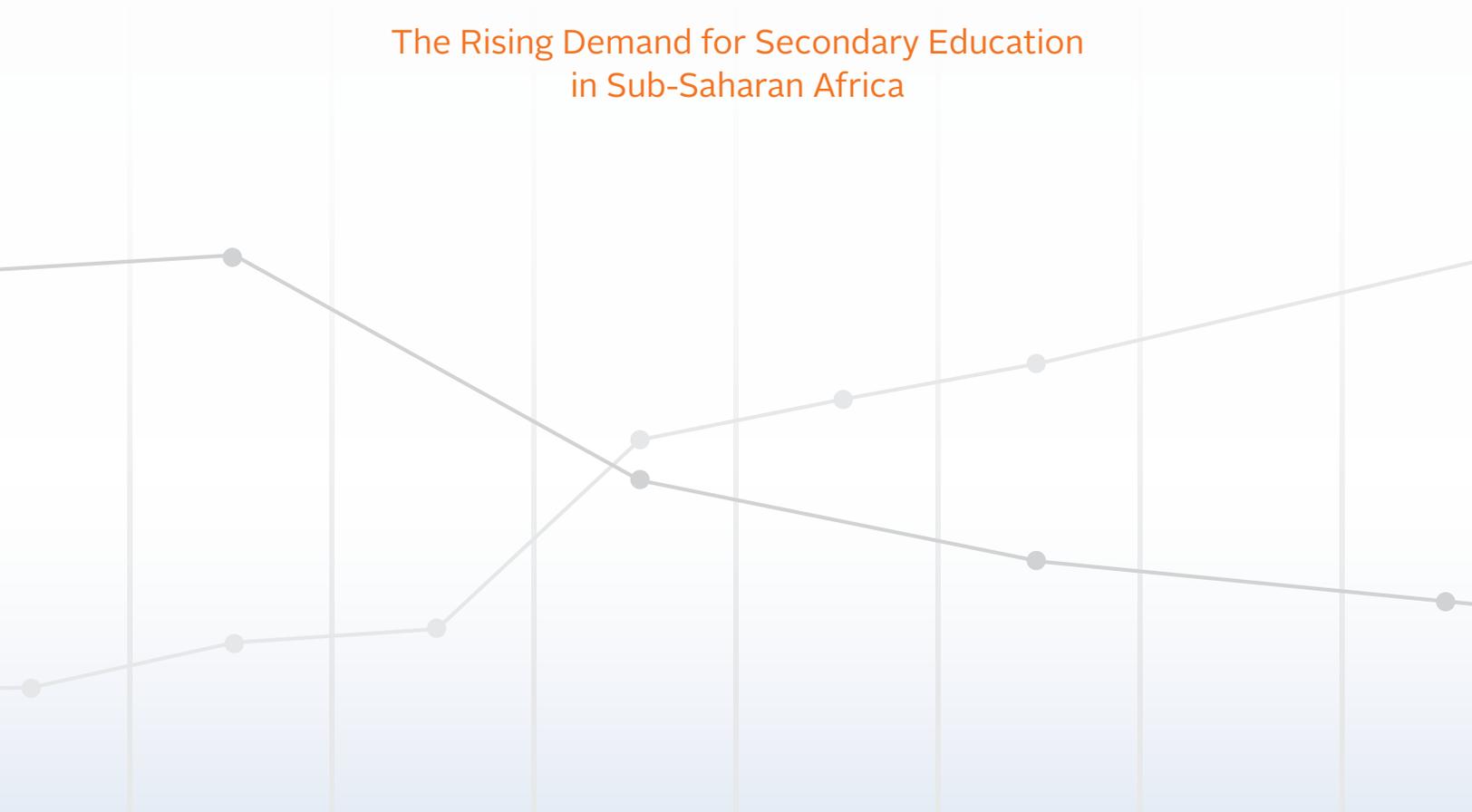


Making Waves

The Rising Demand for Secondary Education in Sub-Saharan Africa



March 2015

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Making Waves

The Rising Demand for Secondary Education
in Sub-Saharan Africa

EDUCATION POLICY AND DATA CENTER | FHI 360

March 2015

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Greater participation in secondary education supports the advancement of human capital linked to economic growth, democracy-building, improved health, greater equity across society, and the development of a capable and competitive workforce (Cuadra & Moreno, 2005; Lutz, Crespo Cuaresma, & Sanderson, 2008; Crespo Cuaresma & Mishra, 2011). However, many youth never reach secondary school in Sub-Saharan Africa, which limits their life opportunities as well as national development trajectories more broadly. Nonetheless, improvement in lower secondary participation has followed recent gains in primary, and many countries across Sub-Saharan Africa are poised to continue to experience an impressive wave of demand for secondary education.

The observation that demand for lower secondary education is proliferating is not new – researchers and education advocates have consistently signaled the importance of anticipating and supporting growth in secondary education in recent decades (e.g. Lewin & Caillods, 2001; Cuadra & Moreno, 2005; Lewin, 2008; UNESCO, 2012). Yet progress to date, while commendable, continues to be sluggish and achievement of universal lower secondary education is likely to remain a long-term endeavor, one that requires attention now more than ever if theoretical demand is to translate into tangible progress.

