



# WORLD ATLAS

## of Gender Equality in Education



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# WORLD ATLAS

of Gender Equality in Education

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# Foreword

Good policy is sharp policy. It is policy that targets specific problems and bottlenecks. For this, we need a clear picture of what is happening and good data. This first *World Atlas of Gender Equality in Education* responds to this need on one of the most important questions for human rights and sustainable development today.

Girls and women remain deprived of full and equal opportunities for education. There has been progress towards parity at the primary level, but this tapers off at the secondary level in developing regions. The global economic crisis is deepening inequalities, made worse by cuts in education budgets and stagnating development support.

Gender equality is one of the six goals of the global Education for All campaign that UNESCO leads. This was launched in 2000, when the countries of the world agreed to “eliminate gender disparities in primary and secondary education by 2005, and achieve gender equality in education by 2015, with a focus on ensuring girls’ full and equal access to and achievement in basic education of good quality”.

Gender equality is essential for protecting universal human rights and fundamental freedoms. It is also a powerful development accelerator. The education of girls and women can lead to a wide range of benefits – from improved maternal health, reduced infant mortality and fertility rates to increased prevention against HIV and AIDS. For this to happen, we need to target the gender gap at every level.

This Atlas illustrates the linkages between different levels, and it situates issues of gender equality in a broader context. Equality in education must be integrated into wider policies at the economic, social and political levels. This is how the transformational power of education for girls and women can translate into sustainable development for society as a whole.

Maps are a way to understand the world; they are also excellent tools to communicate to a wide audience. This Atlas allows readers to access information at a glance and to examine issues of gender equality from different perspectives.

This is possible thanks to the availability of sex-disaggregated data in education, produced by UNESCO’s pioneering Institute for Statistics. The Institute regularly develops sex-disaggregated statistics for all levels of education in order to monitor the progress of girls and the educational attainment levels of women. It creates new indicators to provide policy-relevant information at the national and international levels.

All of this allows for a clearer picture to emerge on gender progress and gaps. This Atlas is a map of the world; it is also a call to action, to concentrate ever more on promoting gender equality in education as a human right and a development multiplier.



Irina Bokova  
Director-General of UNESCO

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# Introduction

**The global community has long been interested in finding ways to improve access to high quality education at all levels, from pre-primary through tertiary. Education is a fundamental human right – one that all individuals are entitled to enjoy whatever the circumstances in which they live – that also brings important benefits to human society as a whole. The level of knowledge and skills that individuals need to function as workers, citizens and fulfilled individuals in the global society is increasing. For all countries, whatever their stage of development, view education as a cornerstone of economic development. An educated citizenry is also a key to social and political stability within and between nations.**

This concern for education on the part of the global community has been reiterated at a series of international conferences, starting in 1990 with the World Conference on Education for All in Jomtien, Thailand. There, representatives from 155 countries launched the Education for All (EFA) movement by agreeing to make primary education accessible to all children and to massively reduce illiteracy by the end of the decade. They adopted a Framework for Action that defined targets and strategies aimed at meeting the basic learning needs of all by the year 2000.

Ten years later, in April 2000, 1,100 participants from 164 countries gathered at the World Education Forum in Dakar, Senegal, to reaffirm their commitment to the notion of education as a fundamental human right and to the goals of EFA. The Forum reviewed progress up to that point and adopted a framework for action that sets updated targets.

Another important development was the signing in September 2000 of a United Nations Millennium Declaration by all 192 United Nations member states and at least 23 international organizations that laid out a set of Millennium Development Goals (MDGs) to be reached by 2015.

Each of these documents acknowledged the pivotal role that access to quality education plays, not only as an end in itself, but as an essential means of reaching other important objectives, such as reducing poverty and achieving sustainable human development.

A closely related theme running through all of these discussions has been that of gender equality in

education. From the outset, the global community has recognized that educating girls and women is an imperative, not only as a matter of respecting a basic human right for half the population but as a powerful and necessary first step to achieving the broader goals of EFA. Following the landmark Fourth World Conference on Women held in Beijing in September 1995, attended by representatives of 189 governments and 2,100 non-governmental organizations, the international community reached a consensus on achieving gender equality in education. The Dakar Framework for Action and the MDGs set the goal of eliminating gender disparities in primary and secondary education by 2005 and of achieving gender equality by 2015.

Table A. Gender-related goals

<b>EFA Goal 5</b>	Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality. – Dakar Framework for Action (2000) (UNESCO)
<b>MDG</b>	Promote gender equality and empower women Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015. – Millennium Summit (2002) (United Nations General Assembly, Resolution A/57/270)

In laying out these goals, governments and international agencies pledged that no country engaged in this effort would be hindered by a lack of resources. They also asserted that regular and rigorous monitoring was required in order to track progress towards the six goals, identify strategies that make a difference, and hold governments and donors accountable for their promises.

Progress towards EFA and the MDGs has been regularly monitored by UNESCO by means of the annual *EFA Global Monitoring Report*. This report, as well as the 2011 edition of the *Global Education Digest* publication, contains a wealth of statistical information as well as detailed analysis of education policies and practices for a variety of audiences, including academic researchers and policy makers.

Given the importance of education in general and gender equality in education in particular, it seemed appropriate to find a way to present data on progress towards EFA in a manner that would be accessible to a general audience. This Atlas is designed to do just that. It reports the latest data on the significant aspects of education – including access to high quality education at the pre-primary, primary, secondary and tertiary levels, retention and dropout rates, school-life expectancy, the relation of education to economic growth, and youth and adult literacy – by means of colour-coded maps that make it easy for readers to visualize global and regional trends. Additional tables and charts illustrate important sub-themes and provide additional information on particular regions and countries. The source of the data is the UNESCO Institute for Statistics (UIS), which was established in 1999 as the United Nations depository for global statistics in the fields of education, science and technology, culture and communication.

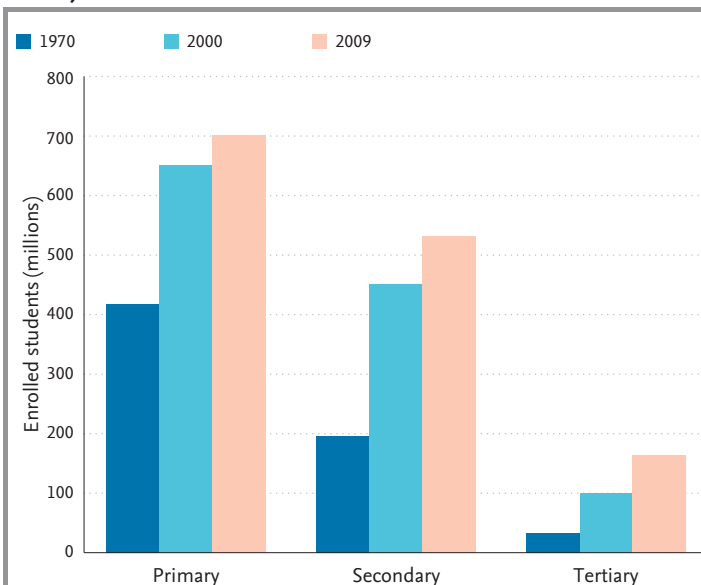
The Atlas tells the story of enormous growth in educational opportunities and literacy levels throughout the world over the last four decades, especially since the Dakar Forum of 2000. During this period the capacity of the world’s educational systems more than doubled – from 647 million students in 1970 to 1,397 million in 2009. Enrolments increased from 418 to 702 million pupils at the primary level, from 196 to 531 million at the secondary level, and from 33 to 164 million in higher education.

While depicting the general expansion of educational opportunities, the maps and tables in the pages that follow also show how the rates of progress have varied widely not only among various regions of the world but between countries within the same region.

The Atlas pays special attention to the issue of gender equality. While educational opportunity expanded over the last four decades for both sexes, the gains were particularly striking among girls in terms of access, retention and progression from primary to secondary and beyond. The maps and tables describe patterns of gender parity at all levels of education – pre-primary, primary, secondary and tertiary – and show how these patterns are shaped by factors such as national wealth, geographic location and field of study. An important theme is that although girls are still disadvantaged in terms of access to education in many countries and regions, they tend to persist and perform at higher rates than boys once they do make it into the education system. Another theme is that all countries face gender equality issues of some sort, including situations where boys are disadvantaged in one way or another.

In order to establish a context for the discussions that follow, the Atlas begins with a description of four factors that underlie and shape educational policies and practices in all countries. These factors are the impact of population growth on the demand for education, the relationship between levels of national wealth and investment in education, the extent to which national governments are committed to their state education systems, and how such commitment takes on a legal basis in the form of compulsory education policies.

**Figure A. Number of students (in millions) worldwide enrolled in school from primary to tertiary education, 1970, 2000 and 2009**



Source: UNESCO Institute for Statistics and United Nations Population Division

# Increased worldwide demand for quality schooling

## 1. School enrolments keeping pace with population growth

An important underlying trend in global education is the increased demand for quality schooling that follows when the school-age population increases. This population is growing in most, but by no means all, areas of the world. The good news is that, by and large, school enrolments are growing at least as fast as the school-age population.

For the world as a whole, the number of the school-age population is projected to increase by 2.8 percent between 2010 and 2020 from 2,989 million to 3,074 million children. Map 1.1.1 shows how this projected growth varies among various countries.

Of the 181 countries for which data are available, a slight majority of 98 will see overall growth in their school-age population, while 83 others are projected to experience a decline. Among countries with projected increases, ten will experience increases of more than 30 percent. A majority of the declines will be in the minimal range of less than 10 percent.

Figure 1.1.1 offers a snapshot of how the world's 3 billion school-age children are distributed among various regions. It shows that over half of this population (56 percent) resides in two regions – South and West Asia, and East Asia and the Pacific – with another 15 percent in sub-Saharan Africa. The other five regions collectively account for less than 30 percent of the world's school-age children.

Map 1.1.1 Majority of countries seeing growth in school-age population

School-age population growth, 2010–2020, ages 5–29

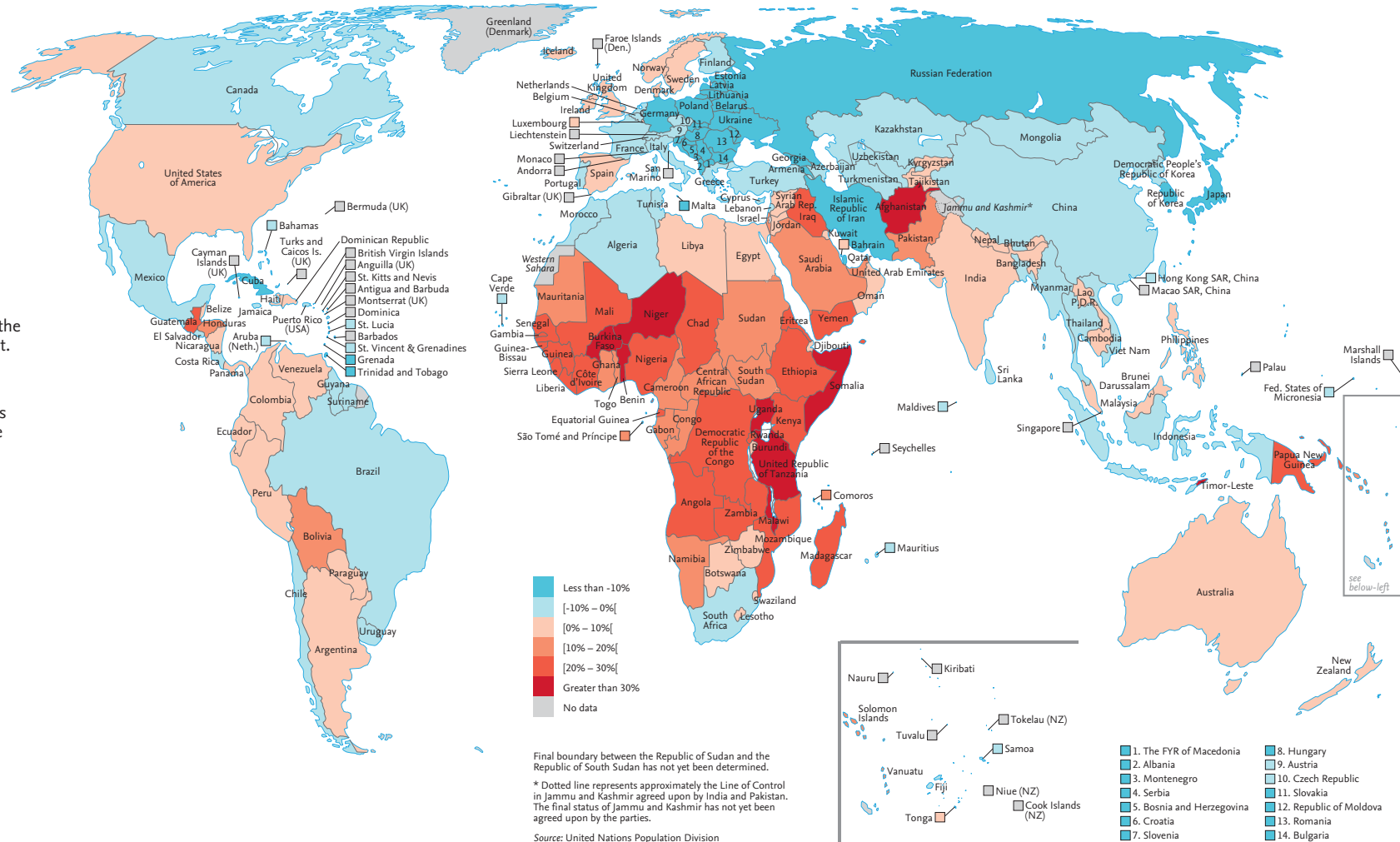


Table 1.1.1 Projected growth in school-age population by region

Region	School-age population (in millions)		Growth %
	2010	2020	
Central and Eastern Europe	137.5	117.9	-14.2
East Asia and the Pacific	848.1	795.2	-6.2
Central Asia	37.7	36.8	-2.5
Latin America and the Caribbean	264.1	260.2	-1.5
North America and Western Europe	238.7	240.4	0.7
South and West Asia	843.9	880.9	4.4
Arab States	176.3	192.1	8.9
Sub-Saharan Africa	444.4	552.1	24.2
<b>World</b>	<b>2,990.7</b>	<b>3,075.6</b>	<b>2.8</b>

Source: United Nations Population Division

Projected patterns of growth and decline of school-age populations vary widely among the various regions of the world – from a decline of 14 percent in Central and Eastern Europe to growth of 24 percent in sub-Saharan Africa. Table 1.1.1 shows that only three of the eight regions of the world are expected to see notable increases: South and West Asia, Arab States and sub-Saharan Africa. With projected changes in the range of 1 percent, North America and Western Europe and Latin America and the Caribbean are essentially stable. Central Asia, Central and Eastern Europe and East Asia and the Pacific will have significant drop-offs in their school-age populations.

The rates of projected changes of the school-age population also vary widely by country and range from projected declines of 23 percent in the Republic of Moldova and 22 percent in Belarus to a projected increase of 52 percent in Niger.

Most of the countries experiencing substantial declines in their school-age population are located either in Central Asia or in Central and Eastern Europe. In addition to the Republic of Moldova, four countries in Central and Eastern Europe have projected declines of at least 20 percent: Belarus, Lithuania, Bosnia and Herzegovina, and Poland. Fourteen other countries in this region and three in East Asia and the Pacific will see double-digit percentage declines, as will Georgia and Armenia in Central Asia. With a projected growth of 9 percent, Tajikistan is the only country in Central Asia that expects a significant increase in its school-age population and twelve other relatively small countries will see an increase in East Asia and the Pacific, where the biggest increases will occur in small islands such as Timor-Leste, and Papua New Guinea.

The region with the most vigorous growth – in terms of both percentages and absolute numbers – is sub-Saharan Africa. The school-age population in this region is projected to increase by 108 million, and sub-Saharan Africa will account for two-thirds of the growth of 162 million persons in the four regions projected to have increases.

As seen in Map 1.1.1, all but three of the 44 sub-Saharan African countries for which data are available – Mauritius, Cape Verde and South Africa – are expected to experience positive growth. The largest number (20) will grow at a rate of 20 to 30 percent, and another seven will increase by more than 30 percent.

Table 1.1.3 illustrates how great the variations can be among countries in the same region by listing the seven African countries with the lowest and highest school-age

Table 1.1.2

Some regions expect population declines

Projected school-age population growth in Central and Eastern Europe, Central Asia, and East Asia and the Pacific

Region	Country	Growth
<b>Central and Eastern Europe</b>	Republic of Moldova	-22.8%
	Belarus	-21.7%
	Lithuania	-21.0%
	Bosnia and Herzegovina	-20.8%
	Poland	-20.3%
	Ukraine	-19.8%
	Russian Federation	-19.5%
	Latvia	-19.5%
	Romania	-18.9%
	Bulgaria	-17.5%
	Slovakia	-17.0%
	FYR of Macedonia	-15.0%
	Croatia	-12.2%
	Estonia	-11.6%
	Montenegro	-11.0%
	Slovenia	-10.6%
	Serbia	-10.5%
	Albania	-10.4%
	Hungary	-10.3%
	Czech Republic	-8.1%
Turkey	-1.2%	
<b>Central Asia</b>	Georgia	-17.1%
	Armenia	-12.0%
	Mongolia	-8.7%
	Uzbekistan	-3.7%
	Azerbaijan	-3.6%
	Kazakhstan	-1.7%
	Turkmenistan	-0.9%
	Kyrgyzstan	0.6%
Tajikistan	8.6%	
<b>East Asia and the Pacific</b>	Macao SAR, China	-20.4%
	Republic of Korea	-15.2%
	Japan	-12.6%
	Hong Kong SAR, China	-9.4%
	Singapore	-9.2%
	China	-9.2%
	Korea DPR	-6.9%
	Thailand	-4.7%
	Fiji	-3.9%
	Viet Nam	-3.1%
	Fed. States of Micronesia	-2.7%
	Myanmar	-2.0%
	Indonesia	-2.0%
	Samoa	-0.2%
	Cambodia	1.3%
	New Zealand	2.0%
	Australia	3.8%
	Malaysia	4.0%
	Brunei Darussalam	5.6%
	Tonga	7.6%
Philippines	8.9%	
Lao PDR	9.8%	
Solomon Islands	17.6%	
Vanuatu	19.2%	
Papua New Guinea	20.9%	
Timor-Leste	34.8%	

Source: United Nations Population Division

population growth. The projections range from negative growth of 3.7 percent in Mauritius to an increase of 52 percent in Niger, which is in a category all by itself.

## 2. National wealth: a factor in educational participation and persistence

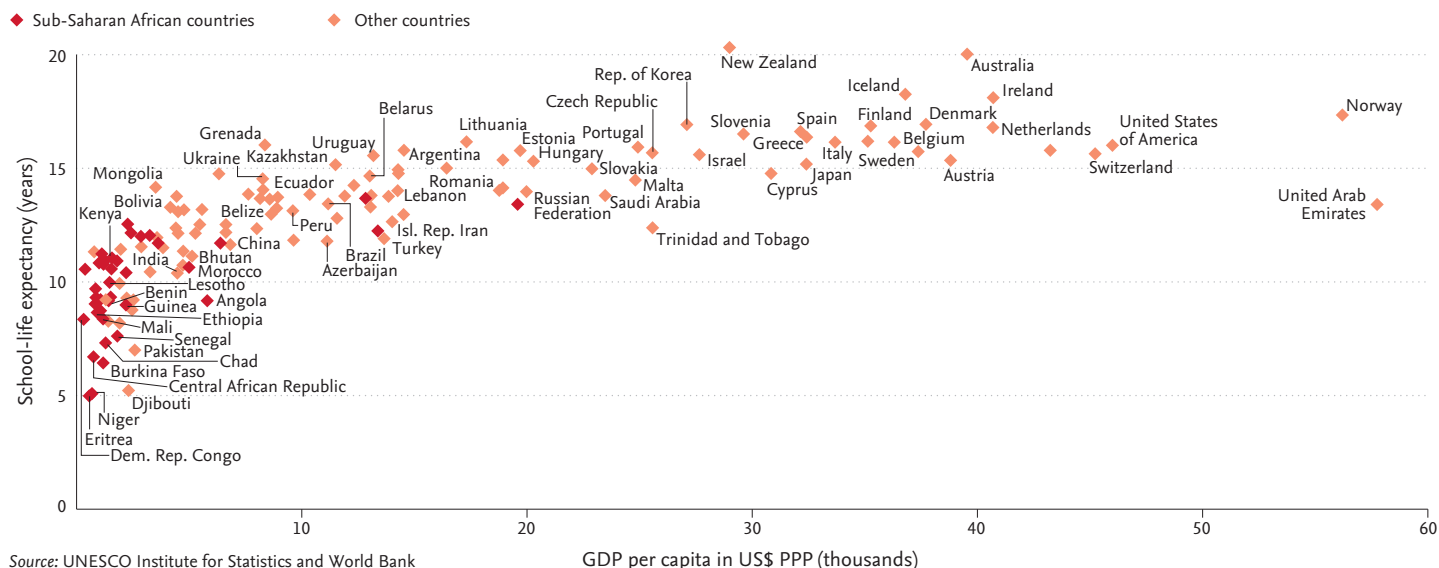
Table 1.1.3 Sub-Saharan African countries that have the lowest and highest school-age population growth

Country	Growth	Country	Growth	Country	Growth
Niger	51.6%	Benin	31.8%	Botswana	2.5%
Burkina Faso	37.9%	Malawi	31.6%	Lesotho	2.3%
Uganda	37.0%			Cape Verde	-0.8%
Somalia	33.9%	Zimbabwe	9.6%	South Africa	-1.3%
Tanzania	33.5%	Swaziland	6.8%	Mauritius	-3.7%

Source: United Nations Population Division

Figure 1.2.1 School-life expectancy rises with national wealth

School-life expectancy and GDP per capita in US\$ PPP, 2009 or latest year available



In today's knowledge-based global economy, countries have strong incentives to provide higher levels of education and training to as many of their citizens as possible. National wealth can be measured by the sum of gross value added by all resident producers in the economy in current US dollars divided by the total population, or GDP per capita. It is strongly associated with rates of participation and persistence in education at all levels, with wealthy countries tending to have consistently higher rates than their low wealth counterparts. Nevertheless, the correlation between levels of GDP per capita and the number of years of schooling is by no means linear.

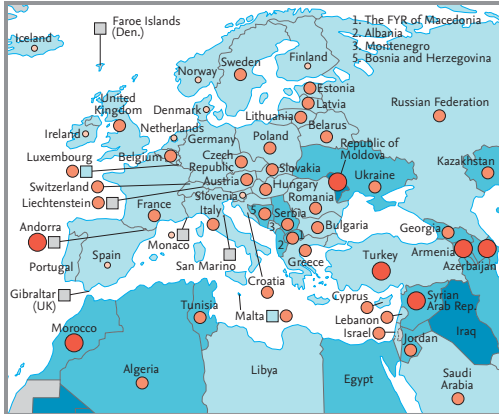
A strong correlation exists around the world between per capita income and school-life expectancy (SLE) – defined as the total number of years of schooling that a typical child of a certain age is likely to spend in the education system.

Map 1.2.1 and Table 1.2.1 show that all of the countries with SLE values in the highest category of 17 to 21 years are classified high income. Likewise, all but one of the 68 countries with SLE of 13 to 16 years are either middle-high or high-income countries. At the other end of the spectrum, all eight countries with SLE in the lowest SLE category are either low income or low-middle

income. Whereas 8 to 12 years of schooling is the highest level achieved by low-income countries, it is the minimum for high-income countries.

The general pattern is thus clear: school-life expectancy tends to increase as national wealth rises. Nevertheless, SLE values above ten years can be found at all levels of GDP per capita, and countries in the same economic stratum frequently have widely different SLEs. Mongolia is notable because, while it is a low-middle income country, it has a SLE of 14 years. Australia's SLE value of 20 is five years higher than the 15 value of Austria, another high-income country with a comparable GDP per capita.

Figure 1.2.1 shows the direct relationship between school-life expectancy and GDP per capita for all countries. In general, the higher a country's GDP per capita, the higher the school-life expectancy. For sub-Saharan African countries, which have been coloured differently, the GDP per capita is very low. As a result, the region presents some of the lowest SLEs, including less than five years for Niger and Eritrea. Moreover, low levels of GDP per capita are characterized by wide variations between SLE levels. Some countries with similar levels of wealth such as Guinea-Bissau and Niger present a big difference between their school-life expectancies which are 9 and 5 years respectively.



Map 1.2.1 School-life expectancy rates rise with greater national wealth

National wealth and school-life expectancy

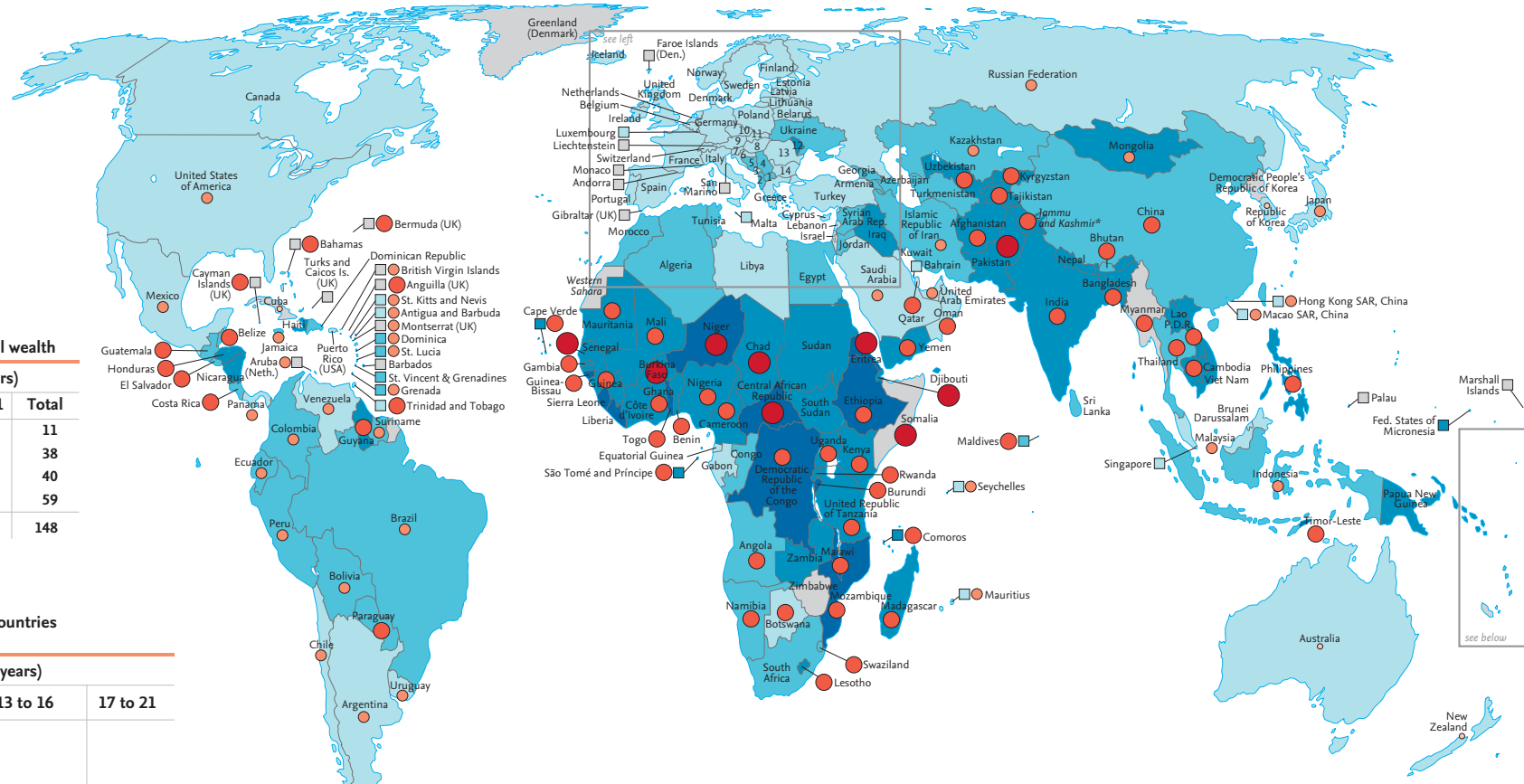


Table 1.2.1 School-life expectancy for different levels of national wealth

National income level	School-life expectancy (in years)				
	4 to 7	8 to 12	13 to 16	17 to 21	Total
Low	3	8	-	-	11
Low-middle	5	32	1	-	38
Middle-high	-	17	23	-	40
High	-	4	44	11	59
<b>Total</b>	<b>8</b>	<b>61</b>	<b>68</b>	<b>11</b>	<b>148</b>

Source: UNESCO Institute for Statistics and World Bank

Table 1.2.2 School-life expectancy for representative group of countries from the various income strata, 2009 or latest year available

National income level	School-life expectancy (in years)			
	4 to 7	8 to 12	13 to 16	17 to 21
Low	Central African Republic Eritrea Niger	Burundi Ethiopia Malawi Mozambique Guinea-Bissau		
Low-middle	Djibouti Pakistan Chad Senegal Burkina Faso	Cambodia India Gambia Ghana Guinea	Mongolia	
Middle-high		Armenia China El Salvador Guatemala Paraguay	Algeria Serbia Brazil Colombia Indonesia	
High		Oman Turkey Trinidad and Tobago Botswana	Saudi Arabia Poland Argentina Mexico Greece	Australia Denmark Finland Iceland Norway

Source: UNESCO Institute for Statistics and World Bank

National wealth, GDP per capita

- Low income (995\$ or less)
- Low-middle income (996 – 3945\$)
- Middle-high income (3,946 – 12,195\$)
- High income (12,196\$ or more)
- No data

School-life expectancy

- Less than 8 years
- 8 – 12 years
- 13 – 16 years
- 17 – 21 years

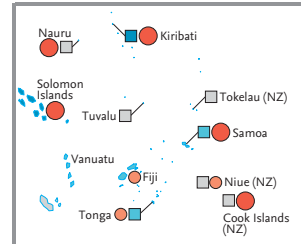
- 1. The FYR of Macedonia
- 2. Albania
- 3. Montenegro
- 4. Serbia
- 5. Bosnia and Herzegovina
- 6. Croatia
- 7. Slovenia
- 8. Hungary
- 9. Austria
- 10. Czech Republic
- 11. Slovakia
- 12. Republic of Moldova
- 13. Romania
- 14. Bulgaria

See Europe inset for the relevant school-life expectancy figures.

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics and World Bank





### 3. Countries differ in levels of commitment to education

One indicator of how committed governments are to education is the proportion of their national budgets that they devote to education at all levels. This proportion, along with the size of their overall public spending, determines the level of spending on education.

Map 1.3.1 offers a global overview of how countries differ in the proportion of government expenditures devoted to education. More than two-thirds (70 percent) devote between 10 and 20 percent of public spending to education, and 18 percent spend a higher proportion. Only one in eight countries devotes less than 10 percent of public expenditures to education.

The extent to which the public sector plays a role in the provision of goods and services helps to account for differences in public education expenditure levels across countries. When governments actively finance and provide such services, including education, public expenditure plays a redistributive role in society. When the level of public services is low, spending on education is also likely to be low unless it represents a high proportion of overall public spending.

Figure 1.3.1 illustrates the extent to which national patterns differ in eleven representative countries, half of which have high levels of spending on education and half with low levels, in the priority they give to education. In Georgia, for example, slightly less than half (42 percent) of GDP finds its way into public expenditure, but only 7.7 percent of these funds are spent on education. Côte d'Ivoire spends a relatively low 18.7 percent of its GDP on public expenditures, but 24.6 percent of this goes toward education. These different priorities between the two countries are reflected in the proportions of their GDP spent on education – 3.2 percent in the case of Georgia and 4.6 percent in Côte d'Ivoire.

Map 1.3.1 Two-thirds of countries devote 10 to 20 percent of public spending to education

Total public expenditure on education as % of total government expenditure

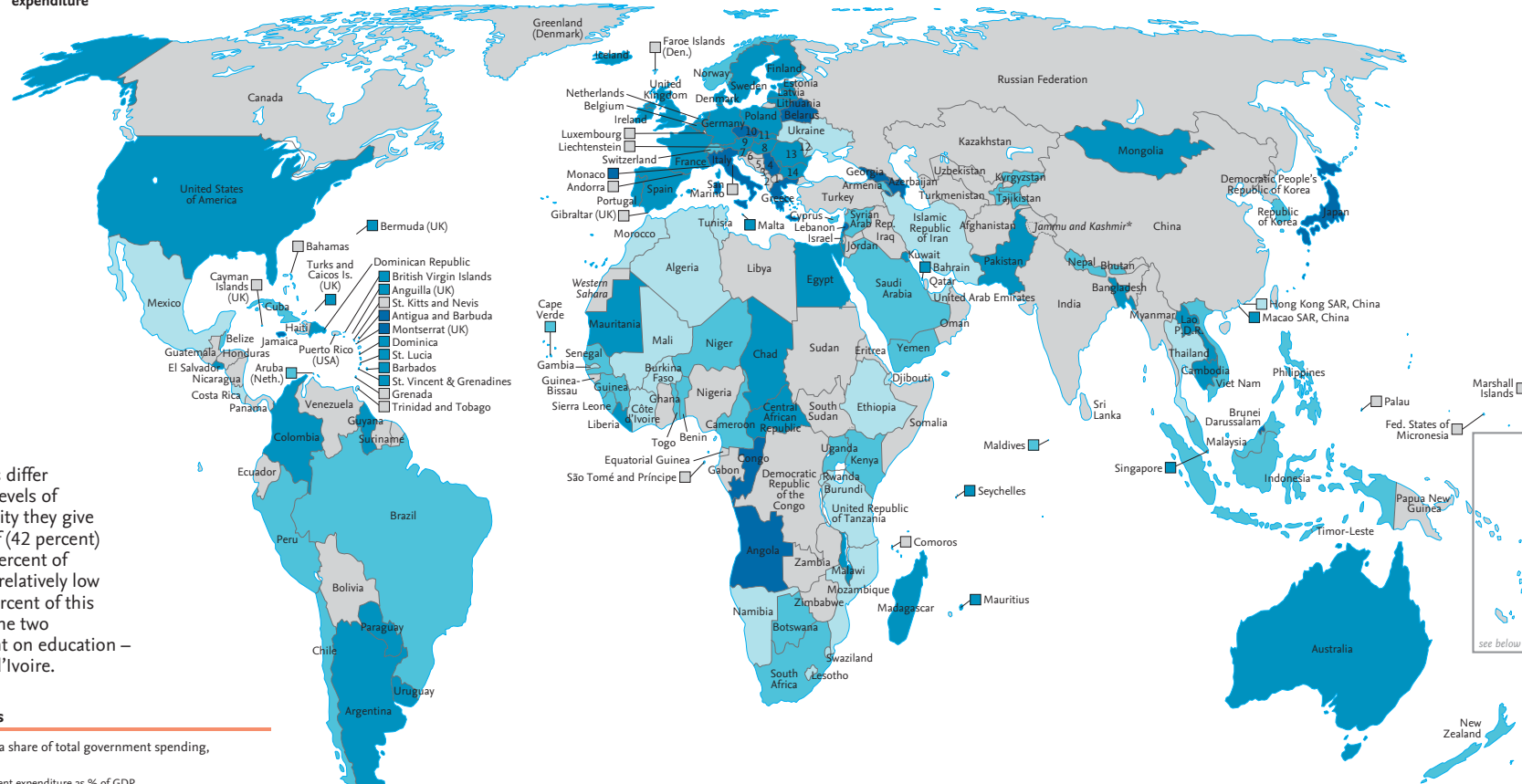
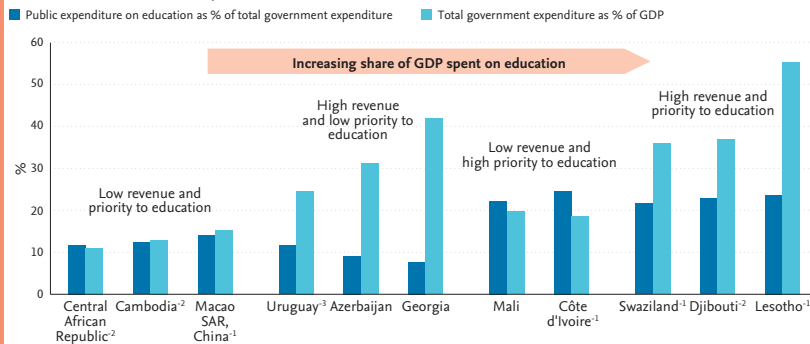


Figure 1.3.1 Size of public sector affects education expenditures

Total government expenditure as a share of GDP and public education spending as a share of total government spending, selected countries, 2009 or latest year available



Note: <sup>1</sup> refer to 2008 data; <sup>2</sup> refer to 2007 data; <sup>3</sup> refer to 2006 data  
Source: UNESCO Institute for Statistics and World Bank

## 4. Compulsory education laws offer legal basis for education

The concept of education as a basic right has long been affirmed in most developed countries and has been extended to developing countries as well. An important signal of countries' commitment to the right to education is the number of years for which education is compulsory.

Map 1.4.1 illustrates how the number of years of compulsory education varies among countries. The largest number of countries (105) are in the range of 10 to 14 years, while 67 make education compulsory for 7 to 9 years. Only four countries have no such requirements at all.

Map 1.4.1 Ten to fourteen years of education is the norm in most countries

Compulsory education

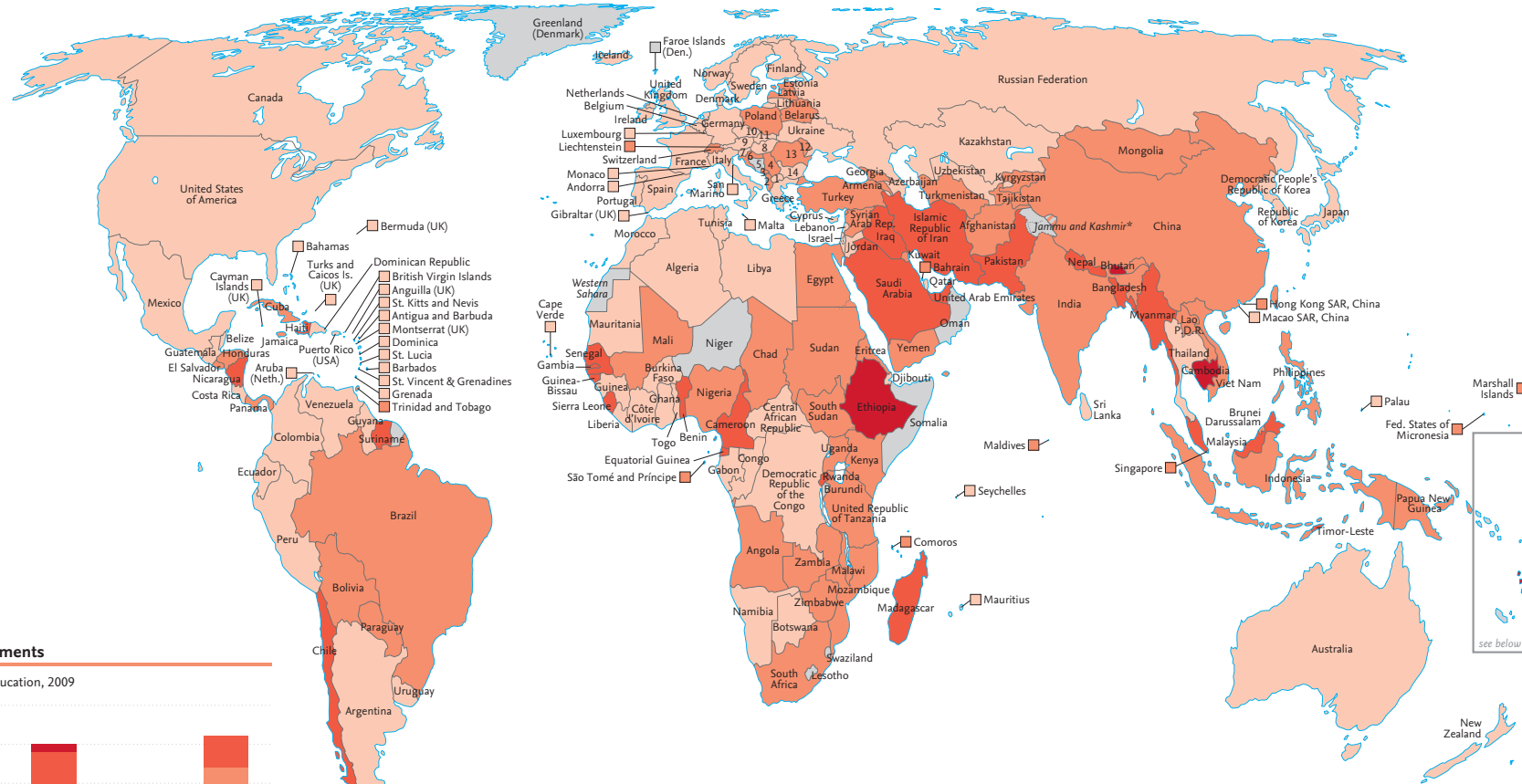
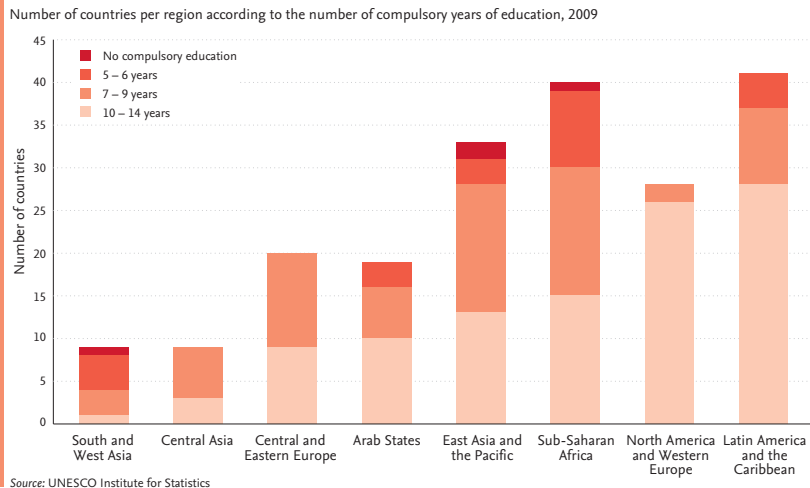


Figure 1.4.1 How regions vary in compulsory education requirements



Source: UNESCO Institute for Statistics

- 1. The FYR of Macedonia
- 2. Albania
- 3. Montenegro
- 4. Serbia
- 5. Bosnia and Herzegovina
- 6. Croatia
- 7. Slovenia
- 8. Hungary
- 9. Austria
- 10. Czech Republic
- 11. Slovakia
- 12. Republic of Moldova
- 13. Romania
- 14. Bulgaria

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
 \* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

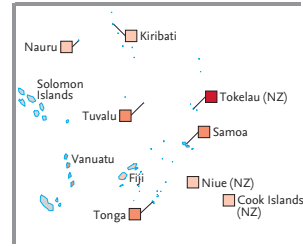


Table 1.4.1 Country distribution by region, according to compulsory education, 2009

Count of country	Education				
	Region	No compulsory education	5 to 6 years	7 to 9 years	10 to 14 years
South and West Asia	1	4	3	1	9
Central Asia			6	3	9
Central and Eastern Europe			11	9	20
Arab States		3	6	10	19
East Asia and the Pacific	2	3	15	13	33
Sub-Saharan Africa	1	9	15	15	40
North America and Western Europe			2	26	28
Latin America and the Caribbean		4	9	28	41
<b>Total</b>	<b>4</b>	<b>23</b>	<b>67</b>	<b>105</b>	<b>199</b>

Source: UNESCO Institute for Statistics

As can be seen in Figure 1.4.1 and Table 1.4.1, regions vary widely in how they structure compulsory education. Countries that make education compulsory for ten or more years represent a substantial majority in two regions: Latin America and the Caribbean, and North America and Western Europe. Only one country – Sri Lanka – does so in South and West Asia. At least half of countries in the other five regions make education compulsory for 7 to 9 years.

Three regions – Central Asia, Central and Eastern Europe, and North America and Western Europe – have no countries where education is compulsory for less than seven years. Sub-Saharan Africa is notable because even though a majority of its countries require education for at least seven years and 15 are in the 10 to 14 years range, it accounts for nearly 40 percent of countries in the 5 to 6 years range globally.

Table 1.4.2 Countries with no compulsory education

Region	Country
Sub-Saharan Africa	Ethiopia
South and West Asia	Bhutan
East Asia and the Pacific	Cambodia
East Asia and the Pacific	Tokelau

Source: UNESCO Institute for Statistics

Table 1.4.3 Countries in sub-Saharan Africa that have 10+ years of compulsory education

Country	Duration of compulsory education
Botswana	10 years
Central African Republic	
Côte d'Ivoire	
Democratic Republic of the Congo	
Ghana	
Guinea	
Namibia	
Seychelles	
Togo	
Burkina Faso	
Cape Verde	
Congo	
Gabon	
Liberia	
Mauritius	12 years

Source: UNESCO Institute for Statistics

Table 1.4.4

Countries with 5 to 6 years of compulsory education

Region	Country	
East Asia and the Pacific	Myanmar	5 years
South and West Asia	Bangladesh	
South and West Asia	Islamic Republic of Iran	
South and West Asia	Pakistan	
Sub-Saharan Africa	Equatorial Guinea	
Sub-Saharan Africa	Madagascar	6 years
Arab States	Iraq	
Arab States	Saudi Arabia	
Arab States	United Arab Emirates	
East Asia and the Pacific	Malaysia	
East Asia and the Pacific	Timor-Leste	
Latin America and the Caribbean	Chile	
Latin America and the Caribbean	Haiti	
Latin America and the Caribbean	Nicaragua	
Latin America and the Caribbean	Suriname	
South and West Asia	Nepal	
Sub-Saharan Africa	Cameroon	
Sub-Saharan Africa	Benin	
Sub-Saharan Africa	Gambia	
Sub-Saharan Africa	Guinea-Bissau	
Sub-Saharan Africa	Rwanda	
Sub-Saharan Africa	Senegal	
Sub-Saharan Africa	Sierra Leone	

Source: UNESCO Institute for Statistics

# Girls' right to education

**The 1990 World Conference on Education for All, held in Jomtien, Thailand, made it clear that Education for All means educating both boys and girls and that treating both sexes equally – and in the process narrowing the “gender gap” – is a matter of justice and equality. Jomtien marked the beginning of intensified international support for assuring access to quality education for girls, a cause that was reaffirmed ten years later at the World Education Forum in Dakar and by the Millennium Development Goals of 2000.**

Traditionally, all societies have given preference to males over females when it comes to educational opportunity, and disparities in educational attainment and literacy rates today reflect patterns which have been shaped by the social and education policies and practices of the past. As a result, virtually all countries face gender disparities of some sort. Given the strong correlations that exist between GDP and educational attainment, all countries have incentives to make the best possible use of all of their human resources.

In discussing education and gender it is helpful to distinguish between “gender parity” and “gender equality”.

Gender parity aims at achieving equal participation for girls and boys in education.

Gender equality is understood more broadly as the right to gain access and participate in education, as well as to benefit from gender-sensitive and gender-responsive educational environments and to obtain meaningful education outcomes that ensure that education benefits translate into greater participation in social, economic and political development of their societies. Achieving gender parity is therefore understood as only a first step towards gender equality.

Discussions of gender differences in education are facilitated by a measure known as the Gender Parity Index (GPI). This measure is defined as the value of a given indicator for girls divided by that value for boys. A GPI value of 1 signifies that there is no difference in the indicators for girls and boys. A GPI of less than 1 indicates that the value of an indicator is higher for boys than for girls, while the opposite is true when the GPI is greater than 1.

For indicators where higher values are desirable (e.g. school participation rates) a GPI value of less than 1 means that girls are at a disadvantage, while a GPI

greater than 1 means that boys are at a disadvantage. For indicators where lower values are desirable (e.g. drop-out rates) a GPI of less than 1 means that boys are at a disadvantage, and a GPI greater than 1 means that girls are at a disadvantage.

UNESCO has defined a GPI value between 0.97 and 1.03 (after rounding) as the achievement of gender parity. This allows for some measurement error but does not imply a judgment about the acceptability of any particular level of disparity.

Discussions about gender equity have traditionally focused on finding ways to help girls catch up with boys in terms of access, completion and long-term educational attainment. By such measures boys globally continue to enjoy significant advantages throughout the developing world. This is why both Education for All goals, as well as the MDGs, have put so much emphasis and invested so many resources over the last two decades in “gender equity” – meaning helping girls catch up with boys.

Many factors have contributed to the increase in women's participation in education, including the fact that higher levels of education and training are becoming necessary to ensure social mobility<sup>i</sup> and to earn higher incomes. The global diffusion of ideas regarding gender equality has also been an important factor, especially in developing countries.

But the situation has become increasingly nuanced. Developed countries now talk about gender gaps that favour females in education, and similar patterns are evident at some levels in developing countries even though boys continue to enjoy an advantage in many such countries. As girls' educational expectations rise at a faster pace than those of boys<sup>ii</sup>, so does their academic performance as measured by persistence, repetition, academic achievement and transition into secondary education. Once they gain access to higher education, women exceed men in grades, evaluations and degree completions.<sup>iii</sup> This growth should be seen as a positive development that reflects the changing values and attitudes related to the role and aspirations of women in society. Also relevant is the fact that stable social processes that make demands on men's masculinity, such as serving as soldiers or demands for labour calling for physical strength for example construction or mining work, prevent men from participating in the tertiary education system, as they will have other alternatives.

<sup>i</sup> Takyi-Amoako, E. (2008). “Poverty reduction and gender parity in education. An alternative approach”. S. Fennell and M. Arnot (eds.), *Gender Education and Equality in a Global Context: Conceptual Frameworks and Policy Perspectives*. London: Routledge, pp. 196–210.

<sup>ii</sup> McDaniel, A. (2010). “Cross-national gender gaps in educational expectations: The influence of national-level gender ideology and educational systems”. *Comparative Education Review*, Vol. 54, No. 1, pp. 27–50.

<sup>iii</sup> Buchmann, C., T. DiPrete and A. McDaniel (2008). “Gender inequalities in education”. *Annual Review of Sociology*, Vol. 34, pp. 319–337.

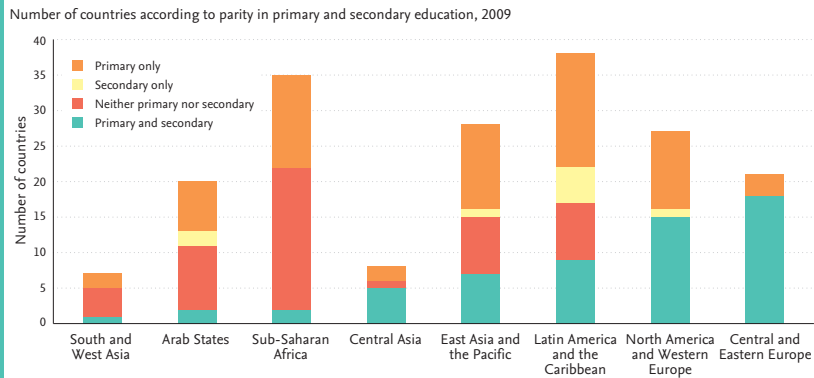
## 1. Female enrolment rising at greater rate than among males

Whereas enrolments have been rising since 1970 for both sexes, girls' enrolments have been increasing faster than those of boys at both the primary and secondary levels. This progress can be seen in the number of countries that have achieved gender parity at the two levels. Females have also made significant gains at the tertiary level, and these will be discussed in Chapter 5.

