuition-free?</i>			
No tuition-free guarantee	0 (0%)	4 (4%)	1 (2%)
Subject to progressive realization	0 (0%)	1 (1%)	0 (0%)
Policy guarantee	4 (15%)	10 (9%)	3 (5%)
Legislative or constitutional guarantee	22 (85%)	93 (86%)	54 (93%)
<i>Is beginning secondary education tuition-free?</i>			
No tuition-free guarantee	6 (23%)	15 (14%)	2 (4%)
Subject to progressive realization	3 (12%)	4 (4%)	0 (0%)
Policy guarantee	2 (8%)	7 (6%)	7 (12%)
Legislative or constitutional guarantee	15 (58%)	82 (76%)	48 (84%)
<i>Is completing secondary education tuition-free?</i>			
No tuition-free guarantee	12 (46%)	34 (31%)	7 (12%)
Subject to progressive realization	4 (15%)	5 (5%)	0 (0%)
Policy guarantee	1 (4%)	6 (6%)	10 (18%)
Legislative or constitutional guarantee	9 (35%)	63 (58%)	40 (70%)
<i>Is primary education compulsory?</i>			
Not compulsory	2 (7%)	4 (4%)	0 (0%)
Subject to progressive realization	0 (0%)	0 (0%)	0 (0%)

TABLE 7 (continued)

	Low-income countries	Middle-income countries	High-income countries
Policy guarantee	2 (7%)	2 (2%)	0 (0%)
Legislative or constitutional guarantee	23 (85%)	101 (94%)	58 (100%)
<i>Is beginning secondary education compulsory?</i>			
Not compulsory	8 (32%)	20 (19%)	0 (0%)
Subject to progressive realization	0 (0%)	2 (2%)	0 (0%)
Policy guarantee	2 (8%)	3 (3%)	0 (0%)
Legislative or constitutional guarantee	15 (60%)	81 (76%)	57 (100%)
<i>Is completing secondary education compulsory?</i>			
Not compulsory	23 (88%)	67 (63%)	41 (72%)
Subject to progressive realization	1 (4%)	5 (5%)	0 (0%)
Policy guarantee	0 (0%)	3 (3%)	0 (0%)
Legislative or constitutional guarantee	2 (8%)	32 (30%)	16 (28%)
<i>Is gender-based discrimination prohibited in primary education?</i>			
No prohibition of gender-based discrimination	1 (4%)	3 (3%)	6 (10%)
Gender-based discrimination broadly prohibited, not specific to education	7 (26%)	22 (20%)	12 (21%)
Gender-based discrimination prohibited in admissions or access to education	3 (11%)	10 (9%)	3 (5%)
Gender-based discrimination broadly prohibited in education	16 (59%)	73 (68%)	37 (64%)
<i>Is sexual harassment explicitly prohibited in education?</i>			
No prohibition	4 (15%)	21 (19%)	10 (17%)
Not explicit, but gender discrimination prohibited	2 (7%)	18 (17%)	8 (14%)
Prohibited against girls only broadly or specifically in education	2 (7%)	9 (8%)	3 (5%)
Broadly prohibited, not specific to education	5 (19%)	14 (13%)	7 (12%)
Prohibited	14 (52%)	46 (43%)	30 (52%)
<i>Are both sexual-based behaviors and sex-based harassment prohibited in education?</i>			
Sexual violence prohibited, but not explicitly harassment	4 (15%)	20 (19%)	10 (17%)
Gender discrimination in education and sexual violence prohibited, but not explicitly harassment	2 (7%)	18 (17%)	8 (14%)
Sexual-based behaviors only	20 (74%)	55 (51%)	16 (28%)
Sexual-based behaviors and sex-based harassment	1 (4%)	14 (13%)	24 (41%)
<i>What sexual-based behaviors are legally defined as sexual harassment in education?</i>			
Sexual violence prohibited, but not explicitly harassment	4 (15%)	20 (19%)	10 (17%)

(contd.)

