



Empowering women for the good of society

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SHORT SUMMARY

Let's change the resilience paradigm

What are the root causes and drivers of resilience?

Societal resilience is shaped by the unique roles that individuals play and their ability to respond to shocks, gender-based expectations and discriminations hinder women's and girls' ability to participate in, and contribute to, society. In times of crises, their vulnerability intensifies resulting in a weakened response that ripples throughout society.

In response, UNESCO designed the first Gender-Based Resilience Framework.

As a compass for inclusive policymaking, this report analyzes how differences in opportunities, needs and constraints impact resilience and proposes a measurement Framework based on:

- (1) fundamental human rights;
- (2) socioeconomic characteristics, such as health, education, work, political engagement, and climate justice;
- (3) contextual factors, such as values and perceptions.

Moving beyond the standard approach of coping with and recovering from shocks; UNESCO calls for a gender-transformative resilience, which leverages the interrelations between individuals and institutions. Decision- and policy-makers, researchers, and gender equality advocates are invited to use and add to this Framework to effectively navigate through current and future crises.

It is only by empowering all women and girls, and people of all genders, that we will be able to face the challenges ahead.

Women's
employment rate
decreases by

4.4%

for every additional hour they
spend on unpaid domestic
and care work.



unesco

"Since wars begin in the minds of men and women it is in the minds of men and women that the defences of peace must be constructed"

Empowering women for the good of society

Foreword



“Diversity is a fact. Inclusion is an act,” I read once outside a small house in the suburbs of New York. And indeed, it is; it must be. The painful discrimination that women have endured for centuries — or any other form of discrimination whatsoever, be it gender- or race- or religion-based, for that matter — is not going to disappear simply because we wish it to disappear. We need to act. And we need to do it soon and collectively. And public policies have an important role to play in eradicating gender discrimination and, in fact, all types of discrimination, once and for all.

Too often, though, action and the design and implementation of effective public policies are hindered by the lack of hard evidence about the connotations that gender discrimination may take, their depth and breadth, and how they relate to the

welfare and well-being of the very people that are discriminated against, as well as the rest of society. For too long, the feminist cause has been portrayed as only benefiting women themselves, which has contributed to reducing the impact it can have on the most important decisions our governments need to make.

Although there has been clear policy and legislative action towards gender equality in many countries around the world, progress is slow, and it can be backtracked, as we have seen recently in the case of women’s reproductive rights. But there are many other areas where gender gaps hinder women from reaching their full potential.

How can we expect women to work and progress in their careers when they spend an average of four hours per day on unpaid care and domestic work (and up to seven hours in some countries), compared with just one and a half hours spent by men? How can they know about and fight for their rights, if in one-third of countries, girls are on average 13 percent less able to read and write and read simple texts? Is it fair that women earn 15 percent less than their counterparts (in 2021) while doing the same type of job with the same set of skills? The gap is even worse when it comes to female top earners, who in 2021 were making 20 percent less than their male peers, and with no positive outlook — since 2006 the gender pay gap has been reduced by only a few percentage points.

This analysis performed, for the first time, provides hard evidence about the impact of gender discrimination on the resilience of our economies and societies, with resilience understood as “the capacity to withstand or recover quickly from shocks”. It shows the extent to which the gaps that women endure on wages, non-paid work, the glass ceiling and sticky floors, and violence, among others, weaken countries. Not empowering women is not empowering us all.

The report proposes an encompassing framework to identify key determinants and mechanisms shaping gender-based discrimination. It then takes this

framework to existing data. In doing so, it identifies some of the many challenges women confront, assesses the magnitude of the different facets that this problem takes, and highlights how they relate to societal dynamics, economic performance and resilience to shocks. In a follow up to this study, we will aim to define the specific vulnerabilities that our economies and societies confront and that derive from gender-based inequalities.

Gender-based inclusion is not a zero-sum game. Increasing the benefits of some does not happen at the expense of others. All the evidence we have gathered shows that including and empowering women leads to greater pies, so to speak, so that everyone can enjoy greater welfare and well-being and thrive in more resilient economies and societies.

