Executive Summary

- This policy brief discusses the representation of women in different academic positions and the policies that can be put in place to support gender equality within higher education institutions.
- Globally, women outnumber men as tertiary education students (52%) and represented close to 45% of teachers in tertiary education in 2020, as compared to less than 35% in 1990.
- Nevertheless, in many countries the representation of women tends to decrease as academic ranks progress and few women reach senior and leadership positions within higher education institutions.
- To support this, governments need to complement general gender policies for the society as a whole (by addressing violence against women, promoting work-life balance, addressing equal pay, etc.) with specific policy instruments for higher education with a long-term approach.
- These particular policies to address gender inequalities in academia, include raising awareness about gender inequality and promoting a culture of gender equality within HEIs to create a favourable environment.
- Promoting hiring and promotion policies and practices that equally rely on quantitative and qualitative performance indicators is also critical to better capture female contribution, while supporting at all stages of the academic career.
- Providing women with increased opportunities for accessing leadership positions in HEIs via dedicated funding, training, mentoring, and networking opportunities are other policy instruments that have proven helpful.
- Developing and implementing systems to collect longitudinal data disaggregated by gender on staff hiring, performance and promotion at different levels and share it increases knowledge and transparency.
- Many of these measures should be co-designed by governments and universities given the high autonomy of HEIs and their diversity.
The representation of women in academia and higher education management positions

Context

This policy brief discusses the representation of women in different academic positions and the policies that can be put in place to support gender equality. Higher education institutions (HEIs) are considered to be advocates of gender equality for society (UNESCO IESALC, 2022), but how much is this reflected in their role as employers? Gender equality in higher education and research is essential to women rights and social justice and to provide all bright minds with the opportunity to contribute to solving the world’s most pressing challenges and drive progress for humanity.

The international community has shown its commitment to promoting gender equality and eliminating discrimination against women through instruments and commitments such as the Convention on the Elimination of All Forms of Discrimination against Women (United Nations, 1979), the Beijing Declaration and Platform for Action (United Nations, 1995) and the Sustainable Development Goals (United Nations, 2015).

In the context of higher education, the revised Recommendation on Science and Scientific Researchers (UNESCO, 2017) called on Member States to promote the recruitment and advancement of women in science. However, today women remain, on average, underrepresented in academia, especially at the most senior levels. Policy has a key role to play in addressing the structural and cultural barriers that continue to impede progress.

Gender parity at different levels of academic progression

Women outnumber men as tertiary education students - In most countries, progression in academic careers follows a well-established path. Accessing faculty and leadership positions usually requires, at least for more senior professorships, having a PhD. The gender parity index (GPI, number of women per man) in each educational and career step influences the subsequent steps. Therefore, in order to understand the state of gender balance in academia and leadership, the GPI is analysed at each of those levels.

Today, 52.1% of tertiary education students are women (i.e., GPI above one). Women outnumber men at all tertiary education levels except for PhD (ISCED 8). Yet, there are considerable differences between world regions, particularly at short-cycle programs (ISCED\(^1\) 5) (see Figure 1). Sub-Saharan Africa is the only region where women are underrepresented at all levels, and particularly at more advanced education levels. In the other world regions, the overrepresentation of women at the bachelor’s level (ISCED 6) increases even more at master’s level (ISCED 7). However, this trend reverses in a sharp drop at the PhD level (ISCED 8), with women becoming underrepresented at this level of education in all regions except Central Asia and Latin America and the Caribbean. The transition between master’s and PhD level is the first measurable explanation for women’s lower global representation in academic positions.