TABLE 7 (continued)

	Low-income countries	Middle-income countries	High-income countries
Gender discrimination in education and sexual violence prohibited, but not explicitly harassment	2 (7%)	18 (17%)	8 (14%)
Sexual advances or quid pro quo	11 (41%)	27 (26%)	9 (16%)
Quid pro quo and conduct that creates a hostile environment	7 (26%)	32 (30%)	30 (52%)
Sexual harassment not defined	3 (11%)	8 (8%)	1 (2%)
<i>What is the minimum age of marriage for girls?</i>			
13 years old or younger	2 (7%)	4 (4%)	1 (2%)
14–15 years old	0 (0%)	0 (0%)	1 (2%)
16–17 years old	3 (11%)	2 (2%)	4 (7%)
18 years old or older	22 (81%)	102 (94%)	52 (90%)
<i>When loophole exceptions are taken into account, what is the minimum age of marriage for girls?</i>			
Unknown minimum age set by religious or customary law	4 (16%)	10 (10%)	3 (5%)
13 years old or younger	6 (24%)	16 (15%)	5 (9%)
14–15 years old	0 (0%)	10 (10%)	4 (7%)
16–17 years old	4 (16%)	21 (20%)	13 (22%)
18 years old or older	11 (44%)	48 (46%)	33 (57%)
<i>Is there a gender disparity in the minimum age of marriage with parental consent?</i>			
No specific minimum age for girls	2 (7%)	3 (3%)	1 (2%)
Girls can be married 3 years younger than boys	4 (15%)	10 (9%)	1 (2%)
Girls can be married 1 to 2 years younger than boys	3 (11%)	17 (16%)	5 (9%)
No difference in minimum age	18 (67%)	78 (72%)	51 (88%)

## NOTES

1. World Bank & UNICEF. (2009). *Abolishing school fees in Africa: Lessons from Ethiopia, Ghana, Kenya, Malawi, and Mozambique*. Development practice in education. Washington, DC: World Bank Group. <https://openknowledge.worldbank.org/handle/10986/2617>.
2. World Bank & UNICEF (2009).
3. UNESCO Institute for Statistics. *Ethiopia*. Retrieved February 9, 2022, from <http://uis.unesco.org/en/country/et>.
4. Education and Training Policy of 1994, Sec. 2.1.1.
5. World Bank & UNICEF (2009).
6. UNESCO Institute for Statistics. *Ethiopia*.
7. *Girls' education and COVID-19 in Ethiopia*. (2020, December). Malala Fund. <https://malala.org/newsroom/archive/girls-education-and-covid-19-in-ethiopia>.