This gender-based resilience report — the first of a series aimed at giving policy- and decision-makers the elements they need to design, assess, and monitor the effectiveness of their gender-inclusive policies — maps gender-based inequalities and links them to economic performance and societal well-being to identify possible good practices and solutions. The compelling evidence proposed represents a call to action for all of us — individuals, governments, and others — for the good of women and our societies and economies. As George Bernard Shaw said, “The possibilities are numerous once we decide to act and not react.”

I want to thank the authors of this report, Mariagrazia Squicciarini, Garance Sarlat and Anna Rita Manca from UNESCO’s Social and Human Science Sector, for having so masterfully depicted how gender equality benefits us all. In a context where our societies continue to confront climate, health, economic, conflict and other shocks, investing in resilience through gender-friendly policies is the smart thing to do.

Gabriela Ramos,

Assistant-Director General for the Social and Human Sciences of UNESCO

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All errors remain our own.

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Executive Summary

This report contributes first-time hard evidence about the impact of gender discrimination on the resilience of economies and societies. Here, resilience is understood as “the capacity to withstand or recover quickly from shocks”. The analysis shows the extent to which the gaps that women endure in relation to wages, non-paid work, the glass ceiling, and violence, among others, weaken countries.

The report proposes an encompassing framework to identify key determinants and mechanisms shaping gender-based discrimination. It then takes this framework to existing data and identifies some of the many challenges that women are confronted with, assesses the magnitude of the different facets that this problem takes, and highlights how they relate to societal dynamics, economic performance and resilience to shocks.

The theoretical **framework** starts from the principle that fundamental rights, including physical integrity and the right to education, should be ensured to all individuals, at all levels of aggregation, be it the household, the community in which they live, or the region or country they belong to. It then moves to identify core domains, namely health, education, work, and political and civic engagement, that need to be examined to assess women’s and girls’ empowerment and resilience. It further looks at contextual domains such as representation, values, perception and institutions, as these interact with core domains and can aggravate, mitigate or improve the condition of women, men and gender-diverse people.

The framework is operationalized using a wider array of proxies and data sources, with the aim to be as encompassing as possible in terms of countries covered and to shed light on trends over time, when possible, to assess progress or lack thereof. The key stylized facts that emerge and the policy implications are listed below.

Investing in children and youth, also and especially through education, means increasing the likelihood of providing a resilient response to future shocks.

- On average, between 2015 and 2020, 90% of young men aged 15-24 reported being able to read and write, against 88% of women in the same age group, and countries that invested in female education and had embraced the concept of gender equality in 2011 seemingly benefited in terms of economic growth. In particular, those with a relatively higher literacy rate of women as compared to men exhibit the highest GDP growth between 2011 and 2021. Conversely, countries in the lowest GDP growth quartile show lower literacy rates for women than men.
- While investing in education reduces school dropout for both girls and boys, in the case of girls, an extra 1% of GDP invested in education may correspond to reducing school dropout rates by 22% (18 % for boys). This implies that women can be more powerful agents of development.
- Targeted investment in women’s and girls’ education may return a greater reduction in the rate of young people Not in Education, Employment or Training (NEET), also in countries characterized by high rates of poverty. A positive and significant correlation between NEET rates and poverty emerges, which is stronger for women (0.59) than for men (0.45).
- Globally, between 2000 and 2021, 14% of men and 23% of women aged 15-24 were NEET, with countries’ specific rates varying significantly between and within regions. Institutions can play an important role in reducing NEET rates, as results show that an increase of 1% in government expenditure may reduce female NEET rates by 10% against 4% for males.
- Acting on the improvement of educational achievement, measured by the minimum

proficiency level in reading at lower secondary education, correlates positively with lower NEET rates, and more markedly so in the case of girls: for an increase of 1% in reading proficiency, the NEET rate decreases by 36% among girls and 14% among boys.

Despite the advances observed, building more inclusive and sustainable societies requires the active involvement of both women and men and addressing gender segregation in education, technological development and science worldwide.