This brief quantifies what we can expect in terms of demand for secondary education in the

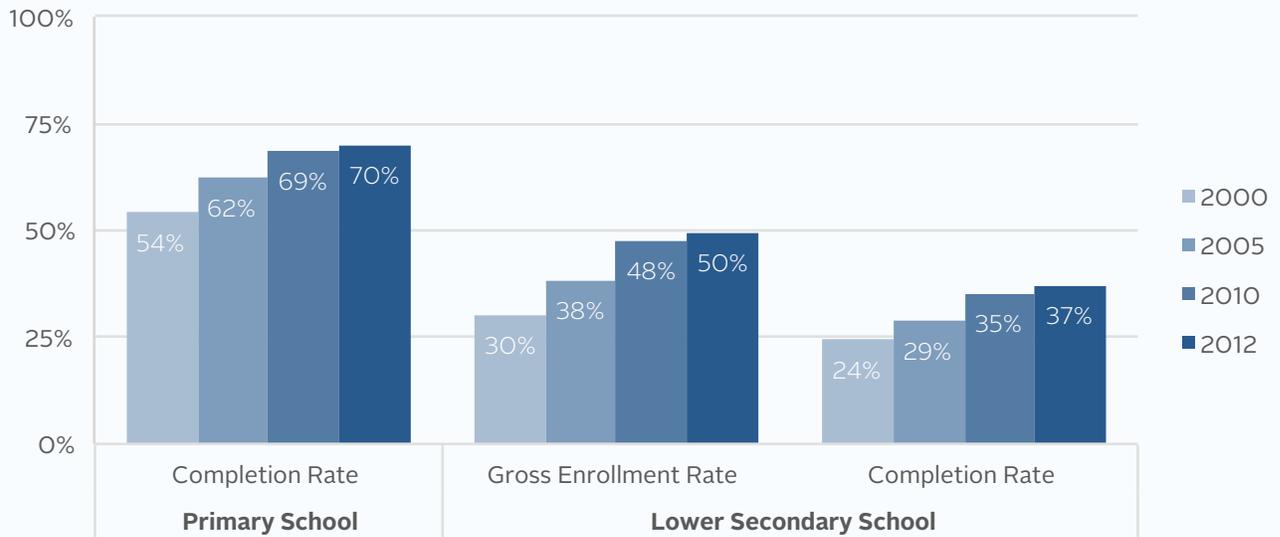
coming decade, with a focus on Sub-Saharan Africa and on lower secondary education. We also highlight school resource challenges the region will face as it expands secondary education while continuing to expand primary education in pursuit of universal primary education. We argue that demand for lower secondary education is poised to surge in the coming decade but that the ability of school systems to accommodate a flood of new students without sacrificing quality will be largely a question of whether systems can accommodate growth efficiently. We examine this argument in the context of Niger, looking at constraints on growth and policies the country has pursued to address these challenges.

GAINS IN PRIMARY HAVE LED TO GROWTH IN LOWER SECONDARY

Today more children grow up having attended school than ever before. Participation in primary school rose in the decade and a half following the renewal of Education for All commitments in 2000. More students now progress through early grades to complete primary education, gaining important early literacy and numeracy

skills. **Figure 1** shows headway in primary school completion rates in Sub-Saharan Africa, which climbed 16 percentage points between 2000 and 2012 from 54 to 70%. These figures speak unambiguously to progress in primary attainment even if the goal of universal primary completion remains aspirational.

FIGURE 1. Progress in educational participation in Sub-Saharan Africa



Data sources: UNESCO Institute for Statistics (UIS) regional estimates for Sub-Saharan Africa

Gains in primary since 2000 have led, in part, to growth in lower secondary education, meaning that more youth now have the opportunity to solidify important foundational skills through formal schooling (UNESCO, 2014). As with primary, expansion in lower secondary has been impressive in Sub-Saharan Africa, with gross enrollment rates growing from 30 to 50% between the start of the new millennium and 2012.

Yet progress in primary has not fully translated into advances in secondary in Sub-Saharan Africa. A higher proportion of children complete primary than enroll in secondary, suggesting only partial transition to what in many countries constitutes the second phase of compulsory, basic education. Indeed, as **Figure 1** presents, the primary school completion rate reached about 70% in 2012, while the gross enrollment rate for lower secondary remained at about 50%

that same year. The 20% gap between those figures represents unmet potential demand for lower secondary education and speaks to a range of supply- and demand-side barriers that curb school participation at the lower secondary level. These include prohibitive school costs to households, long distances to secondary schools, availability of seats in secondary schools, quality of instruction, and the perceived benefits of secondary education (Ohba, 2011; Siddhu, 2011; FHI 360, 2013; Lewin, 2008). Fully closing this gap and transforming potential demand into lower secondary growth requires careful approaches to mitigating challenges to school access.

These challenges also impact efficiency within lower secondary education. As presented in **Figure 1**, lower secondary completion rates have increased from 24 to 37% across Sub-Saharan Africa. While rising completing rates

are undoubtedly positive, completion rates in lower secondary education have not risen as quickly as gross enrollment at that level. The gap between gross enrollment rates and completion rates at the lower secondary level speaks to inefficiencies in lower secondary education and

this gap has yawned, rising from 6% in 2000 to 13% in 2012. Given the immense investments required to expand education, many countries may not be able to afford high repetition and dropout from lower secondary education.