8. UNESCO. (2020). *UNESCO global education monitoring report 2020—Gender report: A new generation: 25 years of efforts for gender equality in education*, p. 9. Paris: UNESCO. <https://en.unesco.org/gem-report/2020genderreport>.
9. UNESCO. (2018). *UNESCO global education monitoring report 2017/2018: Accountability; Meeting our commitments*. Paris: UNESCO. <https://en.unesco.org/gem-report/allreports>.
10. UNESCO (2020).
11. UNESCO (2020). p. 12.
12. UNESCO (2020). p. 11.
13. UNESCO (2020). p. 12.
14. UNESCO (2020). p. 1.
15. Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., & Puranen, B. (Eds.). (2022). *World values survey: Round seven—country-pooled datafile version 3.0 (Q30)*. Madrid & Vienna: JD Systems Institute & WVSA Secretariat. <https://doi.org/10.14281/18241.16>; Inglehart, R., Haerpfer, C., Moreno, A., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., Puranen, B., et al. (Eds.). (2014). *World Values Survey: Round Three—Country-Pooled Datafile Version*: Madrid: JD Systems Institute. [www.worldvaluessurvey.org/WVSDocumentationWV3.jsp](http://www.worldvaluessurvey.org/WVSDocumentationWV3.jsp).
16. Haerpfer, C., Inglehart, R., Moreno, A., et al. (2020). Q30.
17. OECD. *Share of women graduates by field of education*. Retrieved February 9, 2022, from [www.oecd.org/gender/data/shareofwomengraduatesbyfieldofeducation.htm](http://www.oecd.org/gender/data/shareofwomengraduatesbyfieldofeducation.htm).
18. İşcan, T. B., Rosenblum, D., & Tinker, K. (2015). School fees and access to primary education: Assessing four decades of policy in sub-Saharan Africa. *Journal of African Economies*, 24(4), 559–592.
19. Mollé, N. S., & Chong, R. (2017). Socio-cultural constraints of girls' access to education in Mtwara District, Tanzania. *Khazar Journal of Humanities & Social Sciences*, 20(3).
20. World Bank & UNICEF (2009). p. 34.
21. Hallfors, D. D., Cho, H., Rusakaniko, S., Mapfumo, J., Iritani, B., Zhang, L., Luseno, W., & Miller, T. (2015). The impact of school subsidies on HIV-related outcomes among adolescent female orphans. *Journal of Adolescent Health*, 56(1), 79–84; Duflo, E., Dupas, P., & Kremer, M. (2015). Education, HIV, and early fertility: Experimental evidence from Kenya. *American Economic Review*, 105(9), 2757–2797.
22. Koski, A., Strumpf, E. C., Kaufman, J. S., Frank, J., Heymann, J., & Nandi, A. (2018). The impact of eliminating primary school tuition fees on child marriage in sub-Saharan Africa: A quasi-experimental evaluation of policy changes in 8 countries. *PloS One*, 13(5), e0197928.
23. Bose, B., & Heymann, J. (2019). Effects of tuition-free primary education on women's access to family planning and on health decision-making: A cross-national study. *Social Science & Medicine*, 238, 112478.
24. Authors' analysis of data on education expenditures from UNESCO Institute of Statistics for 2015–2019. Retrieved July 26, 2021, from <http://uis.unesco.org/>.
25. Brunello, G., Fort, M., & Weber, G. (2009). Changes in compulsory schooling, education, and the distribution of wages in Europe. *Economic Journal*, 119(536), 516–539.
26. Tayfur, M. D., Kırdar, M. G., & Koc, I. (2011). *The effect of compulsory schooling laws on teenage marriage and births in Turkey* (IZA Discussion Paper 5887). Bonn, Germany: Institute for the Study of Labor. <http://ftp.iza.org/dp5887.pdf>.
27. Erten, B., & Keskin, P. (2018). For better or for worse?: Education and the prevalence of domestic violence in Turkey. *American Economic Journal: Applied Economics*, 10(1), 64–105.
28. UNGEI & UNESCO. (2016). Why ending school-related gender-based violence (SRGBV) is critical to sustainable development. [www.ungei.org/sites/default/files/Why-ending-school-related-gender-based-violence-is-critical-to-sustainable-development-2016-eng.pdf](http://www.ungei.org/sites/default/files/Why-ending-school-related-gender-based-violence-is-critical-to-sustainable-development-2016-eng.pdf).
29. Devries, K. M., Kyegombe, N., Zuurmond, M., Parkes, J., Child, J. C., Walakira, E. J., & Naker, D. (2014). Violence against primary school children with disabilities in Uganda: A cross-sectional study. *BMC Public Health*, 14(1), 1–9.