![Figure 1. Gender parity index for enrolment in tertiary education, per ISCED level and region in 2020](image)

Source: Own elaboration based on UIS data

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\(^1\) ISCED levels the standardized classification used by the UNESCO Institute for Statistics and refers to short-cycle programs (ISCED 5), Bachelor’s degrees (ISCED 6), Master’s degrees (ISCED 7) and PhD degrees (ISCED 8).
Less than half of higher education teachers are female. Over the last 50 years, female student share in higher education has continuously increased over time globally and across all world regions except Central and Eastern Europe (UNESCO IELSAC, 2022). Aligned with this rise, the share of female tertiary education teachers (see Figure 2) has also unceasingly increased from 31.6% in 1974 to 43.6% in 2020. If the share of women continues increasing at the same rate, global gender parity of tertiary education teachers would be reached by 2045\(^2\). While there are regional differences, in the long-term all regions show a similar trend except for Sub-Saharan Africa, where women represent a lower percentage of teachers today (25.2% in 2020) than they did in 1995 (25.9%).

![Figure 2. Percentage of female tertiary education teachers, per world region.](source: Own elaboration based on UIS data.)

Gender parity of PhD students helps explain gender parity in tertiary education teachers years later. There is a significant correlation between the GPI of teaching staff and the GPI of PhD students from a few years prior\(^3\). For example, in 2020, tertiary teachers’ global GPI coincided with the GPI of PhD students in 2002, or the PhD graduates of 2004-2005. This suggests that, in most regions, today’s share of female PhD students predicts to a certain extent the gender balance of future teaching staff (see Figure 3). However, this phenomenon does not explain why the share of female is notably reduced between master’s level and the PhD level.

In three regions (Arab States, South and West Asia, and North America and Western Europe), the trends for all variables are similar to the global average. In Central and Eastern Europe, and in Central Asia, the share of female teachers is higher than for PhD or Bachelor students at any given time, showing the attractiveness of the tertiary education teaching career for women. Sub-Saharan Africa follows a different trend to all other regions, with the lowest female representation at all tertiary education levels. Despite the progress made towards parity in the last decade, the female representation for its teaching staff does not seem to follow a clear trend (See Figure 4).

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\(^2\) This date is solely aimed at illustrating the past rate of change in women’s representation to predict future change and does not account for any other information.

\(^3\) Considering a hypothetical scenario in which most students take three to four years to complete their Bachelor’s degree, then one or two years to complete their Master’s degree, then four to five years to complete their PhD programme, and then become tertiary education teachers for an average of 30 to 35 years, we could assume that today’s teachers are those who, on average, finished their PhD 15 years ago, finished their master’s degree around 4 years prior, and so on. While individual educational and academic careers may not follow this timeline, and the average tenure and education level of teachers will vary from country to country, this approach can help us understand, in broad terms, to which extent today’s gender balance is explained or not by the GPI of prior cohorts.
Regional and national evidence of female representation in academia. For some countries, female representation in academia is a concern at all levels. For example, in at least twelve countries the share of female tertiary education teachers is at or below 20%, including Afghanistan, Cambodia and ten Sub-Saharan African countries. The lack of globally comparable and systematically collected data on gender balance in senior and leadership positions within HEIs does not provide global evidence of the extent to which female are progressing along academic ranks. However, all regional and national information available indicates that the higher the academic position, the lower the representation of women (UNESCO IESALC, 2021).

At regional level, only 18% of Latin American public universities in nine countries are led by female rectorors (UNESCO IESALC, 2020). Similarly, 18% of rectors and 30% of vice-rectors across EUA member universities in 48 European countries are female (EUA, 2022), up from 10.5% and 24%, respectively in 2014. In these same European universities, nearly

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4 Based on historical trends, more countries can be in the same situation, but UIS does not offer recent data to confirm it.

5 Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Panama, Peru and Venezuela.
60% of senior management positions were held by women. Among the top 200 universities listed in the THE ranking, 48 are led by females (THE, 2023).

National reports offer more granularity on gender balance at different levels of seniority in the academic profession. In 2018, the share of entry-level teaching position at HEIs in India is similar than the share of female PhD students, women accounted for 42.6% of lecturer/assistant professor positions, but only 26.3% of professor and equivalent faculty positions and less than 0.1% of Vice-Chancellor positions (UNESCO IESALC, 2021; Tannistha, 2022). In Canada during 2021-22, women represented 42% of academic staff but only 31.5% of full professors as compared to 56.4% of positions at the lowest academic ranks (below assistant professor) (Sharanjit et Hango, 2022). Overall, the share of women at the more junior academic levels tends to be similar or even higher than the share of female PhD students, which suggests that the representation of women in academic positions does not drop when entering the academic career after getting their PhD, but as they progress through the academic ranks.