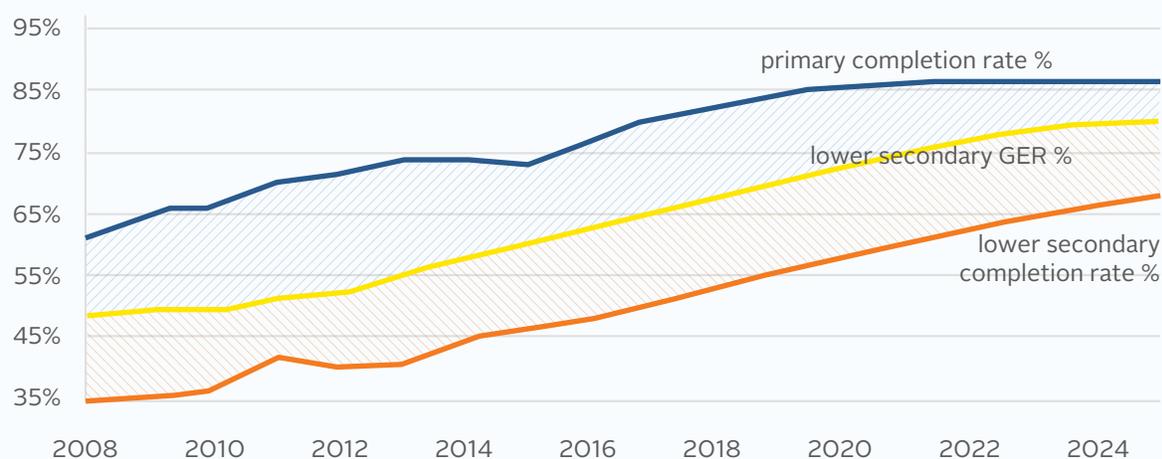
IN THE NEAR FUTURE, DEMAND FOR SECONDARY EDUCATION WILL EXPAND FURTHER

Following past progress, we expect demand for lower secondary education to continue to surge as the decade proceeds. Individuals and nations will benefit where this demand translates to progress, advancing movement towards universal completion of lower secondary education, which has been forwarded as a potential goal in the post-2015 agenda (UNESCO, 2014). Dedication to progress in lower secondary could help ensure a greater share of youth gain the crucial foundational skills often taught in later phases of basic education, and that more students continue their education into upper secondary, where instruction has the most power to provide job skills that enhance the employability of students and the competitiveness of nations. Education Policy and Data Center (EPDC) projections illustrate the imminent wave of demand for lower secondary education. The projections cited in this brief draw from the EPDC forecasting model, HIPE (High-level Interactive Projection for Education). The HIPE model uses historical trends to estimate future progress using a cohort method that traces student flow through the education system based on pathways in gross intake rates for primary education, repetition rates, dropout

rates, and transition rates.¹ It is important to note that EPDC projections rely on assumptions of gradual progress towards ideal intake and flow rates, and therefore projections for potential demand for lower secondary education underestimate growth where improvements are more rapid. In doing so, the projections demonstrate the progress we could see assuming gradual improvements in education systems rather than what progress we will see.

As presented in **Figure 2**, between 2008 and 2025, demand for lower secondary education, as measured by projected primary completion (in blue) and gross enrollment in lower secondary (dark yellow) could surge in Sub-Saharan Africa where lower secondary participation has traditionally been low. Between 2008 and 2025, if demand could be met, gross enrollment rates for lower secondary education would climb from 49 to 80%. Completion of lower secondary would also rise, increasing from 34 to 68%. While these figures imply that universal lower secondary attainment remains a distant goal, growth would indicate laudable progress under complex circumstances.

FIGURE 2. Projected trends in demand for and completion of lower secondary school in Sub-Saharan Africa