- Between 2015 and 2021, women accounted for 64% of enrolled students in arts and humanities studies, whereas men comprised 36%. Conversely, engineering, manufacturing and construction emerge as male-dominated education fields, with women accounting for only 26.4% of graduates on average. This marks a substantial disproportion of women labour in Science, Technology, Engineering and Mathematics (STEM) subjects.
- While Artificial Intelligence (AI) is changing the way we work, live, produce, interact and think, women are only seldom part of it: in 2020, women accounted for only 14% of authors of AI peer-reviewed articles worldwide, and 18% of authors at leading AI conferences were women, while 80% of AI professors are men.
- On the innovation side, there is a marked under-representation of women in the inventive process, as proxied by patent data. Results show that since 2000, taking all technologies together, for every ten inventors, only about two are women; the gender gap in inventorship has barely reduced over the 20-year period considered.
- Fewer than 30% of the world's researchers are women.
- Women scientists face greater threats to their safety: online and offline, survey data shows that 20% of researchers, both women and men consider sexual harassment an important issue to be addressed at the workplace. 62% disclosed having experienced at least one form of gender-based violence in academia and higher education. Of these, 66% were women, 56% men and 74% were non-binary respondents.

Intergenerational mobility, which refers to the extent to which the living standards of a generation are higher than those of their parents, is important. In societies characterized by low intergenerational mobility, talent remains untapped. It can lead to a misallocation of resources that may be very costly for economies and societies alike, especially in times of crisis. Underutilizing human potential, besides being economically inefficient, is unfair, detrimental to innovation and growth, and creates social and economic vulnerabilities.

- In low-income economies, women born in the 1940s had a 30% lower probability of reaching a better education than their parents, while for the cohort born in the 1980s this gap narrowed to 7%. In Sub-Saharan Africa and South Asia, women face much bigger barriers to attaining better education as compared to their parents, despite the fact that the gender gap halved from the 1940s generation to the 1980s generation.
- Intergenerational mobility is negatively correlated with poverty and, on average, accounts for a 23% reduction in poverty headcount for women and men. In low-income economies, for women achieving a higher education level than their parents, on average, the poverty headcount of women born in the 1950s cohort decreased by 22% and by 30% for those born in the 1980s. For men, the relationship between poverty headcount and absolute mobility in education is not significant. Providing education opportunities to women and overcoming gender stereotypes that restrict them to domestic and caring activities may lead to faster and greater reductions of poverty headcounts, particularly in low-income economies.

Resilience at a time of climate change requires equipping all, including girls and women, with a wide set of skills needed to face climate change-related threats.

- With the increased risk of flooding and extreme weather events, water safety knowledge and the ability to swim without assistance are critical to ensuring that girls and women are safe, as well as their children. Across regions, women and men exhibit different swimming without assistance abilities, irrespective of the region considered. On average, 40% of women report being able to swim compared to 66% of men. This difference varies from 15 percentage points in high-income

countries to 30 percentage points in the upper-middle-income group.

- The uneven distribution of swimming ability across countries emerges to be positive and significantly associated with expected years of schooling. Every additional year of schooling is associated with a similar magnitude in the improvement of swimming abilities for both girls and boys, with gender differences that remain nevertheless evident in swimming abilities.

Work is a right and a duty, which should pertain to all individuals, regardless of gender, as it represents a source of financial means, as well as empowerment and independence, and has an impact in terms of enhancing one's sense of usefulness and belonging to a community. While over the last three decades, women's participation in the labour market increased almost everywhere on average, women continue to remain more excluded than men from the labour market. Social norms continue to justify this.

- Between 1991-2022, across the six country groups considered, the average absolute difference in terms of employment rate between women and men was 22%, while in relative terms, women were employed on average 33% less than men. Substantial differences across regions further emerge. Western European and North American States registered the biggest reduction in the employment gender gap (14%), followed by Latin American and Caribbean countries (12%).
- In 1991, the Arab States had the biggest employment gender gap at 50%. The gap has reduced to just 43.5% in 2021.
- When it comes to social norms that can help shed light on participation in the labour market, between 2017-2022, 1 in 3 people believed that men should have more rights to jobs than women when jobs are scarce. This reflects social norms that assign primary responsibility for caregiving activities such as childbearing, care for elderly people and housework to women.
- Location matters. Less than 20% of people in Western Europe and North America believed that when jobs are scarce men should have more rights to employment than women, compared with 70% of men and 57% of women in Arab States.