Map 2.1.1 shows the distribution of 184 countries showing whether they have achieved gender parity, defined as having a GPI between 0.97 and 1.03, at various levels of education. The largest proportion (36 percent) has done so only at the primary level, but more than two-thirds of countries (73 percent) have reached parity at either the primary or secondary levels or both. Particularly interesting are the 9 countries that have achieved parity in secondary schooling but have yet to do so at the previous level.

The patterns of success in reaching parity vary widely by region. As seen in Figure 2.1.1, Central and Eastern Europe is the top region in terms of achieving parity at both the primary and secondary level, with 18 of its 21 countries with data having done so. It is followed by two regions where a majority of countries have done so: Central Asia, and North America and Western Europe. With only one country in this category, South and West Asia ranks last in the number of countries reaching parity at both levels. Sub-Saharan Africa has the lowest proportion of such countries: two out of 35.

Figure 2.1.1 Central and Eastern Europe the top region for parity at both primary and secondary levels



Source: UNESCO Institute for Statistics

Map 2.1.1 Gender parity achieved in two-thirds of countries at primary and/or secondary levels

Gender parity index for primary and secondary education

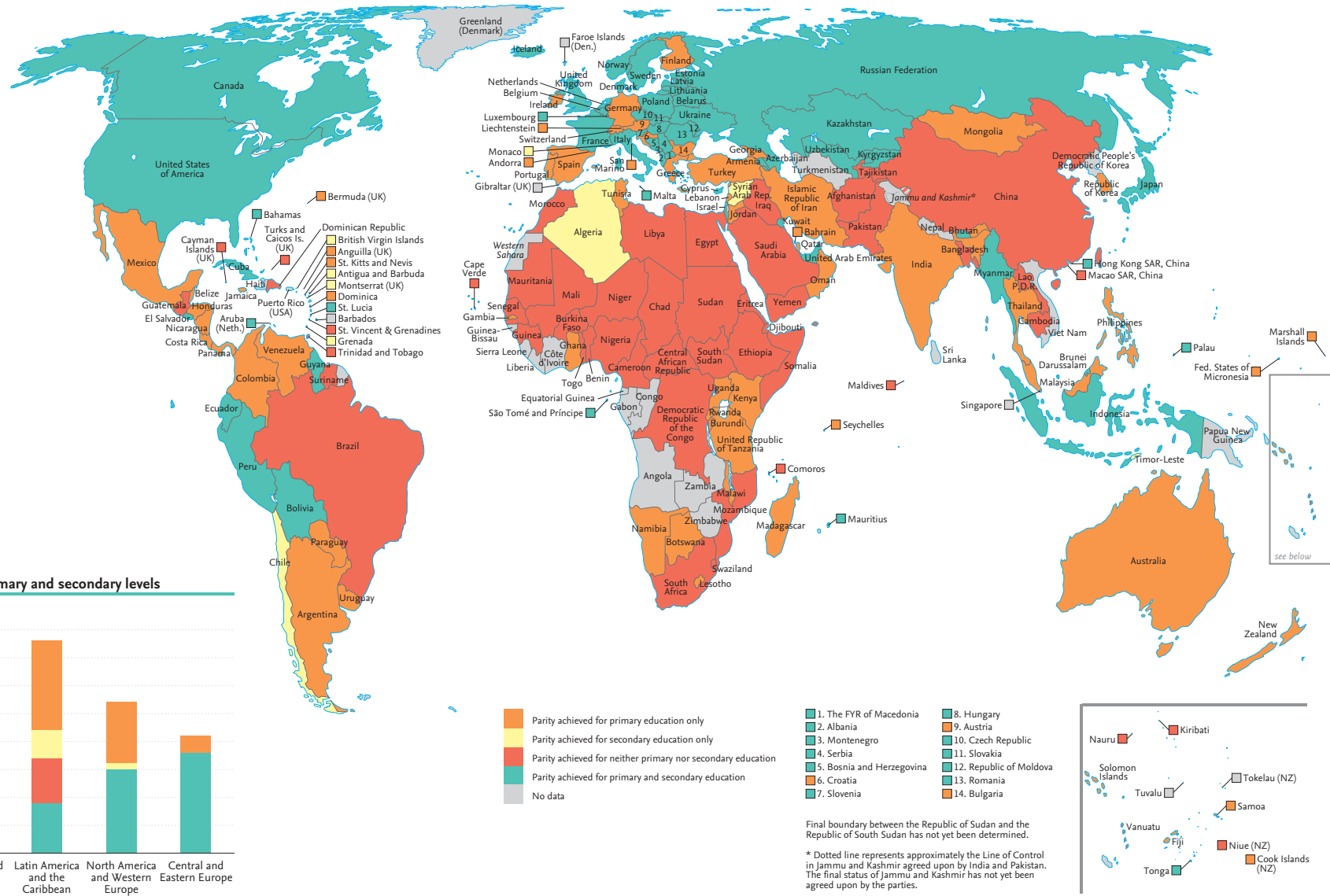
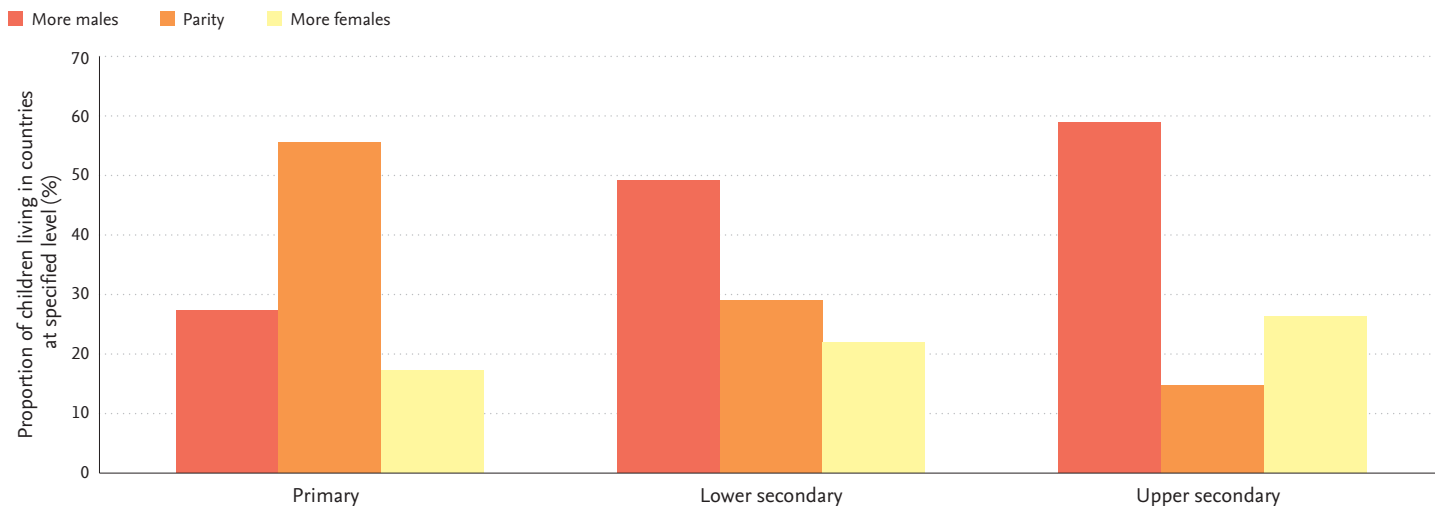


Figure 2.1.2 Majority of world's children living in countries with gender parity at primary level

Distribution of world's children by level of education by gender parity index for gross enrolment ratio, 2009



Source: UNESCO Institute for Statistics

Another way to look at the issue is to calculate the proportion of children who live in countries that have achieved gender parity. Figure 2.1.2 shows that a slight majority (56 percent) of the world's children who are at primary age live in countries that have achieved gender parity at the primary level. However, the proportion of such children drops significantly to 29 percent at the lower secondary level and to 15 percent at the upper secondary level.

At all three levels there are some countries in which males are favoured and others in which females have the advantage. At the primary level, for example, 27 percent of children live in countries with more males in school and only 17 percent in countries with more females. The same pattern is found at the lower secondary (49 versus 22 percent) and upper secondary (59 versus 26 percent) levels.

## 2. Gender parity an issue in all countries

Almost all countries face gender disparities of some kind, though the challenges vary widely among countries and even at the different levels within countries. Although many countries have achieved gender parity in terms of access and enrolment at the primary level, most face continuing challenges related to issues such as late entry into school, repetition and dropping out. At diverse stages of development, virtually all countries must address gender disparities that shape the way boys and girls progress through education.

In some situations the challenge becomes one of how to increase educational outputs for boys rather than girls. Most developed countries have reached parity at the primary level, but disparities in favour of girls sometimes develop at the higher levels. In developing countries, boys frequently have an advantage over girls with regard to access to education; but once they make it into schooling, girls often outperform boys both in terms of educational progression and academic performance. Female advantage in terms of educational attainment can also be found in situations where boys continue to maintain an enrolment advantage.

Despite the continued existence of what is sometimes called the “boy problem” in some countries, the rights of girls to education continues to be inhibited in many developing countries in important respects.

1. *Constraints with families.* In many countries girls take on domestic responsibilities, including the care of younger siblings, and, depending on the country and the culture, boys often receive preferences when choices have to be made regarding education. For example, in

most African countries, such as Kenya, girls may experience domestic work overload, which reduces their interest in pursuing education. Since it is commonly expected that girls should be married off at an early age, parents consider educating their daughters a waste of time and money. The girls are aware of their parents’ perceptions regarding their education. They do not find it necessary to work hard because they assume that they will probably drop out of school early.

2. *Constraints within society.* These include pressure for early marriage, sexual harassment and violence in and out of educational settings, religious constraints and vulnerability to HIV and AIDS.

3. *Policies of school system and educational practices.* School systems in countries of all kinds are not always empowering for girls, nor are they sensitive to their needs through curricula, guidance and counseling services, teaching methods and the presence of appropriate female role models.

4. *Benefits of education.* Even when girls achieve parity in access to education or academic performance, this parity does not always lead to equal benefits of education, especially in the job market of developed countries. We will discuss this point in Chapter 5.

In short, gender disparities and inequalities are prevalent within the schooling process in both rich and poor countries. Virtually all countries must address the gender disparities and inequalities that shape the ways in which boys and girls progress through the education system.

# Enrolment and gender trends: primary education

The World Conference on Education for All in Jomtien in 1990 identified universal primary education (UPE) as the bedrock objective for achieving Education for All, and the Millennium Declaration did likewise. Since the out-of-school population has been disproportionately female, the goal of UPE and the parallel goal of gender equality are inextricably connected.

Data show that significant progress has been made over the last four decades in enhancing access to primary education in all regions of the world and for both sexes. Moreover, primary school completion and school-life expectancy rates have been increasing, and there has been a general narrowing of gender gaps at the primary level. However, troubling trends include high repetition rates and large numbers of overage children in some countries and regions.

## 1. Participation in pre-primary education on the rise

A growing body of research around the world has shown that participation in pre-primary education translates into better learning outcomes once pupils enter primary school and move on to higher levels of education. A report from the Organisation for Economic Co-operation and Development (OECD), for example, found that in practically all countries “15-year-old students who have attended some pre-primary school outperformed students who had not” on the reading portion of the 2009 Programme for International Study Assessment (PISA) that was administered to students in 65 countries.

In examining trends at the pre-primary level it is important to keep in mind that pre-primary education is not compulsory and frequently involves out-of-pocket costs to the families. Moreover, the age of participants varies from three to five or even six years, which means that the gross enrolment ratio may be higher than 100% in situations where students younger or older than the official age are enrolled.

As shown in Map 3.1.1, which depicts the gross enrolment ratios for pre-primary education in 178 countries, participation rates are minimal in about a fifth of countries (18 percent) but nearly universal in another fifth (21 percent). Another 20 percent have participation rates in the 50 to 75 percent range.

Map 3.1.1 Pre-primary enrolment apparent in most regions of the world  
Gross enrolment ratio in pre-primary education

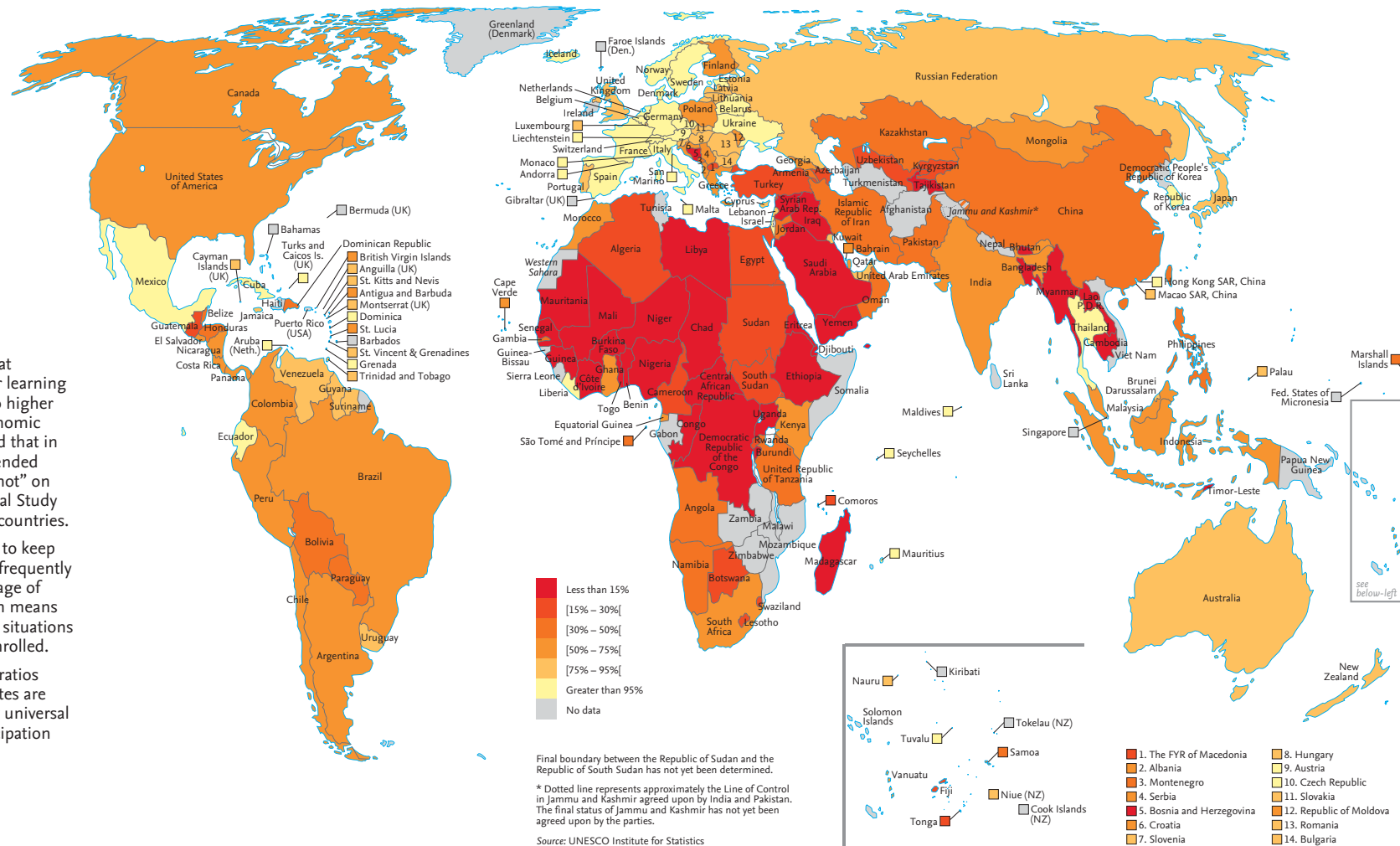
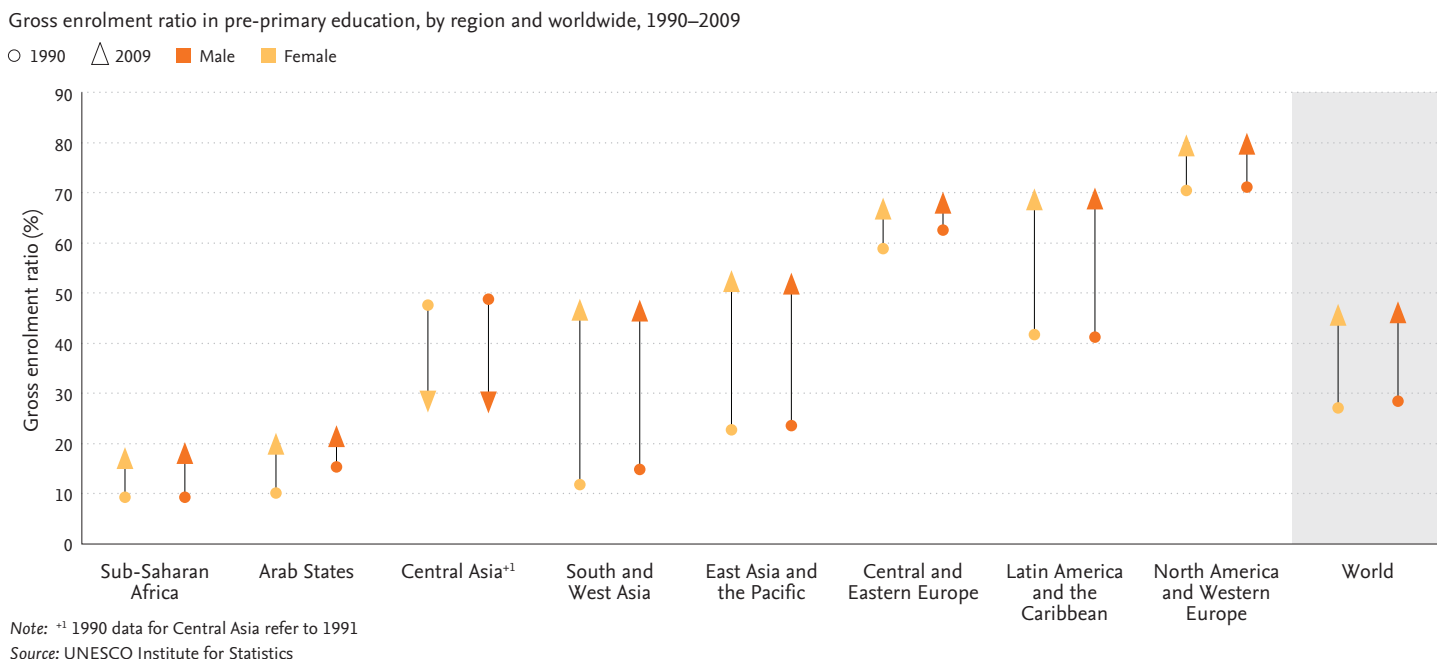




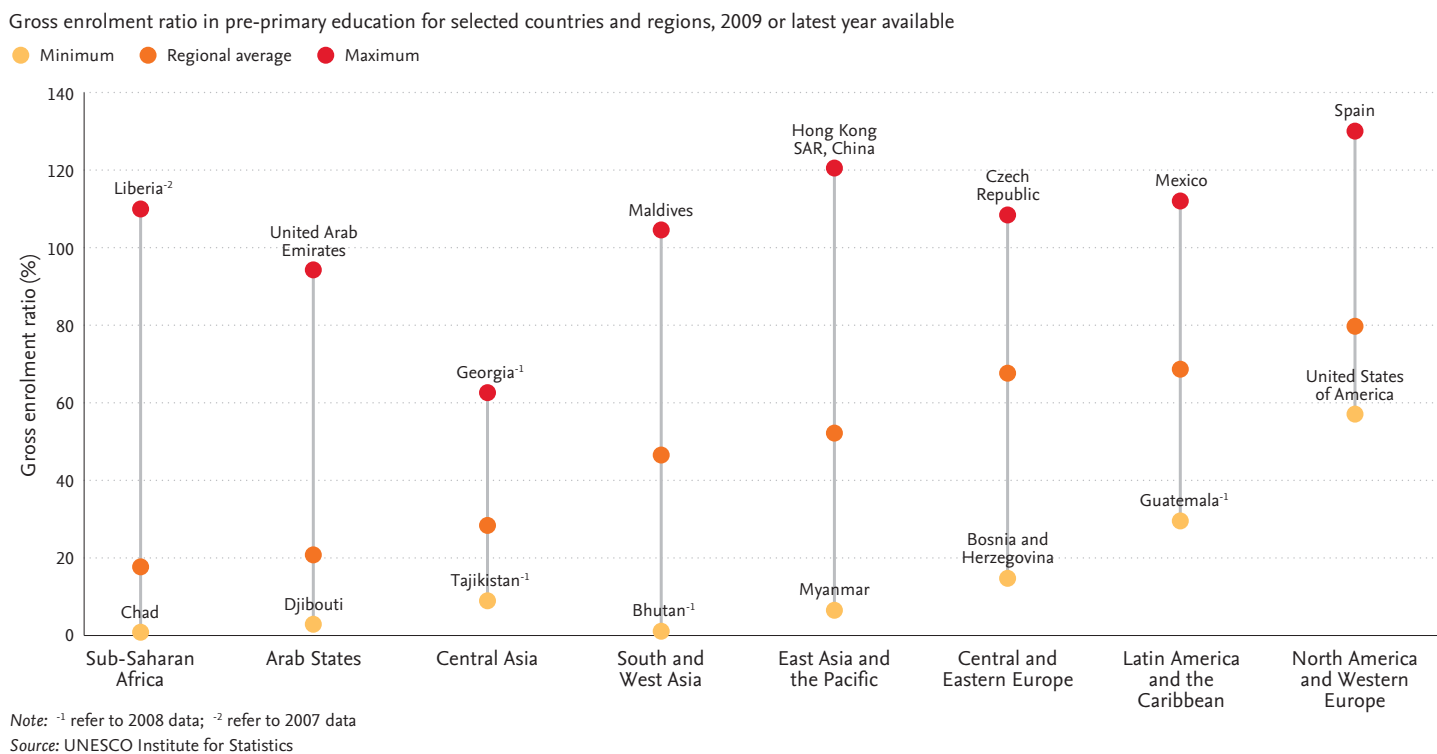
Figure 3.1.1 Growth seen in the majority of the regions



Participation in pre-primary education increased steadily between 1990 and 2009 for both sexes and in almost all regions of the world. As shown in Figure 3.1.1, the most dramatic gains took place in South and West Asia, where participation rates essentially tripled for both sexes. The

proportion of children involved in pre-primary education is greatest in North America and Western Europe, followed by Latin America and the Caribbean and then Central and Eastern Europe. Sub-Saharan Africa has the lowest participation rates, slightly below the Arab States.

Figure 3.1.2 Participation rates vary within regions

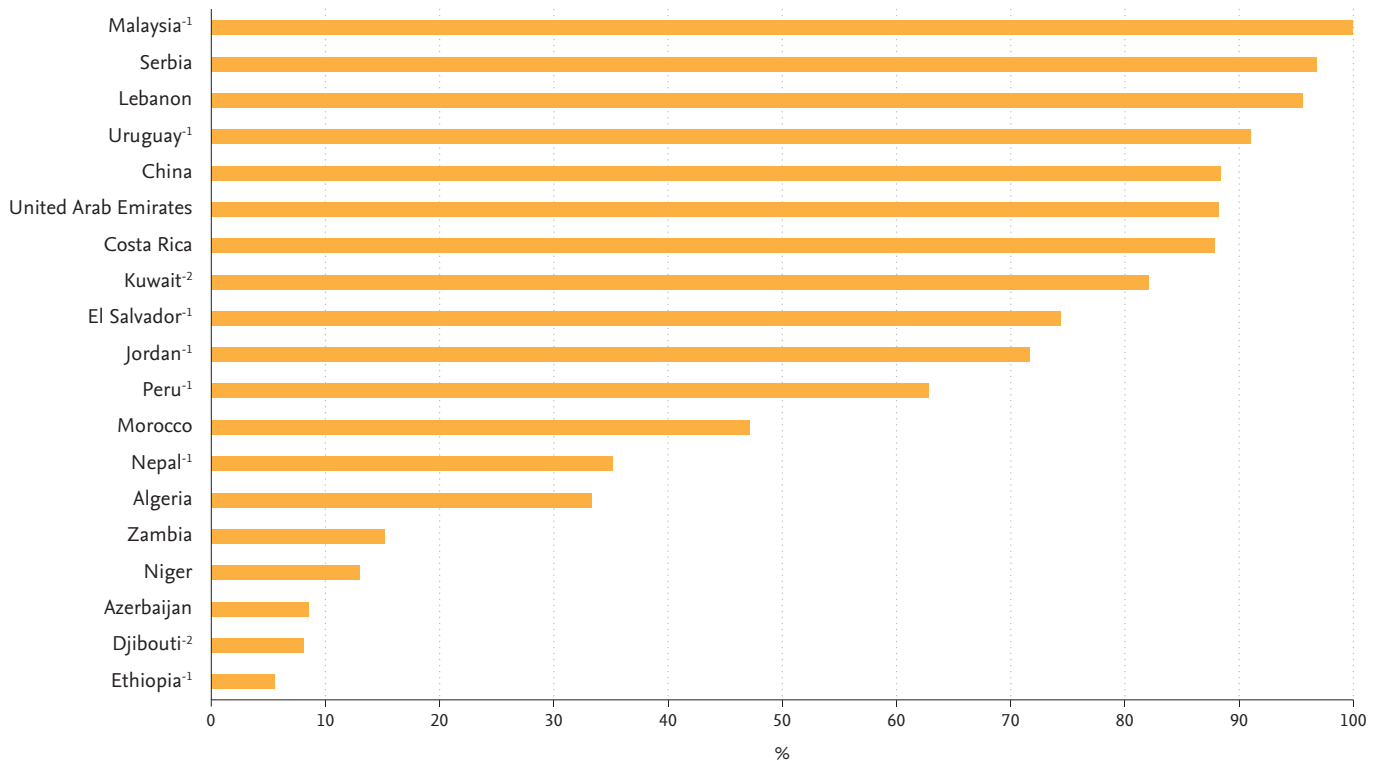


Participation rates for pre-primary education vary dramatically even within regions. These disparities can be seen in Figure 3.1.2 which provides data on eight regions showing the proportion of children enrolled in pre-primary education compared to the total population of children of pre-primary age. The figure also shows the highest and lowest values of GER per region. In sub-Saharan Africa the ratio ranges from less than 4 percent in Chad to 110 percent in Liberia. In North America and Western Europe the ratios extend from 57 percent in the United States to 130 percent in Spain.

Policies and practices relating to pre-primary education vary widely among various countries. Figure 3.1.3 provides information on the proportion of new entrants who enrol in primary school with prior experience in an Early Childhood Development program. The proportions range from single digit percentages in Ethiopia, Djibouti and Azerbaijan to virtually universal pre-primary experience in Malaysia.

**Figure 3.1.3 Early childhood experience ranges from minimal to near-universal**

Percentage of new entrants in primary education with ECD(\*) experience for selected countries, 2009 or latest year available



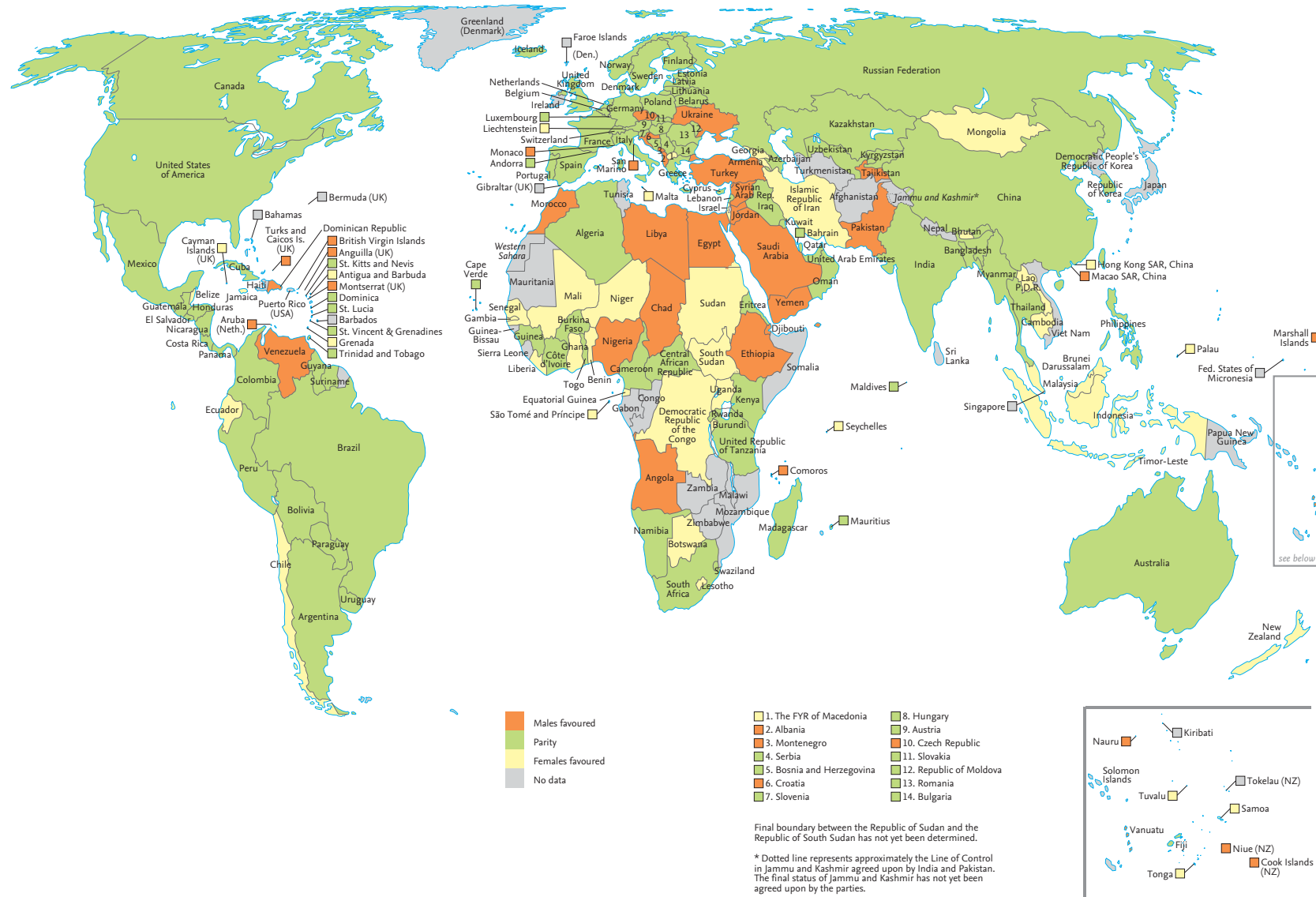
Note: (\*) ECD - Early Childhood Development; <sup>-1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data  
Source: UNESCO Institute for Statistics

Gender parity is strong in the area of pre-primary education. As shown in Map 3.1.2, girls and boys participate in pre-primary education at the same rates in a substantial majority (62 percent) of countries. Males are favoured in 18 percent of countries and females in 20 percent.

One reason for the high level of parity in the earliest years of schooling may be that, especially in developing countries, it is the wealthier and better educated families who enrol their children in pre-primary schools, and such families are more inclined to value schooling for both boys and girls. Such is certainly the case in situations where pre-school involves costs to the families.

Map 3.1.2  
Gender parity widespread in pre-primary education

Gender parity index in pre-primary education

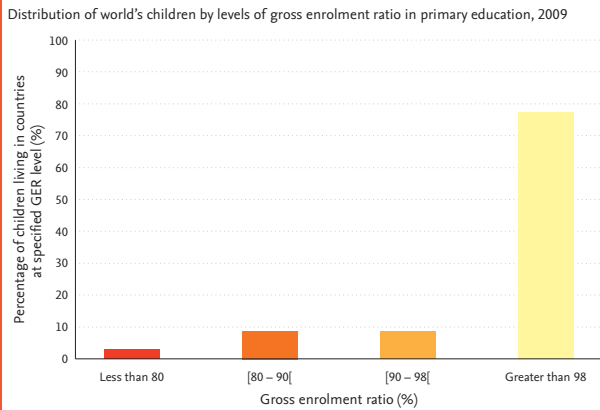


## 2. Growing number of countries achieving universal primary education

Universal primary education (UPE) has long been the situation in most developed countries, and considerable progress has been made in making primary schooling accessible to children in developing countries as well. Progress has been especially strong over the last decade, when a growing number of countries have achieved UPE. Girls' enrolment has been increasing at a faster rate than that of boys, which has helped to close the gender gap at the primary level.

Map 3.2.1 offers a global overview of the number of countries with respect to their gross enrolment ratio (GER). The primary level GER expresses the number of children, regardless of age, who are enrolled in primary school as a percentage of the corresponding population in the theoretical age group for this level of education. The GER can exceed 100 percent if there are significant numbers of under- or over-age children enrolled in primary schools.

Figure 3.2.1  
Majority of children living in countries with high gross enrolment ratios



Source: UNESCO Institute for Statistics

Nearly three-quarters (73 percent) of the 194 countries for which data are available reported a gross enrolment ratio over 98 percent, a sign of near-universal primary enrolment. Only 4 percent of countries have a GER below 80 percent, meaning that at least one in five of their children do not have access to primary schools.

Since countries vary widely in the size of their populations, the number of countries at various GER levels may not be an accurate reflection of where the world stands with regards to primary enrolment.

Map 3.2.1 Gross enrolment ratios vary across regions

Gross enrolment ratio in primary education

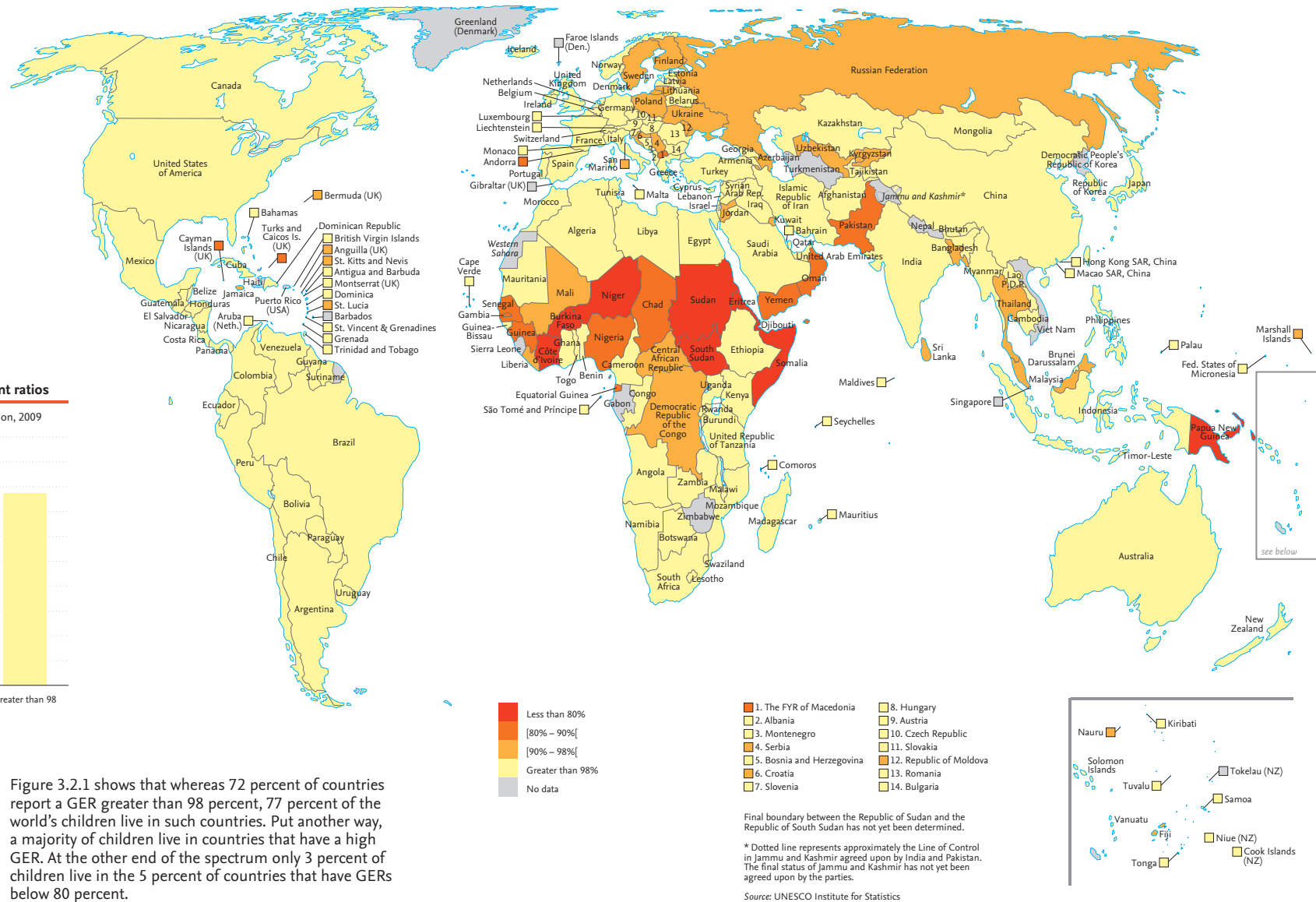


Figure 3.2.1 shows that whereas 72 percent of countries report a GER greater than 98 percent, 77 percent of the world's children live in such countries. Put another way, a majority of children live in countries that have a high GER. At the other end of the spectrum only 3 percent of children live in the 5 percent of countries that have GERs below 80 percent.

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

One way of measuring universal participation in primary education is to examine the net enrolment rate (NER), which is calculated by dividing the number of students of a particular age group – in this case primary level – by the number of children in the population of that age group. In other words, unlike GER, NER indicates the actual share of the particular age group that should be enrolled in primary schools; therefore this rate can never exceed 100%.

Map 3.2.2 shows that the largest proportion of countries (44 percent) have NERs in the range of 85 to 95 percent. About a tenth have near-universal primary enrolment levels of 98 percent or above, while slightly less than one in ten show rates of less than 75 percent. Overall, GERs tend to be higher than NERs – which makes sense given that many children in primary schools are over-aged due to late entrance to school.

Net enrolment rates have been rising in most countries over the last decade – a pattern that can be seen in Figure 3.2.2. Among countries where the NER has deteriorated, most of the declines are either relatively small, such as the drop in Nigeria from 64 to 63 percent, or are occurring in countries that already had near-universal NER in 2000.

Map 3.2.2 Steady progress seen toward universal primary education

Net enrolment rate in primary education

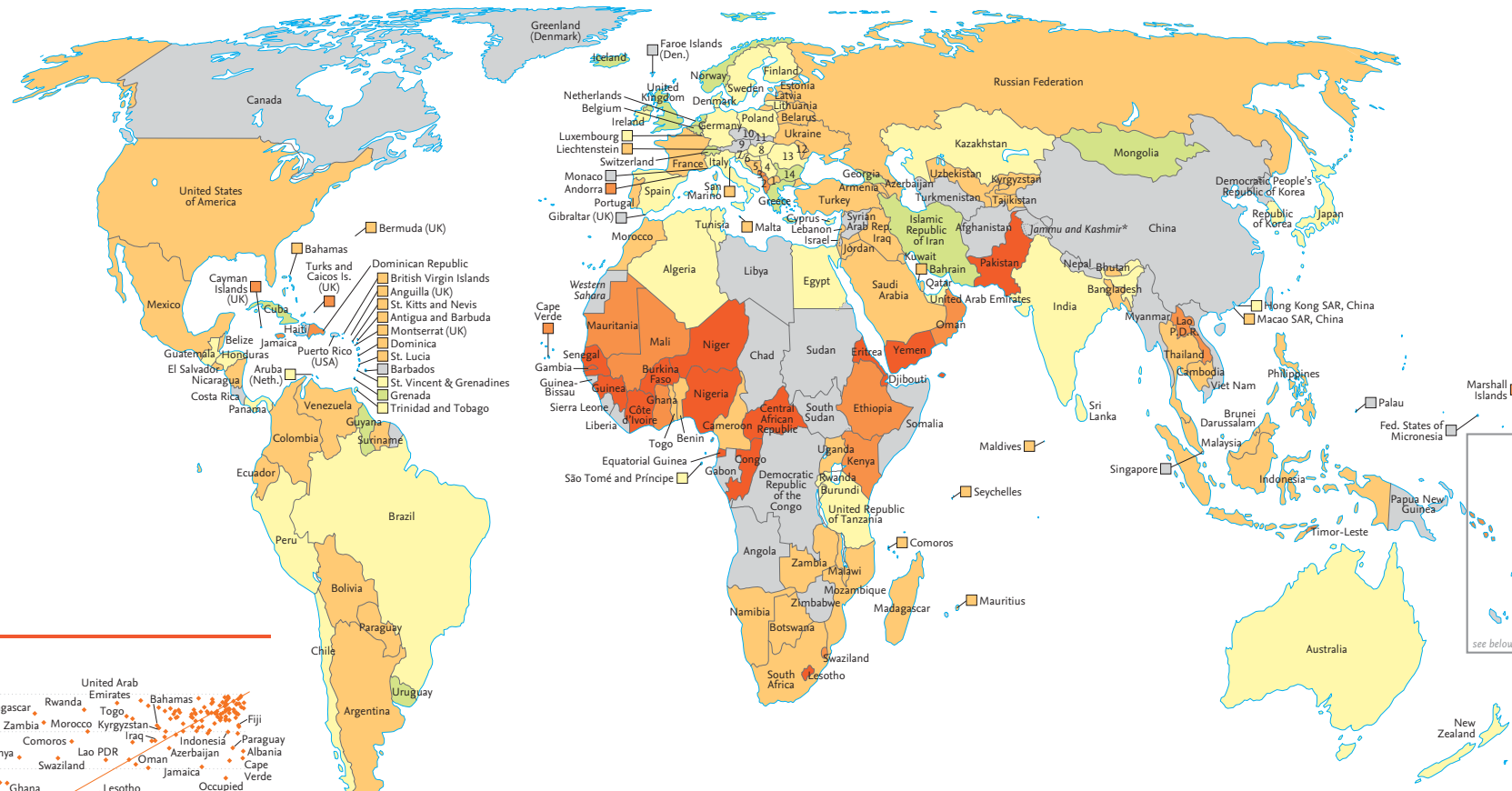
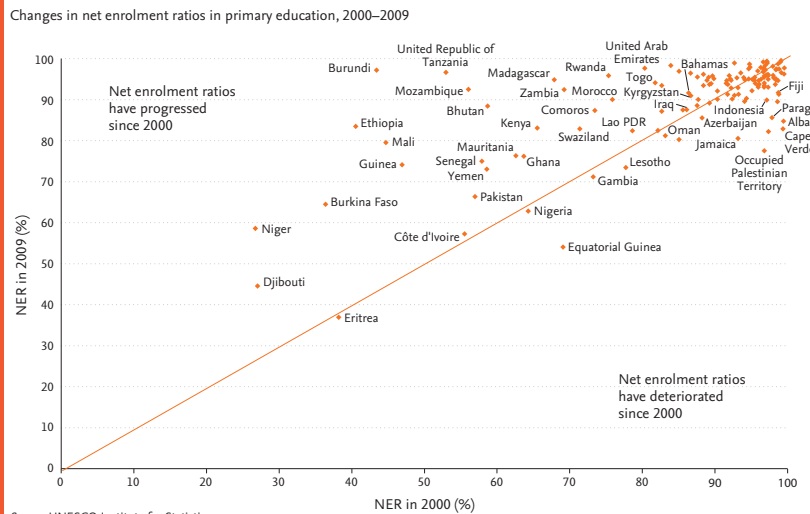


Figure 3.2.2 Net enrolment rates rising in most countries



Source: UNESCO Institute for Statistics

- 1. The FYR of Macedonia
- 2. Albania
- 3. Montenegro
- 4. Serbia
- 5. Bosnia and Herzegovina
- 6. Croatia
- 7. Slovenia
- 8. Hungary
- 9. Austria
- 10. Czech Republic
- 11. Slovakia
- 12. Republic of Moldova
- 13. Romania
- 14. Bulgaria

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

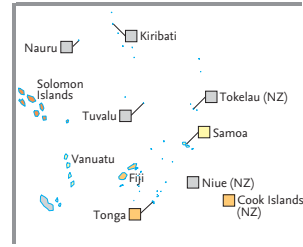
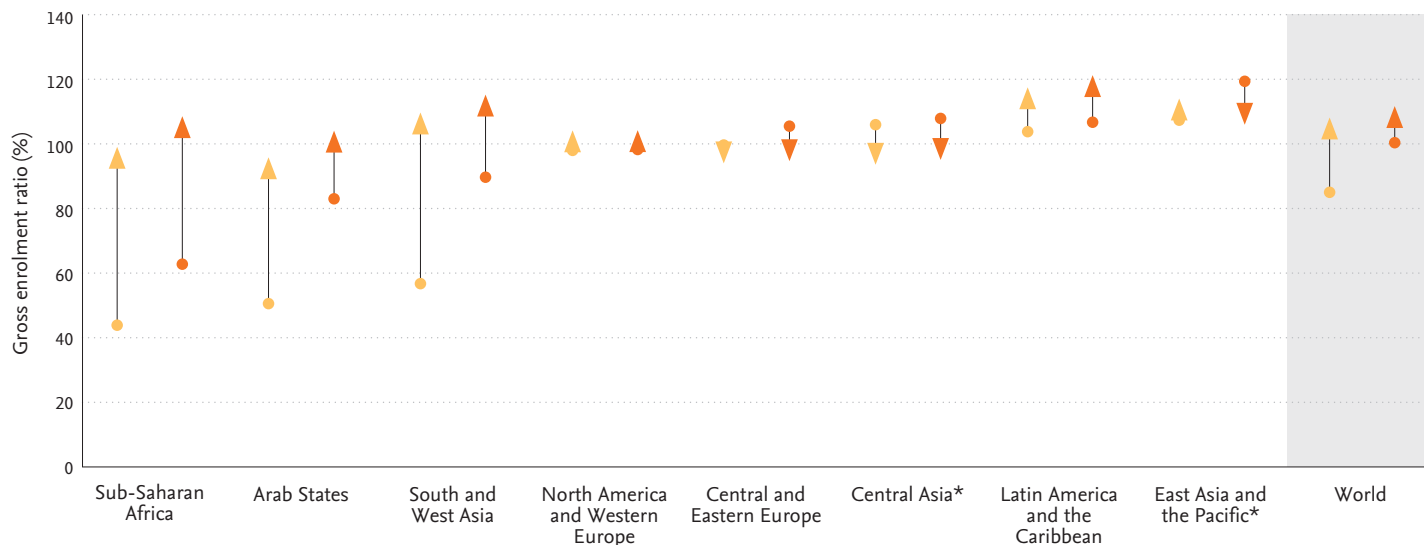


Figure 3.2.3 Sub-Saharan Africa leading gains in gross enrolment ratios for both sexes

Gross enrolment ratio in primary education by region and worldwide, 1970–2009

○ 1970 △ 2009 ■ Male □ Female



Note: \* Data for Central Asia is from 1980–2009; \* Data for East Asia and the Pacific is from 1975–2009

Source: UNESCO Institute for Statistics

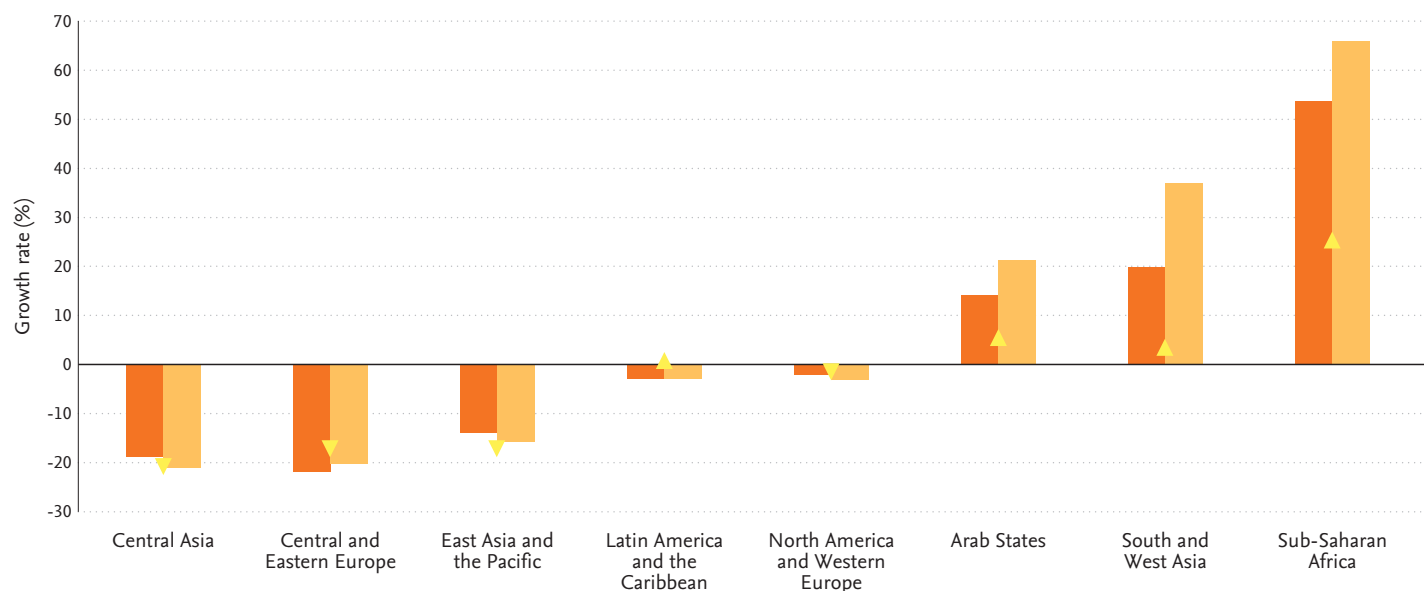
A general upward trend in primary level gross enrolment ratios has occurred for both males and females since 1970. As shown in Figure 3.2.3, the most dramatic gains have been registered among both sexes in sub-Saharan Africa, where the GERs rose from 62 to 106 percent for males and more than doubled, from 43 to 97 percent, for females.

Other significant gains for females were registered in the Arab States and in South and West Asia. The only regions to show declines in GERs were Central Asia, where the ratio for both females and males dropped by around 8 percentage points, Central and Eastern Europe, where both the male and female ratios dropped below 100 percent and East Asia and the Pacific, where the GER

Figure 3.2.4 Primary enrolments keeping pace with population growth

Percentage change in enrolment and population in primary education by gender, 1999–2009

■ Male enrolment □ Female enrolment ▲ Population



Source: UNESCO Institute for Statistics

for males dropped from 119 to 110 percent. It is noteworthy to mention however that declines of the GER that occur when the latter remains near 100 percent, are mostly due to fewer over/under aged pupils being enrolled and do not project a step back for the region.