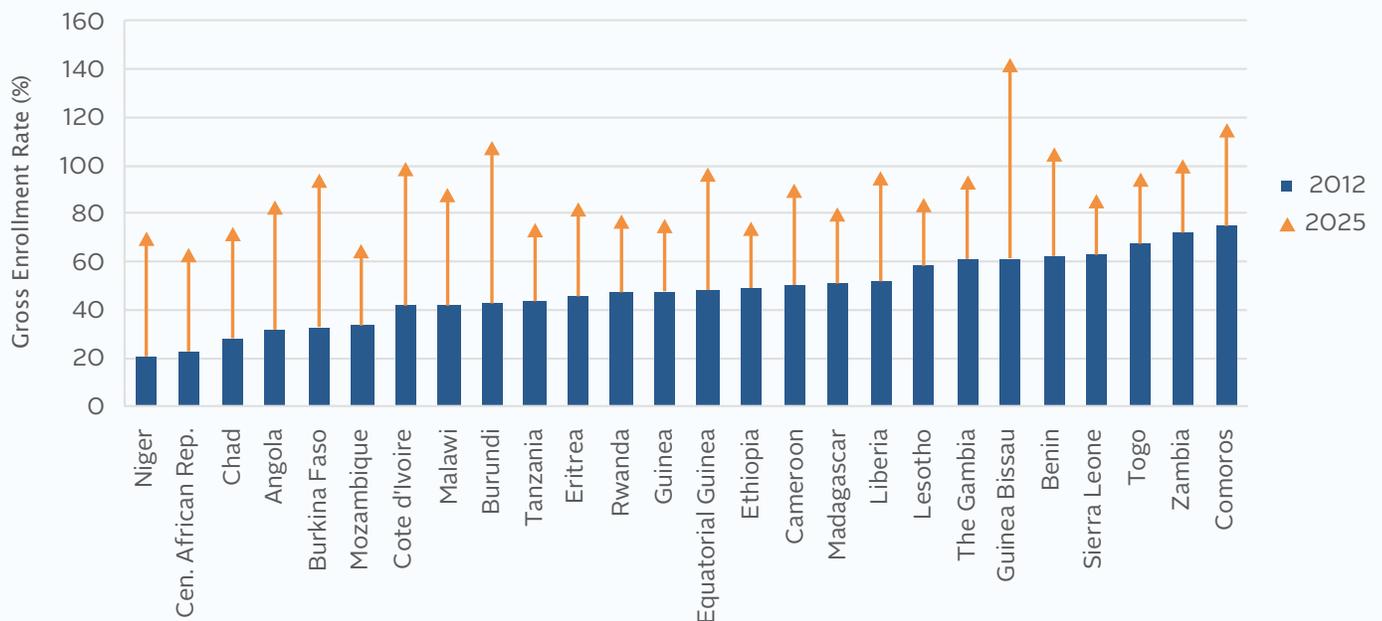


Data sources: EPDC aggregations of historical data from UIS; EPDC projections

Behind these patterns of regional demand, certain countries are poised to experience soaring demand for lower secondary, emphasizing the dramatic impact that modest improvements in gross intake rates for primary education, repetition rates, dropout rates, and transition rates can make. **Figure 3** shows the countries where gross enrollment rates are projected to swell by 20 or more percentage points. Many of these countries began the decade with relatively low enrollment in lower secondary, but are positioned for tremendous growth in demand given their low starting points, with countries such as Niger, Burkina Faso, Burundi, Angola, and Guinea Bissau, tripling – or nearly tripling – the proportion of youth who could enroll in lower secondary education.

It may be unrealistic to assume that these education systems can expand rapidly enough to guarantee sufficient seats and staff in lower secondary education to accommodate such demand, or that impediments like costs to households or safety threats to students (especially girls) in and on the way to school will not shrink demand. Yet, realizing demand to the greatest extent possible will benefit the welfare of individuals and national development. Moreover, the failure to expand lower secondary will endanger continued progress in primary education, as a) the quality of primary school relies on teachers trained at least through the secondary level and b) greater likelihood of progressing to lower secondary provides greater impetus for primary completion (Lewin, 2011).

FIGURE 3: Rapid rises in gross enrollment will require efficient expansion of lower secondary schooling



Data sources: Historical data from UIS; EPDC projections

POPULATION GROWTH WILL MEAN MORE SCHOOL-AGE YOUTH

Accommodating rising demand for lower secondary education will be complicated by strong population growth across Sub-Saharan Africa, making planning for expansion of lower secondary and seeking efficiencies especially important. As presented in **Figure 4**, the youth population in Sub-Saharan Africa will jump from 197 million in 2012 to 273 million in 2025,

meaning education systems will have about 40% more youth to potentially plan for, though presumably not all will make it through primary and into secondary education. Enrolling more youth in lower secondary, and at any level, will require careful planning and efficient use of resources from donors and countries alike, an issue we turn to in the next section.

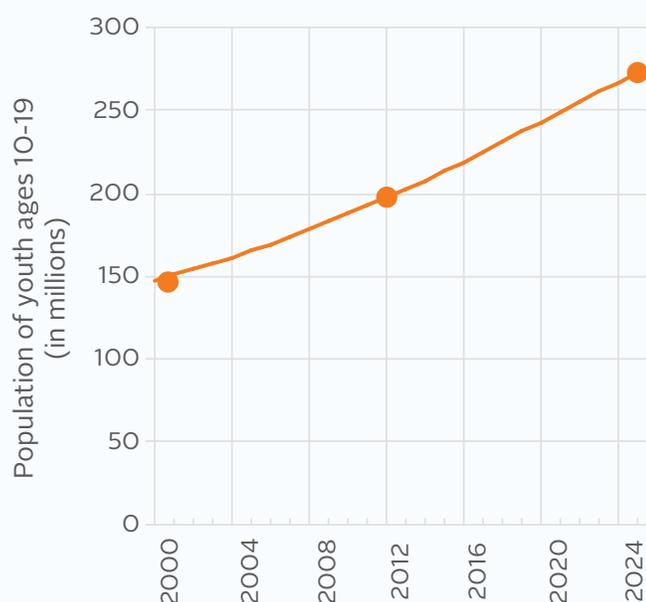
CAN COUNTRIES AFFORD THE EXPANSION OF LOWER SECONDARY EDUCATION?

ODA for secondary education remains low but is gaining donor attention

The Global Partnership for Education (GPE) estimates a financing gap of nearly 22 billion USD for lower secondary education from 2015 to 2018 (GPE, 2014). While the scope of this

financial need would require donor assistance far beyond recent commitments, especially given drops in total aid to education in Sub-Saharan Africa since 2010 (**Figure 4**), donor commitment will remain important in facilitating growth in lower secondary.