While the concept of equal pay for work of equal value is enshrined in the Universal Declaration of Human Rights, and even if the gender wage gap has narrowed worldwide, on average, women have been earning 14% less than men over the last sixteen years.

- The wage gap at the top decile of the earning distribution is wider than at the median, even if over the years it has slowly but steadily been reduced.
- Top women earners in 2006 made almost 22% less than their male counterparts, against women in median paid jobs having to endure a 16% pay gap. In 2010, the gap narrowed by 3 percentage points, probably as a result of the financial and economic crisis, while in 2021, the wage gap of top earners attested itself at 19.8%.
- Greater wage gaps for women's top earners are consistent with the existence of glass ceilings, whereby women are constrained in their career opportunities, especially when moving to leadership positions, compared to men.
- Social norms matter, as in the last 12 years, on average worldwide, 33% of women and 34% of men agreed that it is a problem if women earn more than their husbands, against 29% of women and 28% of men who disagree.
- There is a significant and positive relationship between the gender pay gap of lower earners and female school dropouts. This can result from a vicious circle whereby young girls who do not complete secondary school are more likely to fall into the low-earning traps and face more difficulties in advancing in their careers. An increase of 1% in female school dropout rates in lower secondary education translates into a 0.52% increase in the gender wage gap at the bottom of the income distribution.

Building a resilient society that challenges unequal power relations between women, men and gender-diverse people also requires enhancing women's representation in economic and political decision-making.

- While evidence shows political inclusion is associated with faster economic development and better health-related outcomes, today, women remain significantly underrepresented. In 1997, women held 10% of national parliament seats on average, which increased to 25% in 2022.

- Despite the progress achieved during the 2000-2022 period, women in national parliaments account for less than 10% of the total in 12% of countries. Women hold 40% or more of the seats in only 27 countries out of 191 countries available.
- Women's representation in economic decision-making positions is not very different from women's representation in national parliaments. While since the 1990s, women's participation in senior and middle management positions has improved almost everywhere, the participation of women in economic decision-making did not go above 30% in 63% of countries.

Fostering resilience requires understanding and addressing the determinants and dynamics of vulnerabilities.

- Using adolescents' fertility rate to proxy individuals' and countries' vulnerability, a clear correlation emerges between having children at a very young age and the probability of these women and their children being vulnerable and lacking the resources and opportunities needed for their socioeconomic improvements.
- A positive and highly significant correlation emerges between adolescents' fertility rates and the Gender Inequality Index, which measures gender-based disadvantage in reproductive health, empowerment and the labour market. A 10% increase in the fertility rate is associated with a 5% increase in the Gender Inequality Index. That is, vulnerability is higher in those countries that feature greater gender inequality.
- Correlating adolescents' fertility with the Human Development Index (HDI) points to the existence of poverty traps: median adolescents' fertility rate in the countries exhibiting the lowest Human Development Index values are 10.5 times higher than that of countries displaying the highest HDI values.

Violence against women and gender-based violence represents a major obstacle to personal fulfilment and one of the most widespread and devastating human rights violations one could experience.

- One in three women worldwide experience physical or sexual violence.
- Since 2015, globally, 7% of women have been victims of sexual violence in their life, 22%

experienced emotional violence and 23% experienced physical violence.

- Social norms and stereotypes lead 30% of women to believe that domestic violence might be justified under certain circumstances.
- Compounding forms of discrimination increase the risks of being subject to violence, as is the case for women and girls with disabilities. The rate of sexual assault against women with disabilities is twice that of the general population of women.
- Research estimates that between 40% to 70% of girls with intellectual disabilities are sexually abused before reaching 18 years old.

The (at times important) gender wage gap in the labour market not only mirrors differences in unpaid care and domestic work and the consequent lower participation of women in the labour market, it also translates into cumulated disadvantages upon retirement, which represents an additional source of vulnerability for women.