30. Sentencia N° 32-3-2018 de Tribunal Primero de Sentencia de Santa Tecla. (2018, May 25).
31. Equal Opportunities Commission v. Director of Education, No. 1555 of 2000.
32. Evans, D. K. & Acosta, A. M. (2020). Lifting bans on pregnant girls in school. *The Lancet*, 396(10252), 667–668.
33. UNICEF. (2021, October). *Child marriage*. <https://data.unicef.org/topic/child-protection/child-marriage/>.
34. Koski, A., & Heymann, J. (2018). Child marriage in the United States: How common is the practice, and which children are at greatest risk? *Perspectives on Sexual and Reproductive Health*, 50(2), 59–65.
35. Wodon, Q., Male, C., Nayihouba, A., Onagoruwa, A., Savadogo, A., Yedan, A., Edmeades, J., Kes, A., John, N., Murithi, L., Steinhaus, M., & Petroni, S. (2017). *Economic impacts of child marriage: Global synthesis report*, p. 56. Washington, DC: The World Bank and International Center for Research on Women. <https://documents1.worldbank.org/curated/en/530891498511398503/pdf/116829-WP-P151842-PUBLIC-EICM-Global-Conference-Edition-June-27.pdf>.
36. Wodon, Q., Nguyen, M. C., Yedan, A., & Edmeades, J. (2017).
37. Wodon, Q., Nguyen, M. C., Yedan, A., & Edmeades, J. (2017). *Economic impacts of child marriage: Educational attainment*. Washington, DC: The World Bank and International Center for Research on Women. [www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/ICRW\\_brief\\_educational\\_attainment\\_2017\\_En.pdf](http://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/ICRW_brief_educational_attainment_2017_En.pdf).
38. Wodon, Q., Male, C., & Onagoruwa, A. (2020). A simple approach to measuring the share of early childbirths likely due to child marriage in developing countries. In *Forum for Social Economics*, 49(2), 166–179. Routledge.
39. Wodon, Q., Male, C., Nayihouba, A., Onagoruwa, A., et al. (2017). p. 59.
40. Ganchimeg, T., Ota, E., Morisaki, N., Laopaiboon, M., Lumbiganon, P., Zhang, J., Yamdamsuren, B., et al. (2014). Pregnancy and childbirth outcomes among adolescent mothers: A World Health Organization multicountry study. *BJOG: An International Journal of Obstetrics & Gynaecology*, 121, 40–48.
41. World Health Organization. (2017, May 16). *More than 1.2 million adolescents die every year, nearly all preventable*. [www.who.int/news/item/16-05-2017-more-than-1-2-million-adolescents-die-every-year-nearly-all-preventable](http://www.who.int/news/item/16-05-2017-more-than-1-2-million-adolescents-die-every-year-nearly-all-preventable).
42. Raj, A., Saggurti, N., Winter, M., Labonte, A., Decker, M. R., Balaiah, D., & Silverman, J. G. (2010). The effect of maternal child marriage on morbidity and mortality of children under 5 in India: Cross sectional study of a nationally representative sample. *BMJ*, 340; Finlay, J. E., Özaltın, E., & Canning, D. (2011). The association of maternal age with infant mortality, child anthropometric failure, diarrhoea and anaemia for first births: Evidence from 55 low- and middle-income countries. *BMJ Open* 1(2), e000226.
43. Neal, S., Channon, A. A., & Chintsanya, J. (2018). The impact of young maternal age at birth on neonatal mortality: Evidence from 45 low and middle income countries. *PLoS One*, 13(5), e0195731.
44. Nour, N. M. (2006). Health consequences of child marriage in Africa. *Emerging Infectious Diseases*, 12(11), 1644; Khanna, T., Verma, R., Weiss, E., Glinski, A. M., Weiss, E., & Shetty, A. (2013). *Child marriage in South Asia: Realities, responses, and the way forward*. International Center for Research on Women. [www.icrw.org/publications/child-marriage-in-south-asia-realities-responses-and-the-way-forward/](http://www.icrw.org/publications/child-marriage-in-south-asia-realities-responses-and-the-way-forward/).
45. Kidman, R. (2017). Child marriage and intimate partner violence: A comparative study of 34 countries. *International Journal of Epidemiology*, 46(2), 662–675.
46. Omidakhsh, N., & Heymann, J. (2020). Improved child marriage laws and its association with changing attitudes and experiences of intimate partner violence: A comparative multi-national study. *Journal of Global Health*, 10(1).
47. Gemignani, R., & Wodon, Q. (2015). Child marriage and faith affiliation in sub-Saharan Africa: Stylized facts and heterogeneity. *Review of Faith & International Affairs*, 13(3), 41–47.