FIGURE 4: Youth populations are growing across Sub-Saharan Africa²



Data source: EPDC regional aggregation of UN Population Division projectionst

The overall trend suggests that greater attention has been paid to funding secondary education through official development assistance (ODA) over the past decade. This trend is documented in **Figure 4**, which shows that ODA to secondary nearly doubled from 2004 to 2013 both in absolute terms and relative to total education ODA. While funding to secondary education has historically been weak, it grew faster than any other education sector between 2002 and 2010, according to ODA estimates from the Organization for Economic Co-operation and Development (OECD). In addition to securing international financial resources for education, countries need to develop and implement policies that improve the efficiency of service provision at the lower secondary level.

Economic growth in lower income economies will mean more domestic resources for education

While greater donor attention to lower secondary is needed, governments cannot rely primarily on donors to fund budget gaps for lower secondary. Sustained financing must come from domestic resources for growth. Fortunately, many low and lower middle income countries are positioned for rapid economic expansion. Indeed, growth over the next five years (2014-2018) is likely to be impressive, with an average growth rate of 6.4% across Sub-Saharan Africa with most countries in the region experiencing growth above 4%. As economies continue to grow, even the same proportional allocation to education will mean improved financing for education (EPDC, 2014). By dedicating a higher portion of GDP to education, as many advocate for, even greater resources could be made available to finance lower secondary education, which will be crucial (UNESCO, 2014). Across the 30 countries that the UNESCO Institute for Statistics (UIS) offers recent expenditure data on, the average portion of GDP spent on secondary education was only 1.4%, and yet some estimates suggest that expansion of lower secondary education in Sub-Saharan African countries will require that at least 2% of GDP be devoted to secondary education (Lewin, 2008).

If more resources can be allocated to secondary education, this domestic growth may help low income countries extricate themselves from poverty traps that have plagued development, where more and better education could support economic growth but investment in education

requires (unavailable) economic resources. Given the continued need for lower secondary expansion, attention will need to be paid to devoting more resources to post-primary education and putting them to efficient use, with consideration for quality as an element

of expansion. In the next section, we focus on challenges to educational expansion in Niger, which has had to grapple with budget constraints in educational provision.

WHAT WILL IT TAKE TO TRANSFORM POTENTIAL DEMAND INTO SECONDARY GRADUATES? THE OUTLOOK FOR LOWER SECONDARY EDUCATION IN NIGER

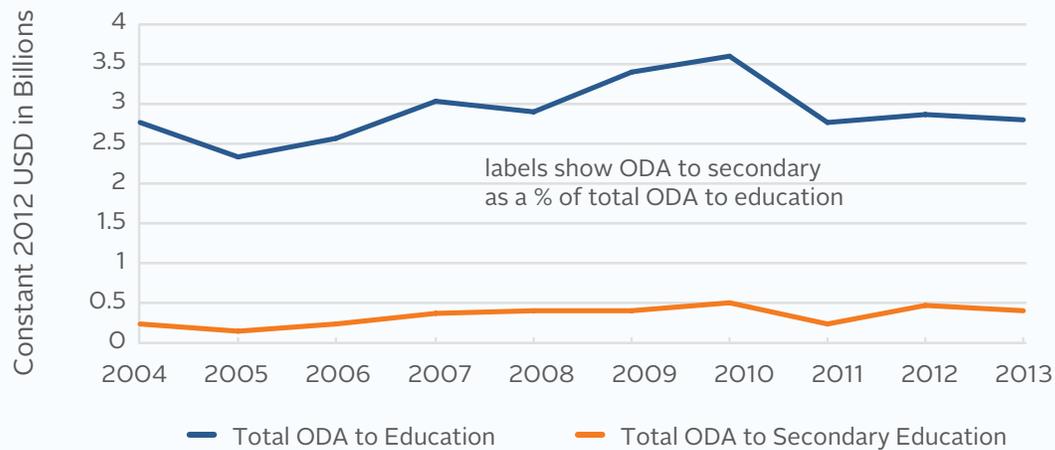
Country approaches to the expansion of secondary education vary widely depending on context-specific needs, including a country's starting point, resources, and environmental factors. To achieve greater nuance in understanding country-specific potential for secondary education growth, we examine challenges that curb the supply and demand of secondary education in Niger, a Francophone West African country ranked last of 187 countries in the 2014 Human Development Index. Niger faces a myriad of challenges that intersect with education, including food scarcity, high rates of child marriage, inequality, and a youth population boom—with some estimates stating that half the population is under age 15 (UNDP, 2014; GPE, 2014).

In the formal education system, Niger has an entry age of seven and a six year primary education cycle that is followed by four years of lower secondary education and three years of upper secondary. Primary and lower secondary education are considered basic education and are

often referred to as Basic Cycle 1 and Basic Cycle 2, respectively. Yet, access to education has historically been very low. In Niger, an average youth between the ages of 15 and 24 has only 2.6 years of schooling, well-below a secondary-level education and likely insufficient to develop basic literacy and numeracy skills, as emphasized by the fact that only 21% of women in that same age group could read a simple sentence (EPDC extraction of 2012 DHS dataset). Recent household survey data emphasizes that educational opportunities are particularly limited for those in rural areas, for those from the poorest households, and for women and girls (EPDC extraction of 2012 DHS dataset). According to UIS, the primary school completion rate in Niger was at about 58% in 2013, while the gross enrollment rate for secondary school was only 16% - suggesting the unmet potential demand of approximately 42%.