The ratios are virtually identical for males and females in North America and Western Europe. The ratio is higher for males than for females in six of the other seven regions. The exception is East Asia and the Pacific, where females have a slight edge. The highest GER (119 percent) is for males in Latin America and the Caribbean, while the lowest (93 percent) is for females in the Arab States. The largest gaps in favour of males are in sub-Saharan Africa and in the Arab States.

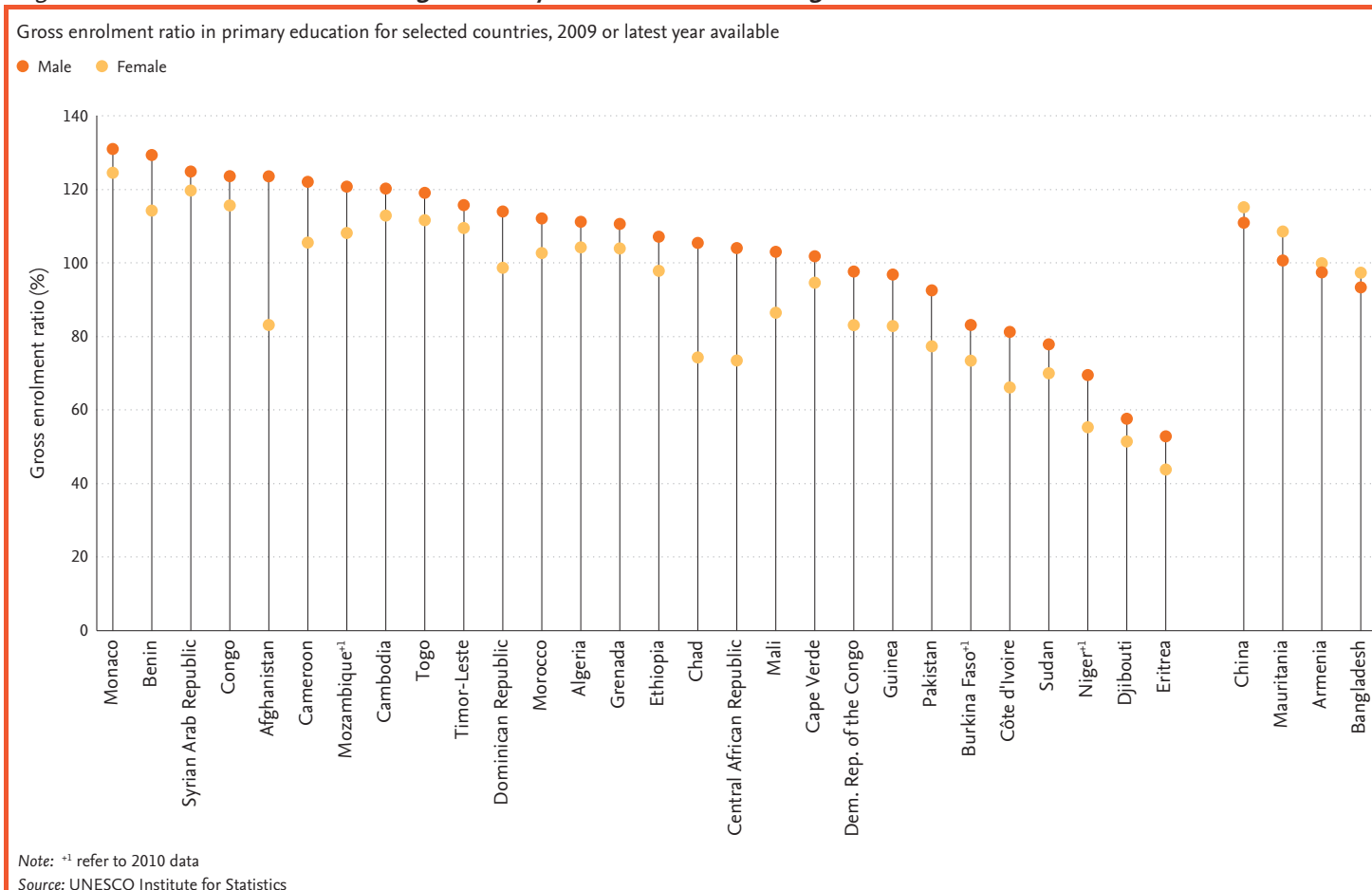
An obvious question that arises is how the changes in enrolment compare with the overall growth of the school-age population? Are there any signs that gains in access to education are being negated by rising population levels? In general, the answer seems to be no. Enrolments are more than keeping pace with population growth.

Figure 3.2.4 shows that the number of primary age children was either steady or declined somewhat in most regions of the world between 1999 and 2009 due to slower population growth. Primary enrolments generally moved in parallel to the population trends, although in Central Asia and in East Asia and the Pacific enrolment declines were slightly less severe than the population drop-offs.

Three regions of the world – Arab States, South and West Asia, and sub-Saharan Africa – showed growth in the school-age population, and in all three cases primary enrolments grew at even faster rates. Another sign of improvement in access to primary education is the fact that the enrolment rates of girls rose faster than those of boys in all three regions.

Figure 3.2.5 reports data on the primary level gross enrolment ratio for 32 selected countries. The largest gap in favour of boys is in Afghanistan, where boys outnumber girls by a ratio of three to two. By contrast, girls have the edge in four countries: China, Mauritania, Armenia and Bangladesh.

Figure 3.2.5 Gross enrolment ratio higher for boys in some countries and girls in others



### 3. Significant progress in gender parity at the primary level

Although boys continue to have a slight edge in access to primary education in some areas, girls have been the principal beneficiaries of the trend toward higher gross enrolment ratios. These gains are reflected in data on gender parity.

Map 3.3.1 depicts the gender parity index at the primary level for 193 countries. It shows that nearly two-thirds (128) of these countries have achieved gender parity. Boys have the edge in all but 8 of the 65 countries that do not show gender parity. Examples of these countries are shown in Table 3.3.1.

Table 3.3.1 Examples of countries with more girls and more boys

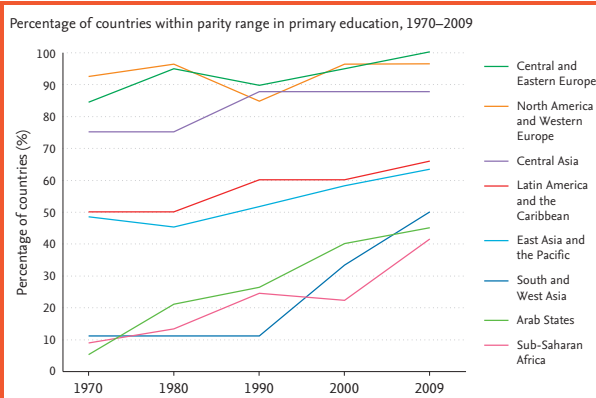
Countries with more females enrolled, 2009 or latest year available		Countries with more males enrolled, 2009 or latest year available	
Country	GPI	Country	GPI
Mauritania	1.08	Somalia <sup>2</sup>	0.55
Nauru <sup>1</sup>	1.06	Afghanistan	0.67
Kiribati <sup>1</sup>	1.04	Chad	0.70
Bangladesh	1.04	Central African Republic <sup>1</sup>	0.71
Senegal	1.04	Yemen <sup>1</sup>	0.80
China	1.04	Angola <sup>1</sup>	0.81
Malawi	1.03	Côte d'Ivoire	0.81
Armenia	1.03	Niger <sup>1</sup>	0.82

Note: <sup>1</sup> refer to 2010 data; <sup>2</sup> refer to 2008 data; <sup>3</sup> refer to 2007 data  
Source: UNESCO Institute for Statistics

Table 3.3.1 provides lists of eight countries that have more females in primary schools as well as eight with more males. The range varies from the 1.08 advantage of females in Mauritania to the 0.55 in favour of males in Somalia.

While almost all countries have made progress towards gender parity, there are significant differences among regions. Moreover, while the gap between regions with high and low levels of gender parity has narrowed, it still remains significant.

Figure 3.3.1 Pace of movement toward gender parity varies among regions



Source: UNESCO Institute for Statistics

Map 3.3.1 Two-thirds of countries show gender parity in primary schools

Gender parity index in primary education



Figure 3.3.1 depicts the percentage of countries in each region that have been within the range of gender parity (0.97 to 1.03) from 1970 to 2009. The eight regions fall into three categories. Countries in three regions – North America and Western Europe, Central Asia, and Central and Eastern Europe – began in 1970 with relatively high levels of parity and have maintained these levels despite a dip in the 1980s. In two other regions – Latin America and the Caribbean,

and East Asia and the Pacific – about half of countries had achieved parity in 1970, and this proportion has grown.

The greatest gains were registered by the three regions that had the lowest proportions in 1970 – the Arab States, sub-Saharan Africa, and South and West Asia. These regions continue to lag behind the other five, but the gap is narrowing. The most dramatic gains came in sub-Saharan Africa and the Arab States, where the proportion of countries achieving parity quadrupled over the four decades from 1970 to 2009.



## 4. Repetition a continuing obstacle to progress in school

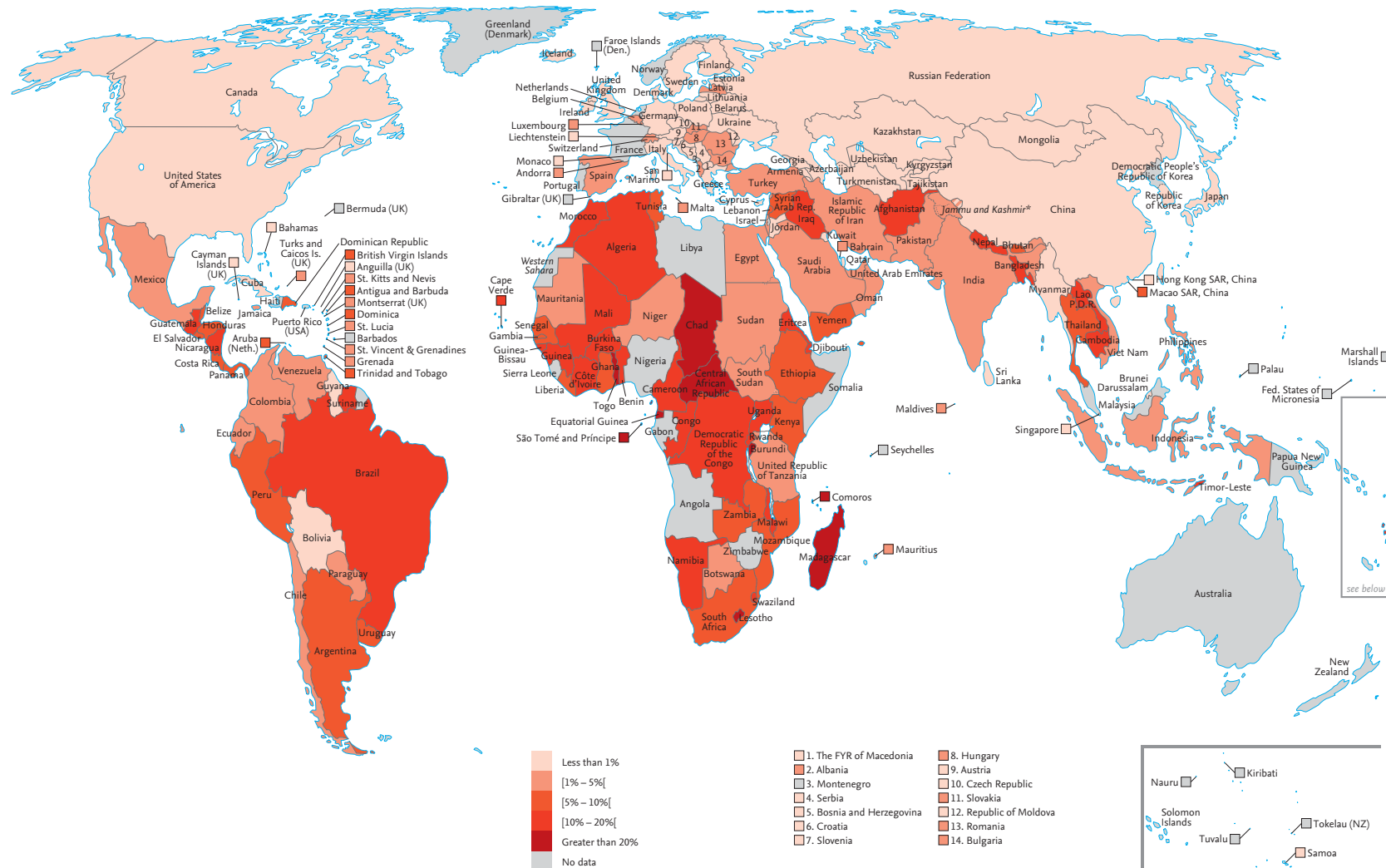
Almost all countries face disparities in the way pupils progress through school, with girls usually doing so in a more timely manner than boys. Repetition of grades is an important determinant of whether or not pupils persist and eventually complete primary school. Repetition rates are an indication of the internal inefficiencies of education systems, and some studies on student learning have questioned the pedagogical benefits of holding pupils back.

The global average for the proportion of pupils who repeat grades during their primary years is 4.9 percent – 4.6 percent among females and 5.2 percent among males. But as seen in Map 3.4.1, the proportions vary widely among various regions and countries. Nearly a third of countries have minimal percentages of less than 1 percent, while around a quarter have percentages between 1 percent and 5 percent. At the other end of the spectrum, there are nine countries in which more than one in five pupils repeat a grade.

Repetition of grades is highest in Burundi, where nearly one in three (32 percent) pupils repeat a grade, and all of the ten countries with the highest percentages are also in sub-Saharan Africa.

Map 3.4.1  
Repetition rates vary widely among different regions

Percentage of repeaters in primary education



Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

Table 3.4.1 shows how repetition levels differ among regions. The practice is negligible in Central Asia and in North America and Western Europe, both of which record percentages below 1 percent. Less than 1.5 percent of students are held back in two other regions: Central and Eastern Europe and East Asia and the Pacific.

**Table 3.4.1 Largest proportions of repeaters found in Latin America and the Caribbean and sub-Saharan Africa**

Regional percentage of repeaters, 2009 or latest year available	
Region	Percentage
Arab States	6.9
Central and Eastern Europe	1.2
Central Asia	0.1
East Asia and the Pacific	1.5
Latin America and the Caribbean	8.5
North America and Western Europe	0.8
South and West Asia <sup>-1</sup>	4.8
Sub-Saharan Africa	9.7
World	4.9

Regional percentage of repeaters by gender, 2009 or latest year available

Region	Female	Male
Arab States	5.7	8.0
Central and Eastern Europe	1.5	0.9
Central Asia	0.1	0.1
East Asia and the Pacific	1.3	1.8
Latin America and the Caribbean	8.2	8.7
North America and Western Europe	1.3	0.3
South and West Asia <sup>-1</sup>	4.8	4.9
Sub-Saharan Africa	8.9	10.5
World	4.6	5.2

Note: <sup>-1</sup> refer to 2008 data

Source: UNESCO Institute for Statistics

The largest proportions of repeaters are found in Latin America and the Caribbean and in sub-Saharan Africa, where the proportion of one in ten students is more than double the global average. As shown in Table 3.4.2, ten of the countries with the highest repetition rates are in sub-Saharan Africa.

**Table 3.4.2 Countries with highest percentage of repeaters, 2009 or latest year available**

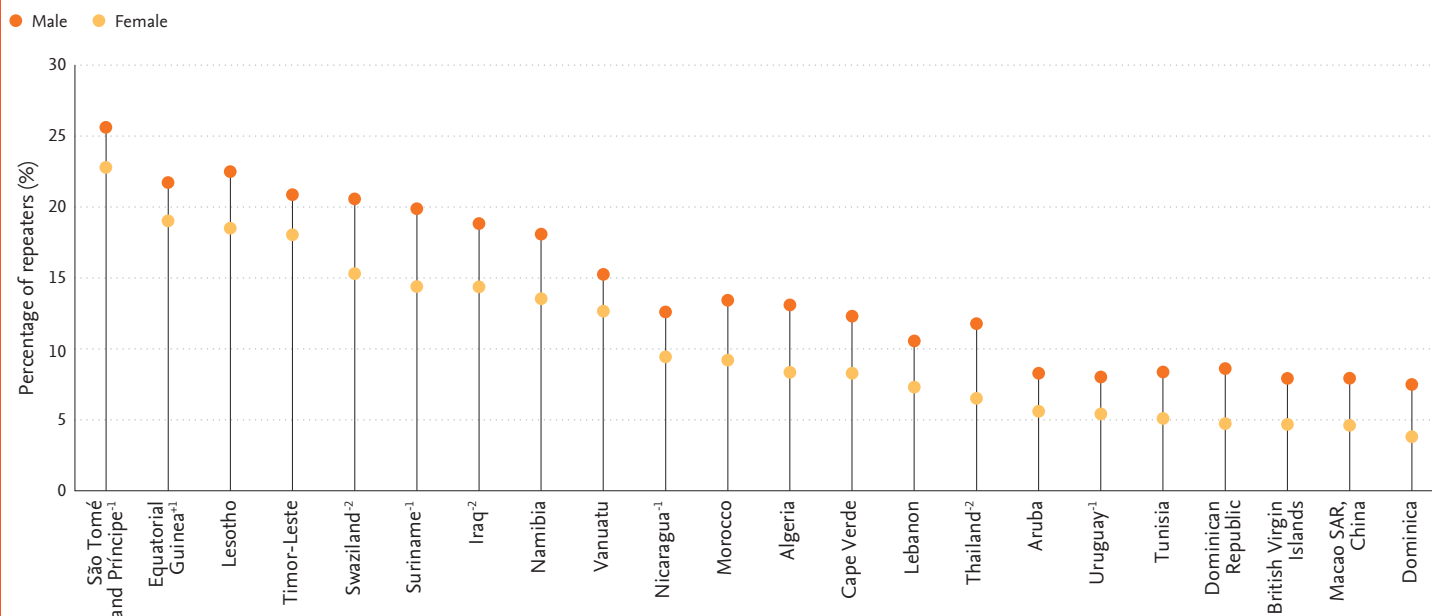
Country	Repetition rate
Burundi	32.3
Comoros <sup>-1</sup>	24.4
São Tomé and Príncipe <sup>-1</sup>	24.2
Togo	22.9
Chad	22.8
Central African Republic <sup>+1</sup>	20.7
Lesotho	20.5
Madagascar	20.4
Equatorial Guinea <sup>+1</sup>	20.4
Congo	19.7

Note: <sup>+1</sup> refer to 2010 data; <sup>-1</sup> refer to 2008 data

Source: UNESCO Institute for Statistics

**Figure 3.4.1 Boys are more likely to repeat than girls**

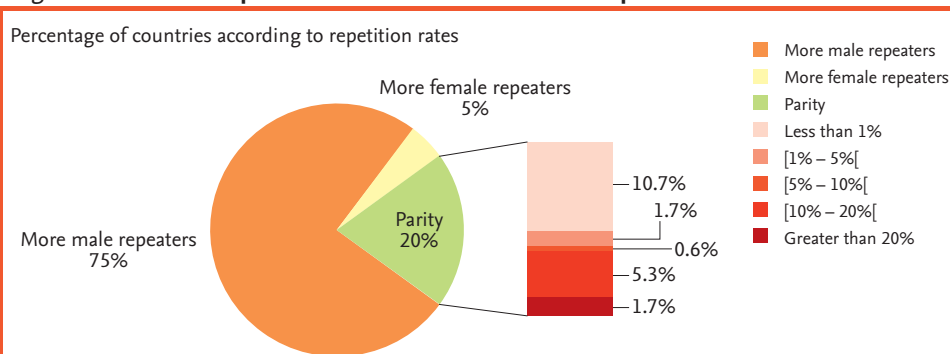
Percentage of repeaters for selected countries, 2009 or latest year available



Note: <sup>+1</sup> refer to 2010 data; <sup>-1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data

Source: UNESCO Institute for Statistics

Figure 3.4.2 Male repeaters outnumber females in 75 percent of countries



Source: UNESCO Institute for Statistics

Table 3.4.3 Some countries have more female repeaters

Region	Country	Male repetition rate	Female repetition rate
Countries with gender parity in repetition rates, 2009 or latest year available			
Arab States	Occupied Palestinian Territory	-	-
East Asia and the Pacific	Cook Islands <sup>+1</sup>	-	-
East Asia and the Pacific	Japan <sup>-1</sup>	-	-
Latin America and the Caribbean	Anguilla <sup>-1</sup>	-	-
Latin America and the Caribbean	Bahamas <sup>-1</sup>	-	-
Latin America and the Caribbean	Cayman Islands <sup>-1</sup>	-	-
North America and Western Europe	Austria	-	-
North America and Western Europe	Canada <sup>-3</sup>	-	-
North America and Western Europe	Iceland	-	-
North America and Western Europe	Liechtenstein	-	-
North America and Western Europe	San Marino	-	-
North America and Western Europe	Sweden	-	-
North America and Western Europe	United Kingdom <sup>-1</sup>	-	-
North America and Western Europe	United States of America	-	-
Central and Eastern Europe	Belarus <sup>-1</sup>	0.1	0.1
Central and Eastern Europe	Ukraine	0.1	0.1
Central Asia	Tajikistan	0.2	0.2
East Asia and the Pacific	Myanmar	0.4	0.4
Arab States	Bahrain	1.9	1.9
South and West Asia	India	3.4	3.5
Sub-Saharan Africa	Niger <sup>+1</sup>	4.4	4.5
Sub-Saharan Africa	Senegal	7.4	7.6
Arab States	Djibouti	9.9	10.1
Sub-Saharan Africa	Burkina Faso <sup>+1</sup>	10.1	10.1
Sub-Saharan Africa	Uganda	11.5	11.9
Sub-Saharan Africa	Mali <sup>+1</sup>	12.9	12.8
South and West Asia	Nepal <sup>+1</sup>	14.0	14.1
Sub-Saharan Africa	Benin	14.3	14.3
Sub-Saharan Africa	Democratic Republic of the Congo	15.6	15.2
Sub-Saharan Africa	Malawi	18.4	19.0
Sub-Saharan Africa	Côte d'Ivoire	18.7	18.9
Sub-Saharan Africa	Central African Republic <sup>+1</sup>	20.9	20.6
Sub-Saharan Africa	Comoros <sup>-1</sup>	24.4	24.5
Sub-Saharan Africa	Burundi	32.3	32.3
Countries where there are more female repeaters, 2009 or latest year available			
Arab States	Qatar	0.5	0.5
Arab States	Jordan <sup>-1</sup>	0.6	0.6
Arab States	Oman	1.3	1.6
Central and Eastern Europe	Turkey <sup>-1</sup>	2.1	2.2
Latin America and the Caribbean	Antigua and Barbuda	5.4	6.7
Sub-Saharan Africa	Liberia <sup>-1</sup>	6.5	6.9
Sub-Saharan Africa	Guinea	14.7	16.1
Sub-Saharan Africa	Chad	22.3	23.6

As already noted, boys are far more likely than girls to be repeaters at the primary level. Table 3.4.1 shows that this pattern applies to all regions except for Central Asia, where there are negligible repetition rates for both sexes and for Central and Eastern Europe, and North America and Western Europe where the repetition rates for females are slightly higher.

Figure 3.4.2 indicates that male repeaters outnumber females in 75 percent of countries, while female repeaters are more numerous in only 5 percent. The other 20 percent of countries are at parity. It is interesting to note that half of the countries that are at parity have very low repetition rates.

Figure 3.4.1 depicts the extent to which a higher percentage of boys repeat in 22 selected countries. The differences range from 2.5 percentage points in Vanuatu to a 5.5 point differential in Suriname.

Male and female repetition rates can be similar in countries where the overall repetition rates fall in different levels. As seen in Table 3.4.3, such parity exists in Myanmar (0.4 for both sexes), Nepal (14.0 for males, 14.1 for females) and Burundi (32.3 for both sexes).

Note: <sup>+1</sup> refer to 2010 data; <sup>-1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data; <sup>-3</sup> refer to 2006 data

Source: UNESCO Institute for Statistics

## 5. Dropout a threat to universal primary education

A major obstacle to reaching the goal of universal primary education is the high dropout rates that characterize many countries. The causes of dropping out, or “school wastage”, are mostly rooted in the overall social and economic environment and those that stem from the way the school system itself is organized and operates. Data show that dropout rates are highly sensitive to the national economic context. Studies in certain less developed countries, for example, have shown a significant and positive correlation between dropout rates and the percentage of people having a very poor income, since even when public schools are ostensibly free, parents must bear various direct costs to educate their children such as purchasing school supplies, textbooks, etc. A poor economy can also be the cause of having classrooms with unfavourable working conditions and teachers that have poor teaching skills. High dropout rates are also observed in countries where there is high mortality amongst adults (e.g. Tanzania). In these situations, the child may be needed to care for the ill or replace them in different economic activities. As a result, the child may attend fewer hours or drop out of school.

Map 3.5.1 and Figure 3.5.1 show how rates vary across the world, with the number of countries spread fairly evenly across the five categories. For sub-Saharan Africa, nearly two-thirds of the countries (63 percent) have a dropout rate greater than 30 percent, compared to only 13 percent in the remaining regions of the world.

Globally, 48 countries have rates of less than 5 percent, where only one (Mauritius) is in sub-Saharan Africa, while 33 others register rates greater than 30 percent, of which 20 are located in sub-Saharan Africa.

Map 3.5.1 Dropout rates vary widely among different regions

Dropout rate in primary education

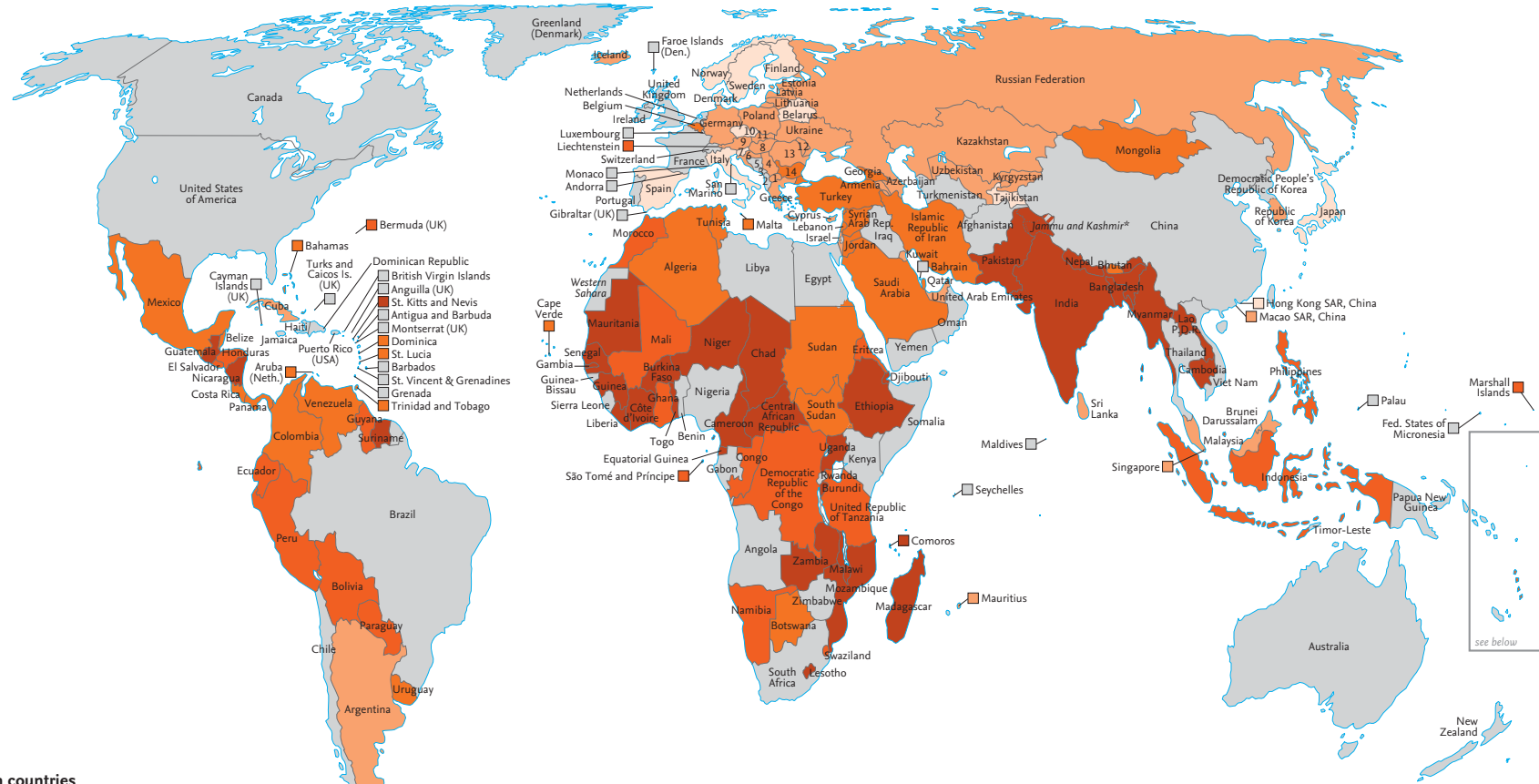
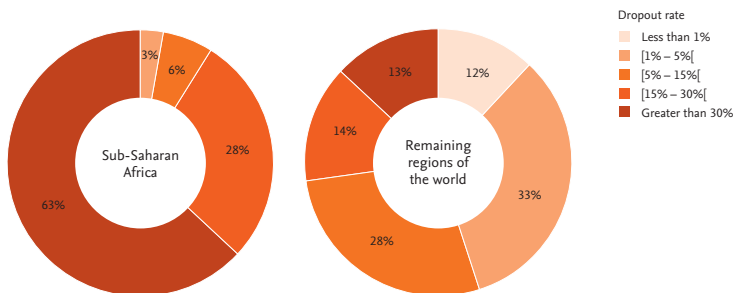


Figure 3.5.1 Dropout rates high in two out of three sub-Saharan countries

Percentage of countries according to dropout rates in primary education for sub-Saharan Africa and the remaining regions of the world, 2009



Source: UNESCO Institute for Statistics



Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

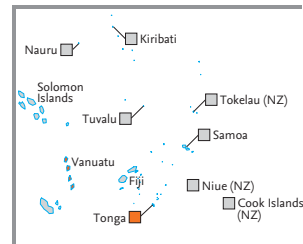
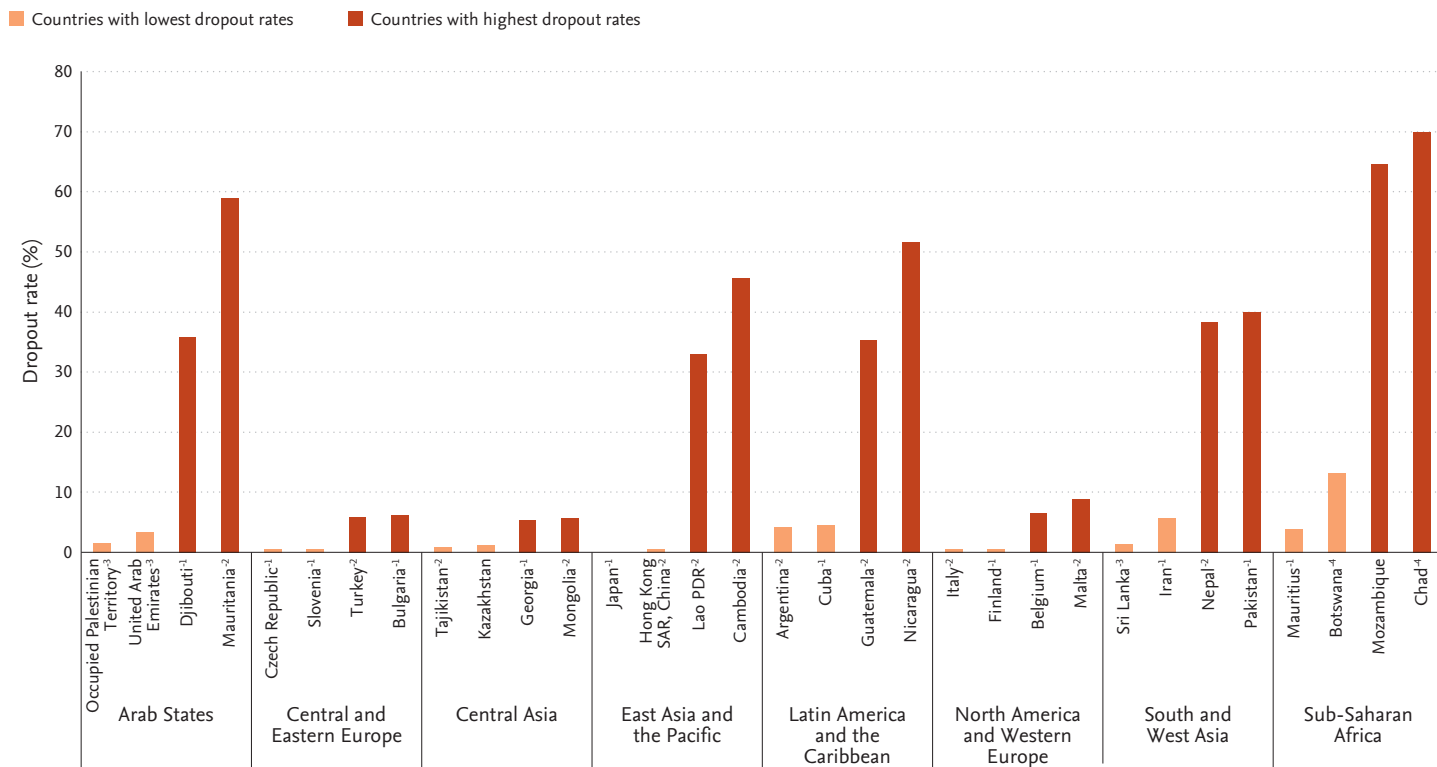


Figure 3.5.2 How dropout rates vary among countries

Dropout rates for selected countries, primary education, 2009 or latest year available



Note: <sup>1</sup> refer to 2008 data; <sup>2</sup> refer to 2007 data; <sup>3</sup> refer to 2006 data; <sup>4</sup> refer to 2005 data

Source: UNESCO Institute for Statistics

The range of dropout rates is wide within various countries and regions. Figure 3.5.2 shows the rates at four different levels for selected countries in each region. The largest dropout problem is found in Chad, where nearly three-quarters (70 percent) of pupils drop out before completing the full primary education cycle. As shown in Figure 3.5.1, sub-Saharan Africa is notable for the fact that whereas 63 percent of countries have rates above 30 percent, only 3 percent have rates in the zero to 5 percent range.

Gender is a significant factor in school survival in almost every country in the world regardless of its state of development, with boys usually dropping out at much higher rates than girls.

Figure 3.5.3 demonstrates both the wide range of dropout rates among various countries and the fact that the number of countries with higher male rates is almost twice as large as those with higher female rates.

Figure 3.5.4 shows the pattern for 27 selected countries – 17 with higher rates for boys and 10 in which girls have a higher rate. Substantial gaps favouring females are found in Lesotho, where the rates are 62 percent for boys and 44 percent for girls, and in Sudan and Aruba, where boys are more than five times as likely to drop out of primary school as girls. The largest gap favouring males exists in Togo, where the rate is 38 percent for females and only 24 percent for males.

Figure 3.5.3 Boys more likely than girls to leave school

Dropout rates by gender for all countries with available data, 2009 or latest year available

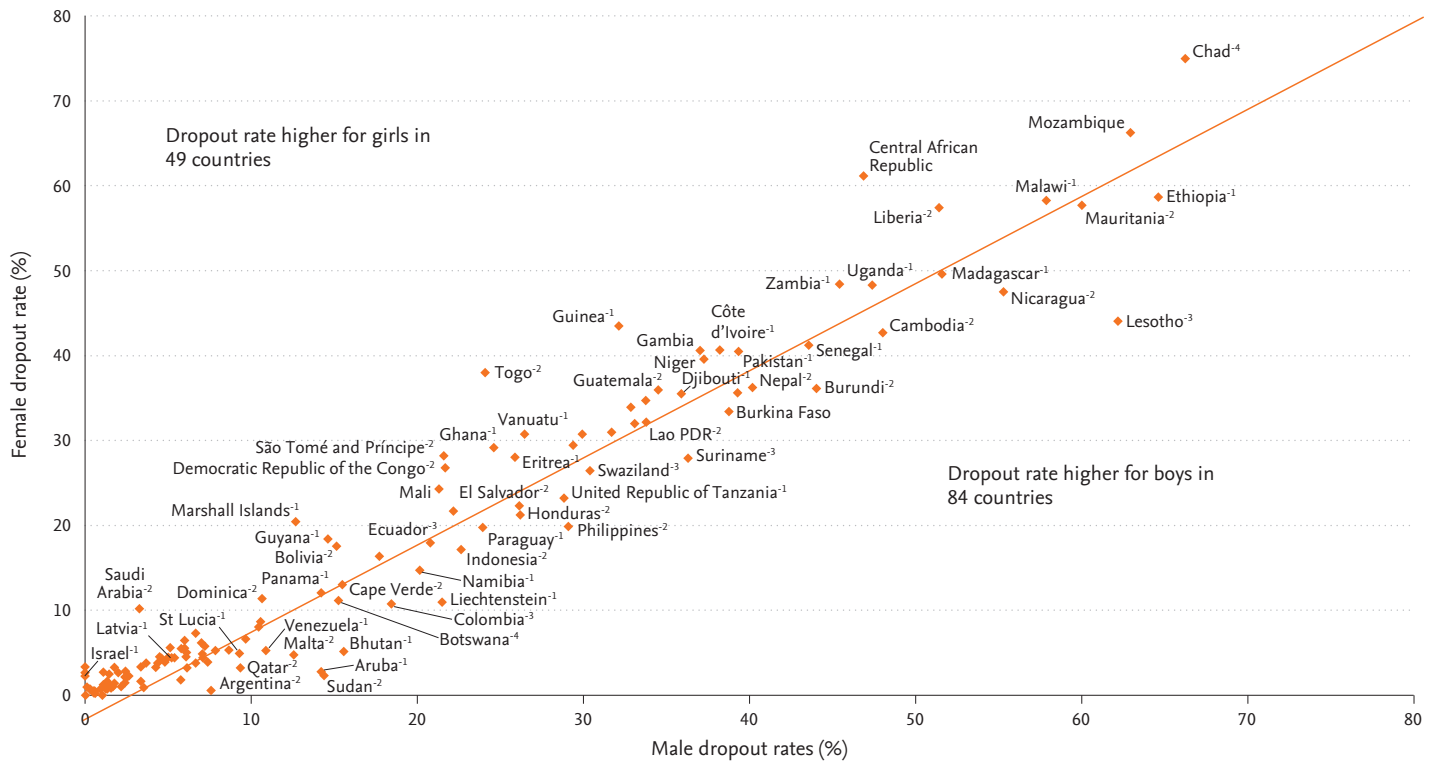
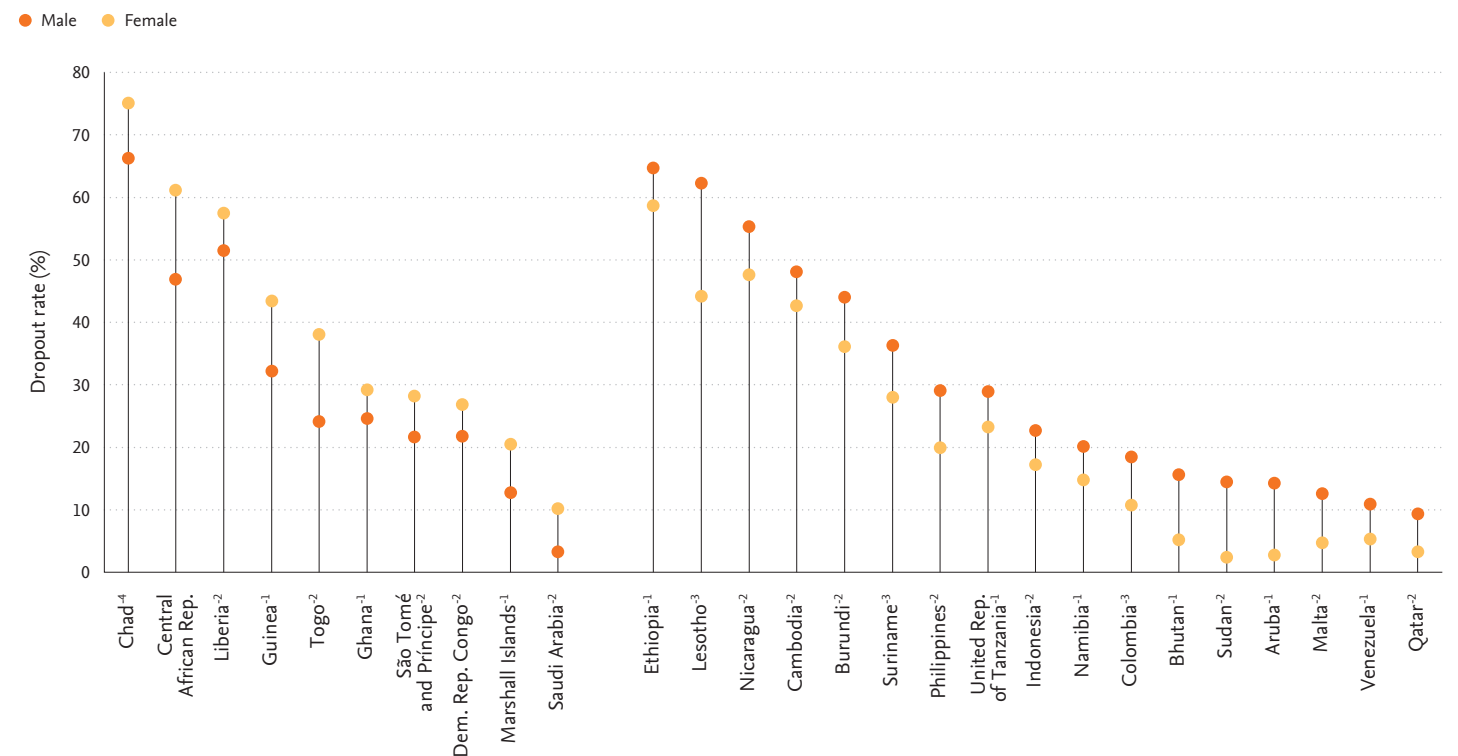


Figure 3.5.4 Examples of male/female dropout rates among countries

Dropout rates by gender for selected countries, 2009 or latest year available



## 6. Primary level completion rates on the rise

Dropout rates by definition have a negative impact on school completion rates. By lowering the number of students who drop out at the primary level, countries will not only increase their primary school completion rates but set the stage for progression through lower secondary and post-compulsory education and training.

Map 3.6.1 depicts the primary completion rates for 173 countries around the world. It shows that around half of countries (45 percent) have rates of 95 percent or higher. At the other end of the spectrum, a quarter of countries have no more than four out of five pupils who complete primary education.

For the world as a whole, primary completion rates rose significantly over the last decade for both sexes. As shown in Figure 3.6.1, the rates for girls increased from 78 to 87 percent, while those for boys grew from 84 to 90 percent. Completion rates are higher for boys in all but two of the regions: Latin America and the Caribbean, and East Asia and the Pacific.

The largest gains occurred in the three regions that started at a relatively low base in 1999: sub-Saharan Africa, South and West Asia, and the Arab States. In sub-Saharan Africa, for example, completion rates jumped from 47 to 64 percent for girls and from 55 to 71 percent for boys. Latin America and the Caribbean is notable because by 2009 the primary completion rate had surpassed 100 percent for both sexes. Changes were both modest and mixed in the other four regions that started at relatively high levels in 1999.

Map 3.6.1 Primary completion rates at least 95 percent in half of countries

Primary completion rate

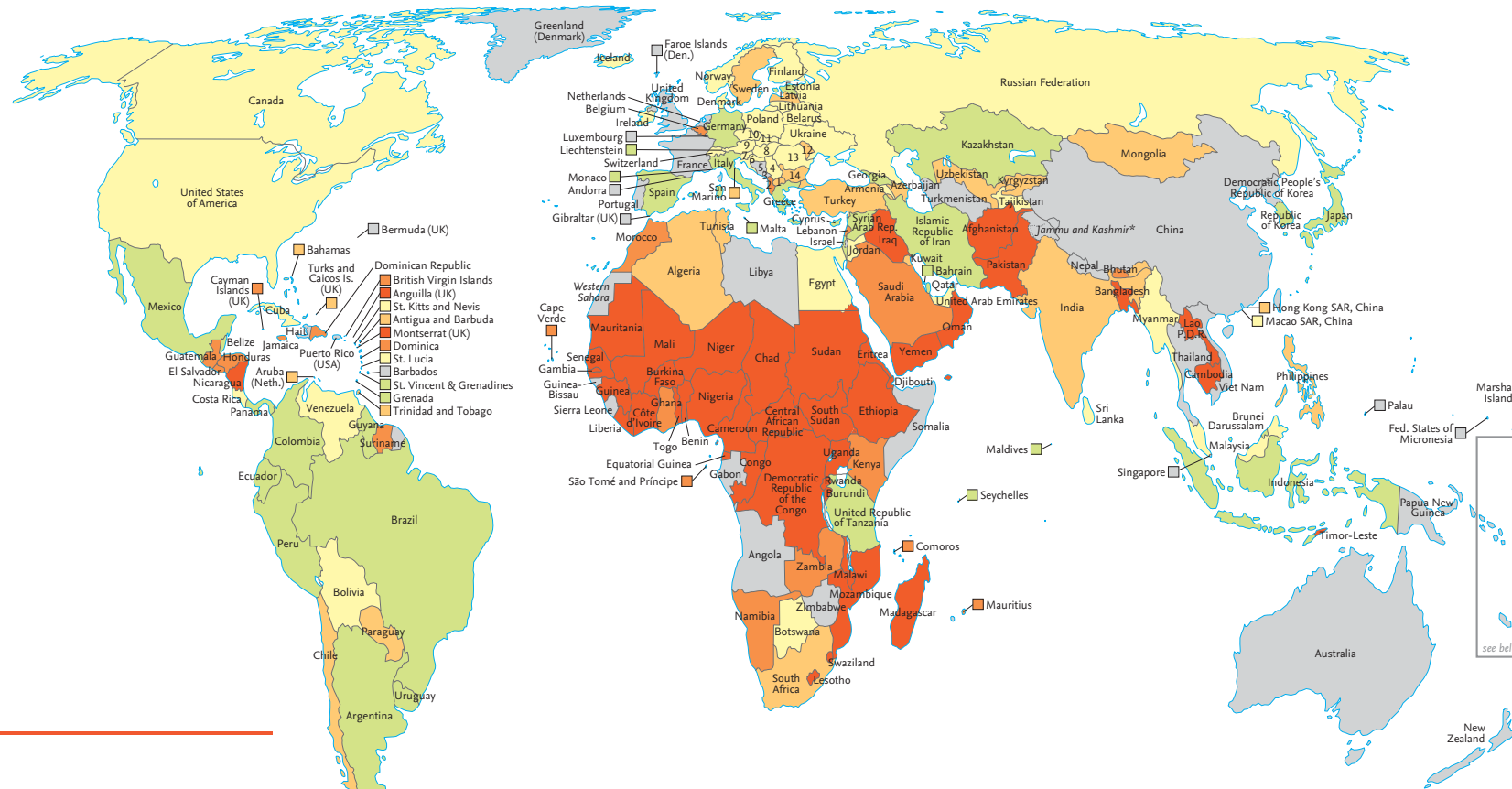
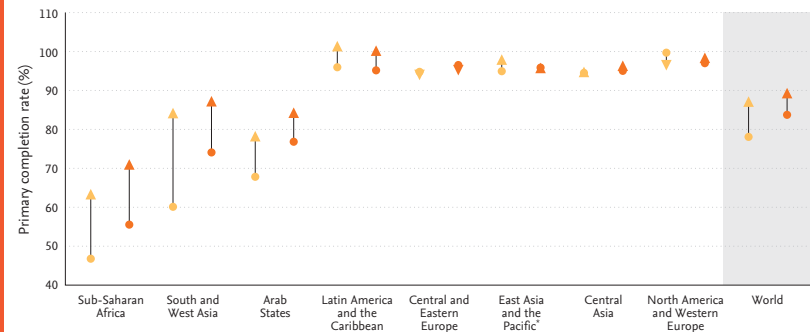


Figure 3.6.1 Rise seen in most regions and among both sexes

Primary completion rates by region and gender, 1999–2009

○ 1999 △ 2009 ■ Male □ Female



Note: \* 2009 data for East Asia and the Pacific refers to 2007  
Source: UNESCO Institute for Statistics

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

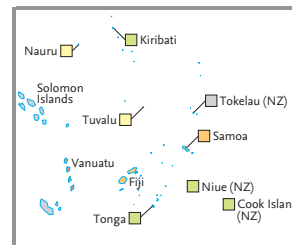
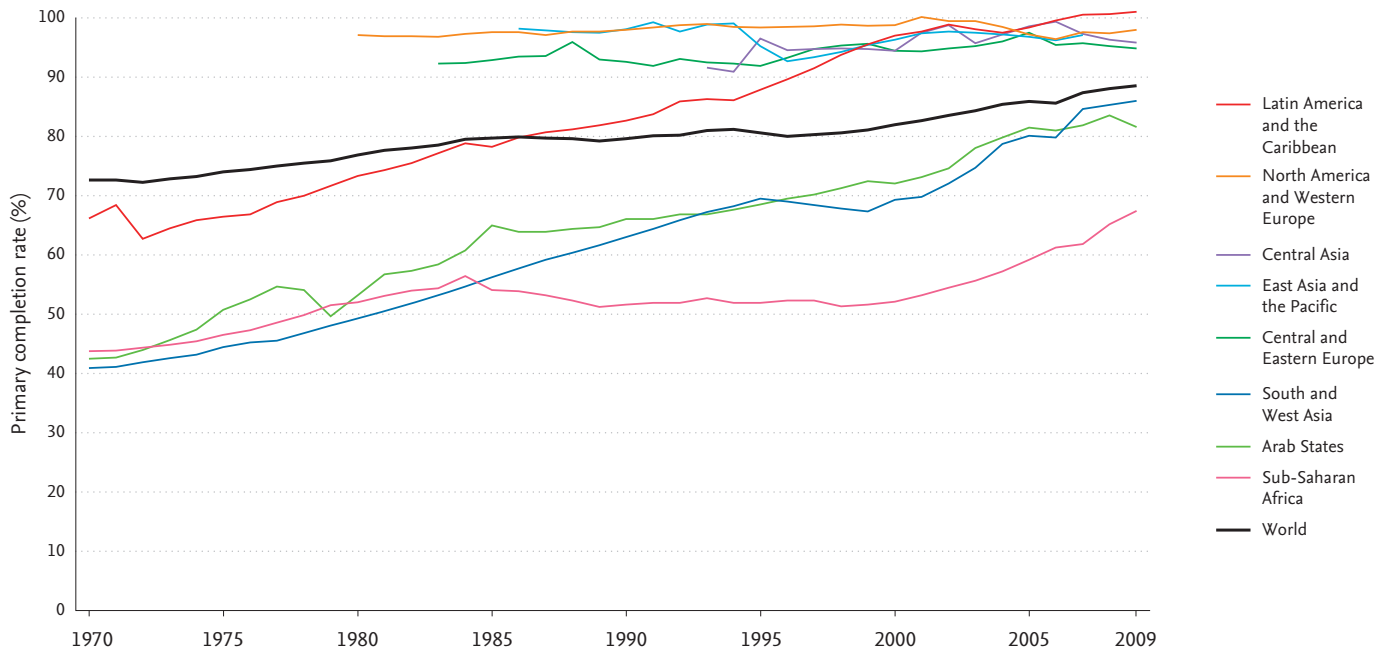


Figure 3.6.2 Global primary completion rates up from 73 to 88 percent

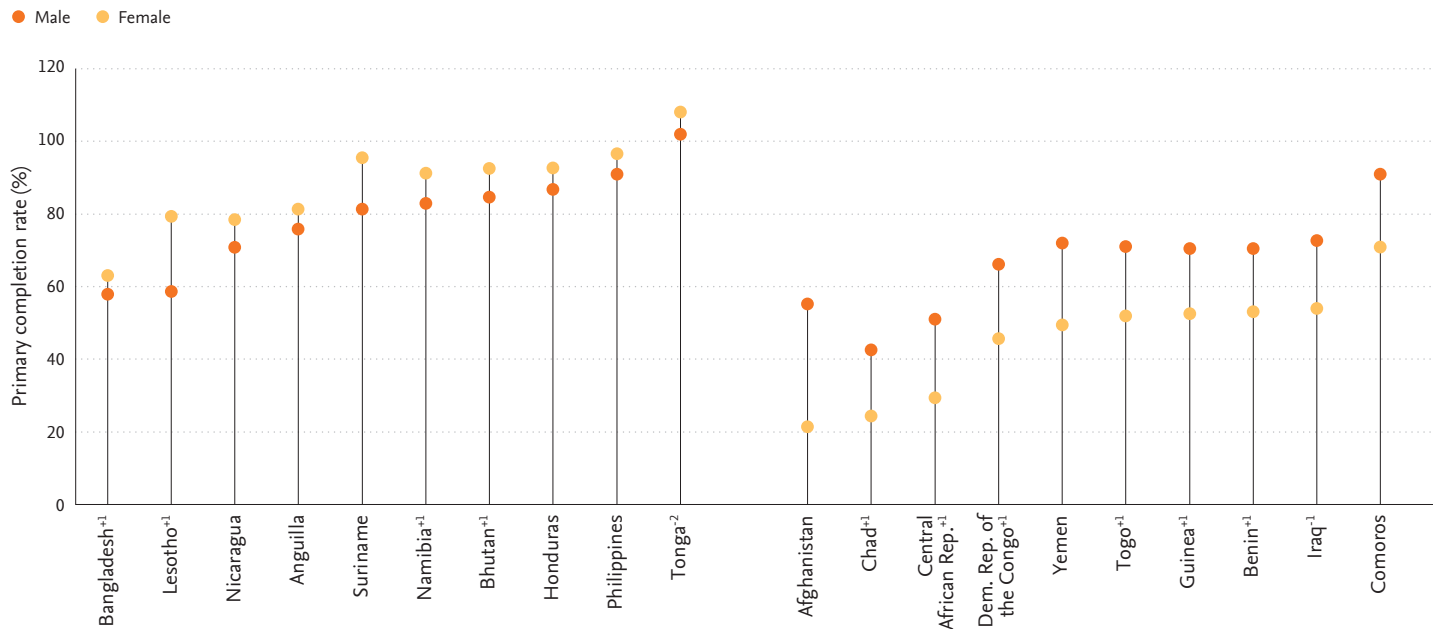
Primary completion rates by region, 1970–2009



Source: UNESCO Institute for Statistics

Figure 3.6.3 Countries differ in primary completion rates by gender

Primary completion rates by gender for selected countries, 2009 or latest year available



Note: <sup>+1</sup> refer to 2010 data; <sup>+1</sup> refer to 2008 data; <sup>+2</sup> refer to 2007 data

Source: UNESCO Institute for Statistics



Figure 3.6.2 depicts the growth in primary completion rates in the various regions over four decades starting in 1970. For the world as a whole the rate rose from 73 percent in 1970 to 80 percent by 1985. It then remained steady until 1999, when it began climbing to the current level of 88 percent.