In some OECD countries, data is gathered on tertiary teachers by age range with similar results. For example, in Japan 34% of PhD students were female (UIS, 2019), and the share of female teachers at bachelor’s, master’s and doctoral programs was 35% for those under 30 years old but as low as 22% for those aged 50 or more, the lowest percentage amongst OECD members (OECD, 2022).

Policies

Policies to address gender inequality in HEIs

Policies to support women representation in academic positions, including at senior levels can be related to three types of policy instruments that are commonly used to foster change in higher education: regulation, funding and information (Vedung, 1998; Klenk et al., 2022). Besides, two additional instruments can be considered due to their utmost importance for gender equality and higher education: the direct provision of services and the collaboration with HEIs. Examples of policies related to those five instruments are presented below.

Regulation

Regulation policies are implemented through laws or other formulated rules. A particularly self-evident regulatory policy to support gender equality is the use of quotas. Quotas prompt HEIs to reserve a number of positions for women in their recruitment and promotion practices.

In Norway, the 2002 Gender Equality Act requires that women represent at least 40% of the members of executive boards of universities and university colleges (UNHR, 2003). In addition, the Higher Education law called for HEIs to develop a comprehensive approach to gender equality for all employees. As a result, the proportion of women amongst academic staff in Norwegian HEIs increased from 35% in 2000 to 48% in 2020, and from 8% to 25% of the country’s full professors over the same period (Klenk et al., 2022).

In Austria, regulation was introduced in 2009 to require university bodies such as the senate and other commissions to meet a quota of 40% female members. The quota was raised to 50% in 2014. By 2016 all but one of the university councils had fulfilled this quota (UNESCO IESALC, 2022). Another example is Colombia where the government implemented a quota in 2010 requiring that women comprise at least 30% of top decision-making positions in public administration, which includes public universities.

In several countries that adopted quotas to strengthen the representation of women in academia, the expected policy goals were not met because of a lack of enforcement or the absence of complementary measures to address the cultural and structural barriers that underpin gender inequalities in higher education (Guldvik, 2011). For instance, gender quotas requiring a minimal representation of women (often 40%) in committees responsible for the selection of candidates to faculty positions were introduced in Finland, France, Italy and Spain. A study focussing
on the cases of Spain and Italy found that the larger presence of female evaluators did not increase the share of female appointment (Bagues et al., 2017).

Beyond quotas, regulation can enforce transparency in HEIs’ internal policies, strengthen equal pay or address several types of discrimination based on gender. A particularly determining set of regulation policies for gender equality in higher education are family-friendly policies. These include flexible work arrangements for parents, childcare subsidies, or parental leave.

Parental leave policies are important given the competitive nature of academic career progression. In most countries, women are expected to carry most of the caregiving responsibilities, and the length of paid leave for mothers far outweighs that granted to fathers after the birth of a child. In academia, this situation can lower the short-term productivity of mothers at the beginning of their career (e.g.; with relatively fewer academic publications), which might impede their career advancement (Morgan et al., 2021). For this reason, several countries have implemented policies to encourage fathers to take a more active role in caregiving, such as increased paternity leave (Dunatchik et Özcan, 2021). In Spain and Iceland, the duration of paid leave is now the same for both parents, although Iceland allows parents to transfer days and Spain does not.

Funding
Funding policies seek to incentivise specific behaviours to achieve policy goals. Incentives can be extra funding offered to HEIs that demonstrate a commitment to gender equality across academic ranks or penalties when the fund allocation of HEIs is bound to their commitment to gender equality.