- Every day individuals spend time cooking, cleaning and caring for children or dependent family members, which represents an indispensable set of activities that contribute to the well-being of individuals, families and communities. This (mostly) unpaid care and domestic work has an estimated economic value that ranges between 10% and 39% of global GDP.
- Unpaid care and domestic work accounts on average for 4 hours of women's time versus 1 hour and a half of men's time.
- Even in the absence of children in the household, women, on average, spend twice as much time as men in care work. Such disparities widen as the number of children increases. For couples with 2 or more children, a minimum of 1 hour and 20 minutes difference is observed in Norway up to a 4-hour difference in Mexico.
- A 4.4% decrease in the female employment rate is observed for each additional hour of unpaid domestic and care work.
- In countries where women spend up to 2 hours more than men on unpaid care and domestic work, the female employment rate is around 50%, and it reduces to between 30% to 40% when women spend 4 hours more than men.

- A negative and significant relationship emerges between unpaid work and the female entrepreneurship rate. On average, the percentage of firms run by women decreases by 12.5% for each additional hour a day that women dedicate to unpaid domestic and care work.
- On average, women aged 65+ receive 26% less than men from the pension system. The size of the gap varies between a minimum of 3% in Estonia to a maximum of 42% in Mexico and 47% in Japan. The gender pension gap decreased by only 4 percentage points between 2000 and 2018.

Ensuring maternal leave in national social protection systems can help foster equal treatment of women in the workplace, promote equal opportunities and treatment in employment and occupation, and ensure better health and economic security for mothers and their children. Extending parental leave to fathers can be an effective tool to promote gender equality, as it gives both parents the same caring responsibilities and rights towards the newborn.

- As of 2022, although all countries considered except the United States of America granted some form of paid maternity and paternity leave, substantial differences in duration and payment emerge. On average, countries made 19.5 weeks of paid maternity leave available, with actual values ranging from a maximum of 58 weeks in Bulgaria, to 43 weeks in Greece, and minimums of 6 weeks in Portugal to zero in the United States.
- When it comes to the level of remuneration of maternity leave, 42% of the countries offer full compensation of average earnings to mothers. The majority of countries grant payments that replace over 50% of previous earnings during the maternity leave period.
- Across the countries for which data are available, fathers are granted two weeks of paternity leave and nine of parental leave on average, compared to the 19.5 weeks of maternity leave and 32.5 weeks of parental leave reserved for mothers.
- Even when parental leave is available to both mothers and fathers, the uptake of statutory parental leave is disproportionately used by mothers, and only 25% of men take up parental leave.

By looking at resilience through a gender lens, the analysis shows the extent to which individuals' and societies' ability to withstand changes and shocks relates to their being equal and inclusive. The gender transformative approach proposed is one that invests in empowering women along several dimensions; one that challenges gender norms and stereotypes and stops violence. To this end, it is key to promote the active roles of women at community and political levels, and to address power inequalities between women and men.

While these unfortunately tend to be slow processes, they can be helped by positive initiatives such as national laws or recommendations. Gender quotas in parliaments and listed companies, pay transparency initiatives and minimum wage directives are examples of positive actions that can help trigger much-needed change. Promoting paternal leave will help deteriorate the stereotypes about motherhood and would help change mentalities about caring activities being a woman's task. As results show, investing in the education of the young generation increases the chances of reducing NEET rates, school drop-out rates and the poverty headcount, especially when the investment is on women.

But neither the status quo nor progress can be measured without relevant data. Ensuring timely and comprehensive data collection and fostering gender-disaggregated data across countries and over time can help design and implement effective and inclusive gender transformative policies.

Introduction

Women's history is one of discrimination, violence and being invisible, and of being treated as second-level citizens – but also one of remarkable prowess and resilience. If it is only at the beginning of the 20th century that women started accessing suffrage, women now have the legal right to vote in every country around the world (IAW, 2005).

However, progress remains to be made on numerous fronts. Property and inheritance rights to women is not universal: women in South Asia, the Middle East and North Africa still experience discrimination in this matter (Bahrami-Rad, 2021). In the workplace, women are paid less for similar job responsibilities (Bishu et al., 2017) and across the world, 9 million girls aged between 6 and 11 will never go to school, compared to 6 million boys (UNESCO, 2016).