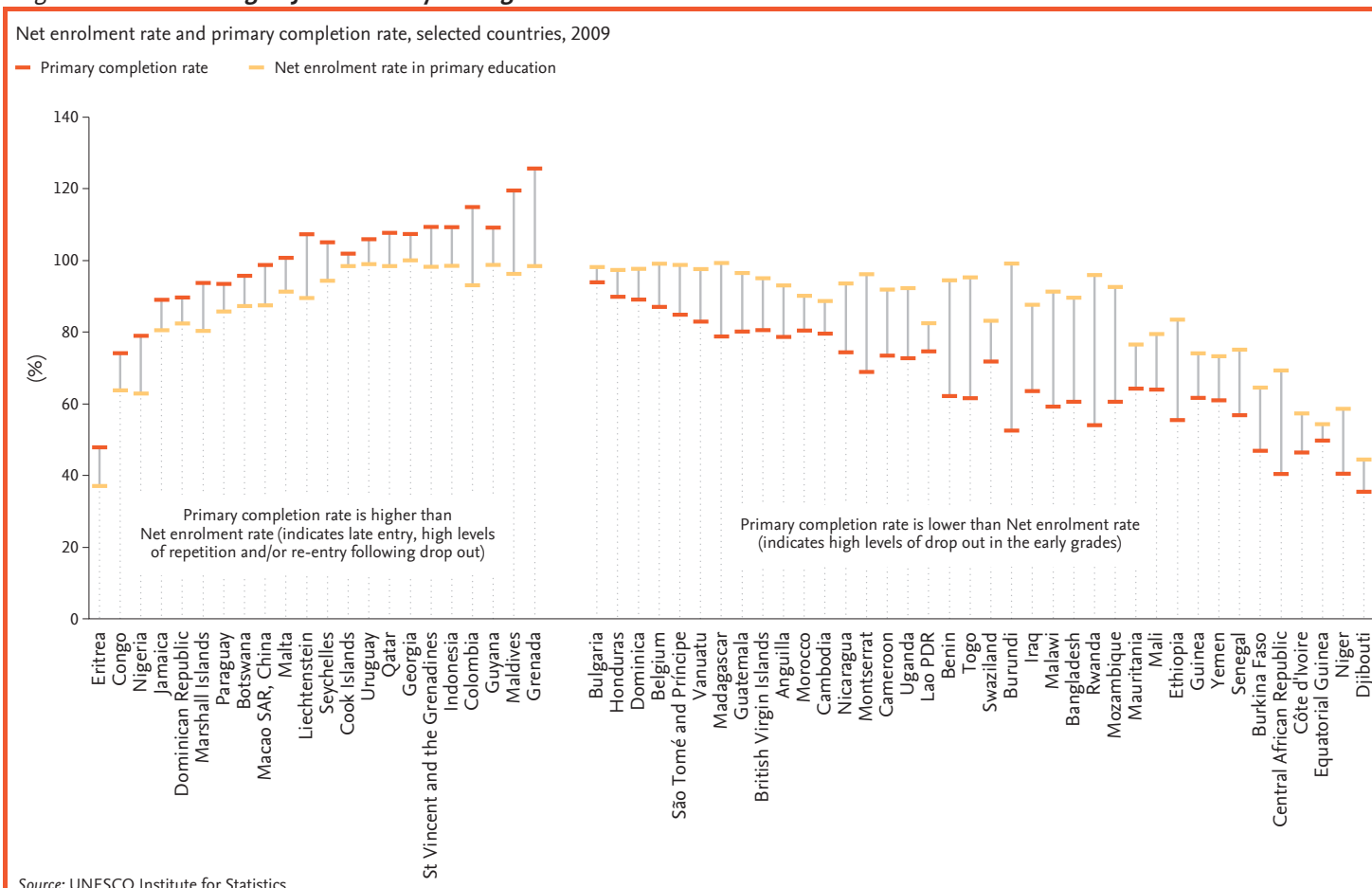
Growth in the primary completion rate was relatively steady over the four decades for both the Arab States and South and West Asia, whereas sub-Saharan Africa lost ground between the mid-1980s and the late 1990s. Consistent with the data in Figure 3.6.1, the last decade has produced spurts in all of the regions that did not already have high primary completion rates.

Depending on the country, completion rates can be higher for either boys or girls. Figure 3.6.3 gives examples of ten countries in each category.

The trajectories by which pupils progress through primary school vary considerably. Students enter primary school at different ages. Some repeat one or more grades, and those who drop out do so at various stages in their primary schooling. One way to examine these trajectories is to compare net enrolment ratios (NER) with primary completion rates; if the completion rate for a country is higher than the net enrolment ratio, the country probably has substantial numbers of pupils who enter school late, repeat grades and/or re-enter school after dropping out. A completion rate that is lower than the net enrolment ratio is a sign that large numbers of pupils drop out during the early grades.

Figure 3.6.4 provides data for 22 countries where the primary completion rate is higher than the NER because of high levels of over-age entrants to the last grade. For 38 countries the reverse is true because of low levels of internal efficiency.

Figure 3.6.4 **Schooling trajectories vary among countries**



## 7. Out-of-school children a continuing challenge

Recent progress in expanding access to primary education worldwide, and the narrowing of the gender gap, have translated into a decline in both absolute numbers, as well as the rate, of children out of school. Despite this progress, however, large numbers of children still lack access to schooling. Data show that in 2009 there were 68 million out-of-school primary-age children around the world.

As seen in Map 3.7.1, about one in seven countries (15 percent) have minimal proportions of such children of 0 to 1 percent, but another fifth of countries (20 percent) have rates of more than 15 percent. In 19 of these countries more than one in five children are out of school.

Figure 3.7.1 shows the regional rate of out-of-school children in primary education, as well as the range, along with the lowest and highest values in the region. The regions with the highest rate of out-of-school children are sub-Saharan Africa and the Arab States. It is interesting to observe that the regions with the highest rates also have the highest variation. In the Arab States for example, where the regional rate is 13.7 percent, the rate of out-of-school children goes as low as 0.6 percent (for Tunisia) up to 55.4 percent (for Djibouti).

Map 3.7.1 Children not in school heavily concentrated in three regions

Rate of out-of-school children

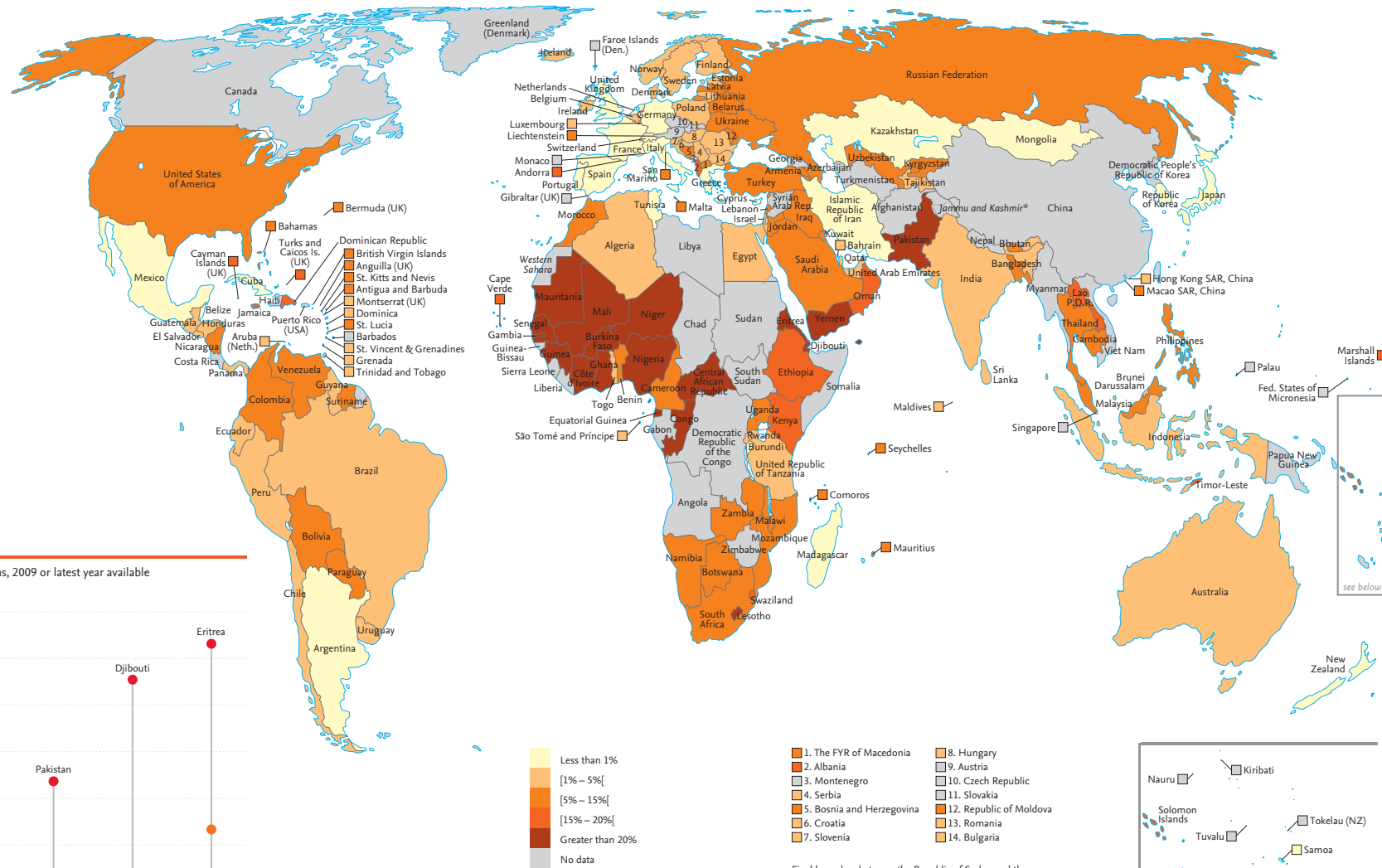
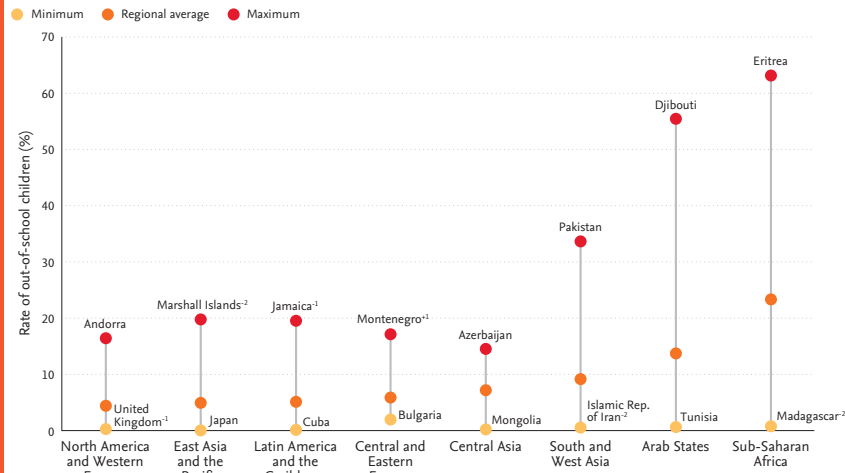


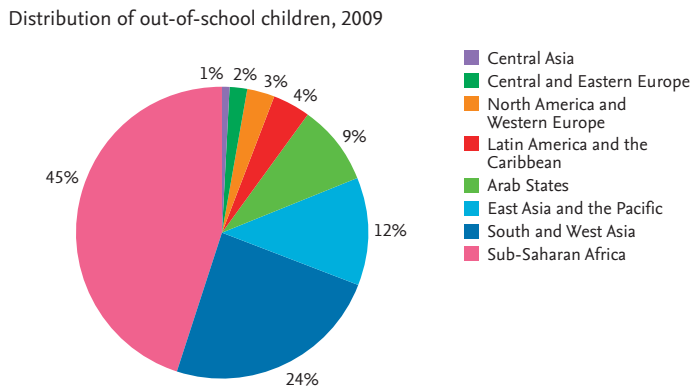
Figure 3.7.1 How out-of-school rates vary among regions

Out-of-school rate for primary school-age children for selected countries and regions, 2009 or latest year available



Note: <sup>1</sup> refer to 2010 data; <sup>2</sup> refer to 2008 data; <sup>3</sup> refer to 2007 data  
Source: UNESCO Institute for Statistics

Figure 3.7.2  
Most out-of-school children living in three regions

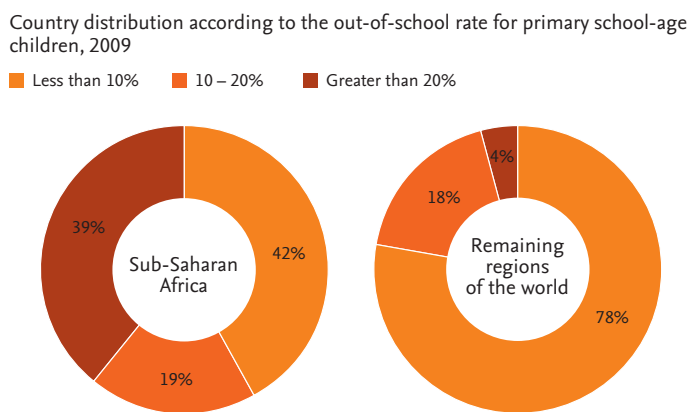


Source: UNESCO Institute for Statistics

The global population of out-of-school children is heavily concentrated in three regions of the world: sub-Saharan Africa, South and West Asia, and East Asia and the Pacific. As seen in Figure 3.7.2, together these regions account for more than four out of five (81 percent) out-of-school primary age children. The problem of out-of-school children is particularly serious in sub-Saharan Africa. Figure 3.7.3 shows that nearly four out of ten (39 percent) of countries in this region have rates above 20 percent, versus only 4 percent for the remaining regions of the world.

Within these regions, however, the patterns vary considerably. As seen in Figure 3.7.1, the percentages in sub-Saharan Africa range from 63 percent in Eritrea to a negligible percentage of 0.7 percent in Madagascar. Likewise, the proportions in Latin America and the Caribbean range from less than 1 percent in Cuba or Belize to 20 percent in Jamaica.

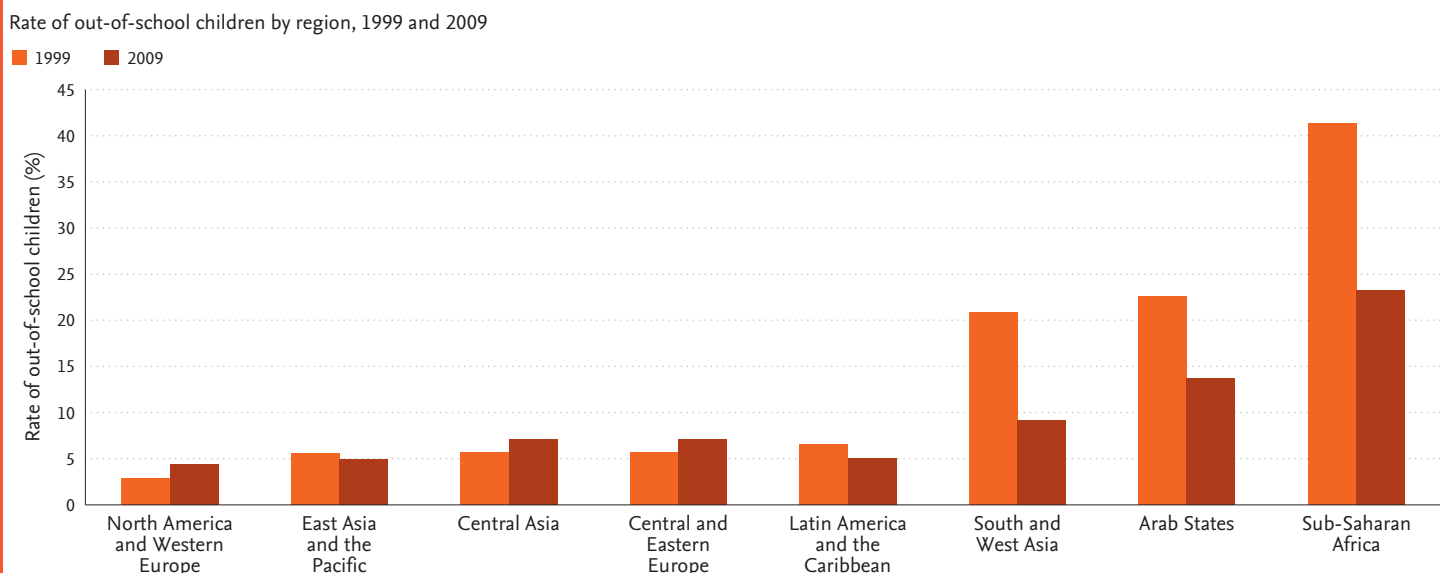
Figure 3.7.3 How sub-Saharan Africa compares to world



Source: UNESCO Institute for Statistics

Despite the substantial number of children who remain out of school, the proportion is actually declining even though the overall school-age populations continue to increase. Figure 3.7.4 shows that the rates of out-of-school children were relatively stable between 1999 and 2009 for most regions and declined dramatically in the three areas where the problem had been most severe: South and West Asia, Arab States, and sub-Saharan Africa. Progress was greatest in sub-Saharan Africa, where, despite a number of countries with large out-of-school populations, the overall rate fell from 41 to 23 percent.

Figure 3.7.4 Out-of-school rates declining, including in sub-Saharan Africa

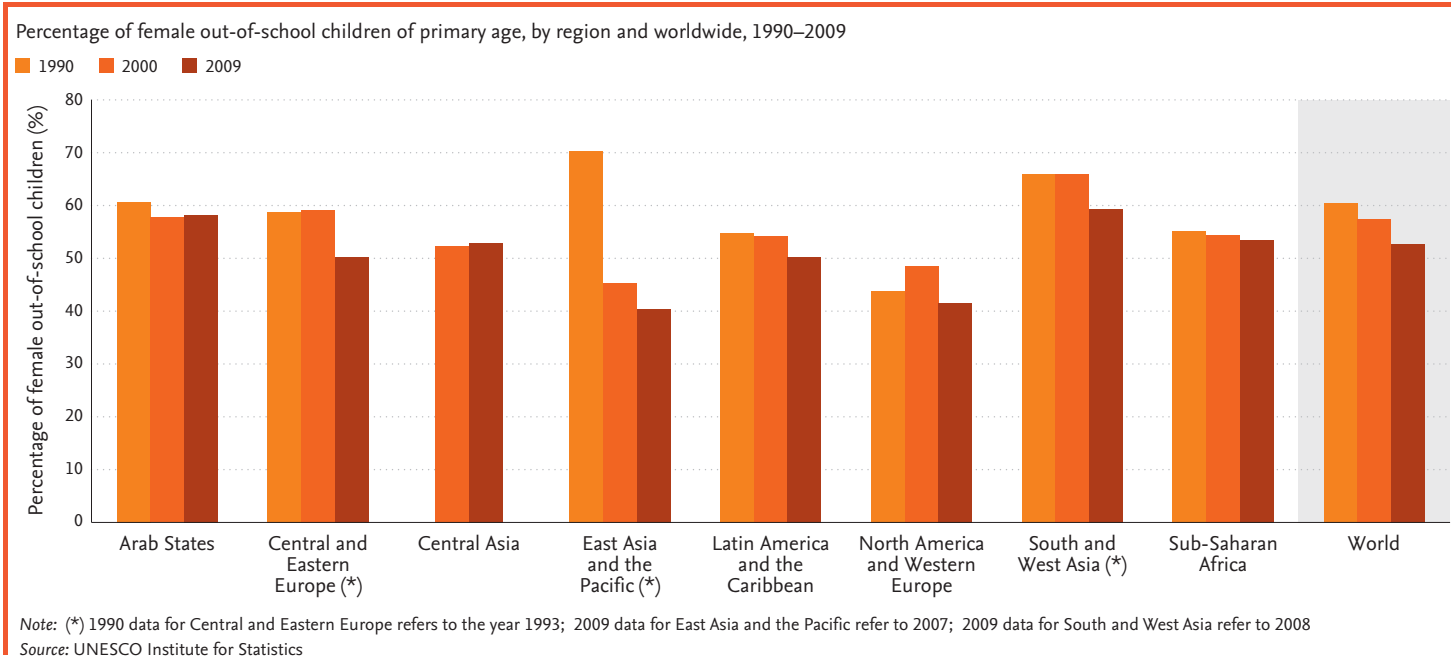


Source: UNESCO Institute for Statistics

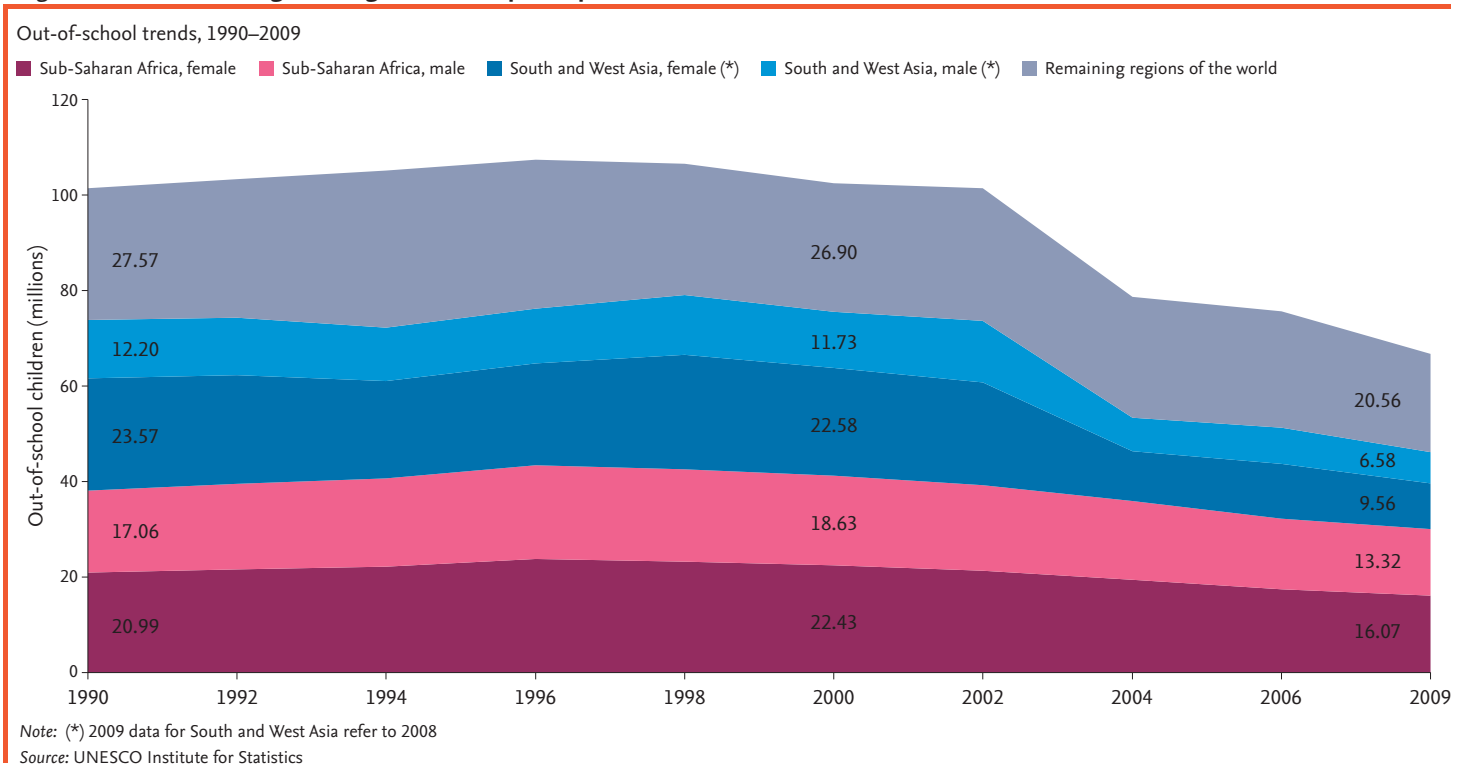
As with the overall numbers of out-of-school children, the share of girls has been declining. Figure 3.7.5 indicates that globally the proportion of girls among out-of-school children has gone down steadily, from 60 percent in 1990 to 53 percent in 2009. The most dramatic decline has taken place in East Asia and the Pacific, where the proportion was almost halved, from 70 to 40 percent in 2007.

Figure 3.7.6 shows the decline in proportions of out-of-school children by sex in sub-Saharan Africa and South and West Asia. The most dramatic gains were among girls in South and West Asia, where the percentages were halved, from 24 to 10 million children.

**Figure 3.7.5 Decline of percentage of female out-of-school children greatest in East Asia and the Pacific**



**Figure 3.7.6 Dramatic gains in girls' school participation seen in South and West Asia**



## 8. Overage children more likely to drop out of school

Primary pupils may be overage because they start school late or repeat grades. Being overage in school affects boys and girls for different reasons. As boys in poor and rural families become older, they face demands for their labour outside the home. Girls are often withdrawn to take on domestic tasks or prepare for early marriage, which is prevalent in regions such as South and West Asia and sub-Saharan Africa.

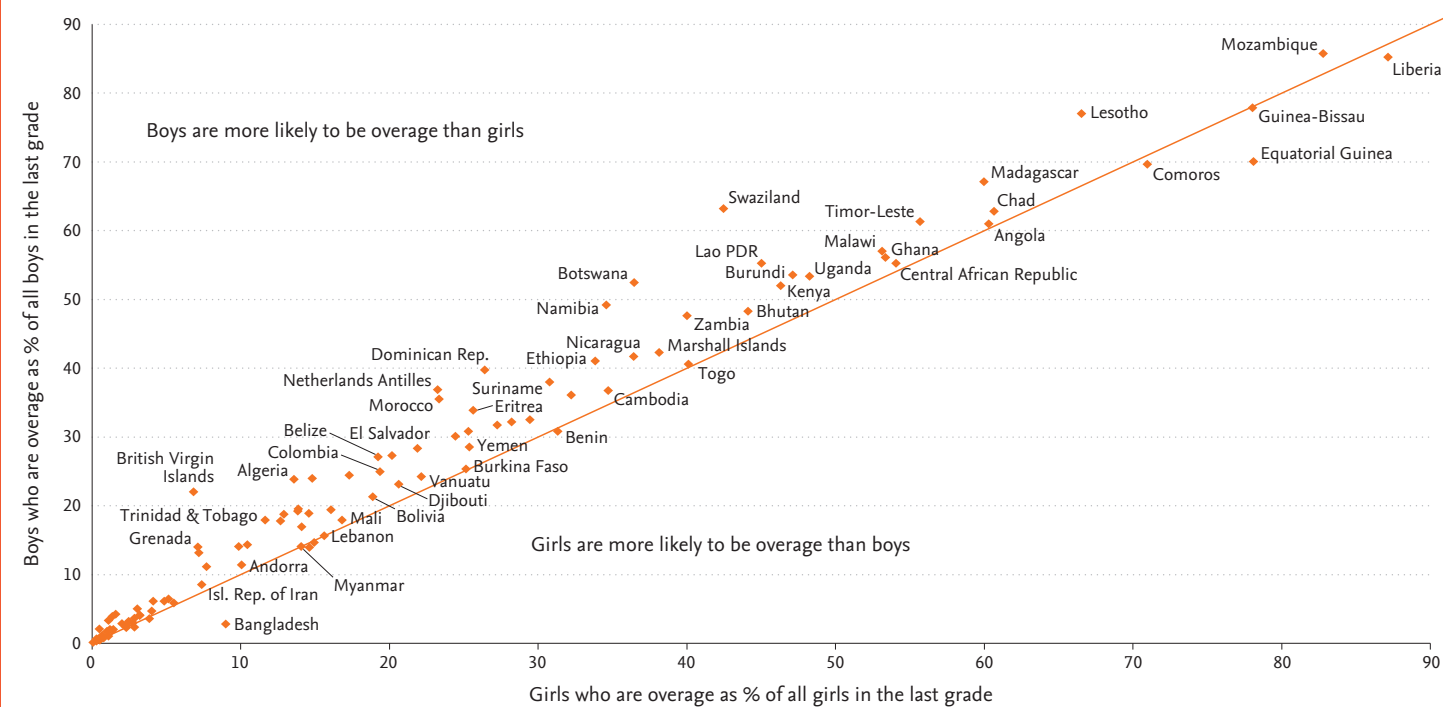
Pupils who are two or three years older than the target age for their grade are at greater risk of dropping out of school, of poor academic performance and of not

making the transition to lower secondary education.

In general, boys are much more likely than girls to be overage for their grades. Figure 3.8.1 shows that boys are most likely to be overage in 86 of the countries that have not achieved gender parity (defined as having a GPI between 0.97 and 1.03), while girls are likely to be so in only seven countries. Where boys are disproportionately overage the margins tend to be higher than they are when girls are overage. In Swaziland, for example, 63 percent of boys are overage as opposed to only 42 percent of girls.

Figure 3.8.1 Boys more likely than girls to be overage at the end of primary school

Percentage of overage boys and girls in the last grade of primary education, 2008 or latest year available



Note: For this chart, overage pupils are those who are two years or more older than the target age for their grade

Source: UNESCO Institute for Statistics

## 9. Special challenges of poor children and those in rural areas

Throughout the world enrolment in primary school tends to be highly correlated with socioeconomic status and geographic location. Children in the lowest economic quintiles are more likely to be out of school than peers from higher quintiles and to cite lack of money as their reason for not attending school. Likewise children from rural areas are more likely to be out of school than those from urban areas.

Figures 3.9.1 and 3.9.2 provide data for 15 sub-Saharan African countries showing how school attendance of

children of primary age correlates with whether pupils come from rich or poor families and whether they live in urban or rural areas. The primary adjusted net attendance rate measures the percentage of primary school-age children who attend either primary or secondary school.

These data show some consistent patterns. Among both males and females, children from families in the highest quintile of household wealth consistently participate in school at higher rates than children of the same sex from

Figure 3.9.1 Primary school attendance highest in wealthy households

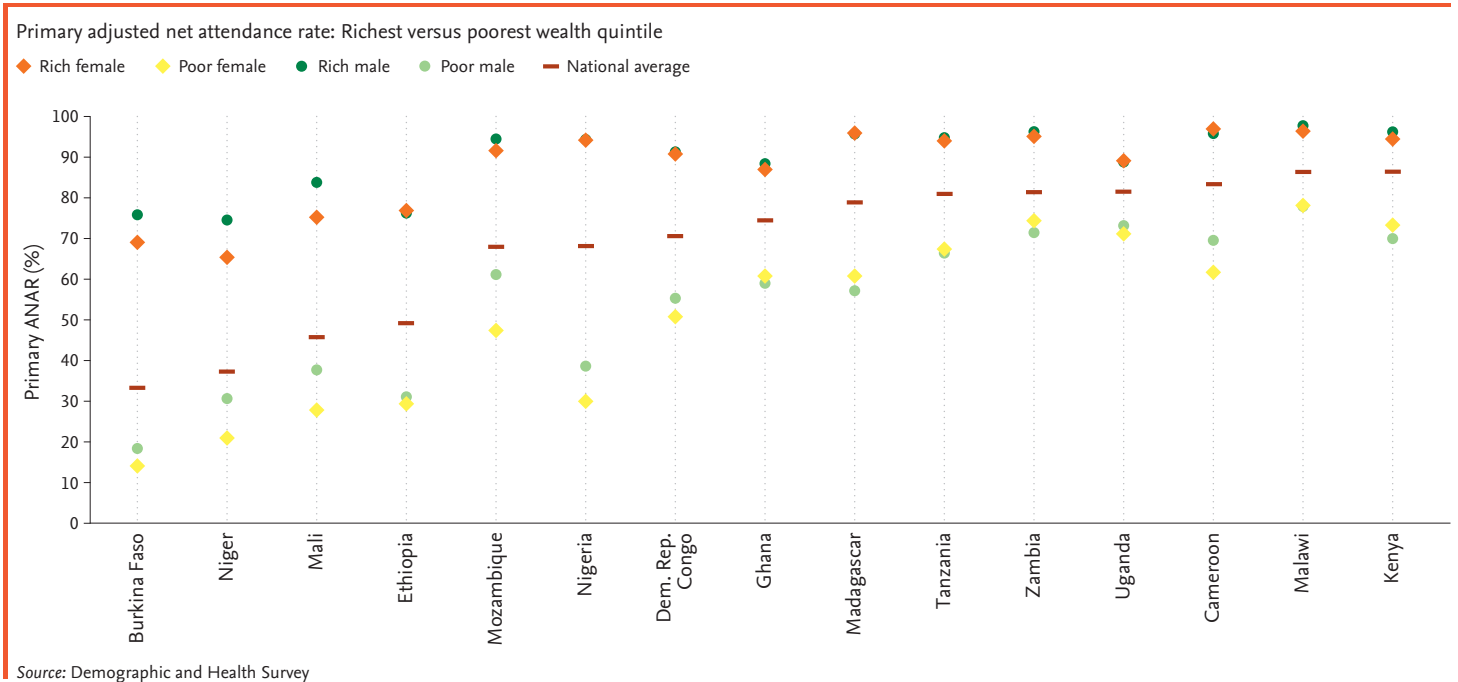
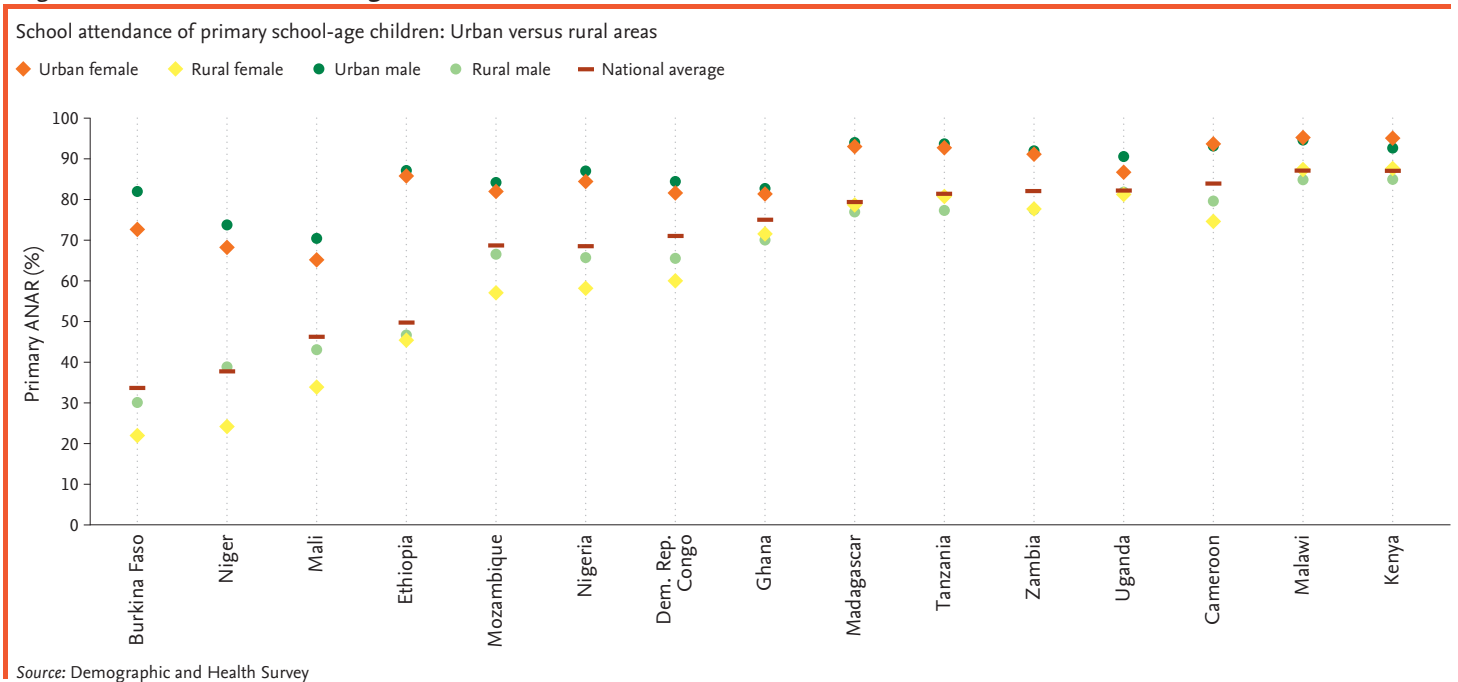


Figure 3.9.2 Attendance also higher in urban than in rural areas



households in the lowest quintiles. Likewise, attendance rates for children of both sexes who live in urban areas are consistently higher than the comparable rates for children in rural areas.

The data show some differences in patterns among the two sexes. In most countries rich males enrol at higher rates than rich females, but there are some exceptions. In Cameroon, for example, the attendance rate of 97 percent among rich females is slightly higher than

the 95 percent for rich males. Likewise, urban males tend to participate at higher rates than urban females, but in Kenya the female rate of 95 percent is above the male rate of 92 percent.

In general, the largest disparities among the sexes occur in countries with the lowest attendance rates. Such countries also tend to have the largest gaps between urban and rural and between rich and poor.

# Enrolment and gender trends: secondary education

The previous chapter documented the progress that has been made toward the goals of enhancing access to education and closing the gender gap. Although the gains have not been as rapid as those at the primary level, countries around the world are making steady progress toward increased access to secondary education. In secondary education, especially the upper secondary level, students typically have more academic options than at the primary level. They can usually choose from a range of general and specialized study programmes offering different levels of instruction and leading to different career paths. Some of those programmes focus on preparing students for tertiary education, while others prepare them for direct entry into the labour force.

The extent to which girls are disproportionately excluded from education is higher at the secondary level than in primary education and increases further from the lower to the upper secondary levels. There may be various reasons for this: Emotional and physical dangers may increase as girls grow into young women and face sexual harassment and assault and social demands to conform to traditional gender roles. Lack of bathrooms and other sanitary facilities can be a problem, and the daily journey to school can be unsafe for girls and young women in communities around the world. Traditional conceptions of appropriate roles for both women and men are often pronounced in the technical and vocational aspects of secondary education.

## 1. Gross enrolment ratios rising at secondary level

Patterns of gross secondary enrolment ratios around the world reveal a polarized picture. Among the 187 countries with data, shown in Map 4.1.1, more than four out of ten (43 percent) countries have GERs of less than 80 percent, while nearly a quarter (27 percent) have rates of 98 percent or more – which approaches universal secondary enrolment.

Map 4.1.1 Secondary gross enrolment ratios vary amongst different regions

Gross enrolment ratio in secondary education

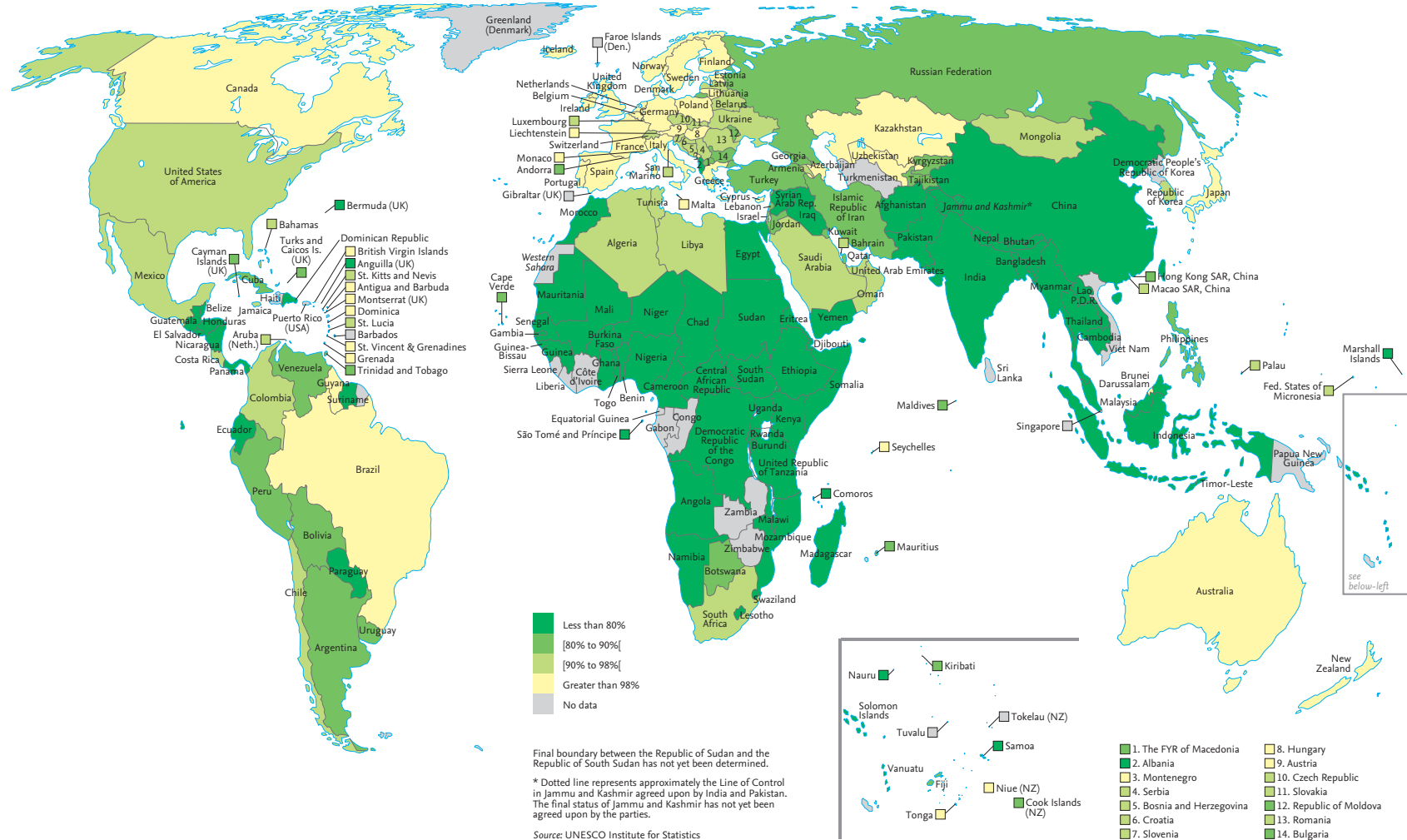
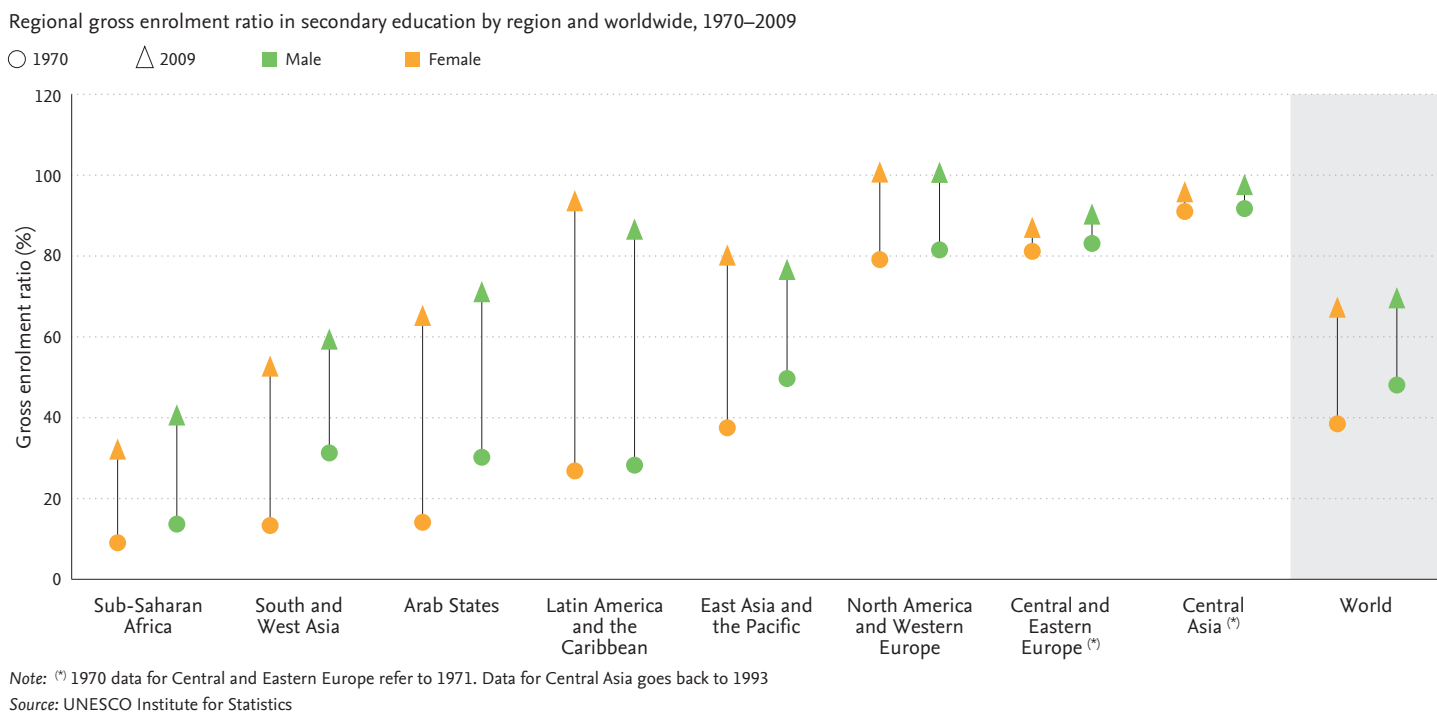


Figure 4.1.1 Upward trend in secondary GER seen in all regions and for both sexes



There has been a general upward trend in secondary level GERs in all regions for both males and females. Between 1970 and 2009 the global average GER for males rose from 48 to 69 percent, while that for females increased from 39 to 67 percent.