In looking at Niger, we focus on the gender dimension of educational inequality in Niger, its intersection with secondary education policy and planning, and its potential to curb demand

FIGURE 5: Despite drops in ODA funding to education in Sub-Saharan Africa, ODA to secondary education has risen over the past decade²



Data source: OECD DAC Database

for lower secondary. We then turn to supply-side issues in meeting educational demand, specifically the challenge of hiring more teachers under strained financial circumstances. Given that spending on education in Niger is already 23 percent of public expenditure (GPE, 2012) and that ODA to education dropped from a high of 63.2 million USD in 2007 to 33.7 million USD in 2013 USD according to OECD figures (estimates use constant 2012 dollars), Niger must negotiate challenges to educational expansion under complex financial circumstances.

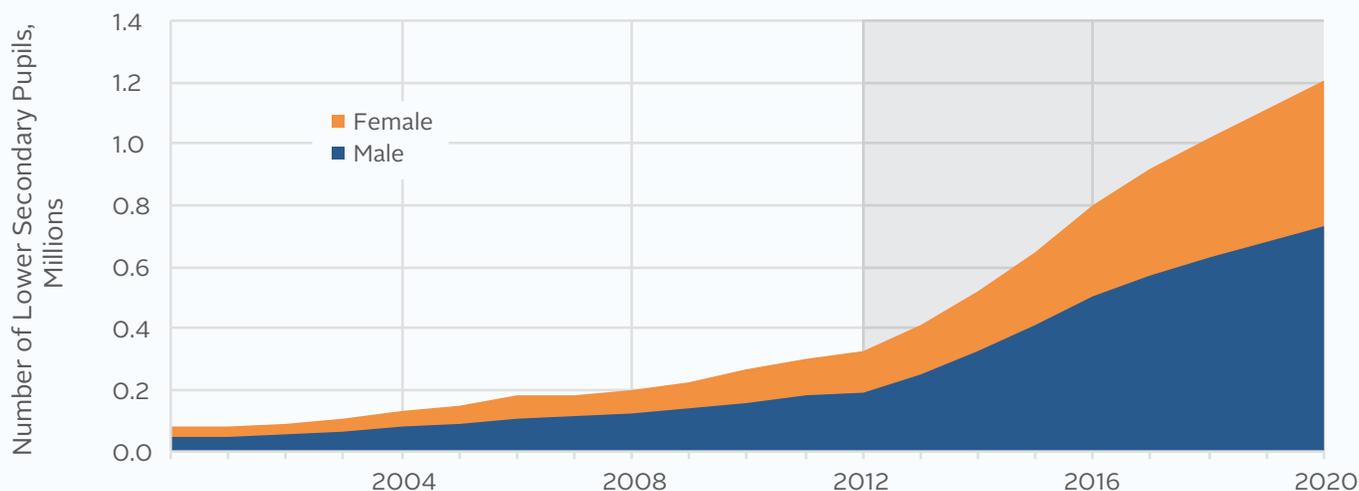
Demand-side challenges to growth: girls and women are under-represented in education at all levels

Educational challenges are more severe for girls than boys in Niger, and, while projections show modest progress for female participation, demand may ultimately be constrained by

slow-changing cultural attitudes towards girls' education. Indeed, **Figure 6** makes clear that females attend school at lower rates than males and that age-specific attendance rates for females of official primary and secondary-school ages are always lower than those of their male counterparts. Moreover, girls and women less often benefit from secondary education, as exemplified in **Figure 7**, which shows that fewer female than male youth have any experience with secondary education and that this disparity is far more dramatic in rural areas, where the majority of the population lives, than urban ones.

Limited female participation in education relates to other issues that impact women and girls in Niger, like low workforce participation, high fertility, and alarming rates of early marriage and early pregnancy (Walker, 2013). The organization Girls Not Brides ranks Niger as the country with the highest rate of child marriage in the world,

FIGURE 6: Niger is projected to experience dramatic growth in lower secondary enrollment, if it can maintain and accommodate demand



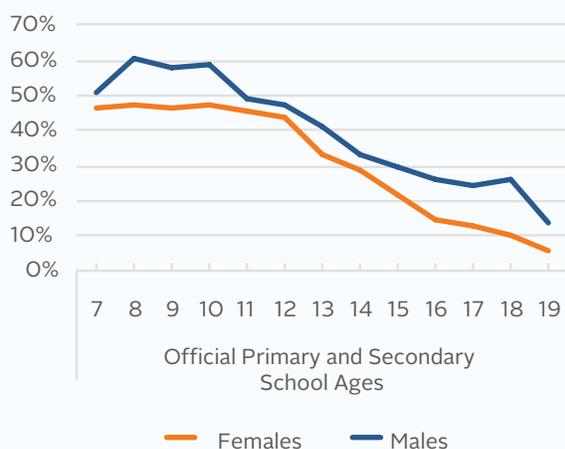
Data source: EPDC projections based on UIS data

with more than 1 in 4 women married by age 15 and 3 in 4 women married by age 18 (2012). Niger also has the highest adolescent birth rate of any country, with 1 in 2 women between ages 20 and 24 reporting that they had given birth by age 18 (UNFPA, 2013). Given that early marriage and child rearing have typically been incompatible with continued formal schooling, transforming potential demand for secondary education, as demonstrated in projections, into actual enrollment growth will require a sea change in cultural attitudes towards women and marriage practices.