In addition, women and children are more likely to bear the brunt of natural disasters, with catastrophes that over time have inflicted heavy tolls in terms of lives lost¹ (UNWOMEN, 2020). In 2004, 70% of the 230,000 people killed in the Indian Ocean Tsunami were women (UNDP, 2022). Similarly, in 2015, women made up 55% of the casualties of the Nepalese earthquake (UNWOMEN, 2019). More generally, estimates suggest that women are 14 times more likely than men to die during and after natural disasters due to gender-based discrimination, especially in terms of insufficient access to or complete lack of resources (UNDP, 2022).

Moreover, natural disasters, seldom occur in isolation. They often trigger political, economic, social, health-related and environmental shocks (UNWOMEN, 2020). Conflicts and pandemics, including the most recent COVID-19 pandemic, have left millions of casualties in their wake. The instability caused by crises of this types contributes to migration flows and ultimately exacerbates poverty and humanitarian emergencies (Crippa et al., 2022; Curtis and Cosgrove, 2021; Goodhand, 2001). This, in turn, may undermine

political and institutional stability, as well as democratic processes (Giovannini et al., 2020).

Resilience resides in the ability to overcome distressful and difficult situations like the above, both collectively and individually. The resilience of any community, society or system depends on how people are treated; what they have access to, the opportunities they are given. This is why resilience will likely be out of reach for any economy or society that discriminates against or confines some of its citizens, such as women and gender-diverse people, to second-citizen roles or prevent them from achieving their full potential, including in education, the labour market or the social and political spheres.

Globally, the loss in human capital due to gender inequalities is estimated to be around \$160 trillion, which is about twice the value of global GDP (Wodon and De La Briere, 2018). In 2022 the Bank of America Institute estimated that gender inequalities have cost the world \$70 trillion in 30 years (Bank of America Institute, 2022).

Greater gender equality reduces violence against women (Flood et al., 2021) and generally has a positive effect on the health of both men and women (King et al., 2020). Estimates further suggest that encouraging a more active participation of women in the labour market and increasing their attainment in STEM education fields may result in a 10% GDP increase in the EU and trigger an additional 10.5 million jobs in the area (Morais Maceira, 2017). When all people, irrespective of gender (and of any other connotation, in fact, being this race, age or others), are included and empowered, societies thrive in peace, and current and future generations enjoy greater welfare and wellbeing (Manca et al., 2017; Alessi et al., 2020).

The purpose of this report is to inform the policy “disc/ action”, as we call it, i.e. both discussion and action, on how to improve social inclusion and resilience through the systematic engagement of women and of gender-

¹ Between 2001 and 2010 recorded natural disasters killed 106 million people, affected 232 million others and caused an estimated US\$ 108 billion of economic damages (Turnbull et al., 2013)

diverse people. The aim is to shed light on the extent to which individuals' and societies' resilience relates to gender equality and social inclusion. To this end, this report proposes a measurement framework for gender-based resilience, which gets operationalized using a wide array of indicators and proxies, with a view to uncover the key drivers and components of gender-based resilience. The term "disc/action" emphasises the need to provide solid evidence to inform the discussion, which would then lead to action to eradicate gender-based discrimination.

The data limitations encountered when performing the present analysis further call for action in the form of greater and better collection and availability of gender-disaggregated data across countries and over time. The report at times points to the data one would need to make a careful and timely assessment of progress (or lack thereof), as what cannot be measured is much more difficult to improve. As a case in point, this study's ambition to define and analyse gender inequalities and gender-based discrimination in an inclusive fashion, to relate them to societal resilience, was curtailed by the fact that most data is disaggregated into binary gender categories, at best.

As United Nation's Secretary General, Antonio Guterres, underlined at the last Commission on the Status of Women in March 2023, gender equality has been facing severe pushbacks in recent years and, if humanity continues along this path, the gender gap will take over 300 years to close². Reverting these trends and moving towards more inclusive and resilient futures needs concrete evidence in support of policy making. The present report represents a step in this direction, with the hope that other researchers and institutions will join UNESCO to help inform the design and implementation of effective and inclusive gender transformative policies.