As seen in Figure 4.1.1, the largest gains took place in Latin America and the Caribbean, where the GER for females soared from 27 to 93 percent and that for males rose from 28 to 86 percent. Females made impressive progress in the Arab States, East Asia and the Pacific, and South and West Asia. Males also made substantial progress in the Arab States, where their GER rose from 30 to 71 percent. The smallest gains were registered in Central and Eastern Europe, where the GER was already

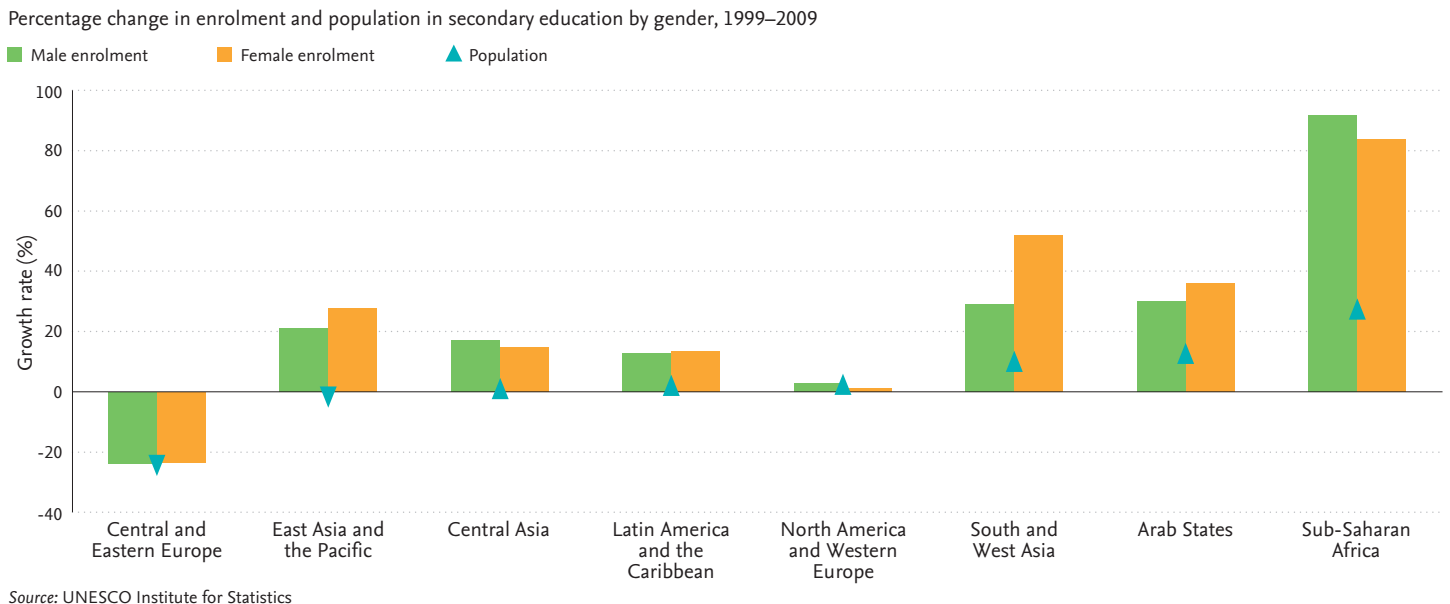
the highest of all regions for both males and females in 1971.

With GERs above 100 percent for both males and females, North America and Western Europe has the highest secondary level gross enrolment ratio. The lowest ratios are found in sub-Saharan Africa, which was at the bottom of the table in 1970 and is the only region that still has GERs below 45 percent for both sexes.

Males have higher GERs than females in five regions, while females have the edge in Latin America and the Caribbean and in East Asia and the Pacific. The GERs are almost the same for both sexes in North America and Western Europe.



Figure 4.1.2 Secondary enrolment rising faster than school-age population in most regions



As indicated in Figure 4.1.2, the number of secondary age children either held steady or increased between 1999 and 2009 in almost all regions of the world. Nevertheless, in almost all of these regions secondary enrolment levels also rose and did so at even faster rates than the population growth. The only region to register

a population loss was Central and Eastern Europe, where there was a parallel decline in secondary enrolment. The surge in secondary enrolment was particularly strong among females in South and West Asia and among both sexes in sub-Saharan Africa.

Figure 4.1.3 Patterns of gross enrolment ratio by gender vary among countries

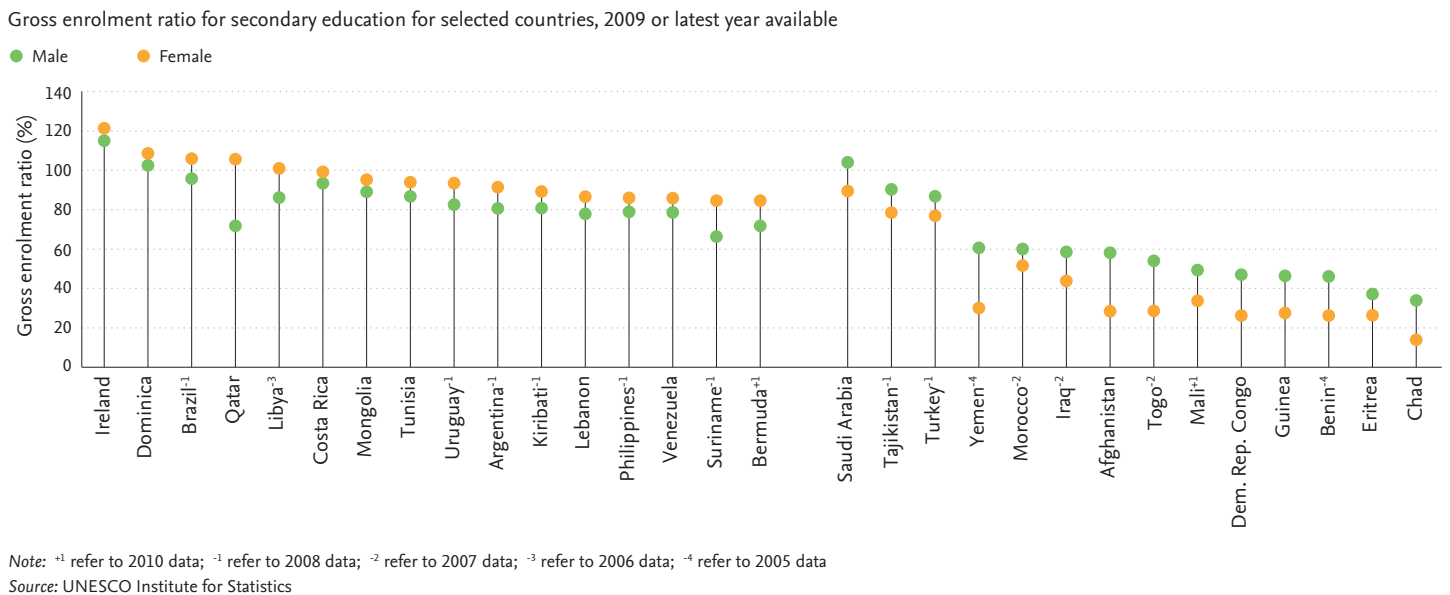


Figure 4.1.3 presents the gross enrolment ratios in secondary education for 30 selected countries. The GERs are higher for males than for females in half of these countries. A striking feature of these data is that, with the exception of Qatar, for the countries where females have

an edge, the differences are not all that large. For countries where males have higher GERs than females, the gap tends to be greater, such as for Afghanistan, Togo and Yemen.

The net enrolment rate (NER) describes the proportion of children in the appropriate age group for a particular level of education who are actually enrolled in school. Map 4.1.2 shows how the NERs for lower secondary education vary in countries around the world. Enrolment at the secondary level is important because it is widely regarded as an upward extension of primary level schooling, where universal enrolment is an important objective.

Recent data show a wide distribution of net enrolment patterns at the lower secondary level. About one in five countries register NERs of less than 75 percent, with a comparable proportion in the range of 98 to 100 percent. One third of countries (30 percent) have NERs between 85 and 95 percent.

Similar disparities are seen at the regional level, as can be seen in Figure 4.1.4 offering data on each of the eight regions of the world for the lower secondary level, as well as the countries that have the highest and lowest NERs. The greatest variations are found in sub-Saharan Africa, where the NERs range from 22 percent in Niger to nearly 100 percent in Seychelles.

Map 4.1.2 Net enrolment rates in lower secondary education vary widely

Net enrolment rate in lower secondary education

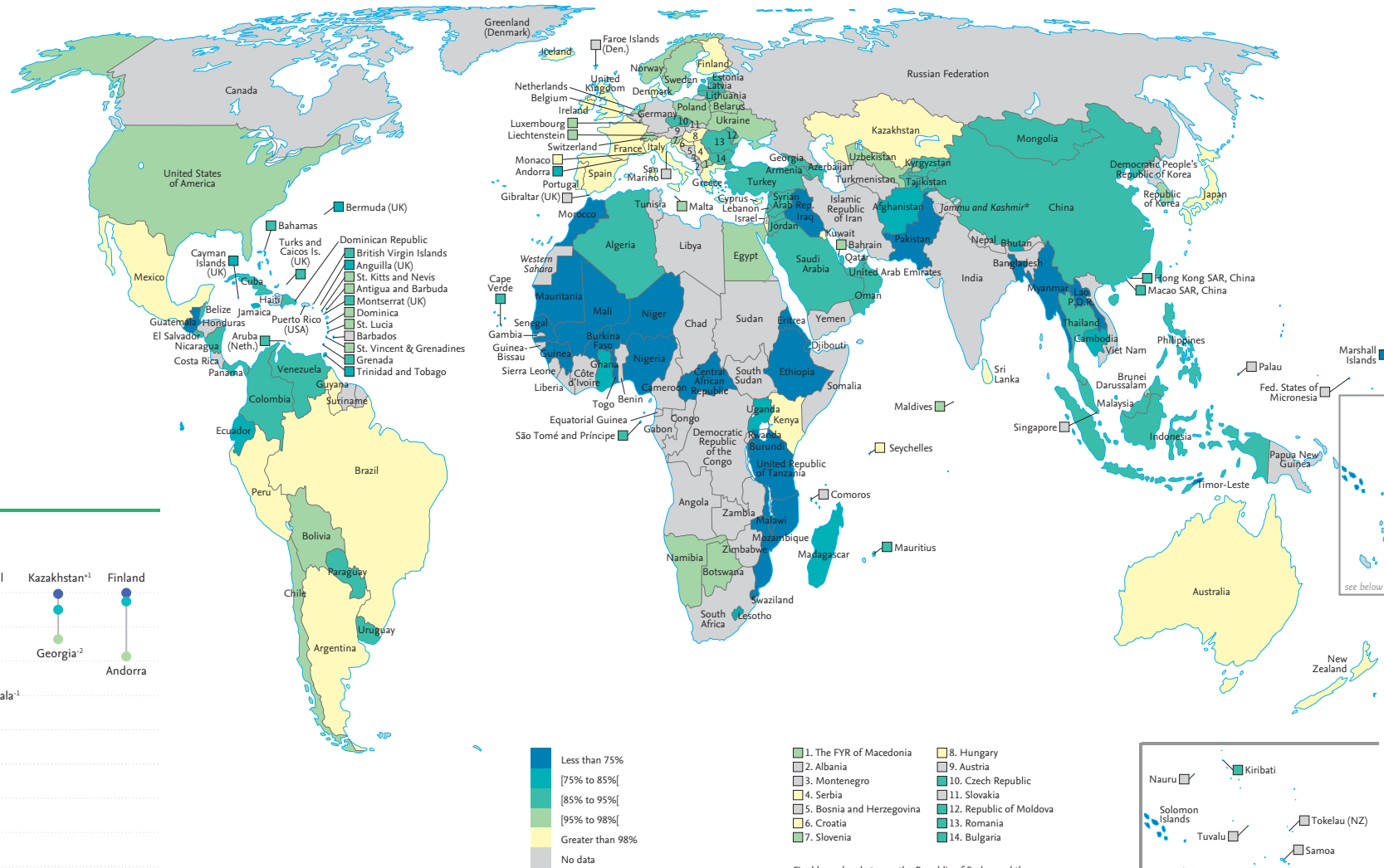
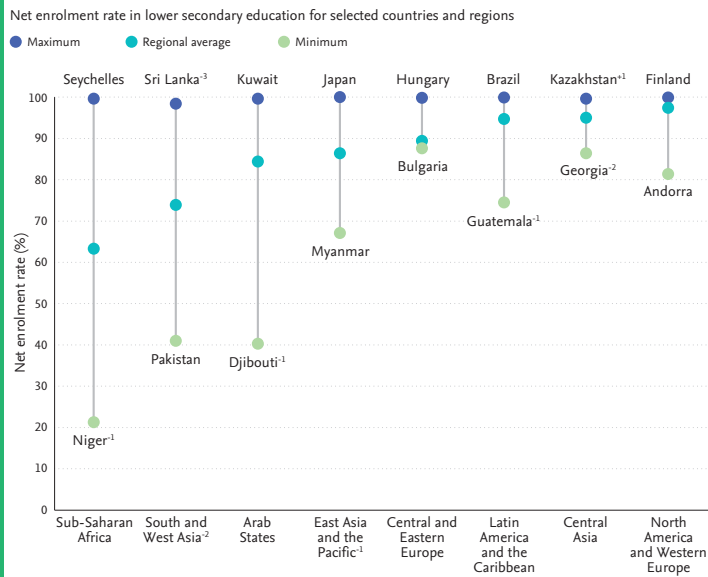


Figure 4.1.4 NERs range widely within regions



Note: <sup>1</sup> refer to 2010 data; <sup>2</sup> refer to 2008 data; <sup>3</sup> refer to 2007 data; <sup>4</sup> refer to 2006 data  
Source: UNESCO Institute for Statistics

- 1. The FYR of Macedonia
- 2. Albania
- 3. Montenegro
- 4. Serbia
- 5. Bosnia and Herzegovina
- 6. Croatia
- 7. Slovenia
- 8. Hungary
- 9. Austria
- 10. Czech Republic
- 11. Slovakia
- 12. Republic of Moldova
- 13. Romania
- 14. Bulgaria

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

## 2. Upward trends in secondary level gender parity

As at the primary level, there has been a general upward trend in the percentage of countries reaching gender parity in secondary education, although the pattern has not been steady across the various regions.

As illustrated in Map 4.2.1, gender parity has been achieved at the overall secondary level (lower and upper combined) in slightly more than one-third of countries (39 percent). The remaining countries are almost equally divided between those where males are favoured (31 percent) and those where females have the edge (30 percent). Table 4.2.1 presents a list of selected countries which have the lowest and highest values of the gender parity index in secondary education.

Map 4.2.1 Gender parity at secondary level reached in more than one-third of countries

Gender parity index in secondary education

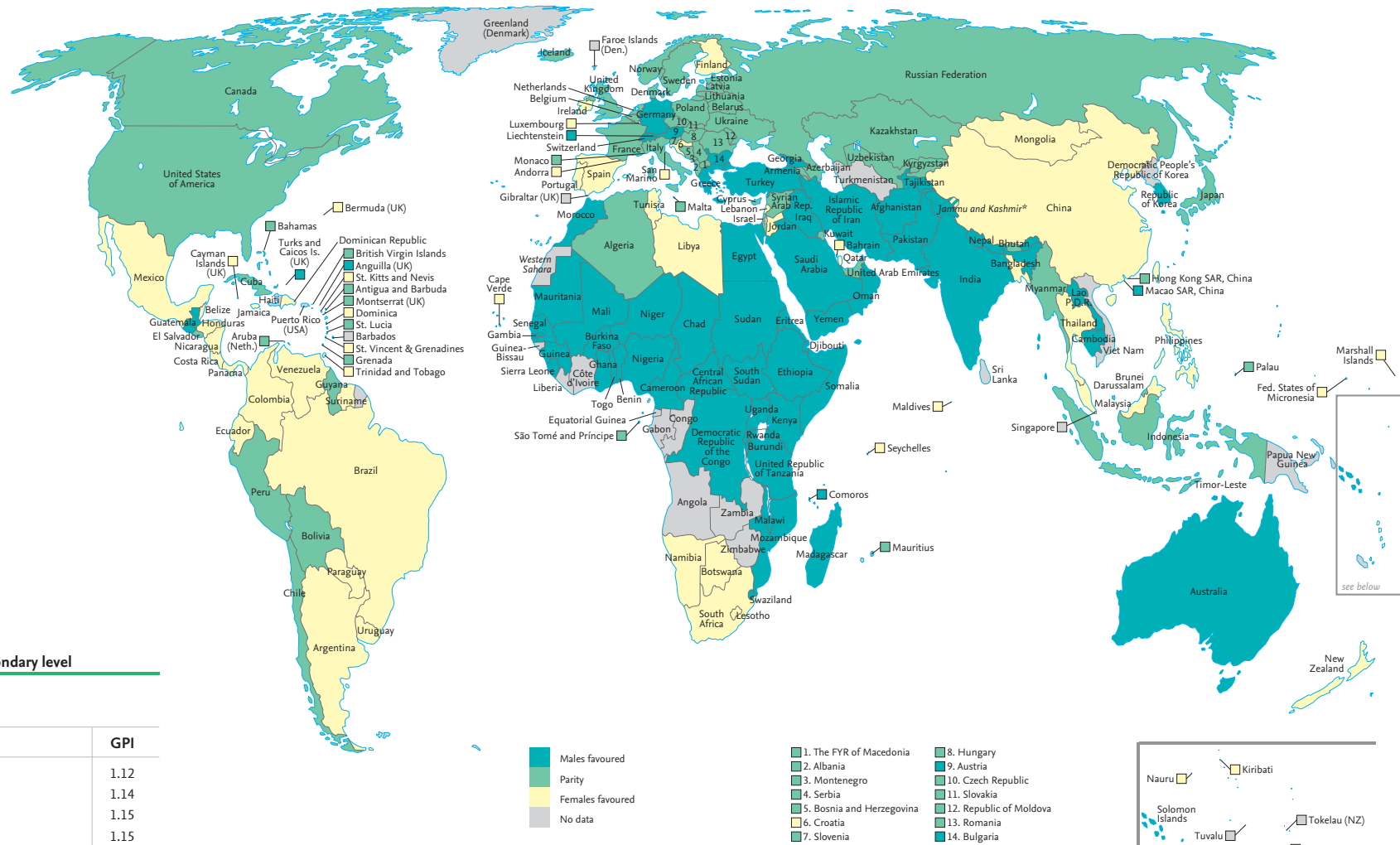


Table 4.2.1 Some countries favour males, some females, at secondary level

Gender parity index for selected countries, 2009 or latest year available

Males favoured		Females favoured	
Country	GPI	Country	GPI
Chad	0.41	Nicaragua <sup>-1</sup>	1.12
Somalia <sup>-2</sup>	0.46	Namibia <sup>-1</sup>	1.14
Afghanistan	0.49	Libya <sup>-3</sup>	1.15
Togo <sup>-2</sup>	0.53	Bermuda <sup>+1</sup>	1.15
Central African Republic	0.56	Cape Verde	1.15
Democratic Republic of the Congo	0.56	Nauru <sup>-1</sup>	1.16
Guinea	0.59	Honduras <sup>-3</sup>	1.21
Mali	0.65	Suriname <sup>-1</sup>	1.22
Niger <sup>+1</sup>	0.66	Lesotho	1.28
Sierra Leone <sup>-2</sup>	0.66	Qatar	1.32

Note: GPI in tables is adjusted  
<sup>+1</sup> refer to 2010 data; <sup>-1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data; <sup>-3</sup> refer to 2006 data  
 Source: UNESCO Institute for Statistics

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
<sup>\*</sup> Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

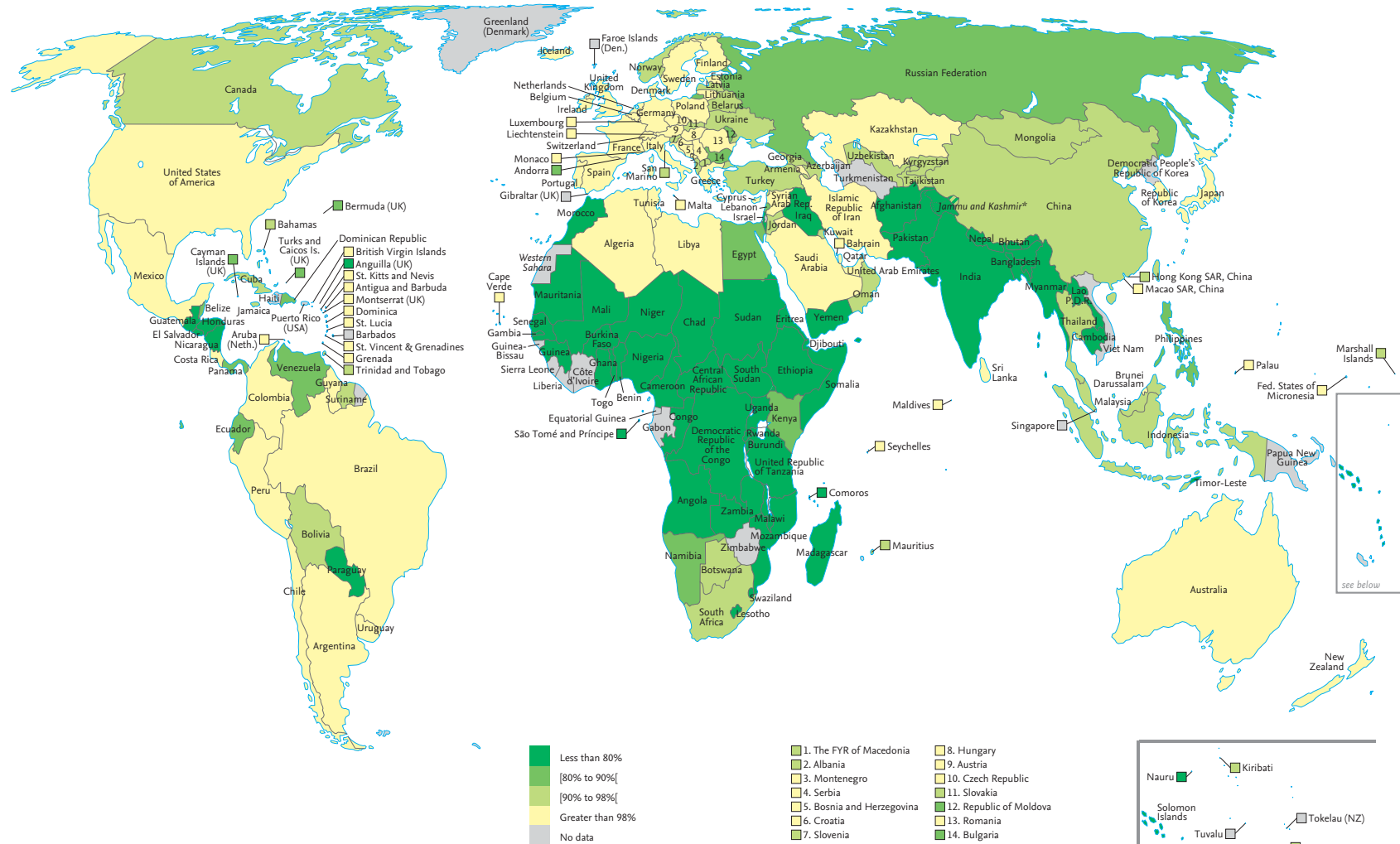
Source: UNESCO Institute for Statistics

### 3. Gross enrolment ratios different at lower and higher secondary levels

Gross enrolment ratios are much higher at the lower secondary level, which is commonly viewed as an extension of compulsory primary schooling, than they are at the upper secondary level. Maps 4.3.1 and 4.3.2 document how countries around the world are distributed according to their GERs at the lower and upper secondary levels respectively.

Map 4.3.1 Enrolments highest at lower secondary level

Gross enrolment ratio in lower secondary education



#### Box 4.1 The adjusted gender parity index

One of the difficulties in presenting the GPI is that the scale of disadvantage for girls or boys is not represented symmetrically around 1. For example, a GPI of 0.5 indicates that the female value of the indicator being reviewed is half the male value whilst a GPI of 1.5 (also 0.5 units away from parity) indicates the male value of the indicator is two-thirds of the female value (not half). Consequently, when boys are underrepresented in a given indicator, it appears more drastic than when girls are disadvantaged.

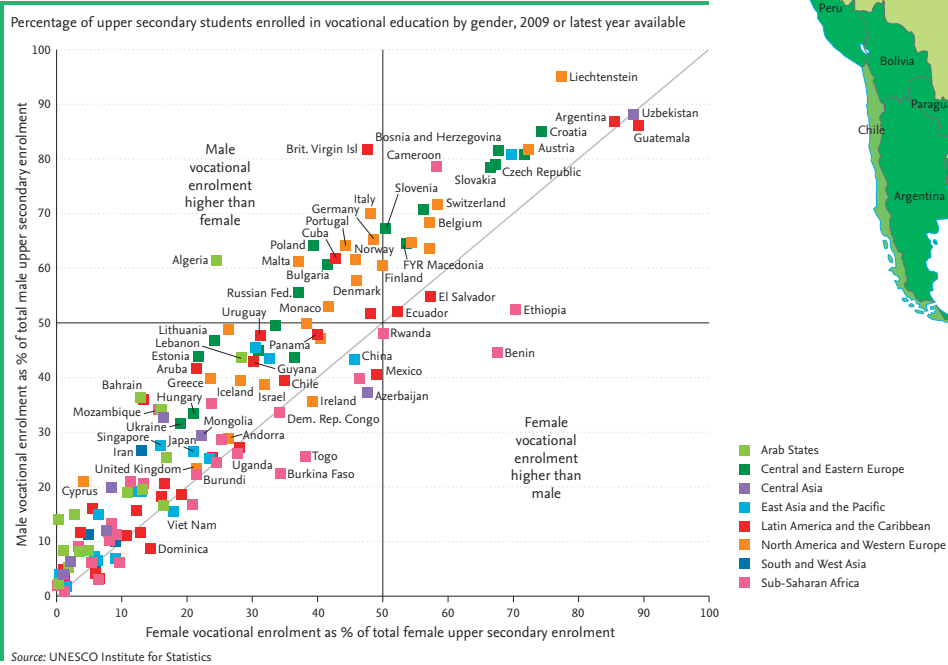
Thus, for the analysis and figures presented in chapters 4 and 5, the GPI is adjusted to present disadvantages symmetrically for both genders. The adjusted GPI is derived from the standard GPI, yet values greater than 1 are slightly different as the adjusted GPI presents disparities on a comparable scale.

The adjusted GPI uses the following methodology: when the ratio of female to male values of a given indicator is less than 1, the adjusted GPI is identical to the unadjusted GPI. By contrast, when the ratio is greater than 1, the adjusted GPI is calculated as the ratio of male to female values and the ratio is subtracted from 2. For instance, if the GER for males is 33 percent and 66 percent for females, the ratio of male to female GER is 0.5. Then, subtracting 0.5 from 2 gives an adjusted GPI of 1.5 while the unadjusted GPI would show a result of 2.

The ratios are consistently higher at the lower secondary level. For example, 40 percent of countries have GERs of 98 percent or more at the lower secondary level, but only a sixth (16 percent) of countries have GERs of 98 percent or more at the upper secondary level. Likewise, more than half (57 percent) of the countries register a ratio lower than 80 percent at the upper secondary level, but only a third (30 percent) of countries have GERs below 80 percent at the lower secondary level.

In the majority of countries worldwide, young men are more likely than young women to enrol in vocational education. Figure 4.3.1 compares male and female vocational enrolment in selected countries colour-coded by region. Although the male percentages are higher in a majority of countries, there are numerous exceptions, especially among countries in sub-Saharan Africa. In Burkina Faso, females out-number males in vocational education by 34 to 22 percent. In Ethiopia they do so by 70 to 52 percent.

Figure 4.3.1 Despite general pattern, some countries have more females than males in vocational education



Map 4.3.2 Enrolments lowest at upper secondary level

Gross enrolment ratio in upper secondary education

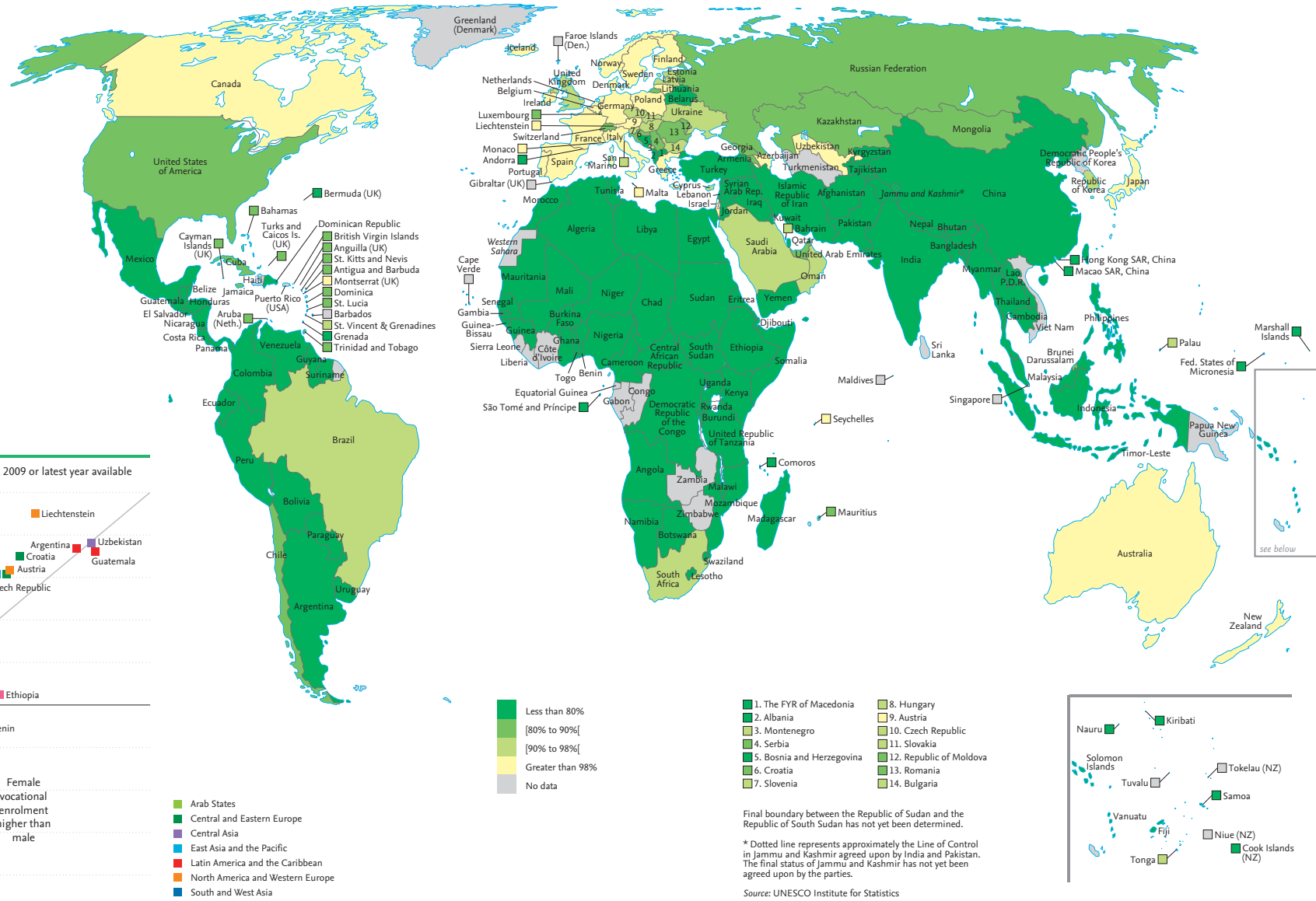
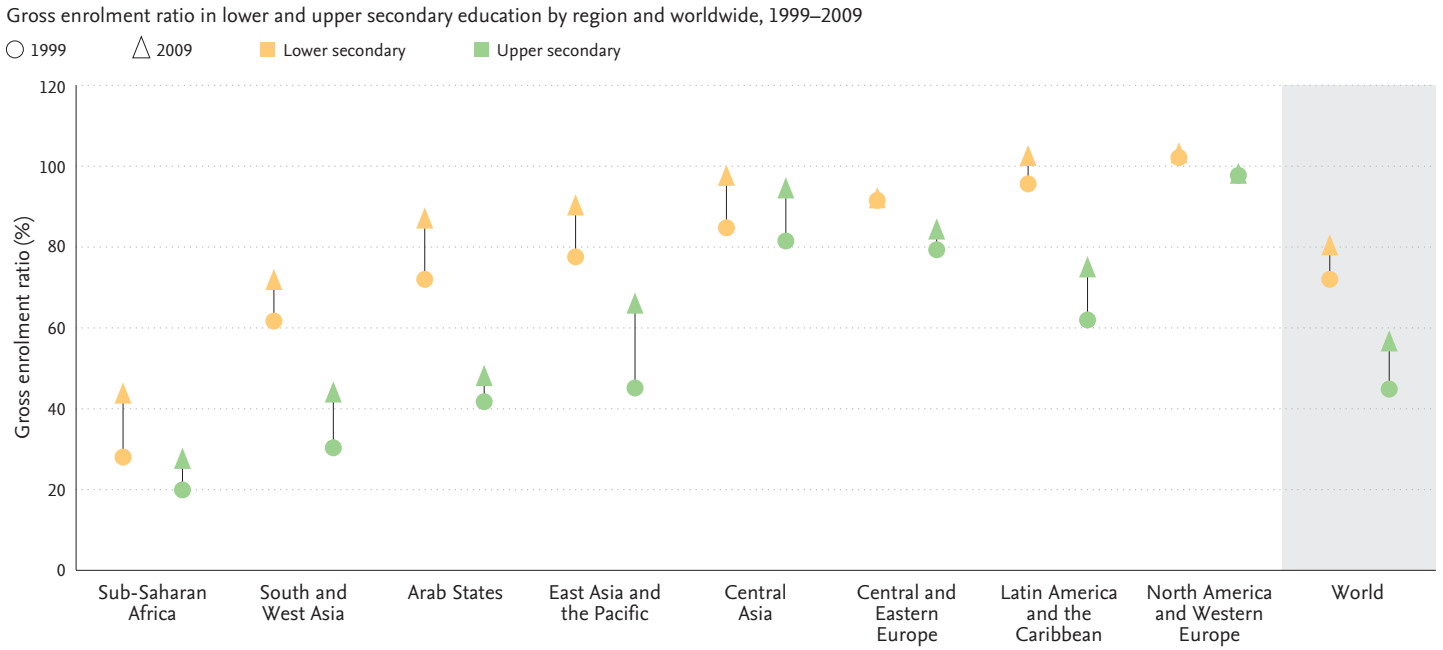


Figure 4.3.2 Significant enrolment increases at both lower and upper secondary levels



Gross enrolment ratios grew significantly between 1999 and 2009 for both the lower and upper secondary levels, and the increases were seen in all regions of the world. Figure 4.3.2 shows these patterns for 1999 and 2009

respectively. In all regions the ratios at the lower secondary level exceeded those at the upper secondary level.

Figure 4.3.3 Regions differ in gender parity patterns at lower and upper secondary levels

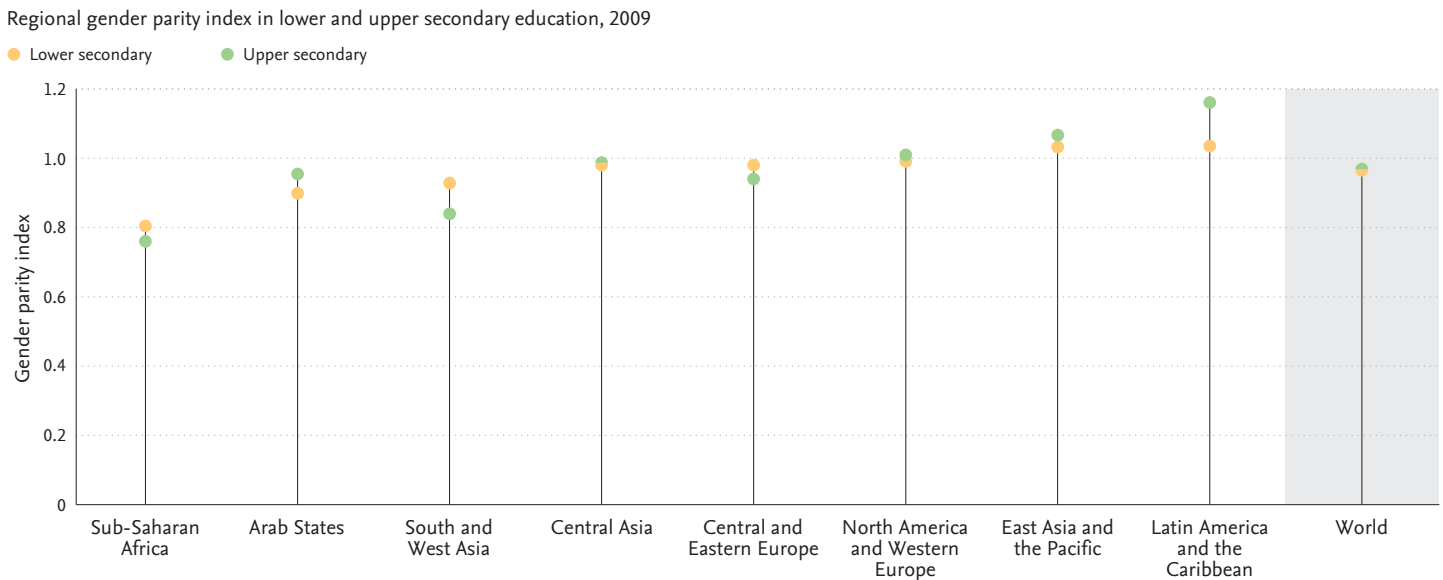
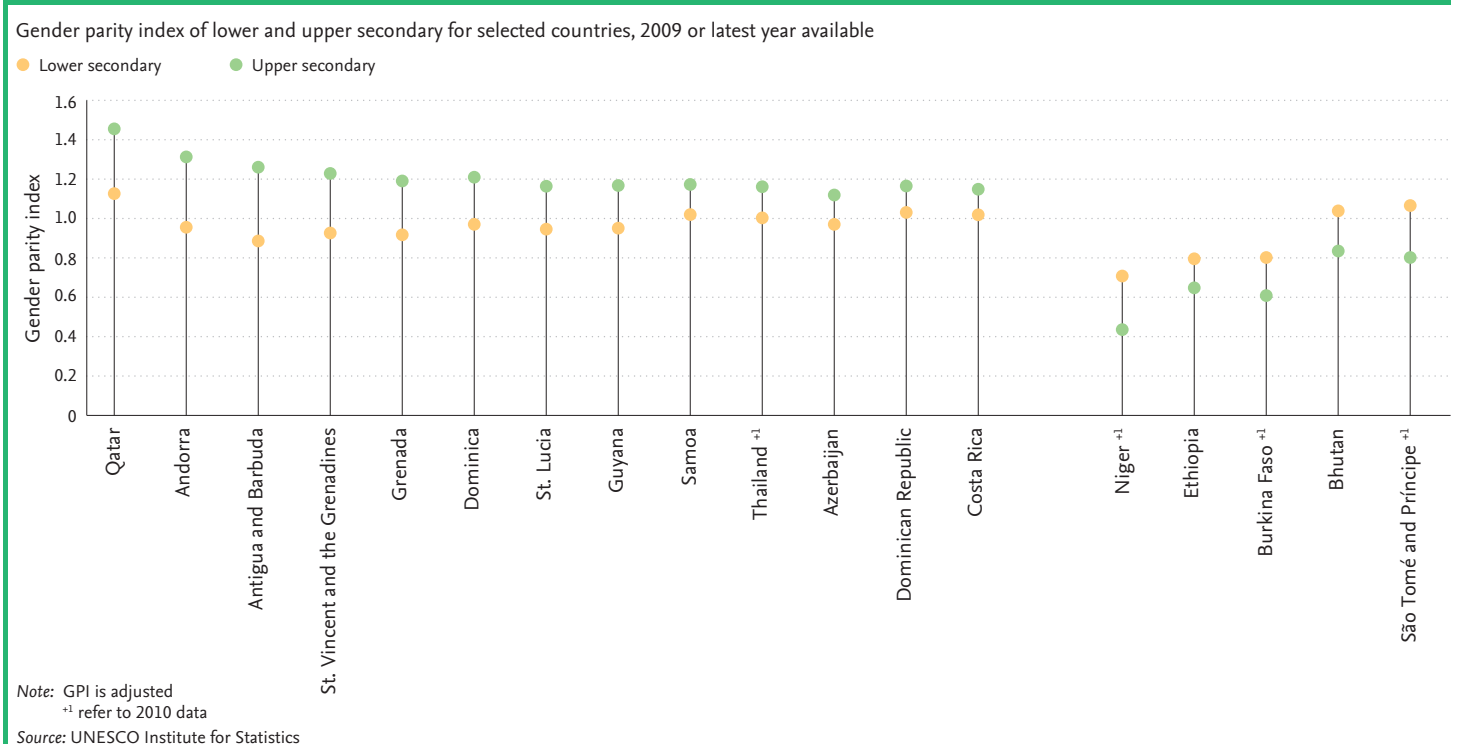


Figure 4.3.3 compares data on gender parity at the lower and upper secondary levels. The global average GPI of 0.97 is the same for both levels, and the regions are equally divided among regions where the GPI is higher for lower secondary and those where it is higher at the upper secondary level, with the exception of Central Asia where the GPI is the same for both levels. For the upper secondary level in most regions the GPI is less than 0.97— meaning that males are favoured.

A conspicuous exception is seen in Latin America and the Caribbean, where the GPI favouring girls is 1.16 at the upper secondary level and in East Asia and the Pacific, where the GPI is of 1.07. For the lower secondary level, half of the regions have achieved parity. In three out of the remaining four regions, males are favoured and in Latin America and the Caribbean a GPI of 1.04 indicated that girls have an advantage.

Figure 4.3.4 Gender parity index of lower and upper secondary for selected countries



Whatever the regional differences in GPI may be, they mask even greater differences among various countries. Figure 4.3.4 presents data on GPI rates for 18 selected countries. At the lower secondary level, the differences

range from 0.71 in favour of males in Niger to 1.13 in favour of females in Qatar. The ranges are even more dramatic at the upper secondary level – ranging from 0.44 in Niger to 1.45 in Qatar.

## 4. Out-of-school adolescents a continuing problem

Map 4.4.1 presents data on the females of lower secondary age who are not enrolled in school. It shows that in almost one-third (32 percent) of the countries this proportion is at least 15 percent. Another third of the countries (32 percent) have an out-of-school rate of less than 5 percent.

Table 4.4.1 illustrates how great the variations are among countries by listing some of the countries with the lowest and highest rates of female out-of-school adolescents. Although countries with low rates of female out-of-school adolescents can be found in most regions of the world, the majority of the countries with high rates are concentrated in sub-Saharan Africa.

Map 4.4.1 High rates of out-of-school female adolescents detected in certain regions

Rate of female out-of-school adolescents (lower secondary education)

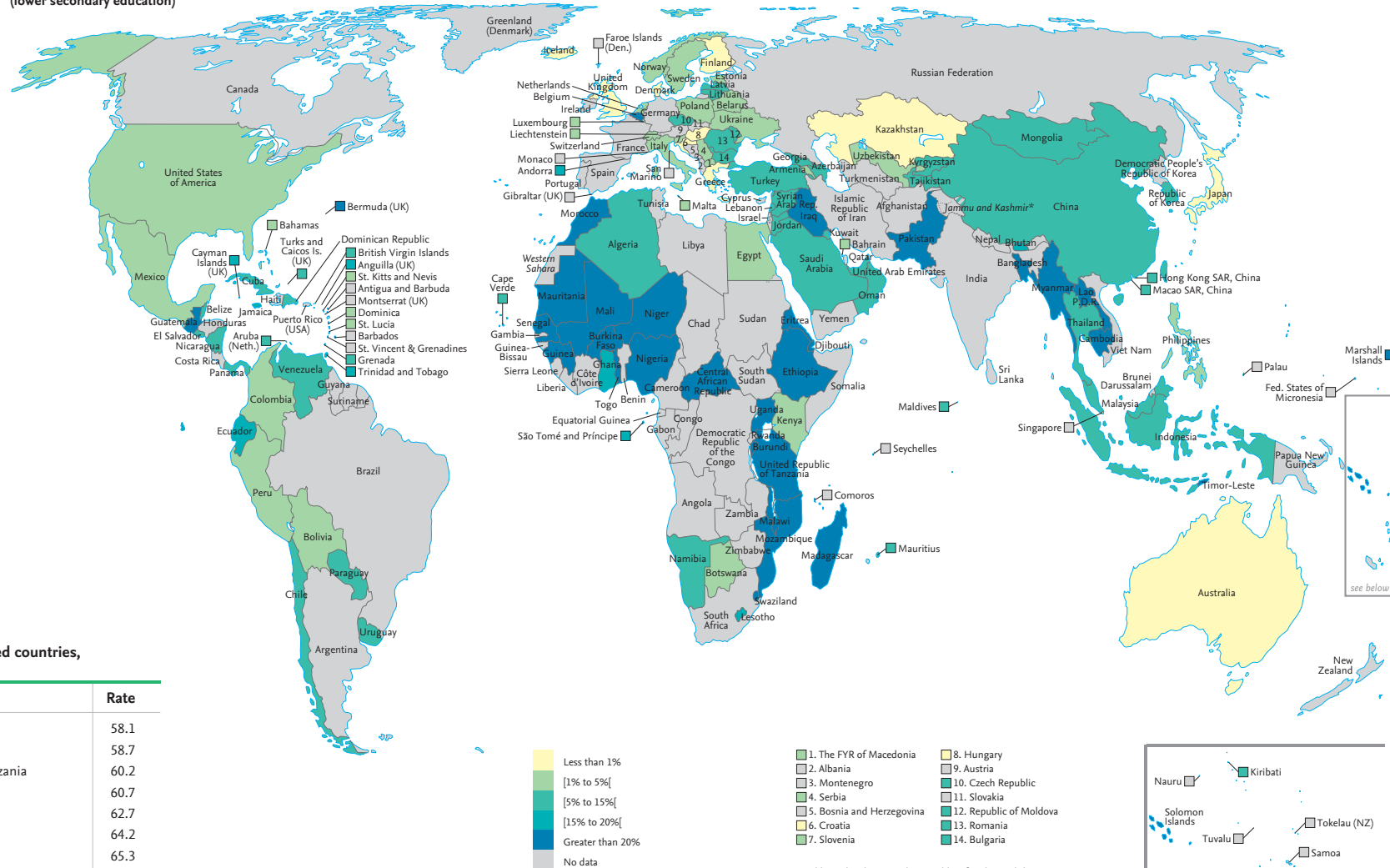


Table 4.4.1 Rate of female out-of-school adolescents for selected countries, 2009 or latest year available

Country	Rate	Country	Rate
Australia <sup>-1</sup>	0.0	Burundi <sup>-2</sup>	58.1
Kazakhstan <sup>-4</sup>	0.2	Burkina Faso <sup>+1</sup>	58.7
Finland <sup>-4</sup>	0.2	United Republic of Tanzania	60.2
Japan <sup>-4</sup>	0.2	Guinea	60.7
Croatia <sup>-1</sup>	0.3	Eritrea	62.7
United Kingdom <sup>-1</sup>	0.5	Pakistan	64.2
Denmark <sup>-2</sup>	0.6	Djibouti <sup>-1</sup>	65.3
Greece <sup>-3</sup>	0.7	Central African Republic <sup>+1</sup>	68.8
Hungary	0.8	Senegal <sup>-3</sup>	71.3
Iceland	0.8	Niger <sup>-2</sup>	83.4

Note: <sup>-1</sup> refer to 2010 data; <sup>+1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data; <sup>-3</sup> refer to 2006 data; <sup>-4</sup> refer to 2005 data  
Source: UNESCO Institute for Statistics

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics



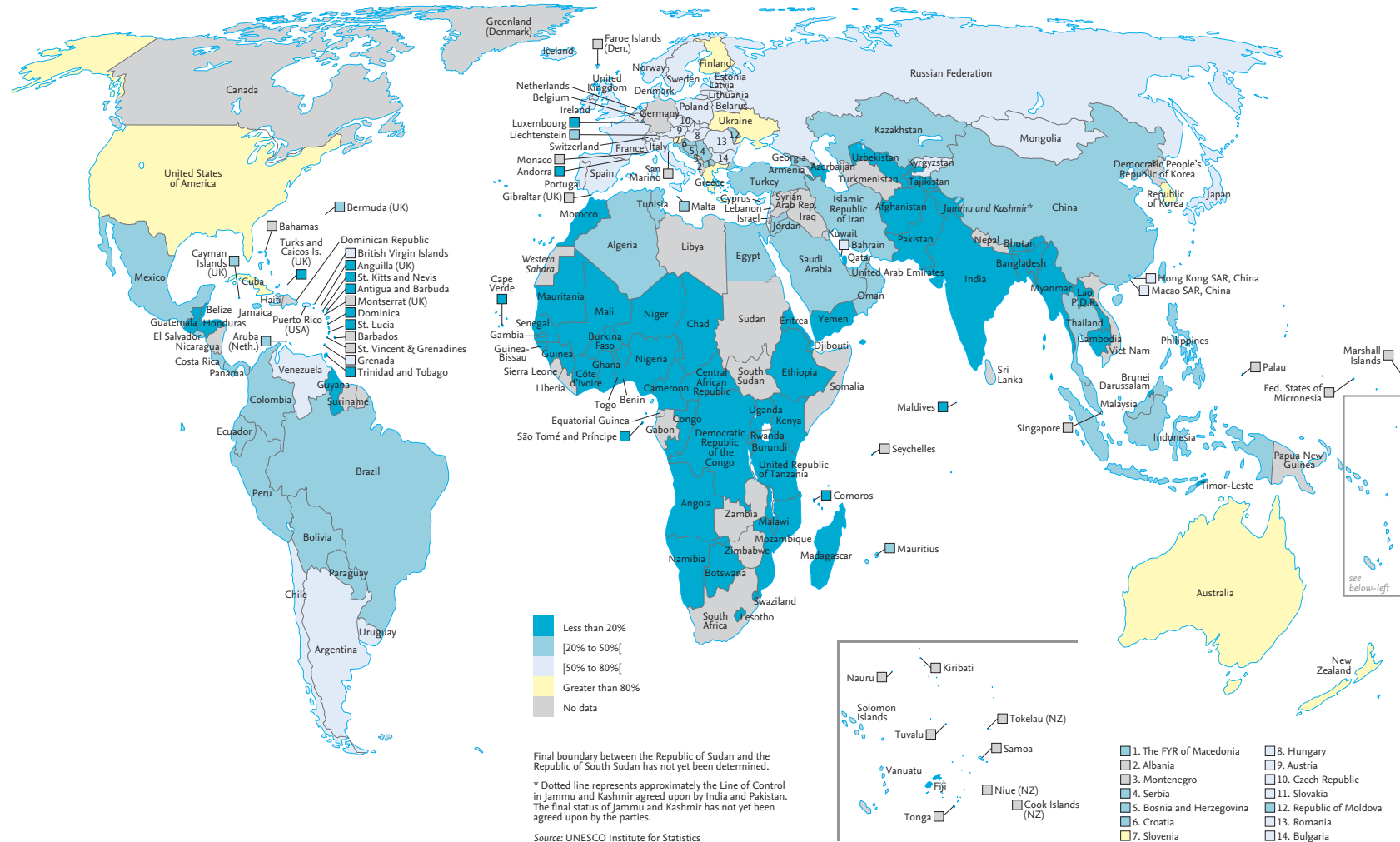
# Enrolment and gender trends: tertiary education

Although access to higher education remains problematic in many countries, the last four decades have brought a major expansion of higher education in every region of the world, and women have been the principal beneficiaries in all regions. Female enrolment at the tertiary level has grown almost twice as fast as that of men over the last four decades for reasons that include social mobility, enhanced income potential and international pressure to narrow the gender gap. Nevertheless, enhanced access to higher education by women has not always translated into enhanced career opportunities, including the opportunity to use their doctorates in the field of research.

## 1. Gross enrolment ratio soaring at the tertiary level

Total enrolment at the tertiary level soared from 32 million students in 1970 to 165 million in 2009 – an increase of around 500 percent. Map 5.1.1 depicts the gross enrolment ratio for tertiary enrolment in 158 countries for which data are available. The GER is below 20 percent in 43 percent of the countries and falls between 20 and 50 percent in a quarter. Another quarter (26 percent) of the countries fall between the 50 to 80 percent range. The GER registers above 80 percent in only nine nations.