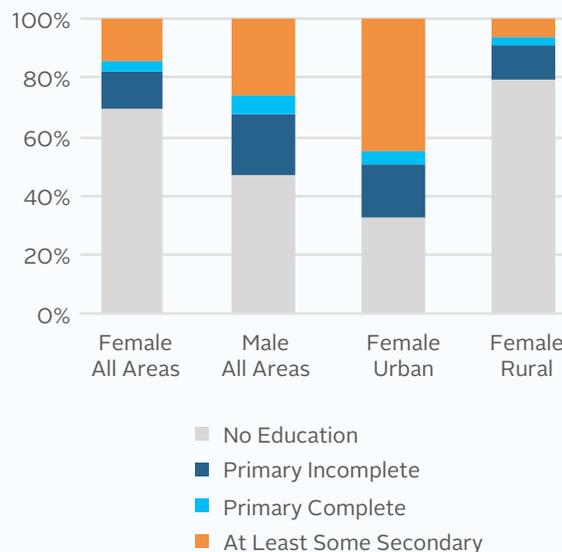
The national government in Niger has repeatedly recognized the need to mitigate gender-disparities in education. The Programme Décennal de Développement de l'Éducation 2003-2012 (PDDE) and the 2013-2020

Education Policy Letter, the two documents that have set Nigerien education policy over the past dozen years, both identify the reduction of gender inequalities in education as a sector priority. At the same time, multiple iterations of Niger's Poverty Reduction Strategy have named improved girls' education as central to combating child marriage, advancing family planning practices, and strengthening socioeconomic development more broadly (Republique du Niger, 2002; IMF, 2007; IMF, 2013). Approaches have ranged from community awareness campaigns on the importance of girls attending and completing school to the creation of canteens in lower-secondary schools in order to incentive girls' attendance in a country prone to severe food shortages and malnutrition (ADF, 2003; IMF, 2013).

FIGURES 7 and 8: Females attend school at lower rates than males and attain secondary education at lower rates than males



Data source: EPDC extraction of 2012 DHS dataset



Both the PDDE and the 2013-2020 Education Policy Letter emphasize the importance of expanding and improving basic education, including both primary and lower secondary education. This inclusion of lower secondary in sector goals is essential, because success at both basic education levels—not primary alone—is more likely to be instrumental in creating virtuous cycles of educational growth and improved development outcomes. Research suggests women with more education have fewer and healthier children (Schultz, 1997), and findings for Niger support this, as girls with at least some secondary education (UNESCO BREDIA, 2005) or completed secondary education (Cohen, 2008) typically have fewer children than those with only a primary education.

Beyond mitigating Niger’s population woes and freeing families to invest more in the education and health of fewer children, greater secondary education among women in Niger would have a range of beneficial effects on society. These benefits include greater female labor force participation (UNESCO, 2003) and an expanded pool of females who could become qualified lower and upper secondary school teachers, thus improving the representation of women in the secondary teaching force. As Niger works to improve demand for secondary education in part through encouraging female participation, it has also made efforts to expand the supply of education sufficiently. One key issue has been increasing the number of teachers in basic education, an issue we explore in the next section.

Supply-side challenge to growth: Teacher-recruitment

One of the main supply-side challenges to expanding secondary education in Niger is an insufficient number of teachers qualified to serve students at the post-primary level. By the late 1990s, Niger found its education budget overburdened by the high salaries of civil service teachers, which were on average 10 times GDP per capita (Bourdon, Frölich, & Michaelowa, 2010). To address these unsustainable costs while also expanding basic education, particularly primary education, the 1998 Nigerien Education System Reform Law initiated the practice of hiring exclusively contract teachers and this practice was upheld in the PDDE for the period 2002-2013. The salaries of contract teachers were a fraction (usually half) of those civil service teachers earned but comparable to teacher salaries in other low-income countries, helping Niger develop more reasonable standards for teacher remuneration (UNESCO, 2008; Fyfe, 2007).