48. Lloyd, C. B., Mensch, B. S., & Clark, W. H. (2000). The effects of primary school quality on school dropout among Kenyan girls and boys. *Comparative Education Review*, 44(2), 113–147.
49. African Development Bank Group. (2020). *African economic outlook 2020: Developing Africa's workforce for the future*. [https://au.int/sites/default/files/documents/38116-doc-african\\_economic\\_outlook\\_2020\\_.pdf](https://au.int/sites/default/files/documents/38116-doc-african_economic_outlook_2020_.pdf).
50. World Bank. (2021, September). *School enrollment, secondary, private (% of total secondary)* [Data set]. <https://data.worldbank.org/indicator/SE.SEC.PRIV.ZS>.
51. Right to Education Project, et al. (2014, July 7). *Privatization and its impact on the right to education of women and girls* (Joint CSO submission to the CEDAW committee). [www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/Submission%20to%20CEDAW\\_Privatisation\\_and\\_RTE\\_of\\_Girls\\_Women\\_2014.pdf](http://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/Submission%20to%20CEDAW_Privatisation_and_RTE_of_Girls_Women_2014.pdf).
52. Duflo, E., Dupas, P., & Kremer, M. (2014). *Education, HIV, and early fertility: Experimental evidence from Kenya* (NBER Working Paper 20784). Cambridge, MA: National Bureau of Economic Research. [www.nber.org/papers/w20784.pdf](http://www.nber.org/papers/w20784.pdf); Evans, D., Kremer, M., & Ngatia, M. (2009, November 1). *The impact of distributing school uniforms on children's education in Kenya*. Poverty Action Lab. [www.poverty-action.org/publication/impact-distributing-school-uniforms-childrens-education-kenya](http://www.poverty-action.org/publication/impact-distributing-school-uniforms-childrens-education-kenya); Kremer, M., Moulin, S., & Namunyu, R. (2002). *Unbalanced decentralization: Results of a randomized school supplies provision program in Kenya*. Cambridge, MA: Harvard University. In Sperling & Winthrop (2015).
53. Brinks, D. M., & Gauri, V. (2012). *The law's majestic equality? The distributive impact of litigating social and economic rights*, World Bank Policy Research Working Paper No. 5999, p. 33–34. Washington, DC: World Bank Group.
54. Benhassine, N., Devoto, F., Duflo, E., Dupas, P., & Pouliquen, V. (2015). Turning a shove into a nudge? A "labeled cash transfer" for education. *American Economic Journal: Economic Policy*, 7(3), 86–125; Levine, R., O'Conner, A., Watts, H., Hollister, R., Widerquist, K., & Williams, W. (2005). A retrospective on the negative income tax experiments: Looking back at the most innovative field studies in social policy. In Widerquist, K., & Lewis, M. A. (Eds.). *The ethics and economics of the basic income guarantee*. London: Routledge.
55. UNICEF. (2019, March). *Guidance on menstrual health and hygiene*. [www.unicef.org/documents/guidance-menstrual-health-and-hygiene](http://www.unicef.org/documents/guidance-menstrual-health-and-hygiene).
56. Adukia, A. (2017). Sanitation and education. *American Economic Journal: Applied Economics*, 9(2), 23–59.
57. Montgomery, P., Ryus, C. R., Dolan, C. S., Dopson, S., & Scott, L. M. (2012). Sanitary pad interventions for girls' education in Ghana: A pilot study. *Plos One*, 7(1), e48274.
58. Mocan, N. H., & Cannonier, C. (2012). *Empowering women through education: Evidence from Sierra Leone* (No. w18016). Cambridge, MA: National Bureau of Economic Research.
59. Muralidharan, K., & Prakash, N. (2017). Cycling to school: Increasing secondary school enrollment for girls in India. *American Economic Journal: Applied Economics*, 9(3), 321–350.
60. Perez, C. C. (2019). *Invisible women: Exposing data bias in a world designed for men*. New York: Random House.
61. WHO. (2019, August 28). *National systems to support drinking-water, sanitation, and hygiene: Global status report 2019* (UN-Water global analysis and assessment of sanitation and drinking water (GLAAS) 2019 report, p. 7). Geneva: World Health Organization. [www.who.int/publications/item/9789241516297](http://www.who.int/publications/item/9789241516297).
62. Graham, J. P., Hirai, M., & Kim, S-S. (2016). An analysis of water collection labor among women and children in 24 sub-Saharan African countries. *PloS One*, 11(6), e0155981.
63. UNICEF. (2016, August 26). UNICEF: Collecting water is often a colossal waste of time for women and girls. [www.unicef.org/press-releases/unicef-collecting-water-often-colossal-waste-time-women-and-girls](http://www.unicef.org/press-releases/unicef-collecting-water-often-colossal-waste-time-women-and-girls).