Map 5.1.1  
Tertiary level gross enrolment ratios vary across regions  
Gross enrolment ratio in tertiary education



Overall enrolment figures, however, do not tell the whole story. As seen in Figure 5.1.1, although every region of the world has experienced a surge in tertiary enrolment, the most dramatic gains have been recorded in regions that had the lowest levels of enrolment in 1970 and which continue to record modest enrolment levels to this day.

Tertiary enrolments in 2009 were 24 times the 1970 figure in sub-Saharan Africa and 17 times in the Arab States. Enrolments multiplied 15-fold in East Asia and the Pacific, which now boasts the highest tertiary education enrolment of any region (52 million). Enrolments in North America and Western Europe rose by 250 percent, but the region's share of total tertiary enrolment dropped from nearly half (45 percent) in 1970 to less than a quarter (22 percent) in 2009.

Figure 5.1.2 shows how the tertiary GER rose in selected countries. Particularly notable is Thailand, where the 2009 gross enrolment ratio was 16 times the 1971 level. Particularly dramatic increases also occurred in Bahrain (up to 36 times) and Cameroon (up to 20 times).

Increases in tertiary enrolment have far out-stripped the growth of the school-age population in all regions and for both sexes. As shown in Figure 5.1.3, consistent with the trends described above, the most dramatic gains were in East Asia and the Pacific, especially among women, and in sub-Saharan Africa, where the growth of enrolment among males was marginally higher than that among females.

Figure 5.1.1 Largest gains seen for regions that had the furthest to go

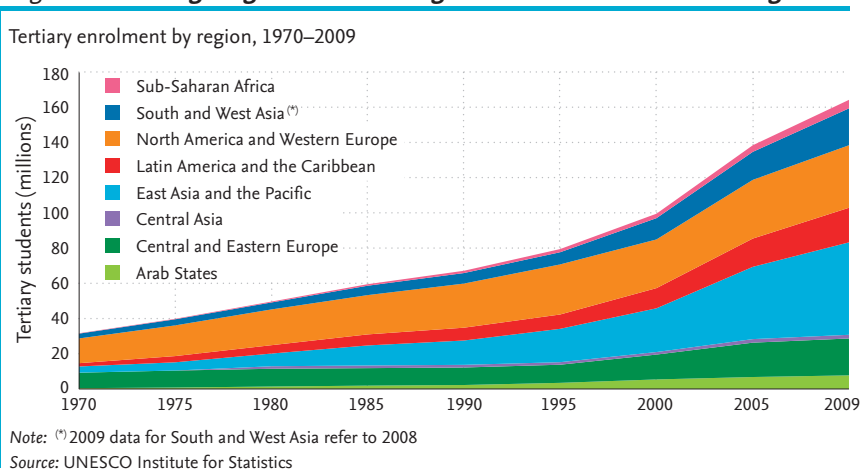


Figure 5.1.2 Dramatic gains seen in Thailand, Bahrain and Cameroon

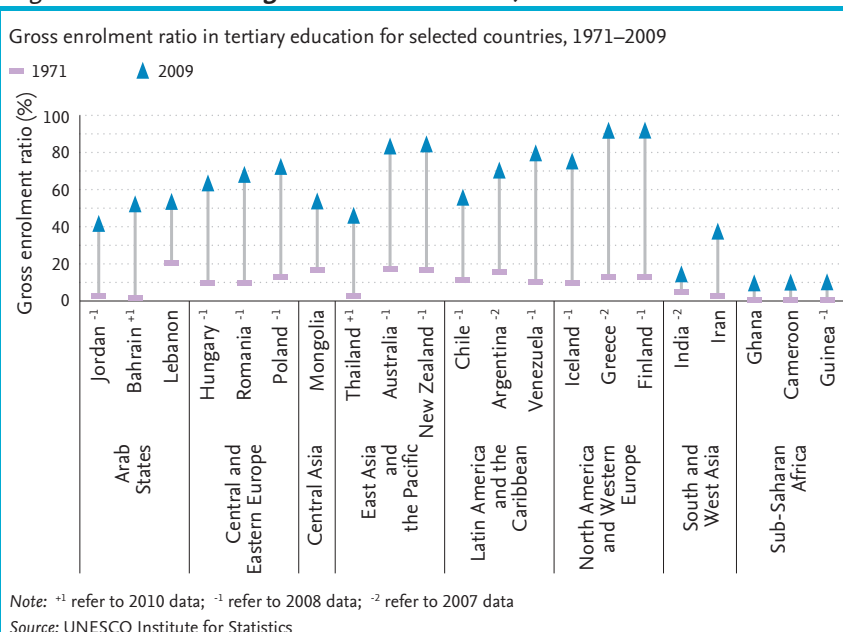
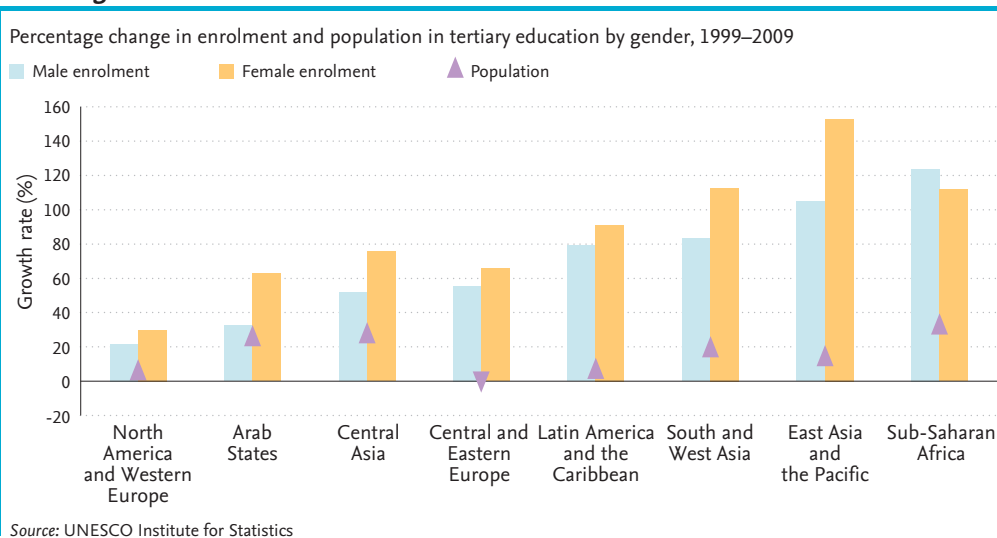


Figure 5.1.3 Tertiary enrolment growth exceeding population growth in all regions and for both sexes



## 2. Women are the biggest beneficiaries of rising tertiary enrolments

Women have been the prime beneficiaries of this surge in tertiary enrolment – with the number of women enrolling in tertiary institutions growing almost twice as fast as that of men over the last four decades. The GER of men went from 11 percent in 1970 to 26 percent in 2009, an increase of about 230 percent. The comparable ratio for women tripled during this period, from 8 to 28 percent.

In some cases, young men may be more likely than young women to move directly from secondary education into the work force or non-formal education or to go abroad to continue their education. Nevertheless, the long-term shift from male to female dominance in enrolment is a function of changing societal and family attitudes towards girls' education. In most areas of the world, it reflects girls' growing expectations and positive attitudes toward schooling rather than lowered expectation among boys, although in some countries, such as the United States, such lowered expectations are an issue. It is also likely that in countries with rapidly growing tertiary education systems, girls may anticipate greater opportunities for higher education and thus raise their own expectations.

The overall growth in female tertiary enrolment is also reflected at the regional level. As shown in Figure 5.2.1, in 1970 the GER was higher for males in all regions except for Central and Eastern Europe. By 2009 four regions had reached the point where the GER favoured females, and there were only two where males continued to have the edge. In the other region there was parity. The largest proportional disparity favouring females was

found in North America and Western Europe. The largest favouring males was in sub-Saharan Africa.

The largest gains in enrolment have occurred in North America and Western Europe, in Latin America and the Caribbean and in Central and Eastern Europe – three areas where males also made lesser but still substantial gains. Females went from a position of disadvantage in 1970 to a majority position in 2009 in three regions: East Asia and the Pacific, Latin America and the Caribbean, and North America and Western Europe.

Figure 5.2.2 depicts the increase in female participation in tertiary education over the last four decades in terms of the changes in the gender parity index for tertiary enrolment. The global GPI as a whole rose dramatically from 0.74 favouring men in 1970 to 1.08 in 2009, which falls within the range of parity and slightly favours women. In 1970 only one region, Central and Eastern Europe, registered a GPI over 1.03 favouring women. By 2009 a majority of four regions had an index favouring women.

While the GPI rose in all regions during this period, the relative position of some of the regions shifted. The largest gains occurred in Latin America and the Caribbean, where the GPI rose from 0.62 to 1.21 over the past four decades. North America and Western Europe moved from second to first place, while South and West Asia, which was at the bottom of the table in 1970, rose to seventh place. Sub-Saharan Africa dropped from sixth to eighth place.

Figure 5.2.1 Overall female advantage in tertiary enrolment growth mirrored at regional level

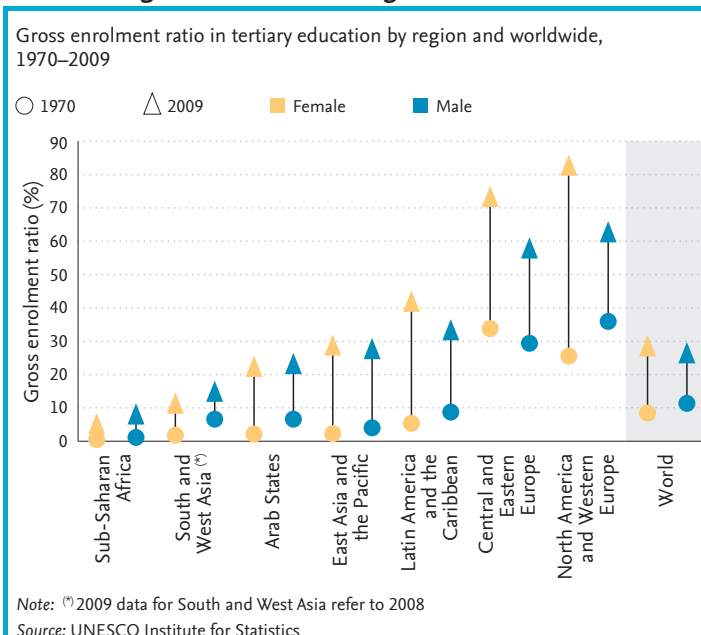
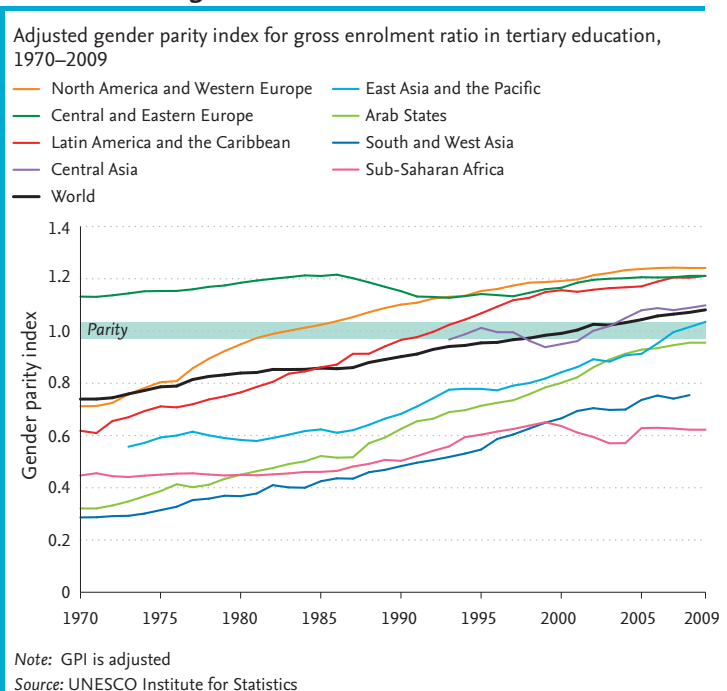


Figure 5.2.2 Global GPI up from 0.74 favouring men to 1.08 favouring women since 1970



Women now account for a majority of students in most countries. Map 5.2.1 depicts the gender parity index at the tertiary level for 149 countries. It shows that women are favoured in a sizeable majority of 93 countries while men are favoured in only 46. Ten countries have achieved gender parity at the tertiary level.

Figure 5.2.3 shows the proportion of the world's students in countries with varying gender parity status for higher education. It shows that 54 percent of youth populations reside in countries where men are favoured, and 43 percent of students reside in countries where women are favoured. Since 31 percent of countries have a level of GPI favouring men and 62 percent have a GPI favouring women, the data suggest that despite a larger number of countries where the GPI is greater than 1.03, the majority of students reside in countries where men are favoured.

Table 5.2.1 demonstrates the variety of patterns among countries. It lists ten countries where the tertiary GPI ranges from 0.17 to 0.41 and heavily favours men, and ten others where the range is 1.46 to 1.84 favouring women.

The strong participation of women in tertiary education represents an interesting contrast to patterns of gender parity at the primary and secondary levels. The overall global picture is one of parity at the low end of the 0.97 to 1.03 range for the primary and secondary levels and over-representation of women at the tertiary level.

As shown in Figure 5.2.4, almost all regions are closest to parity at the primary level, though two regions are within the parity range for both the primary and secondary levels – but not tertiary. Two regions – South and West Asia, and sub-Saharan Africa – show declining GPI values as they move from primary to higher levels.

Table 5.2.1 Examples of countries favouring males or females, 2009 or latest year available

Males favoured		Females favoured	
Country	GPI	Country	GPI
Chad	0.17	Belize	1.46
Congo	0.21	United Arab Emirates	1.47
Afghanistan	0.24	Iceland	1.48
Ethiopia <sup>-1</sup>	0.31	Antigua and Barbuda	1.55
Eritrea <sup>-1</sup>	0.33	Jamaica <sup>-1</sup>	1.55
Guinea <sup>-1</sup>	0.34	Bermuda	1.61
Dem. Rep. Congo <sup>-2</sup>	0.35	St. Lucia	1.61
Niger <sup>-1</sup>	0.36	Dominica <sup>-1</sup>	1.69
Mali	0.41	Anguilla <sup>-1</sup>	1.80
Tajikistan	0.41	Qatar	1.84

Note: <sup>-1</sup> refer to 2010 data; <sup>-2</sup> refer to 2008 data; <sup>-3</sup> refer to 2007 data  
GPI in tables is adjusted

Source: UNESCO Institute for Statistics

Map 5.2.1 Women now a majority of tertiary level students in most countries

Gender parity index, tertiary education

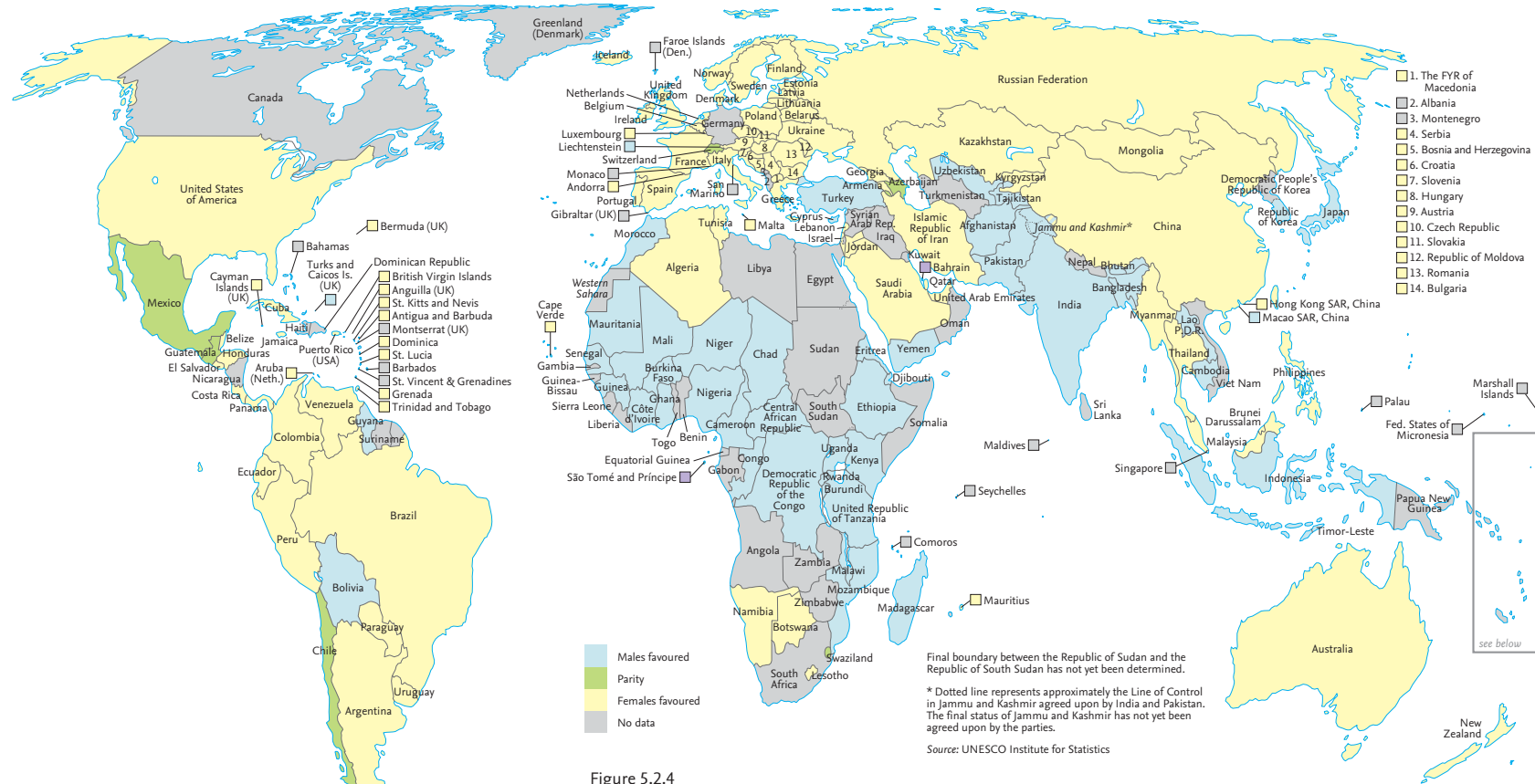
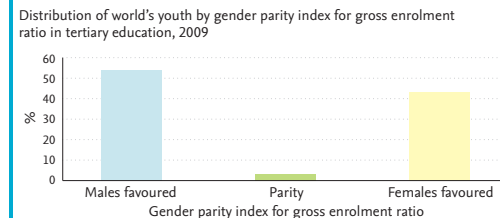
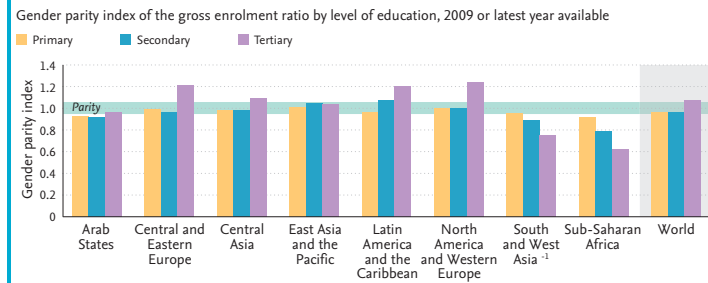


Figure 5.2.3 Majority of world's youth live in countries where men have an edge in tertiary GPI



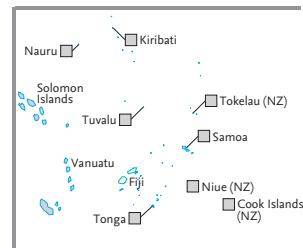
Source: UNESCO Institute for Statistics

Figure 5.2.4 Women's participation in tertiary education much higher than at lower levels



Note: <sup>-1</sup> refer to 2008 data

Source: UNESCO Institute for Statistics



### 3. National wealth a major factor in gender gaps at tertiary level

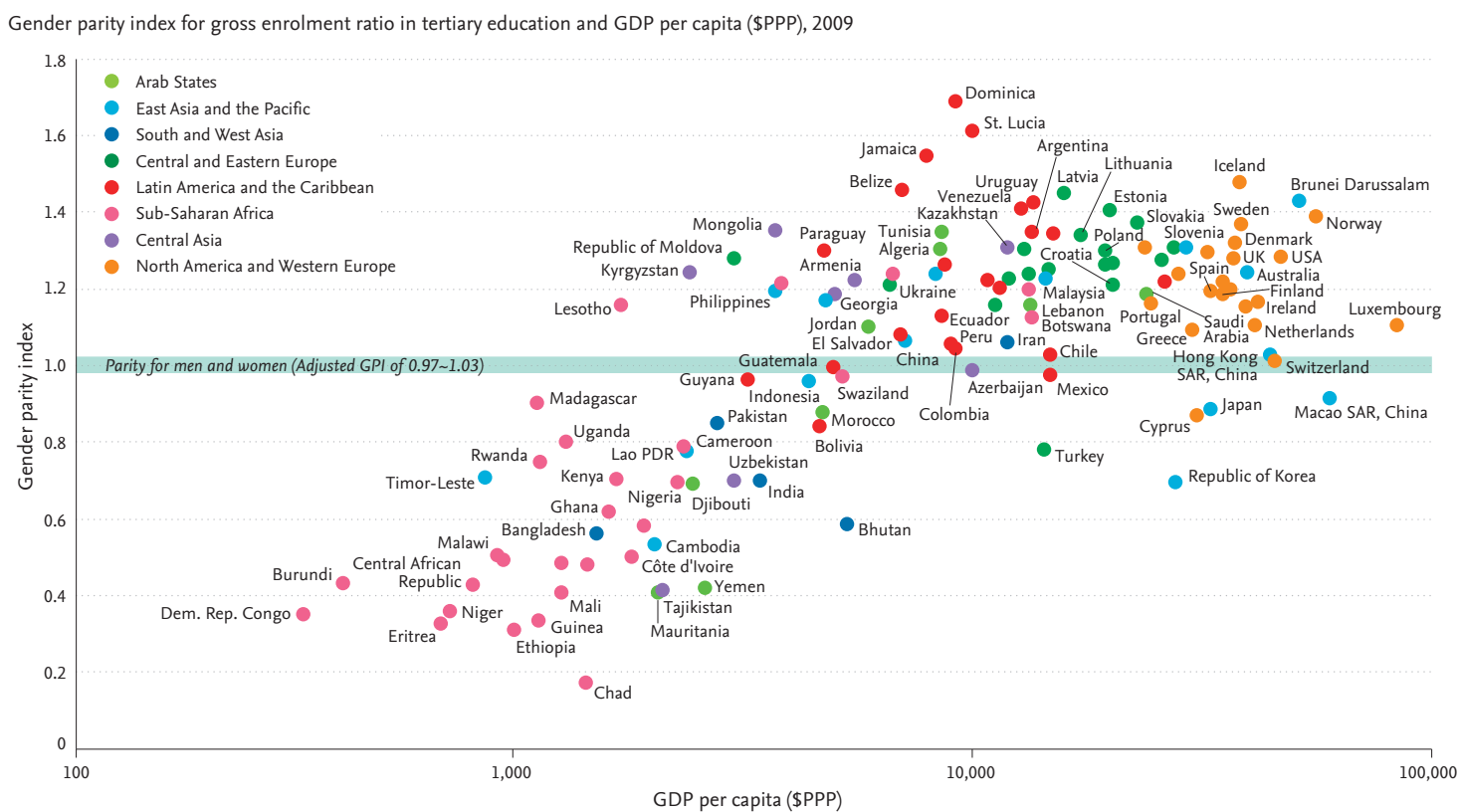
National wealth plays an important role in shaping the ways in which men and women participate in tertiary education. Women are more likely to pursue tertiary education in countries with relatively high income and less likely to do so in low-income countries. Even modest rises in national wealth correlate with lower levels of gender disparities.

Figure 5.3.1 shows how most of the countries and regions above the gender parity range of 0.97 to 1.03 are also at the high end of the axis depicting levels of GDP per capita. By contrast, most of the countries and regions

with low levels of GDP per capita also have GPIs below the parity range.

There are, however, some notable exceptions. Lesotho, Kyrgyzstan, Mongolia and the Philippines have high GPIs even though they are in the middle income range. Japan, which ranks among the wealthiest countries, has a GPI of only 0.88, mainly because the rise in female advancement to university is relatively recent. Hence, women are poorly represented among the ranks in higher education administration compared to many OECD countries.

Figure 5.3.1 Women more likely to pursue tertiary education in wealthy countries



### 4. Women have edge in graduate degrees up until PhD level

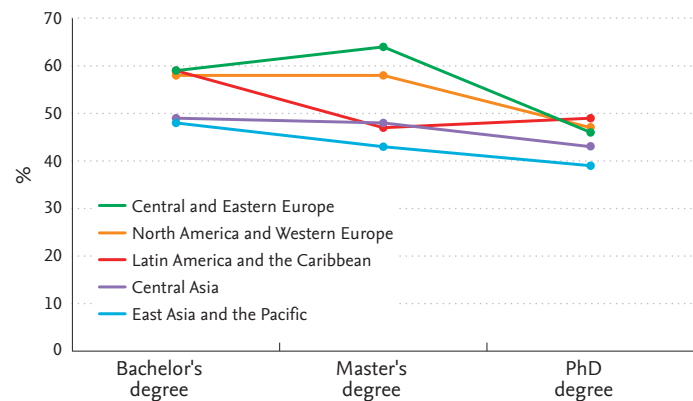
Significant differences exist in the extent to which men and women pursue education at the various levels.

Figure 5.4.1 shows that women have reached parity with men in earning bachelor's degrees. They have an edge over men of 56 to 44 percent in master's degrees, but this ratio is exactly reversed at the PhD level.

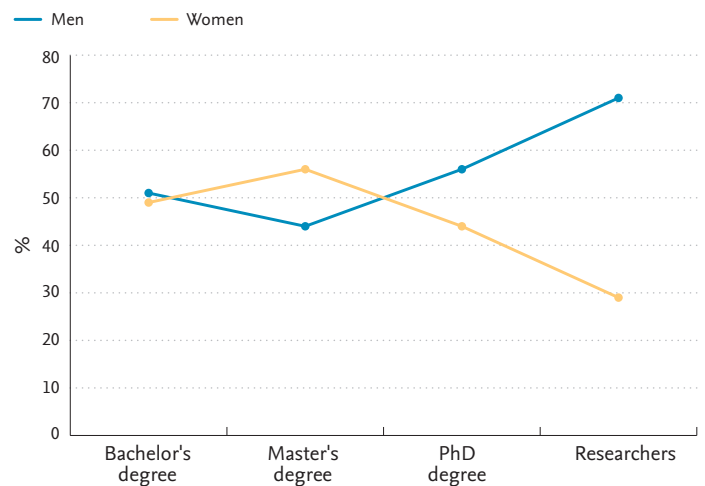
Women receive more bachelor's degrees than men in three of the five regions and more master's degrees in two. When it comes to PhDs, however, men have the advantage in all regions. One interesting region is Latin America and the Caribbean, which is the only region where females participate at a higher rate in PhD than in master's programmes.

Figure 5.4.1 Women's edge in bachelor's and master's degrees reversed at PhD level

a. Proportion of women graduates in tertiary education by programme level, 2008



b. Proportion of women and men graduates in tertiary education by programme level and those employed as researchers, 2008



Note: Regional averages for Arab States, South and West Asia and sub-Saharan Africa are not available due to low response rates

Source: UNESCO Institute for Statistics

## 5. Significant gender differences in various fields of study

Despite the narrowing of the gender gap in tertiary enrolment, significant differences are observed in the fields in which men and women choose to earn degrees.

Table 5.5.1 shows the distribution of female graduates among various disciplines in science and in the social sciences, business and law in various regions. Females account for a majority of graduates in science in two regions: Central Asia and the Arab States. Central Asia has the highest proportion of female graduates in the sciences (53), while North America and Western Europe has the lowest (40).

In all regions women gravitate strongly toward the life sciences, where their majorities reach 70 percent in the Arab States and Central and Eastern Europe. Women

show relatively low interest in computing, although the disparities are wide, ranging from 21 percent in North America and Western Europe to 39 percent in Central Asia.

The proportion of female graduates is much higher in the social sciences, business and law, where women are the majority of graduates in all but one region and in all of the sub-fields of social and behavioural science, journalism and information, business and administration, and law. The major regional exception to these patterns is Central Asia, which strongly favours women in science and where female graduates are a minority in the social sciences, business and law.

Table 5.5.1 Proportion of women graduates strongest in social sciences, business, law and the life sciences

Percentage of women graduates in the fields of science and social sciences, business and law by region, 2008

Region	Broad and sub-field	Science				Social sciences, business and law				
		Life sciences	Physical sciences	Mathematics and statistics	Computing	Social and behaviour science	Journalism and information	Business and administration	Law	
Arab States	<b>51</b>	73	61	59	33	<b>53</b>	69	58	42	55
Central and Eastern Europe	<b>47</b>	70	54	53	29	<b>61</b>	62	69	61	58
Central Asia	<b>53</b>	68	44	60	39	<b>41</b>	46	60	43	34
East Asia and the Pacific	<b>48</b>	60	58	62	29	<b>53</b>	56	64	52	51
Latin America and the Caribbean	<b>41</b>	67	51	53	31	<b>57</b>	70	61	56	52
North America and Western Europe	<b>40</b>	60	43	48	21	<b>57</b>	64	63	53	59

Source: UNESCO Institute for Statistics

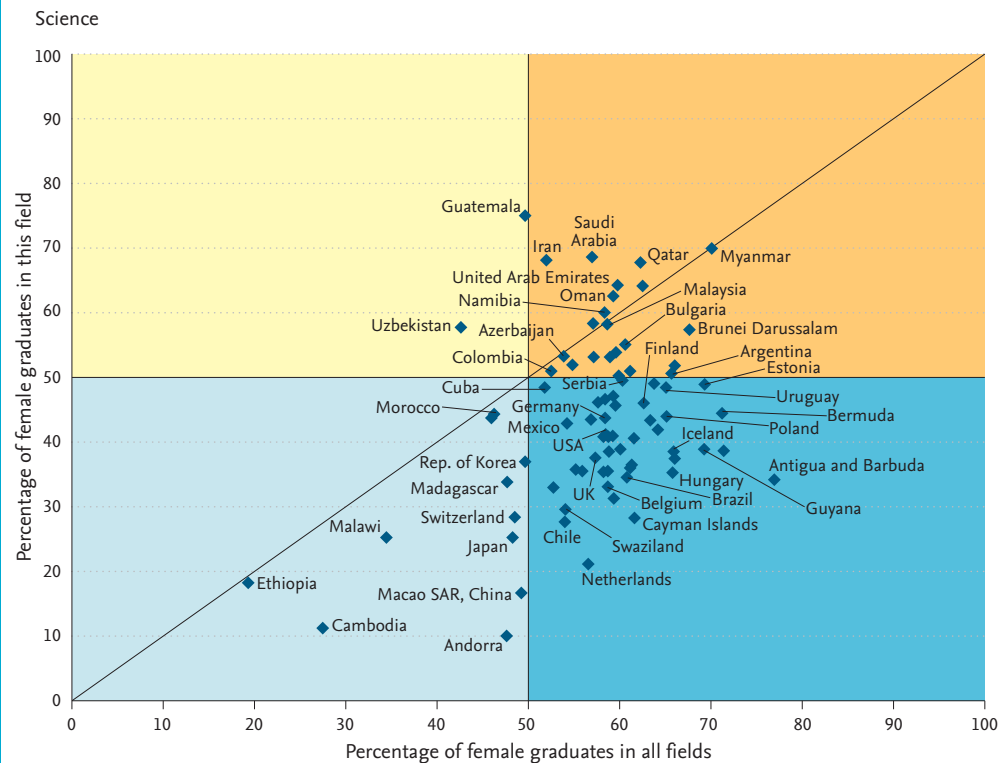
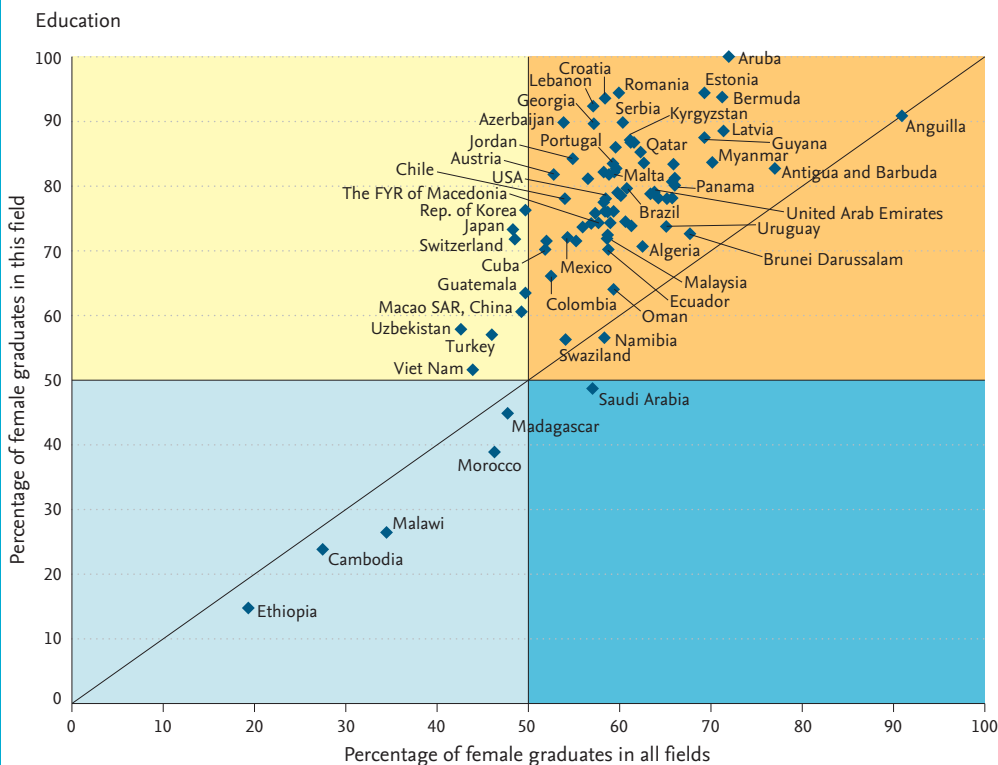
Figure 5.5.1 displays graduate data for four broad fields of education and shows how the proportion of female graduates in each of the four compares with the share of female graduates in all fields.

Among the four fields presented, education is the most popular with women. Women are more likely than men to graduate in this field in 77 of the 84 countries with data. They account for more than nine in ten graduates in several countries, including Aruba, Bermuda, Croatia, Estonia, Lebanon and Latvia. There are, however, some notable exceptions, most of which reflect general patterns of tertiary participation. In Morocco, for example, women make up 46 percent of the tertiary graduate population and 39 percent of those in the field of education.

Figure 5.5.1 Percentage of female tertiary graduates differs in education and engineering

Women as a percentage of the total number of tertiary graduates in selected fields of education, 2009 or latest year available

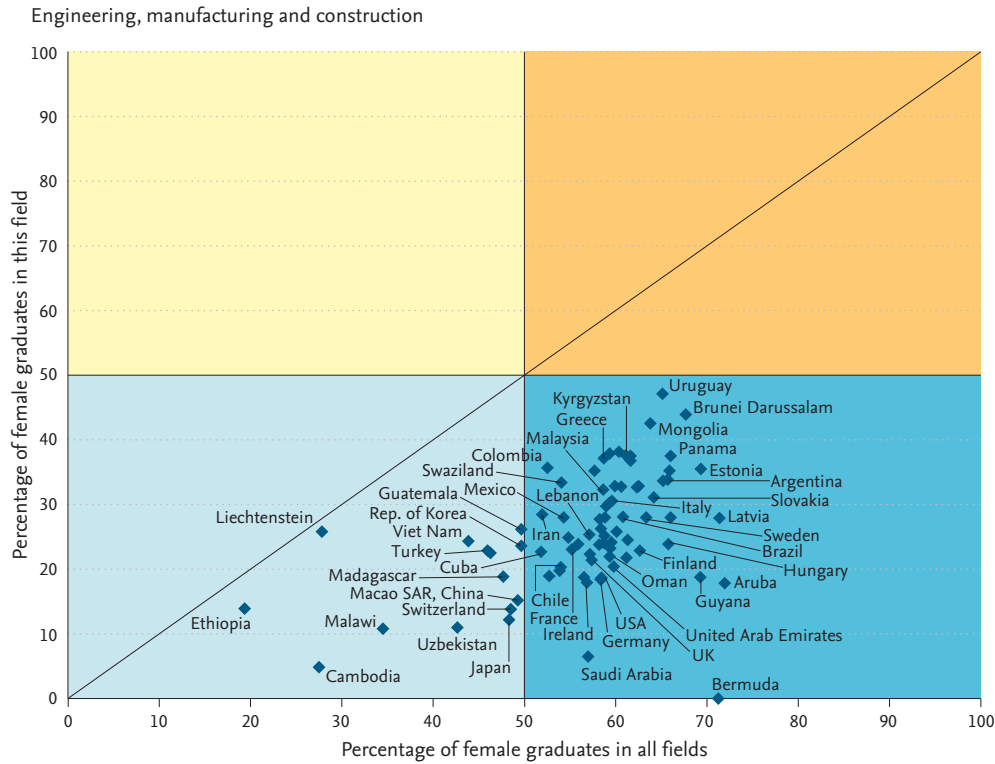
- More female than male graduates in this field but fewer female than male in all fields
- More female than male graduates in this field and in all fields
- Fewer female than male graduates in this field and in all fields
- Fewer female than male graduates in this field but more female than male graduates in all fields



Source: UNESCO Institute for Statistics

By contrast, in the area of engineering, manufacturing and construction, males constitute a majority of graduates in all but one of the 84 countries for which data are available. Women come closest to gender balance in Brunei Darussalam, Mongolia and Uruguay. Even in countries such as Germany, Japan, Switzerland and the United States, where women have reached parity or even constitute a majority of graduates in all fields, however, females account for less than a fifth of graduates in engineering, manufacturing and construction.

More mixed pictures are seen in the fields of science and the social sciences, business and law. In science, women make up a majority of graduates in a number of countries, mainly in those where they account for a majority of graduates in all fields. Graduates in the social sciences, business and law tend to be more equally divided among males and females.





## 6. Men continue to predominate in research jobs

As already seen in Figure 5.4.1, there is a sharp drop-off in the number of women who move from the master's level to PhDs, and there is an even sharper drop in those who go on to careers in research. Clearly women face considerable barriers as they move up the educational ladder to research careers.

When it comes to employment as researchers, men have the edge by an enormous ratio of 71 to 29 percent. Map 5.6.1 gives the global picture of the percentage of female researchers. In a majority (54) of the 90 countries for which data are available, women account for 25 to 45 percent of researchers. They represent more than 45 percent of researchers in only 21 nations, or one in five.

Venezuela and Latvia have the highest proportion of female researchers of any country – 55 percent. They are followed by: Azerbaijan, Georgia, Philippines, Thailand, Argentina, Lithuania, the FYR of Macedonia, Paraguay and Uruguay.

Factors that may explain the lower number of female researchers, especially in senior positions, include the work-life balance, gender stereotyping, performance measurement and promotion criteria, governance, and the role of researchers in society. Apart from being under-represented, women in research are also often paid less than equally-qualified men, are less likely to be promoted, and are consistently clustered at the lower ranking of the science system.

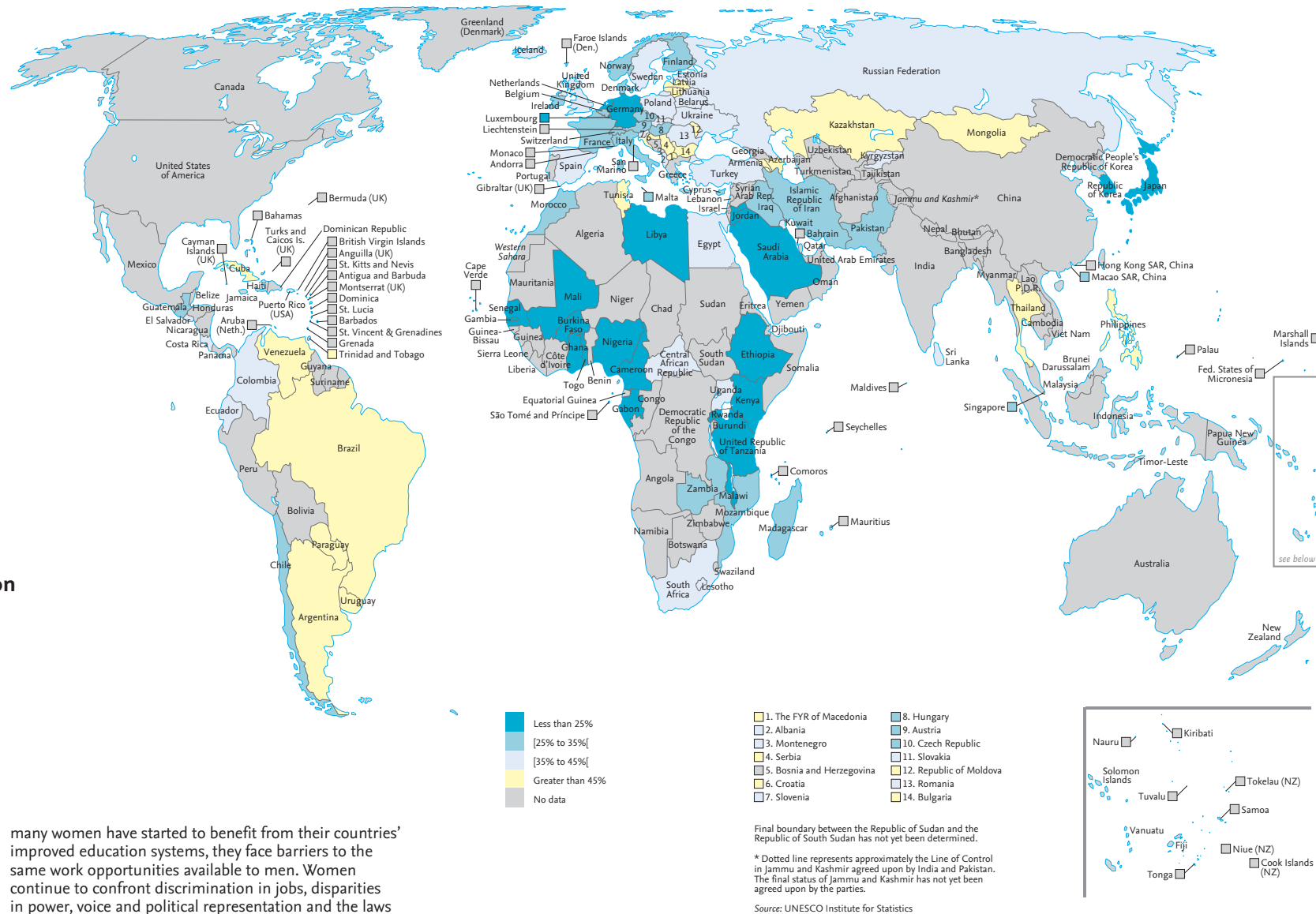
## 7. Multiple reasons for over-representation of women in post-secondary education

Over-representation of women in higher education is not necessarily the result of affirmative action in their favour, for such legislation is rare. Rather, empirical research highlights several reasons for the growing participation of women in post-secondary education, beginning with the fact that higher levels of schooling are now required to attain social mobility and escape poverty. Even though higher education leads to individual returns in the form of higher income, women often need to have more education than men to get the same jobs. Globalization has led to more attention to gender egalitarianism. Finally, once women gain access to higher education they frequently exceed men in grades, evaluations and degree completion.

It must also be noted that over-representation of women in higher education has yet to translate into proportional representation in the labour market, especially in leadership and decision-making positions<sup>16</sup>. Even though

Map 5.6.1  
What is the share of women among researchers?

Women as a share of total researchers



many women have started to benefit from their countries' improved education systems, they face barriers to the same work opportunities available to men. Women continue to confront discrimination in jobs, disparities in power, voice and political representation and the laws that are prejudicial on the basis of their gender. As a result, well-educated women often end up in jobs where they do not use their full potential and skills.

# Trends in school-life expectancy

School-life expectancy (SLE) describes the average number of years that a child is likely to spend in the educational system of his or her country. Specifically, SLE is defined as the total number of years of schooling that a child entering the school system could expect to receive in the future, assuming that the probability of his or her enrolment is equal to prevailing participation rates. SLE indicates the average duration of schooling in years, not the number of grades reached. It is not necessarily a measure of actual or current attainment but rather of what the next cohort entering the schooling system may achieve.

SLE is a useful metric for several reasons. Because it uses a common scale – number of years of schooling – it allows comparisons across countries with widely varying populations, types of programmes and combinations of primary, secondary and tertiary levels of education. SLE also allows comparisons of post-secondary programmes, which are diverse in many respects, including the lack of a common duration period. Finally, SLE offers a measure of overall participation in a country's education system, primary through tertiary.

The good news regarding SLE is that it has been increasing consistently around the globe. For the world as a whole SLE increased between 1990 and 2009 from 8.3 to 11.0 years for females and from 9.6 to 11.4 years for males. Parallel increases were observed in all eight regions.

Map 6.1.1  
School-life expectancy rates vary across different regions  
School-life expectancy from primary to tertiary education

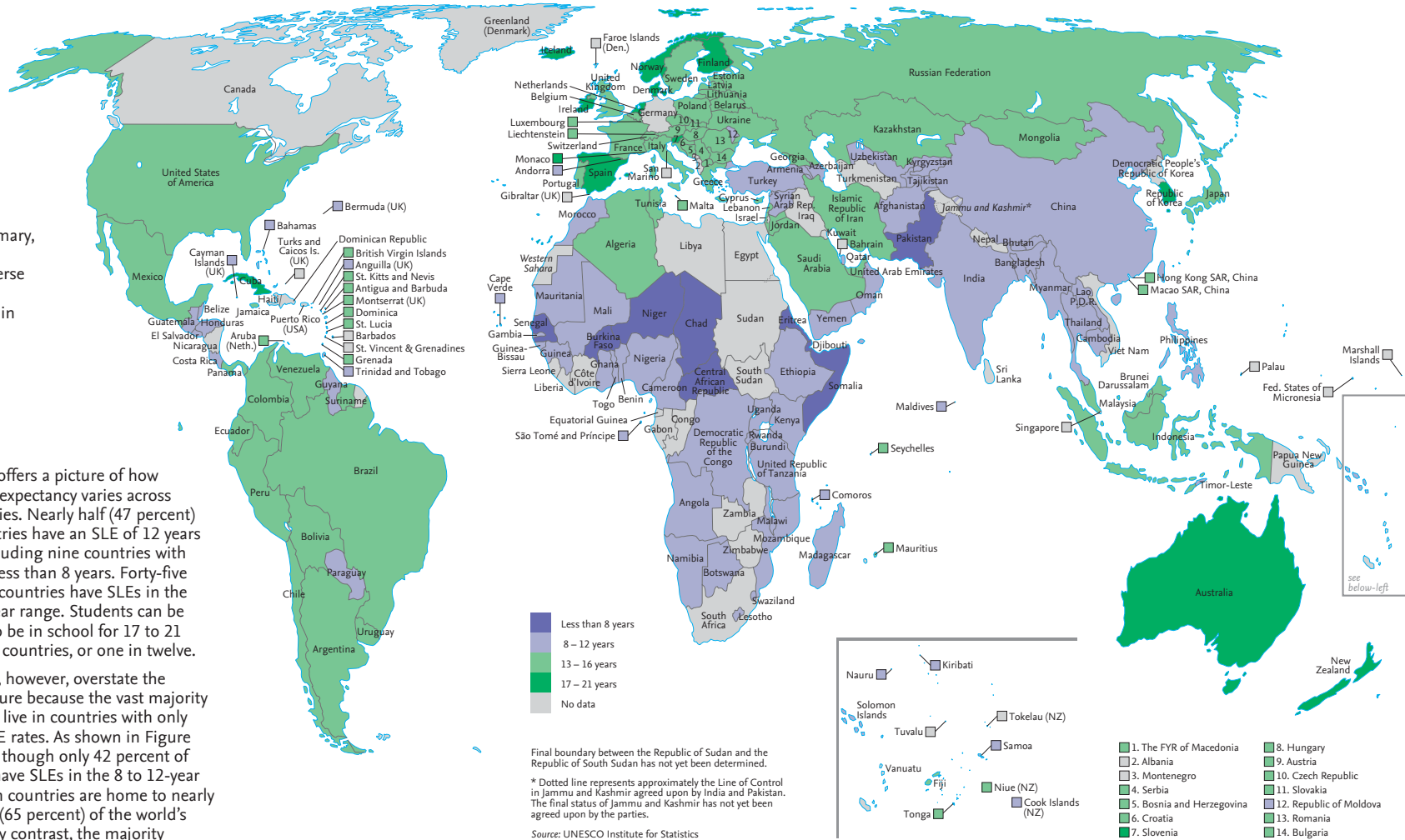
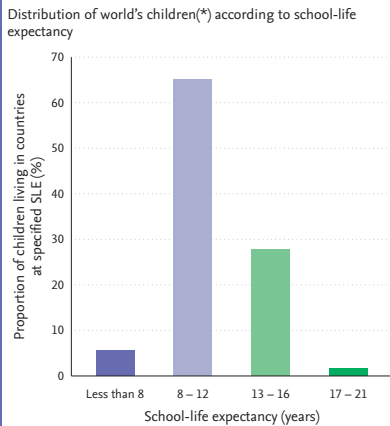


Figure 6.1.1 Most children living in countries with modest SLE rates

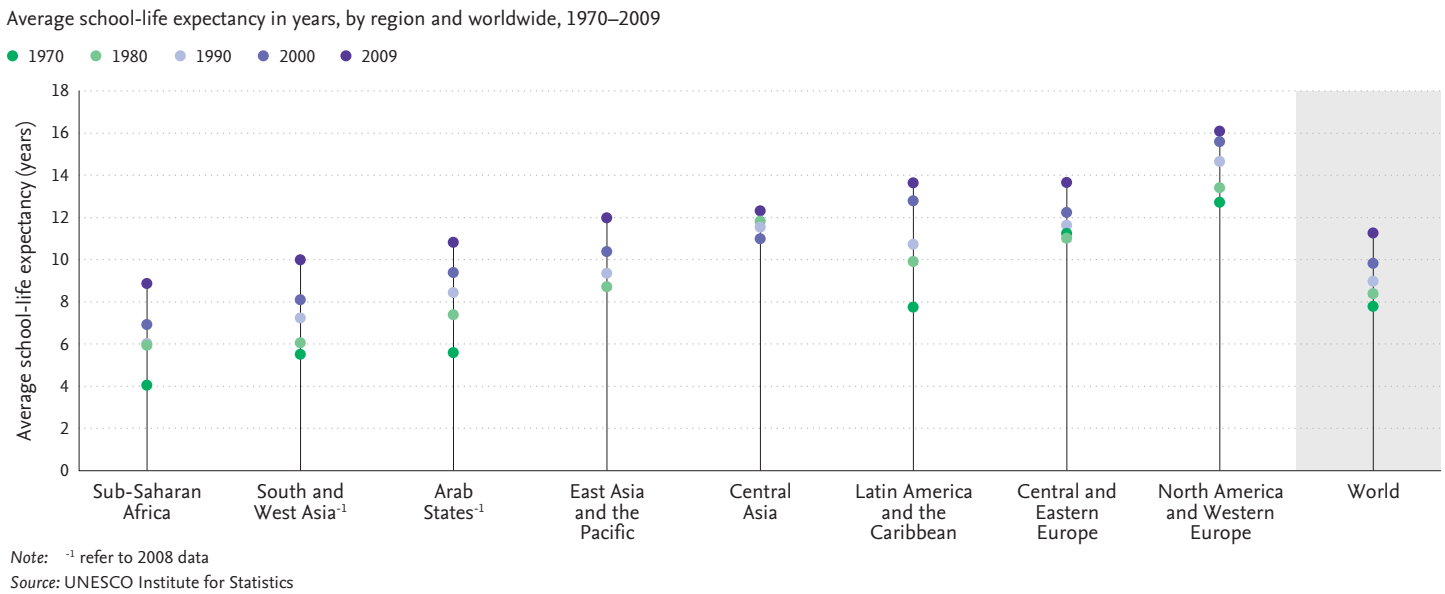


Note: (\*) The school age population from primary to tertiary education  
Source: UNESCO Institute for Statistics

Map 6.1.1 offers a picture of how school-life expectancy varies across 166 countries. Nearly half (47 percent) of all countries have an SLE of 12 years or less, including nine countries with an SLE of less than 8 years. Forty-five percent of countries have SLEs in the 13 to 16-year range. Students can be expected to be in school for 17 to 21 years in 13 countries, or one in twelve.