For example, the Dutch government made in 2017 an investment of €5 million to prompt universities to hire 100 female professors in permanent positions (UNESCO IESALC, 2022). In Sweden, the 2016 Gender Mainstreaming in Academia (GMA) plan requires HEIs to develop gender equality plans and to report on their progress to receive government funding. Although the outcomes of the plan have not yet been fully evaluated, a first study on its implementation concluded that it can have very different impact on HEIs practices depending on how it is translated into HEIs policies. More transformation has happened in those HEIs where the plan was translated by a team of experts who already had a strong experience working on gender issues and confront the existing structure and culture (Peterson and Jordansson, 2022).

Beyond HEIs, funding policies can also target women directly and encourage them to pursue academic careers. Since 2002, the Women Scientist Scheme (WoS) in India provides fellowships to women scientists who have taken a break in their career because of family responsibilities and seek to re-enter the scientific profession. Over 2200 women have benefited from this scheme over the last five years (Baruah, 2022).

Direct provision of services
In multiple countries, governments provide direct services to their population that can have a significant influence on gender balance in academia. The most common governmental service provision in this context is the partial or full subsidy of childcare services and early childhood education. The provision of accessible childcare services was the most effective solution to tackle barriers to women’s employment at OECD countries (OECD, 2017).

As mothers disproportionately assume the responsibility for caring for young children, childcare services can support them to balance their professional and family responsibilities, therefore contributing to the equal participation of women in the workforce, including academia. For US biology PhD candidates, having children shifts female scientists away from academic careers because of childcare responsibilities and reduced working time, ultimately leading to a gender gap of over 10 percentage points in tenure tracks (Cheng, 2020).

Information
Information policies are a more indirect form of governance that generate or disseminate valuable information to change behaviours or guide policymaking (Klenk et al., 2022). Dissemination policies can aim to raise awareness on unconscious biases or gender stereotypes and promote more equitable decision-making in higher education. Depending on the target audience, these policies might focus on bias and discrimination in appointment processes (leaders in HEIs); inclusive teaching (teaching staff); or sexual harassment and assault prevention (staff and students). Dissemination policies can also target women as a specific group and comprise initiatives such as training, mentorship, and networking opportunities to develop their leadership competences.

The Maria da Penha Law adopted in 2006 in Brazil to prevent and address violence against women in multiple sectors and in a comprehensive manner is an example (Brendel and Wolf, 2012). To implement this law, the government provided funding and resources to multiple initiatives across the country, including those to increase awareness.
on gender equality in universities (United Nations, 2010). Another example comes from Ethiopia where the government organises continuous capacity-building initiatives to improve the leadership capabilities of women. The expected outcomes of these trainings are better individual performance of female leaders and improved leadership capacity in HEIs (Tamrat, 2021).

Policies can also seek to generate information to guide policy making. Regarding gender equality in academic positions, policies can organise the collection of data on position occupations or on hiring and promotion committees and practices. Data collection can be conducted at regular intervals, using information systems and surveys of academic staff. Surveys are particularly useful to understand the root causes of gender inequalities, beyond their occurrence. In Africa, a 2021 survey of female tertiary education academics and managers found that the greatest barriers for women to access leadership positions were socio-cultural expectations (33%), followed by lack of mentorship (29%), gender stereotypes (25%), limited access to training and development (24%), unfair promotional policies at the workplace (23%), unhealthy work (education)/life balance (23%) and the lack of networking opportunities (22%) (ESSA, 2021). Such information is crucial to identify adequate policy intervention and cannot be captured through data on position occupations.

The information generated can either be used to design policies, be shared with HEIs to co-develop plans to improve gender equity or be disseminated publicly to promote transparency and accountability.

**Recommendations**

To improve the representation of female academics in HEIs throughout their careers, governments should design and implement a wide range of general policy measures that promote gender equality in society as a whole (by addressing violence against women, promoting work-life balance, addressing equal pay, etc.) as a baseline. These measures should be complemented with specific policy instruments for higher education with a long-term approach, including:

**Raise awareness about gender inequality and promote a culture of gender equality within HEIs.** It is critical to address the cultural barriers to gender equality with all stakeholders of higher education (male and female students, academics and academic leaders) through gender mainstreaming that includes information and awareness campaigns as well as a gender approach in the teaching, research, engagement and management of the HEI. The baseline is to eliminate the gender-based violence and abuse still present in many HEIs. This will create a favorable environment for women to thrive academically and professionally.