64. Khanam, R. (2008). Child labour and school attendance: Evidence from Bangladesh. *International Journal of Social Economics*, 35(1/2), 77–98.
65. Assaad, R., Levison, D., & Zibani, N. (2010). The effect of domestic work on girls' schooling: Evidence from Egypt. *Feminist Economics*, 16(1), 79–128.
66. Levison, D. (1998). Household work as a deterrent to schooling: An analysis of adolescent girls in Peru. *Journal of Developing Areas*, 32(3), 339–356.
67. Parikh, P., Fu, K., Parikh, H., McRobie, A., & George, G. (2015). Infrastructure provision, gender, and poverty in Indian slums. *World Development*, 66, 468–486.
68. Roby, J. L., Erickson, L., & Nagaishi, C. (2016). Education for children in sub-Saharan Africa: Predictors impacting school attendance. *Children and Youth Services Review*, 64, 110–116.
69. Wodon, Q., Male, C., Nayihouba, A., Onagoruwa, A., et al. (2017).
70. Psacharopoulos, G., & Tzannatos, Z. (1989). Female labor force participation: An international perspective. *World Bank Research Observer*, 4(2), 187–201.
71. Grépin, K. A., & Bharadwaj, P. (2015). Maternal education and child mortality in Zimbabwe. *Journal of Health Economics*, 44, 97–117.
72. UNESCO. (2014). *Teaching and learning: Achieving quality for all* (Education for all global monitoring report). <https://unesdoc.unesco.org/ark:/48223/pf0000225660>.
73. Psacharopoulos, G., & Patrinos, H. A. (2018). *Returns to investment in education: A decennial review of the global literature*. Washington, DC: World Bank Group. <https://openknowledge.worldbank.org/handle/10986/29672>.
74. UNESCO (2014).
75. Pradhan, E., et al. (2018). The Effects of education quantity and quality on child and adult mortality: Their magnitude and their value. In *Optimizing Education Outcomes: High-Return Investments in School Health for Increased Participation and Learning*, p. 211. Washington, DC: World Bank Group. For list of countries included in regression analyses, see Annex 30A.
76. Heymann, J., Levy, J. K., Bose, B., Ríos-Salas, V., Mekonen, Y., Swaminathan, H., Omidakhsh, N., et al. (2019). Improving health with programmatic, legal, and policy approaches to reduce gender inequality and change restrictive gender norms. *The Lancet*, 393(10190), 2522–2534.
77. Bhalotra, S., Harttgen, K., & Klasen, S. (2013). *The impact of school fees on the intergenerational transmission of education* (background paper commissioned for EFA Global Monitoring Report 2013/4). Paris: UNESCO. In Sperling & Winthrop (2016).
78. Wodon, Q., Montenegro, C., Nguyen, H., & Onagoruwa, A. (2018). *Missed opportunities: The high cost of not educating girls* (The cost of not educating girls notes series). Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/29956>.
79. OECD. (2012). *Closing the gender gap: Act now*. [www.oecd-ilibrary.org/social-issues-migration-health/close-the-gender-gap-now\\_9789264179370-en](http://www.oecd-ilibrary.org/social-issues-migration-health/close-the-gender-gap-now_9789264179370-en).