These data, however, overstate the overall picture because the vast majority of children live in countries with only modest SLE rates. As shown in Figure 6.1.1, even though only 42 percent of countries have SLEs in the 8 to 12-year range, such countries are home to nearly two-thirds (65 percent) of the world's children. By contrast, the majority (53 percent) of countries with SLEs of 13 years or above are home to only 30 percent of the school-age population.

Figure 6.1.2 Gains in school-life expectancy reflected in all regions



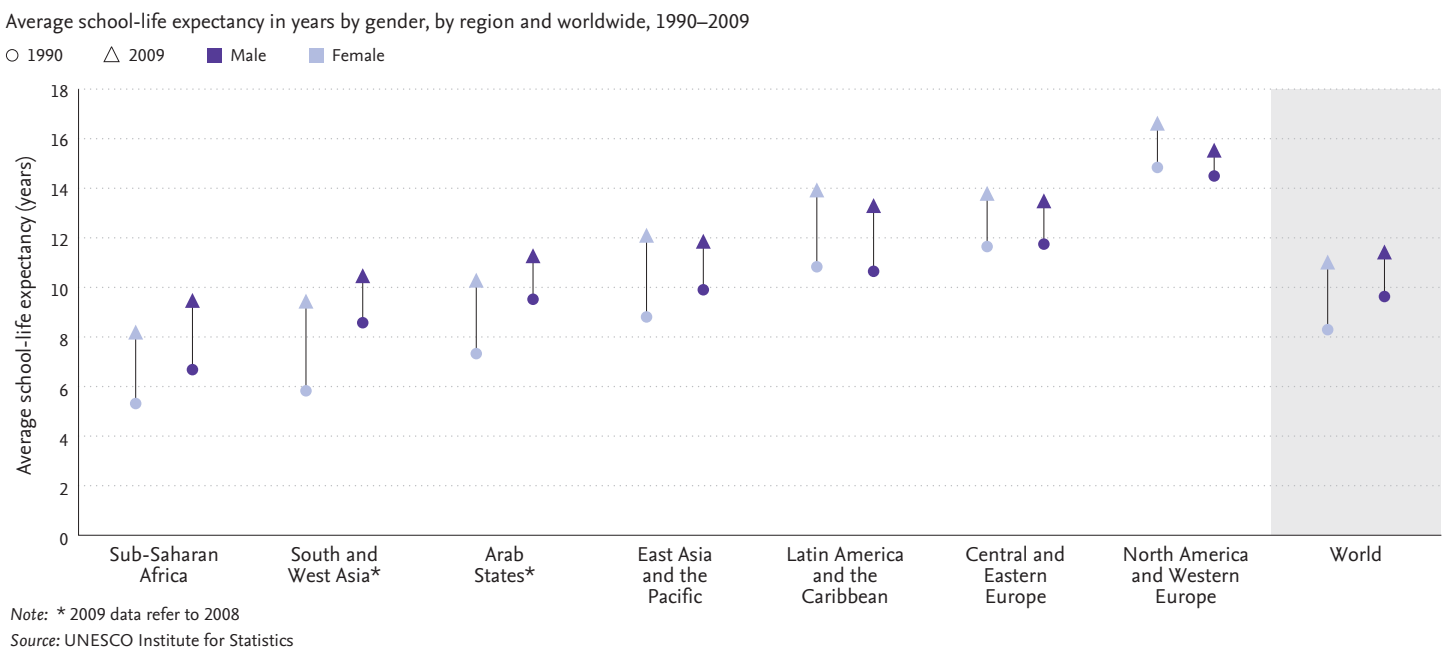
Global SLE rates are on the rise. The global average increased from 7.8 years in 1970 to 11.2 years in 2009, and, as seen in Figure 6.1.2, every region of the world shared in this growth, although the magnitude of the gains differs among regions. Sub-Saharan Africa ranked at the bottom of the regions in 1970 and, despite more than doubling its SLE from 4.0 to 8.9 years, it remained the lowest performing region in 2009. North America and Western Europe was the top-performing region in 1970 and remained so by a comfortable margin in 2009. With a SLE of 16.1, it is the only region with a rate above 14.

The smallest gain was observed in Central Asia (0.4 years), where the SLE actually declined between 1980 and 2000 before rebounding and increased by 1.3 years

between 2000 and 2009. The largest gains were registered in Latin America and the Caribbean, which showed a gain from 7.7 to 13.6 years. Its relative rank rose from fourth place to a tie with Central and Eastern Europe.

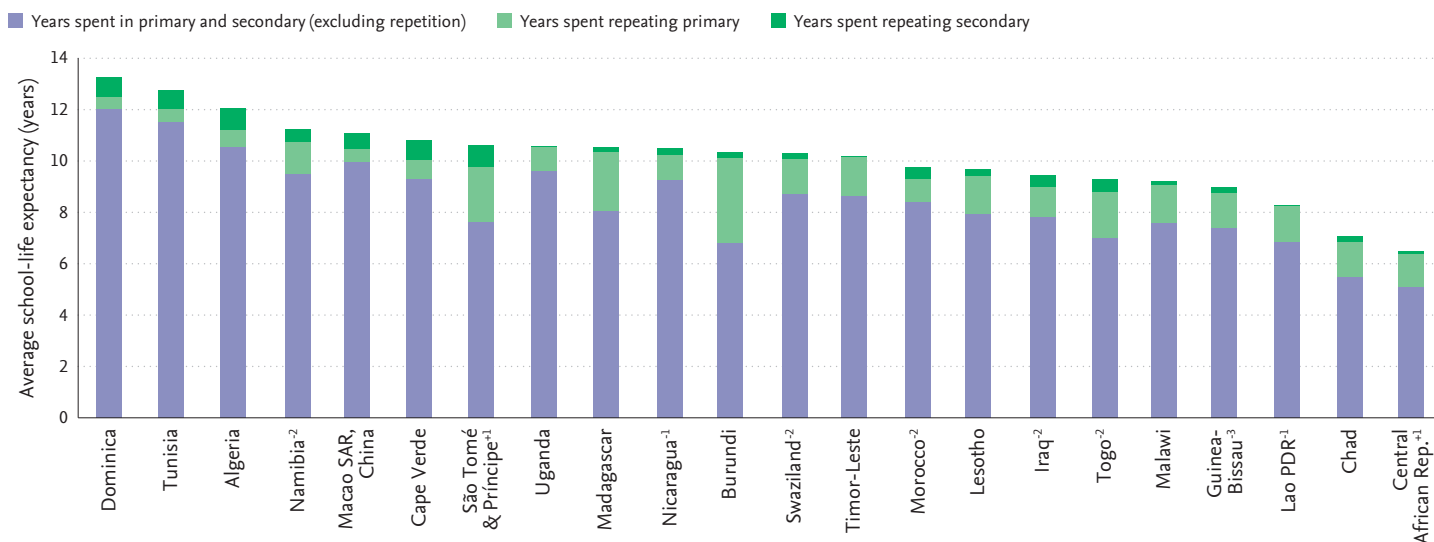
Whereas males have a slight overall edge in SLE for the world as a whole (11.4 versus 11.0), Figure 6.1.3 shows that the various regions are fairly evenly divided between the four where females have higher rates and three where the male rates are higher. The largest gains over the two decades were registered among females in Latin America and the Caribbean (3.1 years), females in East Asia and the Pacific (3.3 years) and females in South and West Asia (3.7 years).

Figure 6.1.3 Increase in school-life expectancy seen among both sexes



**Figure 6.1.4 Grade repetition: A major impediment to school-life expectancy**

Average school-life expectancy excluding repetition, and years expected to be spent repeating grades for selected countries, primary and secondary education, 2009 or latest year available



Note: <sup>-1</sup> refer to 2010 data; <sup>-1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data; <sup>-3</sup> refer to 2006 data

Source: UNESCO Institute for Statistics

School-life expectancy is reduced when students repeat grades. Figure 6.1.4 shows how the number of years that students spend repeating primary and secondary school affects total school-life expectancy in 22 selected countries. In most countries the bulk of the repetition occurs during primary school.

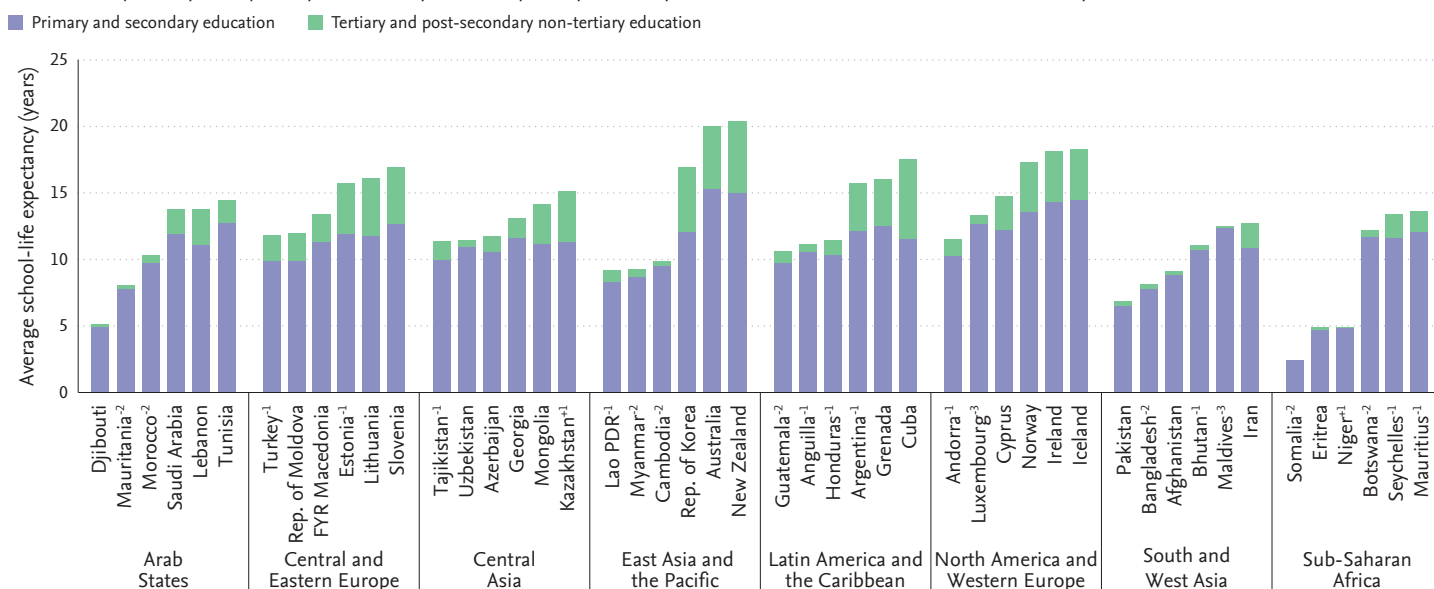
The primary repetition rate is particularly high in Burundi, where, in addition to 6.8 years of schooling, students typically spend 3.3 years repeating grades in primary school and another 0.2 years at the secondary level. In some countries, however, including Dominica,

Cape Verde and Tunisia, repetition is higher at the secondary level.

Figure 6.1.5 shows how SLE patterns at the secondary and tertiary levels contribute to the overall SLE rates for six countries in each of eight regions. The greatest SLE rates are in Australia and New Zealand, where strong higher education systems extend total SLE rates by 4.7 and 5.4 years respectively. Post-secondary participation leads to the smallest gains in SLE among countries in sub-Saharan Africa.

**Figure 6.1.5 Patterns of school-life expectancy differ among countries and regions**

School-life expectancy from primary to secondary and from primary to tertiary education for selected countries, 2009 or latest year available

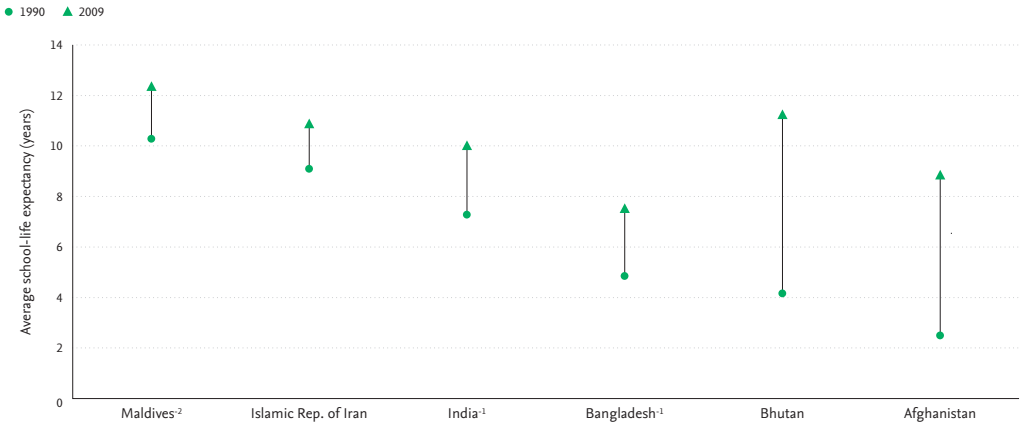


Note: <sup>-1</sup> refer to 2010 data; <sup>-1</sup> refer to 2008 data; <sup>-2</sup> refer to 2007 data; <sup>-3</sup> refer to 2006 data

Source: UNESCO Institute for Statistics

Figure 6.1.6 Dramatic gains seen in school-life expectancy in Afghanistan and Bhutan

School-life expectancy for primary and secondary education for selected South and West Asian countries, 1990 and 2009



Note: <sup>1</sup> refer to 2008 data; <sup>2</sup> refer to 2007 data

Source: UNESCO Institute for Statistics

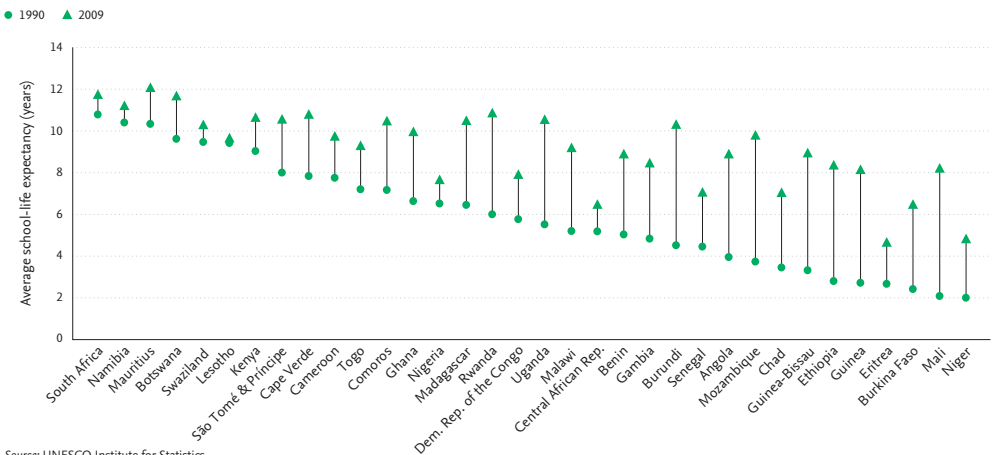
Progress in increasing school-life expectancy rates has varied widely both among regions and among countries within regions. Figure 6.1.6 shows how SLE has increased in selected countries in South and West Asia. The most dramatic gains were registered by Afghanistan and Bhutan, where SLE nearly tripled between 1990 and 2009.

Although its overall SLE rate more than doubled over the last four decades – from 4.0 to 8.9 years – sub-Saharan Africa is the lowest-performing of the eight regions.

Figure 6.1.7 presents similar data for 34 countries in sub-Saharan Africa, all of which showed gains in SLE between 1990 and 2009. The highest SLE is in Mauritius, which had a SLE of 12 years in 2009. The largest numerical gains were registered in Guinea-Bissau, Uganda, Mozambique, Ethiopia, Mali, Guinea and Burundi. The lowest SLE is found in Eritrea, which almost doubled its SLE during this period but still has a rate of only 4.7 years.

Figure 6.1.7 Despite gains, sub-Saharan African countries still face challenges in school-life expectancy

School-life expectancy for primary and secondary education for selected sub-Saharan African countries, 1990 and 2009



Source: UNESCO Institute for Statistics

Figure 6.1.8 Gender disparities a persistent problem in some developing countries



Note: The years of education by individuals exclude years spent repeating  
 Source: Bangladesh DHS 2007, Guatemala DHS 1998–99, Kenya DHS 2003 and Morocco DHS 2003–04

Gender disparities based on socio-economic factors and geographical location are a persistent problem, especially in developing countries. Figure 6.1.8 looks at four such countries – Bangladesh, Guatemala, Kenya and Morocco – and depicts how the proportion of the population with at least five years of schooling has increased. Solid lines represent males and dashed lines represent females in each of four categories: rich, poor, urban and rural.

In all four countries the percentage of the population born in 1950 with five years of schooling favoured males

over females, rich over poor among both sexes, and urban over rural among both sexes. The general trend line in all eight categories was upward, and in Guatemala and Morocco males maintained their edge over females with the single exception that urban females in Morocco caught up with urban males. By contrast, females in Bangladesh reached parity with or surpassed their male counterparts in all four categories of rich, poor, urban and rural.

# Gender trends: adult and youth literacy

Enhanced access to education at the primary and secondary levels eventually pays off in higher levels of educational attainment and literacy skills among the adult population as a whole. At the same time, current literacy rates continue to reflect social patterns and educational policies of the past.

The overall global adult literacy rate has risen from 76 percent in 1990 to 83 percent in 2009. Consistent with this increase, the number of illiterates worldwide has decreased over time, including in some highly populated countries like China. Despite these gains, however, there are still an estimated 793 million adults lacking basic literacy skills – two-thirds of them (508 million) are women. Even though the size of the global self-reported illiterate population is shrinking, the female proportion has remained virtually steady at 63 to 64 percent.

## 1. Significant progress made in push for universal adult literacy

Map 7.1.1 shows how the proportions of adult literates vary among 148 countries. Fourteen percent of the countries register near universal rates of 99 to 100 percent, while another half (47 percent) have adult literacy rates in the range of 85 to 99 percent. Only a dozen countries (7 percent) are in a situation where less than half of adults are literate.

The global increase in adult literacy rates is mirrored in all regions. Table 7.1.1 shows that three regions – Central Asia, Central and Eastern Europe, and North America and Western Europe – began with relatively high rates in 1990 and are now close to universal adult literacy. Despite considerable gains over the two decades, three other regions – Arab States, South and West Asia, and sub-Saharan Africa – continue to struggle with adult literacy rates that are well below the global average. More than one-half of the world's adult self-reported illiterates (52 percent) are found in South and West Asia, which hosts 410.5 million out of the 793 million self-reported illiterates.

Map 7.1.1 Adult literacy rates vary across different regions

Adult literacy rate

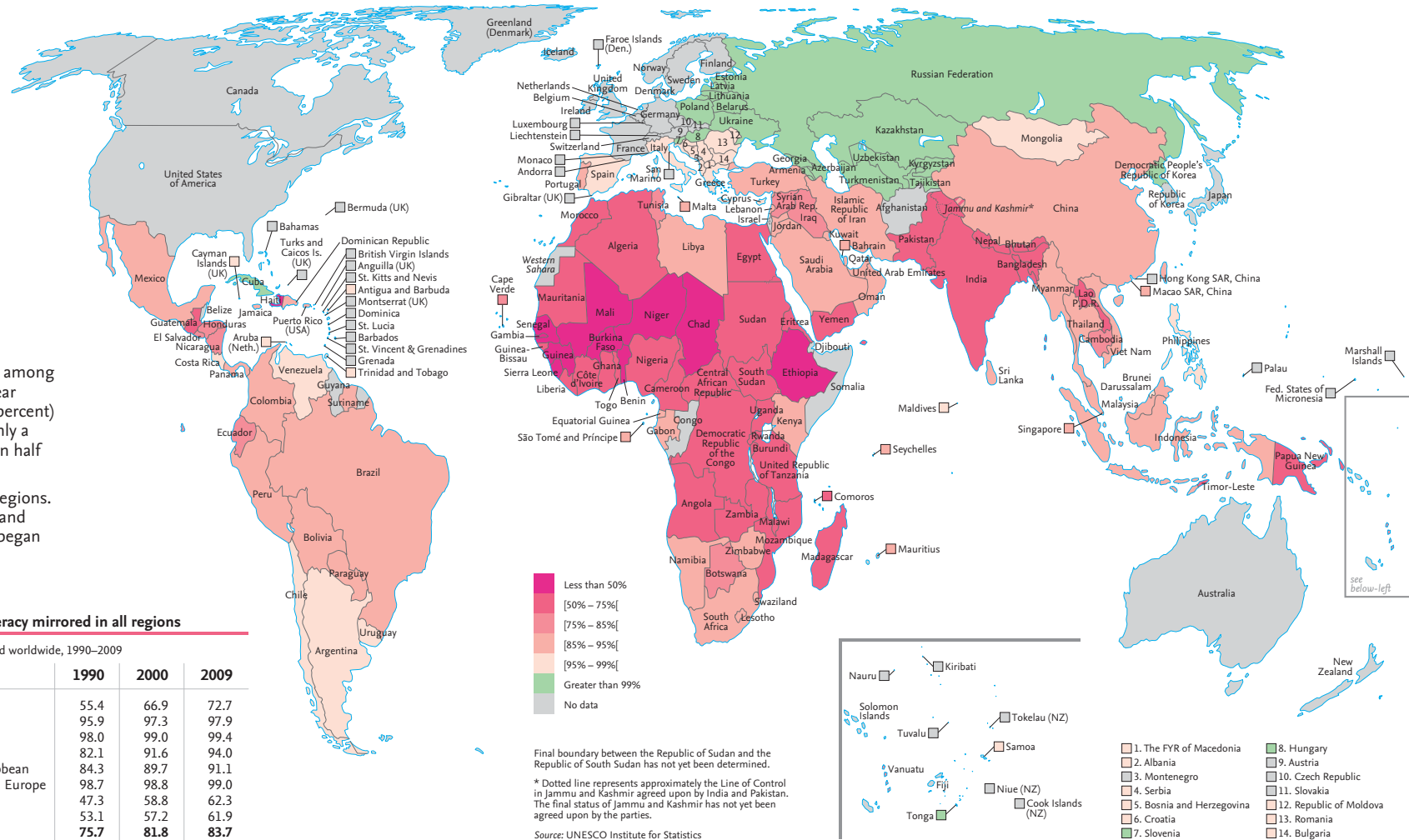


Table 7.1.1 Global gains in adult literacy mirrored in all regions

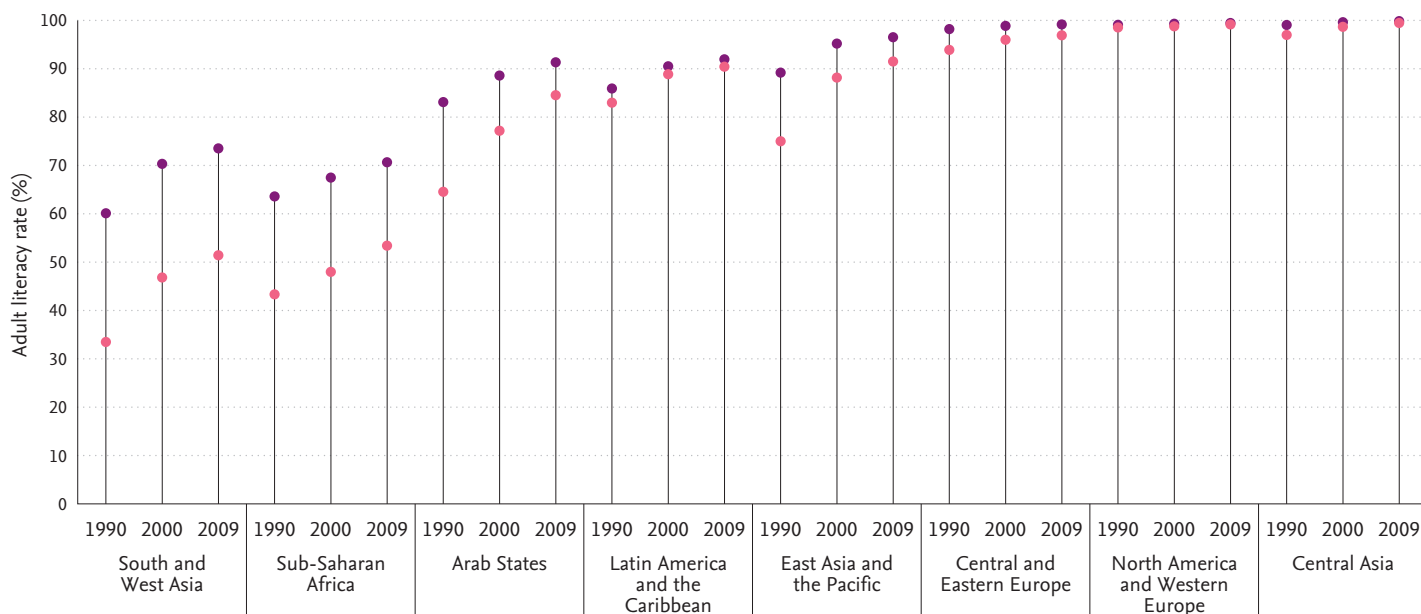
Region	1990	2000	2009
Arab States	55.4	66.9	72.7
Central and Eastern Europe	95.9	97.3	97.9
Central Asia	98.0	99.0	99.4
East Asia and the Pacific	82.1	91.6	94.0
Latin America and the Caribbean	84.3	89.7	91.0
North America and Western Europe	98.7	98.8	99.0
South and West Asia	47.3	58.8	62.3
Sub-Saharan Africa	53.1	57.2	61.9
<b>World</b>	<b>75.7</b>	<b>81.8</b>	<b>83.7</b>

Source: UNESCO Institute for Statistics

Figure 7.1.1 **Despite gains, women still account for substantial majority of adult illiterates**

Trends in male and female adult literacy rates, 1990–2009

● Male ● Female



Source: UNESCO Institute for Statistics

Women account for a substantial majority of self-reported adult illiterates, even though the gap has narrowed from 12.9 in 1990 to 9.1 percent in 2009. Figure 7.1.1 shows that women made particularly significant gains in South and West Asia, the Arab States, and East Asia and the Pacific between 1990 and 2009. Nevertheless, the overall proportion of adult female literates in 2009 remains well below what the rate was for men in 1990.

Adult literacy rates continue to be higher for men than for women in all eight regions. The male advantage is minimal in North America and Western Europe but remains striking in South and West Asia and in sub-Saharan Africa, where the gaps favouring males are 22 and 17 percentage points respectively.

Consistent with these trends in adult literacy, the global gender parity index for adult literacy has increased from 0.84 in 1990 to 0.90 in 2009, which is still well below the 0.97 threshold for parity.

As shown in Figure 7.1.2, the GPI in three regions of the world – the Arab States, South and West Asia, and sub-Saharan Africa – remains less than 0.80. There are no regions in which women have an edge in adult literacy rates, although parity has been reached in Central and Eastern Europe, Central Asia, Latin America and the Caribbean, and North America and Western Europe.

The greatest gains for women have been among regions that had the furthest to go, notably the Arab States, sub-Saharan Africa and South and West Asia.

Rates and patterns of adult literacy differ widely among individual countries, as do their rates of progress. Figure 7.1.3 presents the situation for six selected countries that account for much of the illiterate adult populations and documents the progress that they made between 1990 and 2009.

By far the largest number of self-reported adult illiterates live in India, where 99 million males and 184 million females are unable to read and write. They account for one-quarter of the male population and half of females in India. Bangladesh is home to 22 million self-reported adult illiterate males and 27 million self-reported adult illiterate females – accounting for 40 percent of the overall male population and half of all females in that country.

The largest numerical gains in reducing adult illiteracy have been observed in China. Since 1990 the number of male illiterates has fallen from 55 to 17 million while the male literacy rate jumped from 87 to 97 percent. Likewise, the number of female illiterates dropped from 127 to 47 million, while the female literacy rate rose from 68 to 91 percent.



As discussed in Chapter 1, increases in school enrolment from the primary through the tertiary levels has kept pace with, and in many countries surpassed, overall growth in the school-age population. Data on adult literacy present a very different picture. Whereas about one-third saw absolute increases in the number of

illiterate adults of both sexes, all countries registered an increase in their literacy rates. In Nigeria, for example, the absolute number of self-reported illiterates increased by nearly 4 million males and around 7 million females, nevertheless the literacy rate rose by 4 points for males and 6 points for females.

Figure 7.1.2 Greatest gains in female literacy seen in Arab States and South and West Asia

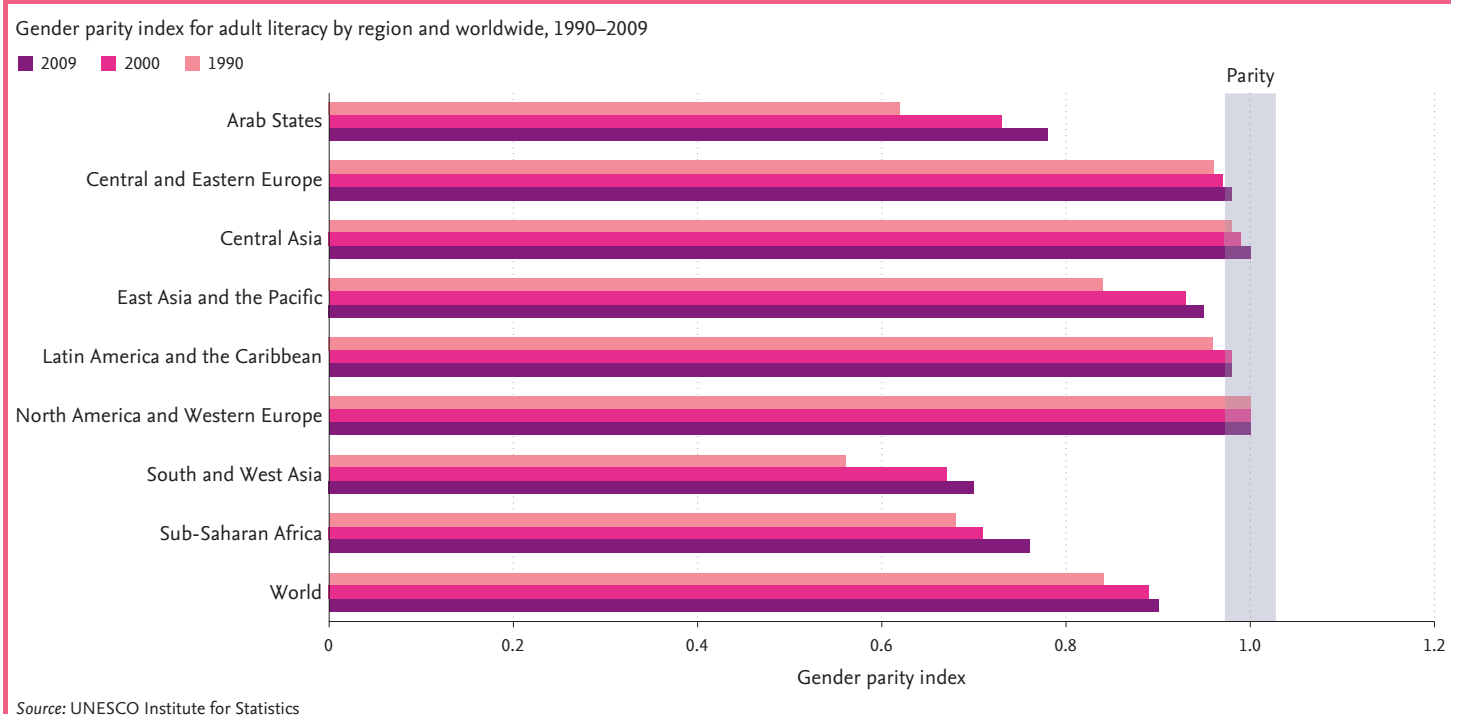
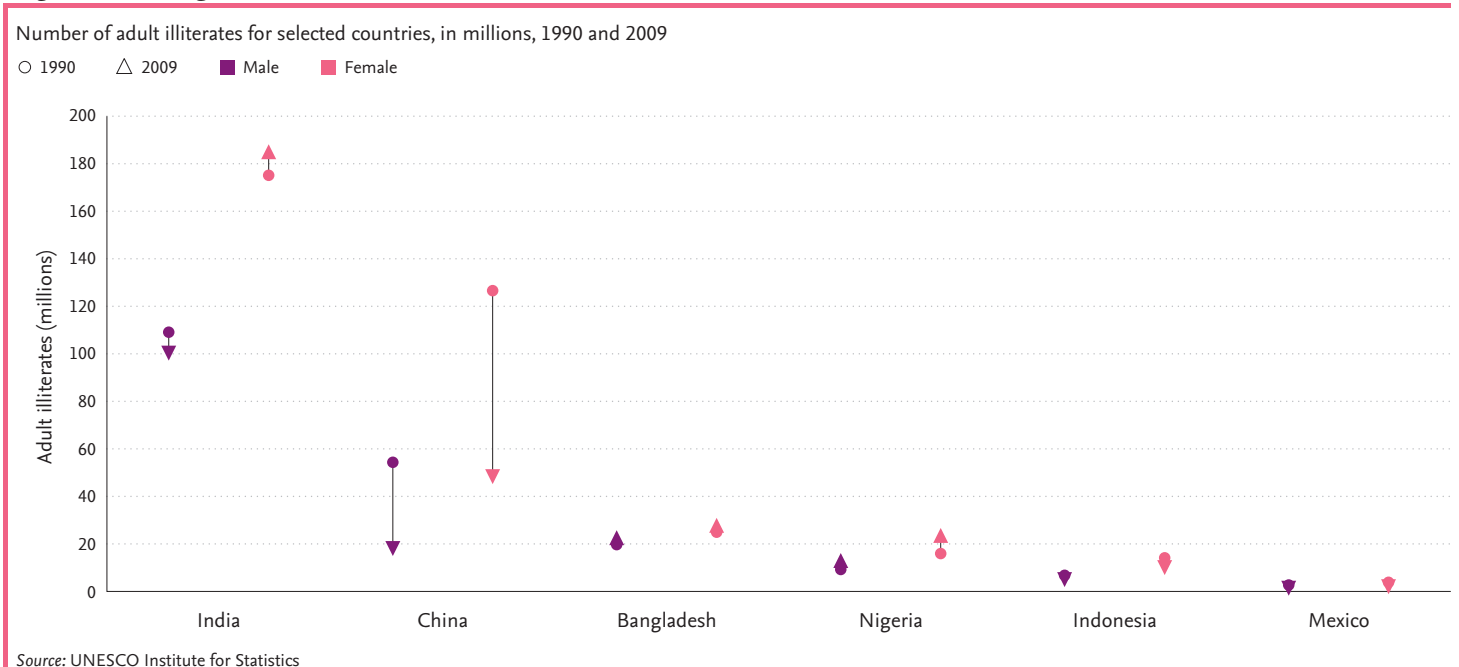


Figure 7.1.3 Largest number of adult illiterates live in India



## 2. Youth literacy on the rise

Given the consistent increases in enrolment at all levels over recent decades and widespread narrowing of gender gaps, it is no surprise that literacy rates for youth – defined as persons between the ages of 15 and 24 – have also increased.

Map 7.2.1 presents youth literacy rates for 147 countries for which data are available. It shows that well over half (61 percent) of countries have youth literacy rates of 95 percent or higher. This proportion compares favourably with the situation for adults, where only 31 percent of countries have such high literacy rates. Another 35 percent of countries have youth literacy rates between 50 and 95 percent. There are only five countries in which less than half of young people are reported as literate – compared to 11 such countries among adults.

As with adult literacy, the youth literacy rates of males remain larger than those for females in some regions. As seen in Figure 7.2.1, the youth literacy rate for males was higher in the Arab States, South and West Asia, and sub-Saharan Africa in 1990 and remained so in 2009. In each region, however, the gap had narrowed since 2000.

Map 7.2.1 Youth literacy rates higher than those for adults

Youth literacy rate

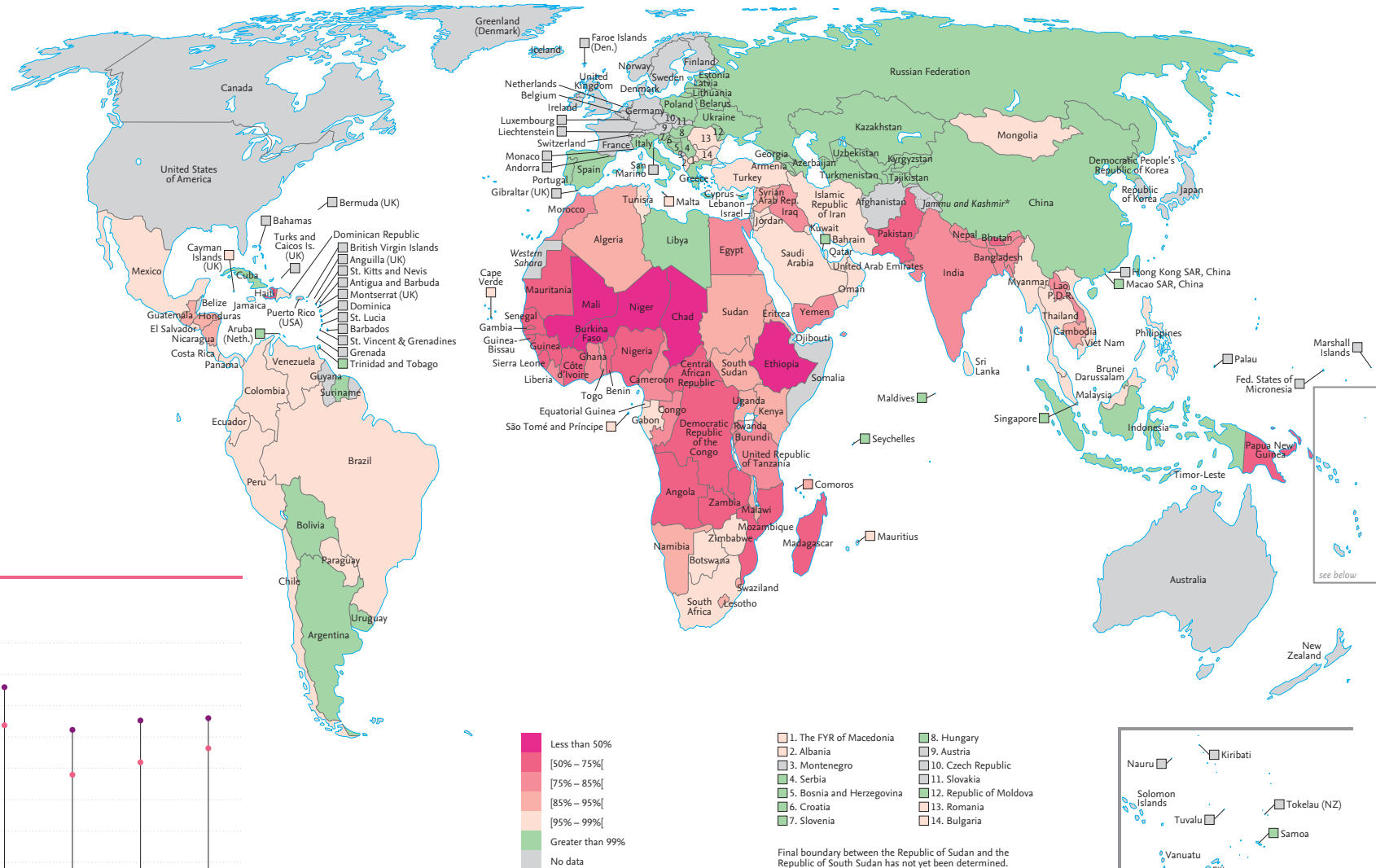
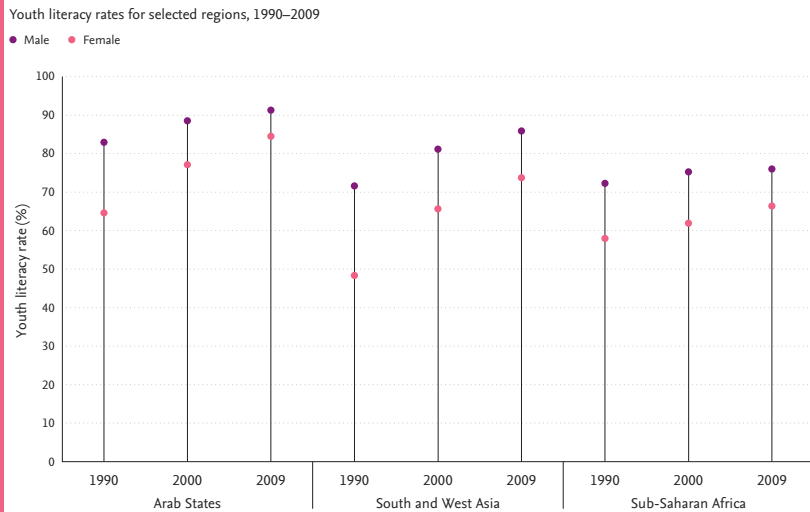


Figure 7.2.1 Males still have an edge in some regions



Source: UNESCO Institute for Statistics

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

# How policies affect gender equality in education

Despite the substantial gains that have been made in recent years, access is the single most important cause of disparities against girls in the pursuit of primary and secondary education. But girls also face in-school disadvantages in forms that include biased treatment, harassment and sexist stereotypes in educational content. Boys are less likely than girls to be excluded from education based on their gender, but they also face in-school issues that contribute to higher repetition and dropout rates.

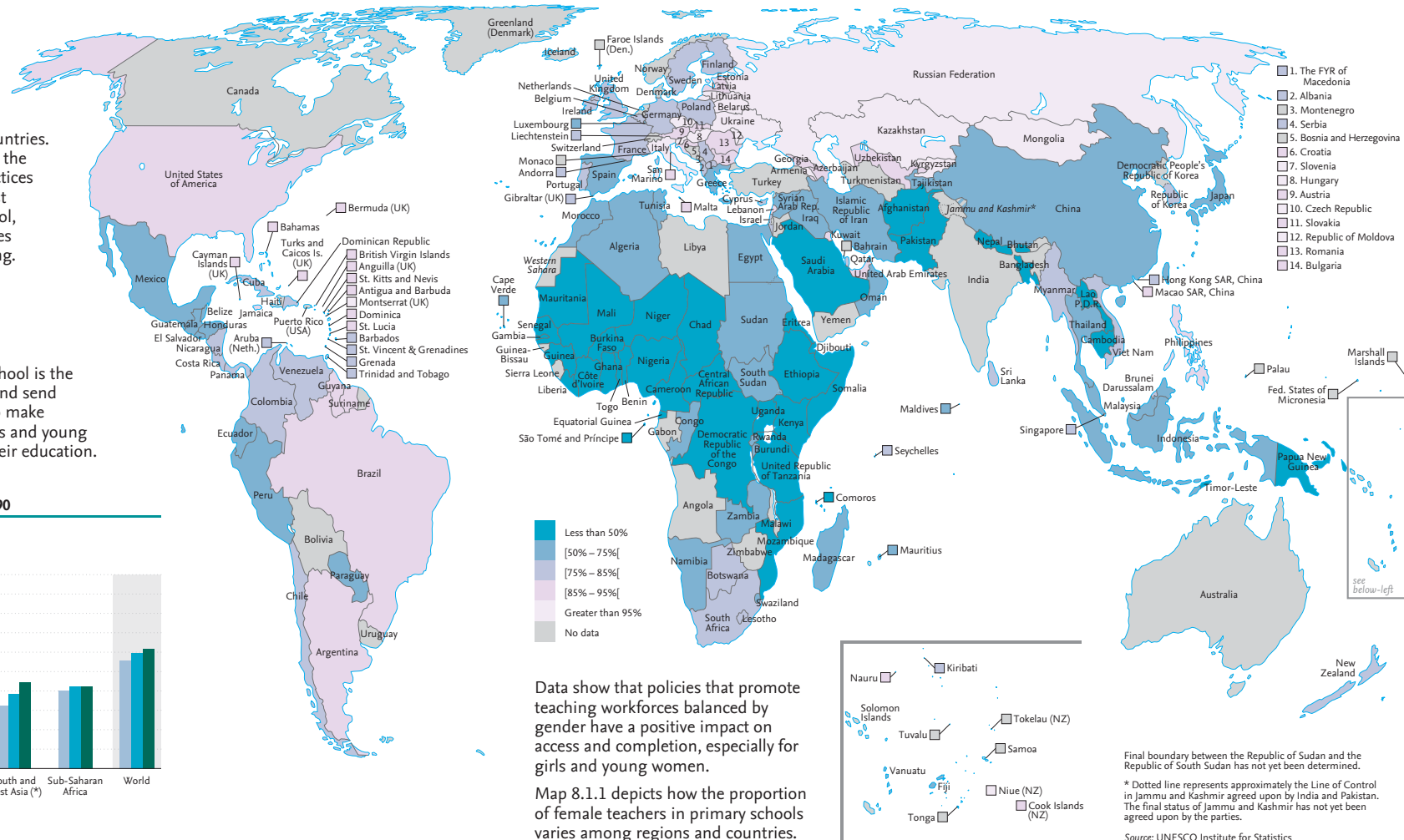
Gender disparities can take many different forms across countries. Thus countries need a range of different policies to address the specific inequalities related to school intake, classroom practices and the transition to higher levels of education. Just as most countries take steps to ensure that girls have access to school, they also need policies to address the different disadvantages facing boys and girls that arise at different levels of schooling.

## 1. Female role models an important factor in girls' academic success

One important factor that contributes to girls' success in school is the presence of female teachers who can serve as role models and send powerful messages to young girls. Female teachers can also make classrooms seem like safer and more inviting places for girls and young women and, in the process, encourage them to continue their education.

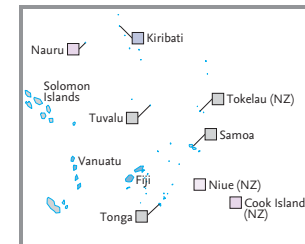
Map 8.1.1 Women account for a majority of primary school teachers in most countries and regions

Percentage of female teachers, primary education



Data show that policies that promote teaching workforces balanced by gender have a positive impact on access and completion, especially for girls and young women.

Map 8.1.1 depicts how the proportion of female teachers in primary schools varies among regions and countries.



Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.  
\* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

Source: UNESCO Institute for Statistics

continued on page 100

continued from page 99

Map 8.1.1 (see pages 98–99) shows that women account for a majority of primary teachers in more than three-quarters (78 percent) of the 171 countries for which data are available. In 9 percent of countries they constitute virtually all (more than 95 percent) of the teaching force.

For the world as a whole, the percentage of female teachers at the primary level has been increasing over the last two decades – from 56 percent in 1990 to 62 percent in 2009.

As seen in Figure 8.1.1 (see page 98), females now account for a majority of primary teachers in six of the eight regions. The two exceptions are South and West Asia (45 percent) and sub-Saharan Africa (43 percent). Central Asia has the highest proportion of female teachers (89 percent).

The female proportion increased in six of the eight regions while remaining stable in Latin America and the Caribbean and Central and Eastern Europe. Interestingly enough, the greatest gain (13 percentage points) took place in East Asia and the Pacific, which had a percentage below 50 percent (48 percent) in 1990. By and large, females are less well represented in the classroom in poor countries where primary teaching jobs have considerable appeal to males. Conversely, they tend to be well represented in wealthier countries where teaching is an important source of employment for women looking to have both a family and a career.

## 2. Secondary teaching force evenly divided among males and females

The importance of having female teachers as role models for female students is just as relevant at the secondary as at the primary level. Whereas females have traditionally represented a minority of the teaching force at the secondary level, this situation is changing.

Map 8.2.1 offers a global picture of the proportions of female teachers at the secondary level, where the teaching force is more evenly divided between the two sexes. Women represent a majority of teachers in 68 percent of 152 countries – well below the comparable proportion of 78 percent of countries at the primary level. Significantly, there are only eight countries in which they account for at least 80 percent of the secondary teaching force.