**Include policy support for all stages of the academic career.** Policies should support equal opportunities at all academic career stages, from undergraduate studies to leadership positions. The

**Collaboration**

In the context of higher education policy, collaboration with HEIs can be key to improving women’s access to academic positions. In many countries, HEIs are granted with a high degree of autonomy, academic leaders are elected by their peers, and academic staff benefit from academic freedom. Given this autonomy, shared efforts between governments and HEIs to co-develop and co-implement gender equality policies are essential to allow for effective and sustainable impacts.

To collaborate with HEIs, governments can establish a specific agency or programme for the promotion of gender equality in academia to work closely with HEIs and provide resources for initiatives. In South Africa, for example, the government created a Ministerial Task Team in 2019 to address gender-based violence affecting both staff and students on university campuses. Addressing this problem was considered the first step to achieve gender equity in higher education. The role of the Task Team was to collaborate with HEIs to identify mechanisms to reduce sexual harassment and gender-based harm, share best practices and advice on future policy frameworks (Morell, 2019).

Governments can also use contractual policies through which they agree with HEIs on specific targets and milestones related to women representation in academia, as well as on the resources and support that will be provided to achieve those targets. Another form of collaboration between governments and HEIs can tap on their scientific expertise by financing and conducting research project on gender equality that are of direct relevance to policy.
The general aim is to ensure that women not only have equal opportunities to enter all fields of higher education or be hired at the lowest levels of academic positions but also to progress to senior and leadership positions. Besides, considering the whole academic pipeline allows governments to identify the most appropriate level of policy intervention and prioritize instruments.

**Promote hiring and promotion policies and practices that equally rely on qualitative and quantitative performance measures.** Women generally carry most responsibilities for childcaring at the beginning of their career and this can hinder their progression in academia when only quantitative measures are used, such as publication metrics or citation counts. These should be balanced with more qualitative performance measures such as peer evaluations, teaching evaluations or community engagement to provide a more comprehensive view of academics’ contribution to their field and promote a more inclusive and diverse academic community. More broadly, policies should also enforce transparency of internal policies and procedures regarding hiring, promotion and retention of academic staff to promote accountability of all stakeholders and build trust.

**Providing women with increased opportunities for accessing leadership positions in HEIs.** Providing women with dedicated funding, training, mentoring, and networking opportunities to increase career advancement and become leaders in higher education are ways to increase their confidence and capacity to access such positions and become role-models that challenge gender stereotypes and encourage other women to pursue academic careers and reach leadership positions.

**Developing and implementing systems to collect longitudinal data disaggregated by gender on staff hiring, performance and promotion at different levels.** The factors contributing to gender inequality in academia vary significantly between regions, countries, HEIs and across time. Thus, it is crucial for governments to build effective monitoring systems, or adapt existing ones, to understand the state of gender inequalities in the system and identify the barriers and challenges that women face in their career advancement, the effectiveness of policy interventions and keep track of progress. This transparency increases accountability of governments and HEIs. Ideally, monitoring systems could rely on administrative data complemented by surveys of academic staff in HEIs to gain a more comprehensive understanding of gender inequalities and their causes. Beyond data collection, it is important to disseminate findings in a transparent manner to promote accountability and ensure ethical practices.

**Build partnerships with HEIs to develop and implement tailored response to gender inequalities.** Given the high level of HEIs autonomy and the diversity of gender-related challenges, it is critical that governments and HEIs collaborate closely to identify the most pressing challenges and co-develop the most appropriate managerial and policy actions. To ensure strong partnerships, governments can establish specific agencies or programmes to co-develop and implement gender-equality plans with individual HEIs. Contractual policies can also be used to systematise HEIs’ commitment to gender equality, in particular when this commitment is tied to new funding opportunities.
References


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