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

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 determined.

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References

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

Source: UNESCO Institute for Statistics
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 for 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.
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 with varying gender parity status for higher education, it shows that 54 percent of youth populations are favoured in a sizeable majority of 93 countries while women now account for a majority of students in most countries.

Table 5.2.1 demonstrates the variety of patterns among countries. It lists ten countries where the 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

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

### 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

Distribution of world’s youth by gender parity index for gross enrolment ratio in tertiary education, 2009

Note: GPI in tables is adjusted. Source: UNESCO Institute for Statistics

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

Gender parity index of the gross enrolment ratio by level of education, 2009 or latest year available

Note: GPI in tables is adjusted. 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 lower 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.
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.

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. Even though 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.