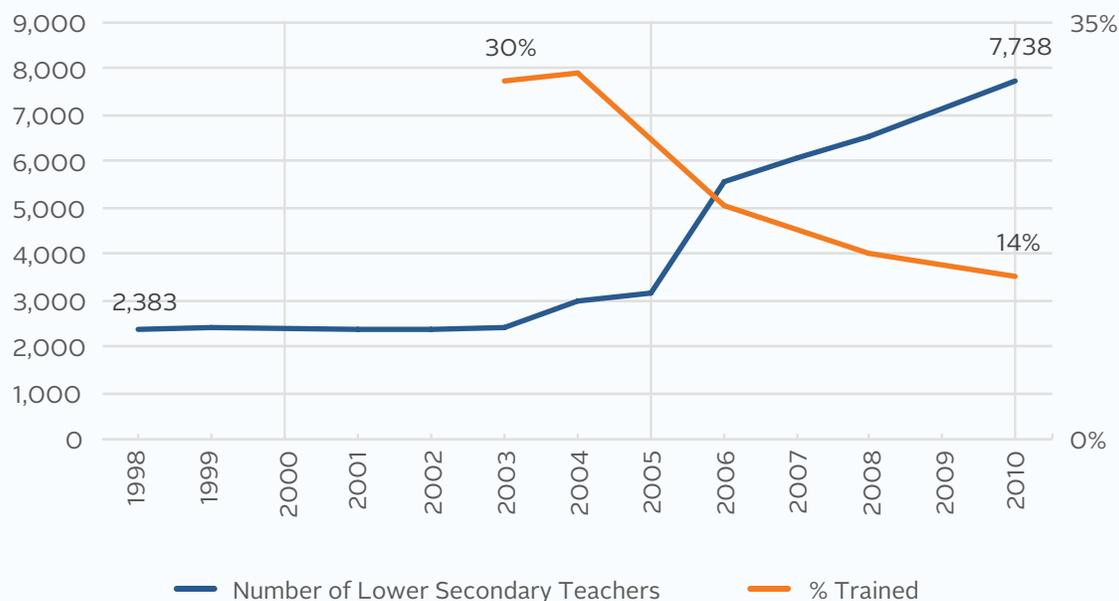
More but not necessarily better teachers. Literature on contract teacher policies cautiously suggests that their use in secondary education can save education systems money without undermining school quality if they are utilized carefully and usually as a short-term solution (Mulkeen, Chapman, DeJaeghere, & Leu, 2007; Lewin, 2008). In Niger, the use of contract teachers is cited as a key factor in the successful expansion of primary education in the new millennium and in attracting teachers to rural and less desirable teaching posts (Fyfe, 2007). Given

that lower secondary education also expanded and its teaching force grew during this period, as presented in **Figure 8**, the contract teacher policy has likely played a role in improving the supply of school throughout basic education.

However, whether contract teachers are providing quality education in Niger remains a question. Their qualifications are generally lower than those for civil service teachers and they have received varying degrees of training: In the late 1990s and into the early 2000s, contract teachers received no training before beginning to teach, starting in the early 2000s new hires received an abbreviated pre-service training (World Bank, 2005), and later in the decade this was increased to a full-term of pre-service training comparable to that of civil service teachers (Majgaard & Mingat, 2012). Although it is unclear how teacher performance was affected at the lower secondary level, news reports point to an over three-month strike by nearly 40,000 contract teachers in 2009, which undoubtedly had a negative impact on students during that academic year (IRIN, 26 March 2009). Furthermore, the percentage of qualified lower secondary teachers declined notably over the past decade as its ranks swelled, as presented in **Figure 8**.

In sum, there is evidence that the contract teacher policy has helped boost the supply of basic education in a much needed way, but some evidence suggests that it might have compromised the quality of education. In the 2013-2020 Education Policy Letter, the

FIGURE 9: There are more lower secondary teachers in Niger than ever before but the lower secondary teaching force is relatively less qualified now than earlier in the decade



Data source: UIS

government of Niger committed to ending the practice of hiring contract teachers by the end of the decade while also promising to extend free and compulsory education from age 12 to age 16, i.e. for the official ages of basic education. This policy shift away from contract teachers may

help to ensure teacher quality but will require alternative means towards efficient expansion of lower secondary education, and education more generally, if the system is to accommodate future increases in demand.

CONCLUSION

As demonstrated in this brief, the remainder of the decade will see a surge of demand for lower secondary education in Sub-Saharan Africa. Whether this potential demand will result in progress will depend in large part on the ability of governments and donors to mobilize resources for growth. Where low and lower middle income countries will experience vigorous economic growth and choose to dedicate more resources to education, expansion of lower secondary may happen sooner. Nonetheless, given the scope of financial need that secondary education will require, donor commitment will play an important role in facilitating growth in post-primary education. Progress in increasing lower secondary school enrollment – even in countries with sufficient resources – will also require policy and planning efforts that ensure efficient expansion and address challenges related to teacher recruitment, the relevance of the curriculum, the affordability of schooling to households, the safety and health of students, and increased participation from disadvantaged groups (especially girls) (Lewin, 2008).

Failure to address needs of educational expansion will mean foregoing benefits that follow from secondary education, such as increasing human capital to improve economic growth and productivity, growing a capable, competitive workforce; improving health and democracy; and promoting greater equity across societies. Moreover, it could mean sacrificing gains that nations have worked hard to make in primary, as limited options to reach higher education levels discourages retention and completion in primary education (Cuadra & Moreno, 2005). More research is needed to identify the main barriers to secondary school expansion. Governments and the international community must develop effective policies to address these challenges to ensure that recent progress in education does not stall and that secondary education becomes an option for more youth in the near future.

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ENDNOTES

- 1 A full description of the HIPE model methodology is available at <http://www.epdc.org/sites/default/files/documents/Projections%20Methodology%20March%202014.pdf>.
- 2 Official lower secondary school ages vary from country to country, but common official ages are 12-15. We offer ages 10-19 as a broad measure of the youth population.



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