As at the primary level, the proportion of female teachers in secondary schools is rising. For the world as a whole, the proportion of female secondary teachers grew from a minority of 48 percent in 1990 to a slight majority of

Map 8.2.1 Proportion of female teachers in secondary schools rising but still lower than at the primary level

Percentage of female teachers, secondary education

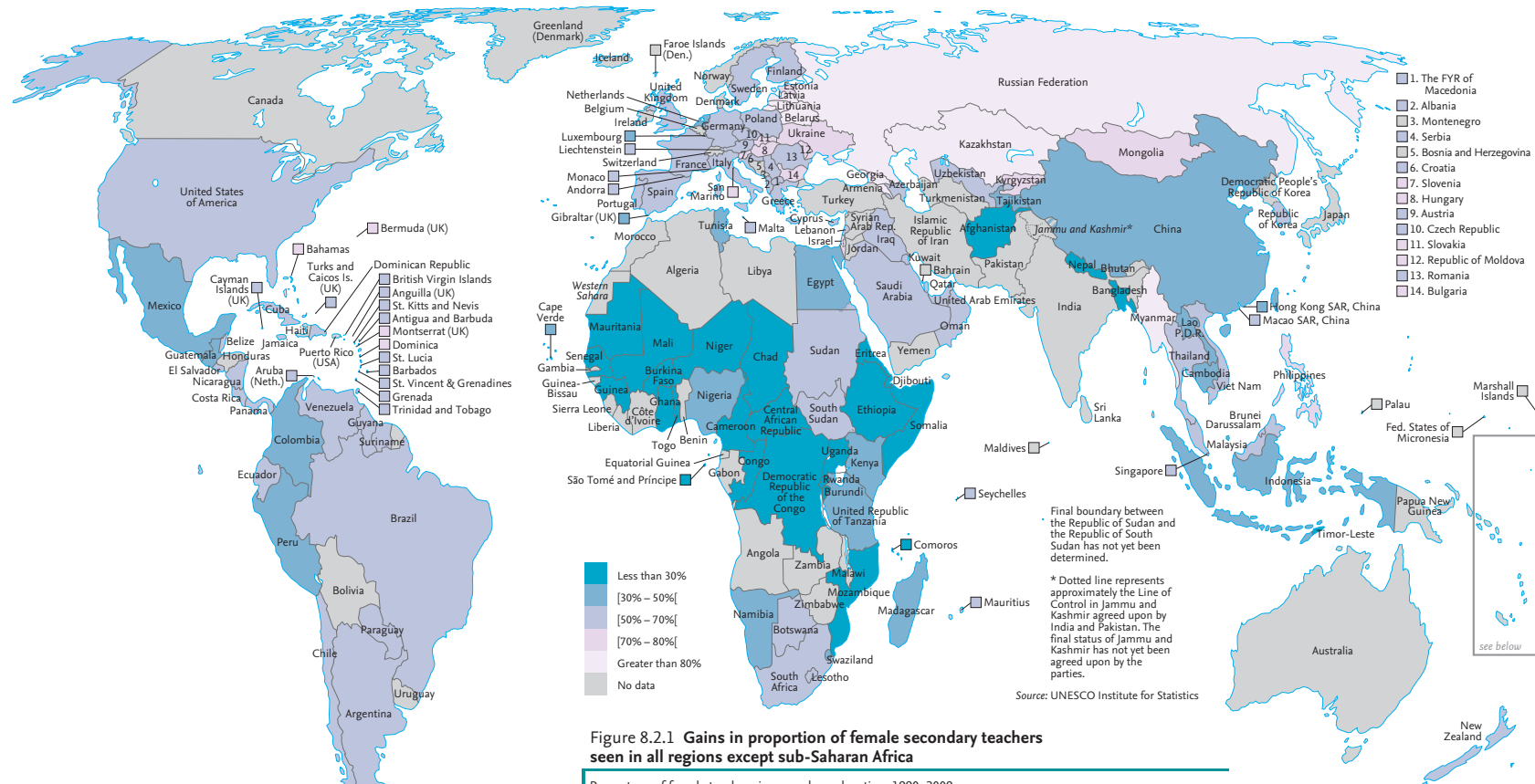
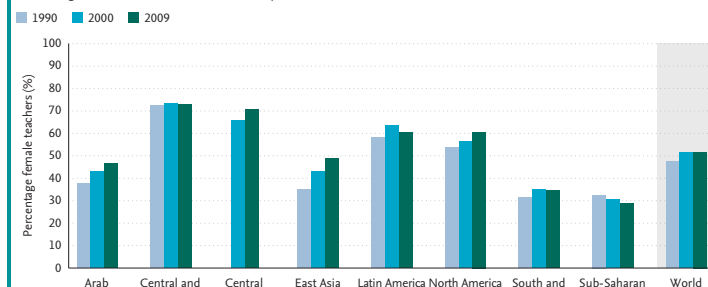


Figure 8.2.1 Gains in proportion of female secondary teachers seen in all regions except sub-Saharan Africa

Percentage of female teachers in secondary education, 1990–2009



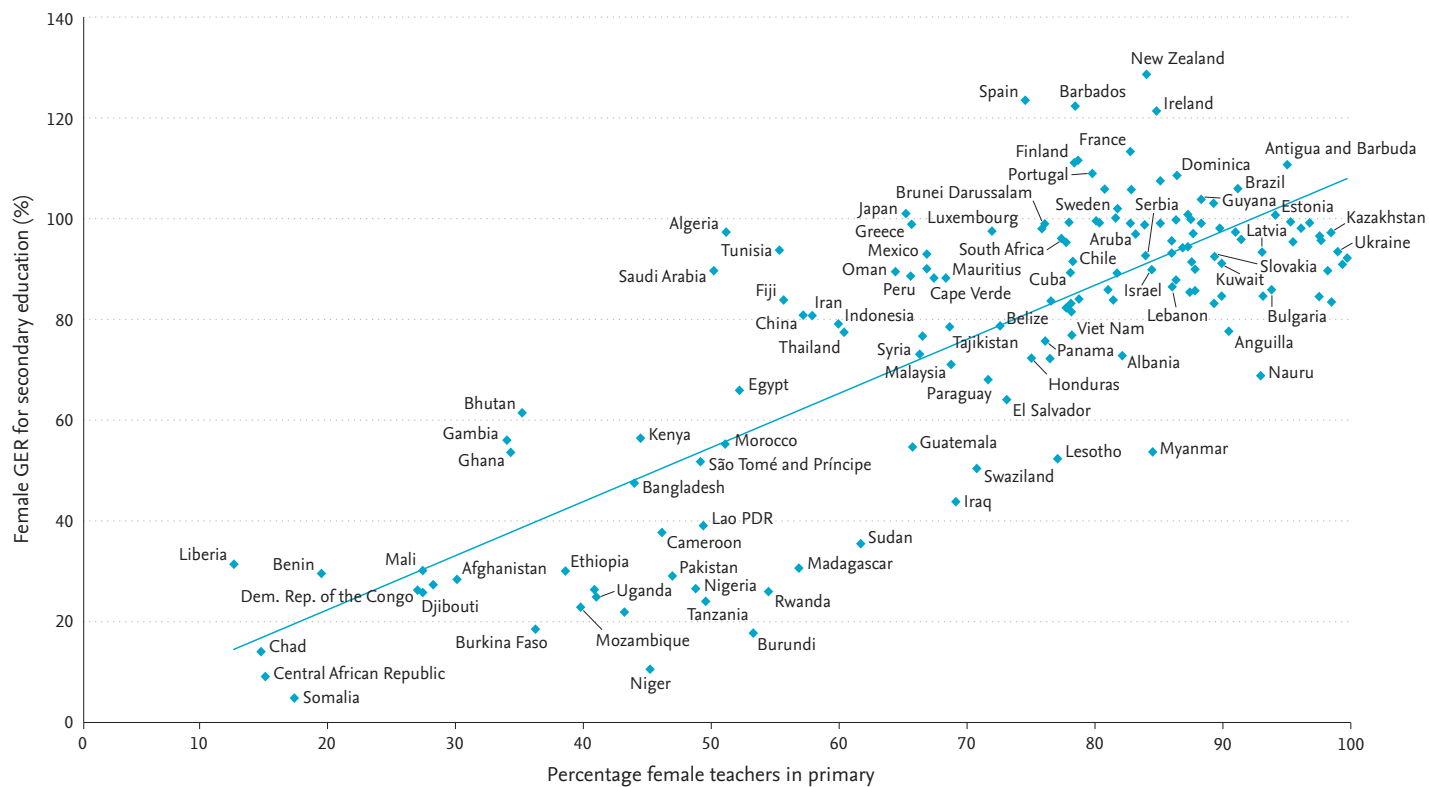
Note: (\*) 2009 data for South and West Asia refer to 2007; (\*\*) 1990 data for Central and Eastern Europe refer to 1995  
Source: UNESCO Institute for Statistics

52 percent in 2009. The highest proportion (73 percent) was registered in Central and Eastern Europe.

Figure 8.2.1 indicates that the proportion of female secondary teachers increased in all regions except sub-Saharan Africa, which had one of the lowest proportions of female teachers in 1990 and retained this position in 2009 after its proportion dropped by another four percentage points.

Figure 8.2.2 Countries with high female GERs have more female teachers

Gross enrolment ratio for females in secondary education and the proportion of women teachers in primary education



Source: UNESCO Institute for Statistics

Since girls seeking to become primary school teachers need to go to secondary school, it is not surprising that large proportions of female teachers at the primary level are associated with high gross enrolment ratios at the secondary level – a pattern that is illustrated in Figure 8.2.2. It shows that the percentage of female teachers in primary schools roughly correlates with the gross enrolment ratios of girls' at the secondary level.

Countries like Chad, Somalia and Central African Republic, for example, are among the lowest both in their percentages of female primary school teachers and their proportions of females attending secondary school. By contrast, in all of the countries with female gross enrolment ratios of 100 percent, females make up at least two-thirds of the primary level teaching force.

This correlation may partly reflect the impact that female role models have in making education more attractive to girls. Conversely, low participation rates for girls in secondary schooling will lead to fewer females enrolled in teacher training programmes.

On the other hand, both male and female teachers have been guilty of gender stereotyping – which, depending on circumstance, can operate to the detriment of either boys or girls.

Despite the fact that they now represent a majority of teachers at both the primary and secondary levels, female teachers are not as likely as their male counterparts to move into school level management positions.

Figure 8.2.3 presents data for 18 selected countries comparing the proportion of school level management personnel who are female to the proportion of female teachers at the primary and secondary levels. The proportion of female managers ranges from a low of 26 percent in China to a high of 82 percent in Argentina.

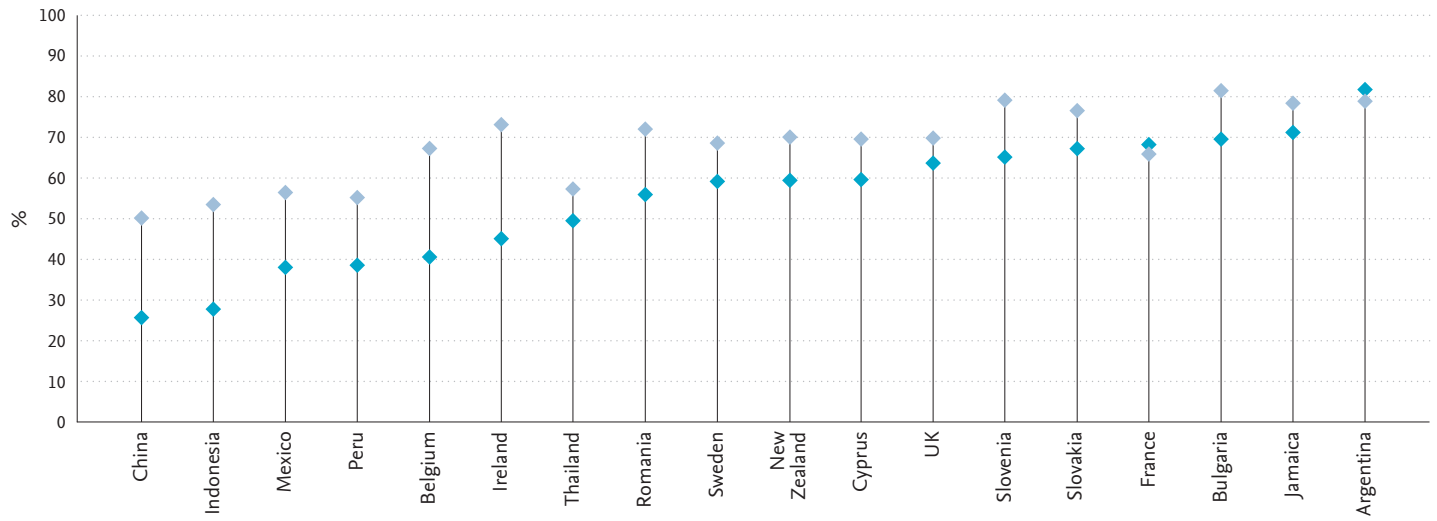
Argentina and France are the only countries in which there is a higher proportion of female managers than female teachers. The largest gaps are in China, where the ratio of female teachers to managers is almost two to one, and Ireland, where females account for nearly three-quarters of teachers but less than half of managers.

Figure 8.2.4 presents parallel data for the primary level alone. Slovakia is the only country where females constitute a slightly higher proportion of managers than teachers at the primary level. When the primary and secondary levels are combined, however, male managers have a significant edge. In Argentina and France the proportions of female managers and teachers are the same.

Figure 8.2.3 Proportion of female managers at primary and secondary levels ranges from 26 to 82 percent

Percentage of female teachers and female management personnel in primary and secondary education

◆ School level management personnel ◆ Teachers primary and secondary

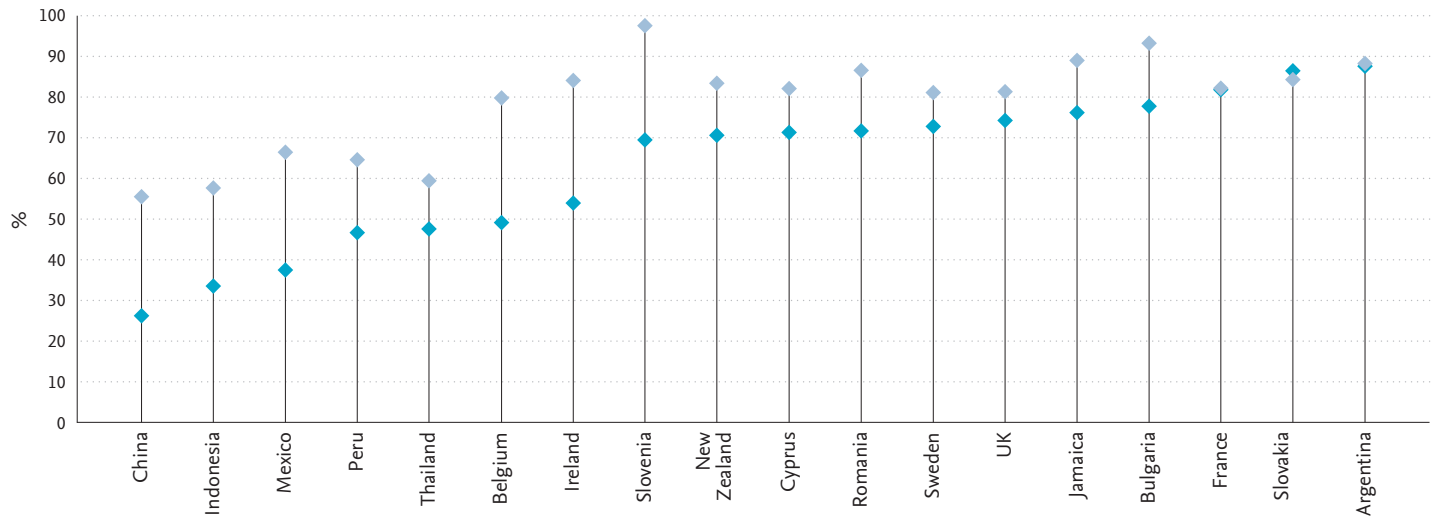


Source: UNESCO Institute for Statistics

Figure 8.2.4 Slovakia the only country with more female managers than teachers

Percentage of female teachers and female management personnel in primary education

◆ School level management personnel ◆ Teachers primary



Source: UNESCO Institute for Statistics

### 3. Teachers' pay a factor in proportion of female teachers

The proportion of female teachers in a country tends to reflect how well teachers are paid. That proportion tends to be high in places where teacher salaries are low. By contrast, males tend to dominate the teaching force in countries where teachers are relatively well paid.

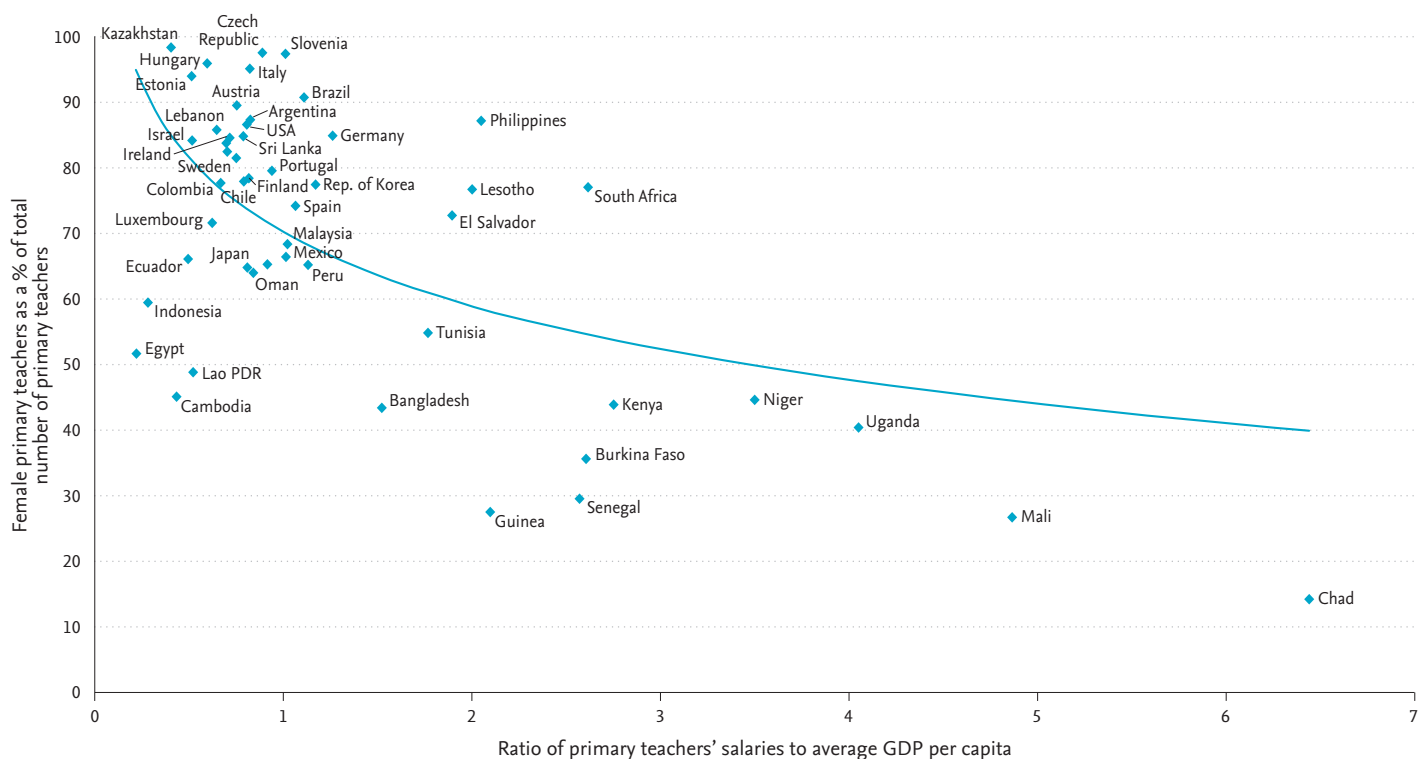
Figure 8.3.1 compares primary teachers' salaries (measured in relation to the average GDP per capita) with the proportion of women teachers in 50 countries.

In Chad, Mali and Uganda, where teacher salaries are more than four times GDP per capita, females account

for only 14 percent, 27 percent and 40 percent of the teaching force respectively. By contrast, in Kazakhstan, Czech Republic and Italy, where teacher salaries are below the levels of GDP per capita, females make up well over 90 percent of teachers. There are, however, plenty of exceptions to these general patterns. In Cambodia, for example, men make up a majority of primary teachers, but the salary level is less than half of GDP per capita. In South Africa more than three-quarters of teachers are female even though teacher salaries are more than two times GDP per capita.

Figure 8.3.1 More female primary teachers in countries where salaries are low

Primary teachers' salaries as a ratio of average GDP per capita and the proportion of female primary teachers, 2000–2007



Source: UNESCO Institute for Statistics

### 4. Girls more affected than boys by distance to school

The need to travel long distances to school has a negative impact on attendance and persistence for both sexes, but distance is a significant obstacle for girls, especially at the lower secondary level.

Figure 8.4.1 presents data showing the relation between the gross attendance rate and the distance to school at the primary level for four African countries: Malawi, Nigeria, Uganda and Zambia. In three of the countries attendance rates decline as the distance increases for both sexes, with the decline particularly steep in Nigeria. In

both Nigeria and Uganda the negative impact of distance on attendance is slightly higher for girls than for boys.

The exception is Malawi, where attendance remains relatively steady for both sexes as the distance to school increases.

As seen in Figure 8.4.2, the negative impact of distance from school in the four countries is much greater at the secondary than at the primary level for both boys and girls. In Malawi the negative impact is significantly greater for girls than for boys.

Figure 8.4.1 How distance affects primary attendance in four sub-Saharan African countries

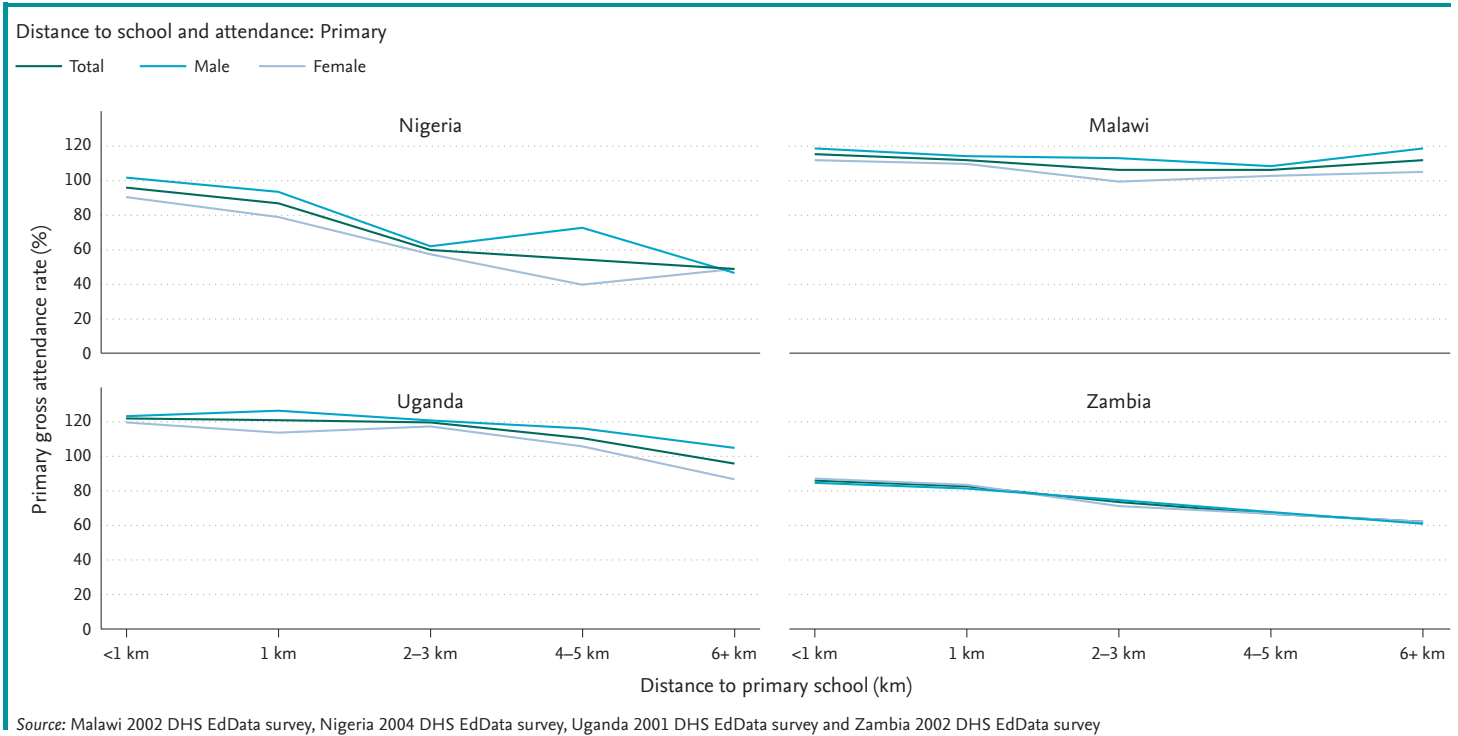
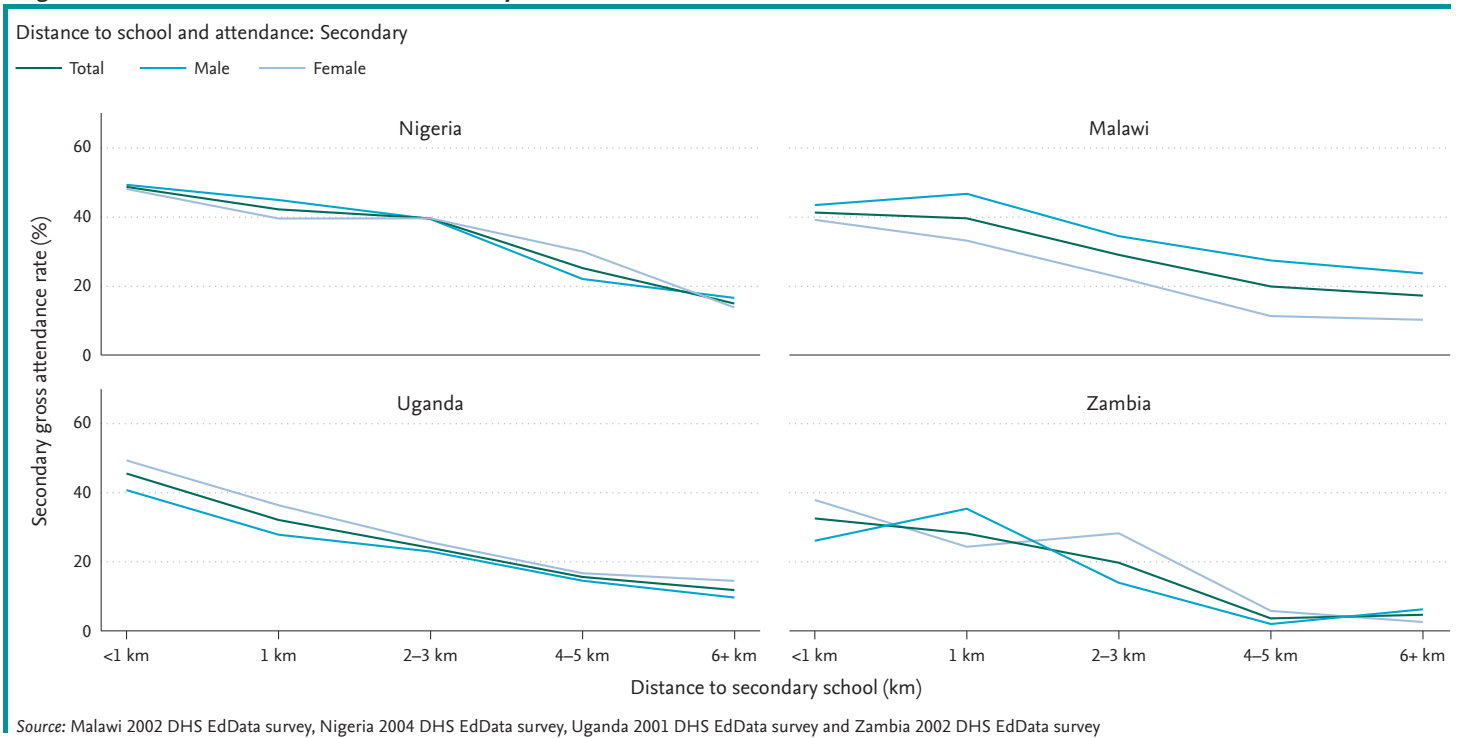


Figure 8.4.2 How distance affects secondary attendance in four sub-Saharan African countries





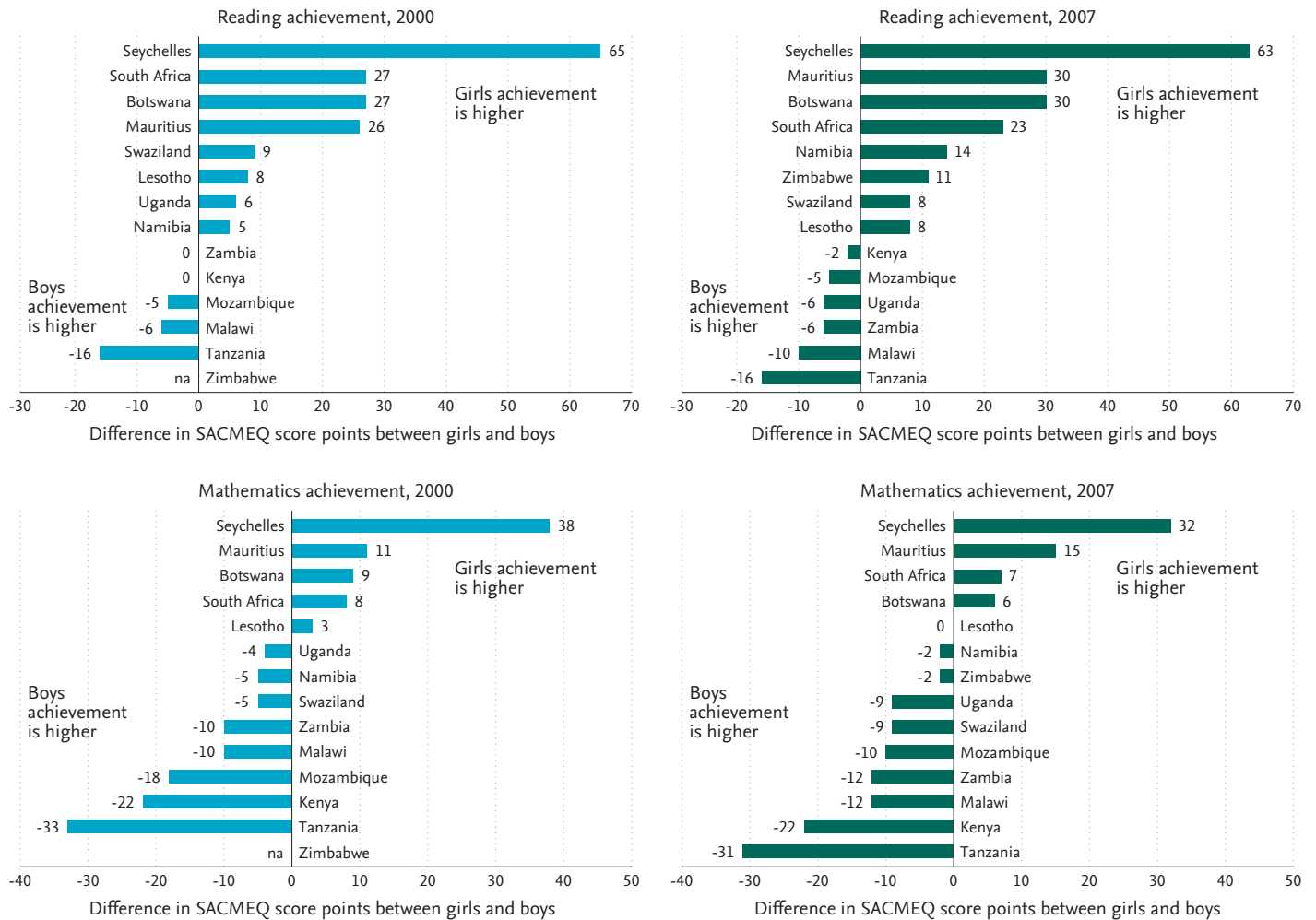
## 5. Females have edge over males in learning achievement

Abundant evidence exists in countries around the world of significant gender differences in learning achievement. Specifically, girls tend to have an advantage in reading achievement compared to boys, while boys have historically held an advantage in mathematics and science.

In many countries girls have been narrowing the gaps in these areas of study, but recent evidence from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) suggests that these gender differences are persisting.

Figure 8.5.1 Girls have edge in reading and mathematics in 14 developing countries

Gender differences in reading and mathematics in 14 southern and eastern African countries, 2000 and 2007



Note: Countries are sorted on the basis of gender differences for each subject in 2000. SACMEQ score points are standardised based on a SACMEQ mean of 500 and a standard deviation of 100. For further documentation regarding the assessments please see [www.sacmeq.org](http://www.sacmeq.org).

Source: Saito (in preparation). Southern African Consortium for Monitoring Education Quality (SACMEQ). For more information, see [www.sacmeq.org](http://www.sacmeq.org).

Figure 8.5.1 presents data from a SACMEQ study of educational achievement among girls and boys at the end of primary schooling in 14 sub-Saharan African countries for 2000 and 2007. The figure shows that in 2000, girls performed better than boys in a majority of countries in reading, while boys did better than girls in a majority of countries in mathematics.

Comparable data for 2007 is remarkable in that the sets of countries in which boys outperformed girls and vice versa were virtually the same as in 2000. So, too, were the magnitudes of the differences.

# Conclusion

**Participants of the World Conference on Education for All in 1990 and in subsequent international assemblies embraced an ambitious vision of a world in which all children would have access to an education that would enable them to realize their highest potential as individuals, parents, citizens and workers. Over the last two decades much progress has been made toward achieving this vision.**

Enrolments at all levels, from pre-primary through tertiary, have increased at rates well above the growth of the relevant school-age population, meaning that the number of out-of-school children has declined. Three-quarters of the world's children now reside in countries with near-universal primary enrolment, and there has been a general upward trend in participation in secondary school in all regions. School-life expectancy rates are on the rise throughout the world for both males and females. Youth literacy rates are well above those for adults – a development that portends well for adult literacy rates in the future.

Progress has also been made toward the goal of gender parity. Female enrolments have increased faster than those for males at all levels, most dramatically in tertiary education. Two-thirds of countries have achieved gender parity at the primary level and one-third at both the primary and secondary levels.

Whereas the challenge of gender equality was once seen as a simple matter of increasing female enrolments, the situation is now more nuanced, and every country,

developed and developing alike, faces policy issues relating to gender equality. Girls continue to face discrimination in access to primary education in some countries, and the female edge in tertiary enrolment up through the master's level disappears when it comes to PhDs and careers in research. On the other hand, once girls gain access to education their levels of persistence and attainment often surpass those of males. High repetition and dropout rates among males are significant problems.

Despite these achievements however, most of the developing regions still fall behind on several aspects of gender equality. It is often the case where a better level of education doesn't necessarily translate into better employment opportunities. Even though women outperform men in education, they still face significant shortfalls and discrimination in the labour market and end up in jobs where they don't use any of their skills. However, even though education is not the only input into women's empowerment it is nonetheless a central one.

Some years ago Neth Din, a 77-year old farmer in Kandal Province, was asked why he and his wife were so committed to educating their three granddaughters. He said, "We have two hands, and if one hand is weak we can do nothing. The two hands must be strong. We must use both hands."

The same could be said of all regions and nations.

# Glossary

**Compulsory education** The number of years or age span during which children are legally obliged to attend school.

**Duration** The number of grades or years in a given level of education.

**Educational attainment** The educational attainment of an individual is defined as the highest level of education successfully completed.

## **Educational institutions (public and private)**

Educational institutions are defined as entities that provide instructional or education-related services to individuals and other educational institutions. Whether or not an entity qualifies as an educational institution is not contingent upon which public authority (if any) has responsibility for it.

Educational institutions are classified as either public or private according to whether a public agency or a private entity has the ultimate power to make decisions concerning the institution's affairs.

An institution is classified as public if it is controlled and managed directly by a public education authority or agency; or controlled and managed either by a government agency directly or by a governing body (council, committee, etc.), most of whose members are either appointed by a public authority or elected by public franchise.

An institution is classified as private if it is controlled and managed, whether for profit or not, by private bodies such as non-governmental organizations, religious bodies, special interest groups, foundations or business enterprises, or if its governing board consists mostly of members not selected by a public agency.

**Enrolment** The number of pupils or students enrolled in a given grade or level of education, regardless of age. Typically, these data are collected at the beginning of the school year.

**Total public expenditure on education** The sum of all expenditures, current and capital, on education made by local, regional and national/central governments, including municipalities. Intergovernmental transfers are excluded.

## **Fields of education (broad)**

### **Science and technology fields**

*Science:* life and physical sciences; mathematics and statistics; computer sciences.

*Engineering, manufacturing and construction:* engineering and engineering trades; manufacturing and processing;

architecture and building.

### **Other fields**

*Agriculture:* agriculture, forestry and fishery; veterinary science.

*Education:* teacher training; education science.

*Health and welfare:* medical sciences and health related sciences; social services.

*Humanities and arts:* humanities; religion and theology; fine and applied arts.

*Social sciences, business and law:* social and behavioural sciences; journalism and information; business and administration; law.

*Services:* personal services; transport services; environmental protection; security services.

*Basic programmes:* literacy, numeracy and personal development – together with programmes for which the field is unknown – are classified as “not known or unspecified”.

**Graduate** A person who has successfully completed the final year of a level or sub-level of education. In some countries, completion occurs as a result of passing an examination or a series of examinations. In other countries, it occurs after a requisite number of course hours have been accumulated. Sometimes both types of completion occur within a country.

**Gross domestic product (GDP)** The sum of all final goods and services produced in a country in one year, including distributive trades and transport, plus any product taxes and minus any subsidies not included in the value of the products.

**GDP per capita** The gross domestic product divided by the population at mid-year.

**Literacy** According to UNESCO's 1958 definition, the term literacy refers to the ability of an individual to read and write, with understanding, a simple statement related to one's daily life. The concept has since evolved and now involves a continuum of reading and writing skills, and often includes basic arithmetic skills (numeracy).

**New entrants** Pupils or students entering a given level of education, grade or programme for the first time.

**Purchasing power parity (PPP)** An exchange rate that accounts for price differences among countries, allowing international comparisons of real output and incomes. This means that a given sum of money, when converted into U.S. dollars at the PPP rate (PPP dollars), will buy the same basket of goods and services in all

countries. In other words, PPPs are the rates of currency conversion which eliminate the differences in price levels among countries. Thus, comparisons between countries reflect only differences in the volume of goods and services purchased.

**Repeater** Pupil enrolled in the same grade for a second or further year.

**School-age population** Population of the age group corresponding to a given level of education, whether enrolled in school or not, as indicated by official entrance age and duration.

**School-life expectancy** The number of years a child of school entrance age is expected to spend within the specified levels of education. It is the sum of the age-specific enrolment ratios for the specified levels of education. To compensate for the lack of reliable data by age for tertiary education, the gross enrolment ratio for tertiary education is multiplied by 5 and used as a proxy for age-specific enrolment rates. At all other ISCED levels, enrolment that is not distributed by age is divided by the school-age population and multiplied by the duration of the given level before being added to the sum of the age-specific enrolment rates.

## Students

**Students/pupils:** Pupils refer to children enrolled in pre-primary and primary education, whereas youth and adults enrolled at more advanced levels are often referred to as students.

**Full-time students:** Students engaged in an educational programme for a number of hours of study statutorily regarded as full-time at a particular level of education in a given country.

**Part-time students:** Students whose statutory study hours are less than those required of full-time students in a given level and country.

**Full-time equivalent number of students:** These are generally calculated in person/years. The unit for the measurement of full-time equivalence is a full-time student. Thus, a full-time student equals one full-time equivalent. The full-time equivalence of part-time students is determined by calculating the ratio of their hours studied to the statutory hours studied by a full-time student during the school year. For example, a student who studied one-third of the statutory hours of a full-time student equals one-third of a full-time equivalent student.

## Teachers

**Teaching staff:** Number of persons employed full-time or part-time in an official capacity to guide and direct the learning experience of pupils and students, irrespective of their qualification or the delivery

mechanism (i.e. whether face-to-face or at a distance). This definition excludes educational personnel who have no active teaching duties (e.g. headmasters, headmistresses or principals who do not teach) and who work occasionally or in a voluntary capacity in educational institutions.

**Trained teachers:** Teachers who have received the minimum organized teacher training (pre-service or in-service) required for teaching at the relevant level in a given country.

**Full-time teachers:** Persons engaged in teaching for a number of hours of work statutorily regarded as full-time at the particular level of education in a given country.

**Part-time teachers:** Teachers whose statutory working hours are less than those required of full-time teachers in a given country.

**Full-time equivalent number of teachers:** The equivalent is calculated in person/years. The unit for the measurement of full-time equivalence is a full-time teacher. Thus, a full-time teacher equals one full-time equivalent. The full-time equivalence of part-time teachers is determined by calculating the ratio of their hours worked to the statutory hours worked by a full-time teacher during the school year. For example, a teacher who works one-third of the statutory hours of a full-time teacher equals one-third of a full-time equivalent teacher.

**Teachers' salaries** Teachers' salaries are expressed as statutory salaries, which are scheduled salaries according to official pay scales. They refer to the minimum scheduled gross salary per year for a full-time teacher who has the minimum training necessary to be qualified at the beginning of his or her teaching career. Reported salaries are defined as the total sum of money paid by the employer for the labour supplied minus the employer's contribution to social security and pension funding (according to existing salary scales). Bonuses that constitute a regular part of the salary (such as holidays or regional bonuses) are included in the figures.

**Technical and vocational education (TVE)** Programmes designed mainly to prepare students for direct entry into a particular occupation or trade, or class of occupations and trades. Successful completion of such programmes normally leads to a labour-market relevant vocational qualification recognized by the relevant authorities (ministry of education, employers' associations) in the country in which it is obtained.

For more definitions, please refer to the UIS multilingual online glossary at [www.uis.unesco.org/glossary](http://www.uis.unesco.org/glossary)

# Definitions of indicators

## Education finance

**Total public expenditure on education as a percentage of GDP:** Total current and capital expenditures on education by local, regional and national governments, including municipalities (household contributions are excluded), expressed as a percentage of GDP.

**Total public expenditure on education as a percentage of total government expenditure:** Total current and capital expenditures on education by local, regional and national governments, including municipalities (household contributions are excluded), expressed as a percentage of total government expenditure on all sectors (including health, education, social services, etc.).

**Gender parity index (GPI)** The ratio of female-to-male (or male-to-female, in certain cases) values of a given indicator. A GPI of 1 indicates parity between sexes. A GPI above or below 1 indicates a disparity in favour of one sex over the other.

**Gross intake ratio (GIR)** Total number of new entrants in the first grade of primary education, regardless of age, expressed as a percentage of the population at official primary school entrance age.

**Gross intake ratio to the last grade of primary (GIRLG)** The total number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the population at the official school entrance age to the last grade.

**Gross enrolment ratio (GER)** The number of pupils or students enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the official age group for this level of education. For the tertiary level, the population used is that of the 5-year age group following on from the official secondary school leaving age.

**Gross graduation ratio** Total number of graduates, regardless of age, from a given level of education or programme expressed as a percentage of the population at the official graduation age for that level of education or programme.

**Literacy rate** Total number of literate persons in a given age group, expressed as a percentage of the total population in that age group. The adult literacy rate measures literacy among persons aged 15 years and above, and the youth literacy rate measures literacy among persons aged 15 to 24 years.

**Net enrolment rate (NER)** Total number of pupils or students of the official age group for a given level of education enrolled at that level, expressed as a percentage of the total population in that age group.

**Net intake rate (NIR)** Total number of new entrants in the first grade of primary education who are of the theoretical primary school entrance age, expressed as a percentage of the population of that age.

**Net intake rate (adjusted) (ANIR)** Total enrolment in primary education of pupils of official primary school entrance age, either in the first or subsequent grades, expressed as a percentage of the population of that age in a given school year. It is the equivalent of the age-specific enrolment ratio of the official primary school entrance age. It measures the actual level of access and participation into primary education of the population of the official primary school entrance age.

**Percentage of female students** Total number of female students in a given level of education, expressed as a percentage of the total number of students enrolled at that level of education.

**Percentage of new entrants to primary education with ECCE experience**

Total number of new entrants to primary education who have attended some form of organized Early Childhood Care and Education (ECCE) programmes, expressed as a percentage of the total number of new entrants to primary education.

**Percentage of repeaters** Total number of pupils or students who are enrolled in the same grade as the previous year, expressed as a percentage of total enrolment in that grade of education.

**Percentage of technical and vocational enrolment** Total number of students enrolled in technical/vocational programmes at a given level of education, expressed as a percentage of the total number of students enrolled in all programmes (technical and vocational and general) at that level.

**Percentage of trained teachers** Total number of teachers who have received the minimum organized teacher-training (pre-service or in service) required for teaching at the relevant level of education in a given country, expressed as a percentage of the total number of teachers at that level of education.

**Pupil/teacher ratio (PTR)** The average number of pupils per teacher at a specific level of education specified in a given school year, based on headcounts for both pupils and teachers.

**Regional averages** Regional averages are weighted averages, taking into account the relative size of the relevant population of each country. The figures for the countries with larger populations thus have a proportionately greater influence on the regional aggregates.

The averages are derived from published data complemented by imputed values for missing countries. Imputations are based on publishable data for the same countries from previous years. When imputing an indicator, information from related indicators are used to inform about trends. In the case of Afghanistan, China, Haiti, India, Pakistan, Papua New Guinea, the Russian Federation and Somalia imputations are partly based on UIS estimates.

*For more definitions, please refer to the UIS multilingual online glossary at [www.uis.unesco.org/glossary](http://www.uis.unesco.org/glossary)*

# Regions

## Arab States

*(20 countries or territories)*

### **Respondents to UIS questionnaires:**

Algeria, Bahrain, Djibouti, Iraq, Kuwait, Lebanon, Libya, Mauritania, Morocco, Occupied Palestinian Territory, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, United Arab Emirates, Yemen.

### **Respondents to UOE or WEI questionnaires:**

Egypt, Jordan, Tunisia.

## Central and Eastern Europe

*(21 countries or territories)*

### **Respondents to UIS questionnaires:**

Belarus, Montenegro, Republic of Moldova, Serbia, Ukraine.

### **Respondents to UOE or WEI questionnaires:**

Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovakia, Slovenia, The Former Yugoslav Republic of Macedonia, Turkey.

## Central Asia

*(9 countries or territories)*

### **Respondents to UIS questionnaires:**

Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, Uzbekistan.

## East Asia and the Pacific

*(34 countries or territories)*

### **Respondents to UIS questionnaires:**

Brunei Darussalam, Cambodia, Cook Islands, Democratic People's Republic of Korea, Fiji, Hong Kong Special Administrative Region of China, Kiribati, Lao People's Democratic Republic, Macao Special Administrative Region of China, Marshall Islands, Federated States of Micronesia, Myanmar, Nauru, Niue, Palau, Papua New Guinea, Samoa, Singapore, Solomon Islands, Timor-Leste, Tokelau, Tonga, Tuvalu, Vanuatu, Viet Nam.

### **Respondents to UOE or WEI questionnaires:**

Australia, China, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Thailand.

## Latin America and the Caribbean

*(42 countries or territories)*

### **Respondents to UIS questionnaires:**

Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, British Virgin Islands, Cayman Islands, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Montserrat, Netherlands Antilles, Nicaragua, Panama, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Venezuela.

### **Respondents to UOE or WEI questionnaires:**

Argentina, Brazil, Chile, Jamaica, Mexico, Paraguay, Peru, Uruguay.

## North America and Western Europe

*(29 countries or territories)*

### **Respondents to UIS questionnaires:**

Andorra, Gibraltar, Holy See, Monaco, San Marino.

### **Respondents to UOE or WEI questionnaires:**

Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Liechtenstein, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States of America.

## South and West Asia

*(9 countries or territories)*

### **Respondents to UIS questionnaires:**

Afghanistan, Bangladesh, Bhutan, Islamic Republic of Iran, Maldives, Nepal, Pakistan.

### **Respondents to UOE or WEI questionnaires:**

India, Sri Lanka.

## Sub-Saharan Africa

*(45 countries or territories)*

### **Respondents to UIS questionnaires:**

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

# Electronic resources

## Data Centre

The printed version of the *World Atlas of Gender Equality in Education* provides a subset of the internationally comparable statistics found in the UIS Data Centre, which can be accessed free of charge via the Institute's website at <http://stats.uis.unesco.org>

The Data Centre contains more than 500 education indicators and underlying data. It covers all levels of education from pre-primary to tertiary and includes topics such as access, participation, progression, completion, teachers and finance. For example, users will find statistical information on:

*Enrolment by grade and level of education*

*Repeaters by grade*

*Tertiary enrolment by fields of study*

The Data Centre also includes a range of tools to facilitate data access and analysis, including:

*Country profiles highlighting key education indicators*

*Tools to build and store statistical tables and graphs*

*UIS survey instruments, classifications and methodological documents*

## Time series

The Data Centre contains indicators and underlying data for 1999 onwards. In addition, the UIS incorporated a smaller set of indicators in a separate historical database covering indicators on education participation, progression and resources for the period 1970 to 1999.

## Data updates

The Data Centre is updated in January, April and October of each year. This publication contains the October 2010 data release.

## Documentation and publications

All UIS publications and surveys are posted on the UIS website in different language versions.

*Consult publications and documents on education*

Most documents can be downloaded free of charge: [www.unesco.org/education](http://www.unesco.org/education)

*Order publications*

Order our publications from the online bookshop in English, French, Spanish, Russian and Arabic published or co-published by UNESCO. These include books, multimedia, periodicals, and scientific maps for professionals:

<http://publishing.unesco.org/default.aspx>

## Alert service

Please consult the UIS website in order to subscribe to the alert service and receive e-mail notifications of new reports and data releases.

## Electronic version

Consult the e-Atlas:

[www.unesco.org/data/atlas-education-gender](http://www.unesco.org/data/atlas-education-gender)





# International targets

In the year 2000, the international community signed up to the Education for All and Millennium Development Goals. Currently the two most influential frameworks in the field of education, they are an ambitious roadmap for the global community to follow, offering a long-term vision of reduced poverty and hunger, better health and education, sustainable lifestyles, strong partnerships and shared commitments.

## **Education for All (EFA)**

The EFA movement is a global commitment led by UNESCO to provide quality basic education for all children, youths and adults. It began at the World Conference on Education for All (Jomtien, Thailand, 1990), which stressed education as a human right and outlined a holistic vision of lifelong learning. Ten years later, at the World Education Forum (Dakar, 2000), 164 governments pledged to achieve EFA and identified six goals with wide-ranging targets to be met by 2015.

The five multilateral institutions that organized the World Conference for Education for All remain the key international stakeholders in the EFA movement: UNESCO, UNDP, UNFPA, UNICEF and the World Bank. As lead agency of the EFA movement, UNESCO focuses its activities on five key areas: policy dialogue, monitoring, advocacy, mobilization of funding and capacity development.

### *The six Education for All Goals*

- Goal 1. Expand early childhood care and education
- Goal 2. Provide free and compulsory primary education for all
- Goal 3. Promote learning and life skills for young people and adults
- Goal 4. Increase adult literacy
- Goal 5. Achieve gender parity
- Goal 6. Improve the quality of education

## **Millennium Development Goals**

Also adopted in 2000, the eight Millennium Development Goals (MDGs) aim to halve poverty by 2015. Although MDGs 2 and 3 focus on achieving universal primary schooling, empowering women and eliminating gender disparities at the primary and secondary levels, education drives the achievement of all the MDGs. This is because it equips people with the knowledge and skills to break the cycle of poverty and shape their future life chances.

### *The eight Millennium Development Goals*

- Goal 1. Eradicate extreme poverty and hunger
- Goal 2. Achieve universal primary education
- Goal 3. Promote gender equality and empower women
- Goal 4. Reduce child mortality rate
- Goal 5. Improve maternal health
- Goal 6. Combat HIV/AIDS, malaria and other diseases
- Goal 7. Ensure environmental sustainability
- Goal 8. Develop a global partnership for development

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The education of girls and women is important not only as a matter of respecting a basic human right for half the population but as a powerful force for economic development and achieving social goals such as enhanced health, nutrition and civic involvement. This Atlas presents the latest data from the UNESCO Institute for Statistics on trends in educational access and progression, from pre-primary through tertiary levels and adult literacy, with special attention to the all-important issue of gender equality. These trends are depicted through colour-coded maps that make it easy for readers to visualize global and regional trends and to understand how they are shaped by factors such as national wealth and geographic location.



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