² Secretary-General's remarks to the Commission on the Status of Women

What is resilience and why does gender matter?

Resilience is the capacity to absorb shocks and adapt to changes or engage in transformation to change the original path (Colloff et al., 2017; Folke et al., 2010; Pike A et al., 2010). A number of key components and features of resilience have been highlighted and discussed in the literature. Building on the concept of resilience as “a function enabling people in their choices, for the current and future times, to cope and adjust to adversities and distress” (UNDP, 2014), the Joint Research Centre of the European Commission (EC-JRC, 2016; Manca et al., 2017) defines a society as being resilient if “it retains the ability to deliver societal well-being in a sustainable way even when facing shocks and persistent structural changes”. This entails that the goals of societies remain: guaranteeing dignity so that everyone has access to a secure, healthy and safe life and a safe environment exists for all forms of life; ensuring fairness by providing justice across all dimensions; facilitating participation in social and civic engagement; and creating a sense of belonging to communities and institutions that serve the common good (Dixon-Declève et al., 2022). This definition underscores that the current generation’s social well-being should not compromise the well-being of future ones and their ability to thrive.

Resilience is a multidimensional concept, which cuts across different layers and interacts with the social, political, economic and environmental systems in which individuals live, their communities, regions and countries (Alessi et al., 2020). In a world characterized by frequent and intersecting shocks and persistent structural changes, enhancing resilience helps fostering societies able to withstand and overcome them. The resilience of a country relies on the resilience of its citizens. As such, resilience is not only an individual capacity, but institutions play an important role in supporting it, at both individual and community levels (Joossens et al., 2022).

Individual resilience is individuals’ abilities to leverage their resources to withstand or recover quickly from difficulties and address challenges. It depends on individuals’ attitude to life and beliefs, which are conditioned by experience and social contexts and shape behaviours and actions, and thus their ability to tackle challenges or react to shocks. (Joossens et al., 2022).

Collective or societal resilience is the ability to face shocks and persistent structural changes in such a way that communities do not lose their ability to deliver societal well-being in a sustainable way. It relies not only on individual resilience but also on the ability of institutions to foster resilience through policy (Manca et al., 2017).

Institutional resilience refers the capacity to deliver and enhance results over time, credibly, legitimately and adaptively; as well as the ability to manage shocks and change (OECD, 2020).

Intersectionality pertains to the ways in which systems of inequality based on gender, race, ethnicity, sexual orientation, gender identity, disability, class and other forms of segregation intersect to create obstacles and unique dynamics and effects. (Crenshaw, 2022).

Individuals of different gender, age, professional status, class, religion, gender, ethnicity, or disability if any, do not react or cope in the same way to shocks, whether social or personal. For this reason, intersectionality is of paramount importance when discussing resilience (Crenshaw, 2022). Bearing in mind the heterogeneous responses that the very same events or shocks can trigger, it is crucial to better understand the roots of vulnerability and to assess individuals’ ability to demonstrate resilience. The need to apply gendered lenses and to challenge unequal power relations reflects the need to assess the extent to which social differences, roles, expectations, needs and constraints, as well as socioeconomic status and living conditions affect the ability of people to cope and react to distress (Jenkins and Rondón, 2015).

Improving countries’ ability to withstand and overcome crises indeed calls for the design and implementation of effective and inclusive policies that address short-term needs as well as long-term structural inequalities. Acknowledging differences from the perspective of intersectionality and analysing the reasons behind them is key to inform the design of policies fostering the resilience of societies and economies alike.

Why is gender based-resilience important?

Gender norms and stereotypes are inherently connected to gender inequalities, as they offer an overly simplistic view of reality and exaggerate the perceived implications of categorizing people by gender. Stereotypical expectations influence how one judges abilities, building on the assumption that women, men and gender-diverse people are internally consistent, homogeneous groups (Moss-Racusin et al., 2012).

For example, the career aspirations of young people are influenced by the stereotype that men are better than women at mathematics. This impairs young women's performance in scientific fields and undermines their interest in related subjects (Andrieu et al., 2019; Cvencek et al., 2011; Galdi et al., 2014; Andrieu et al., 2019). According to the UNESCO Institute for Statistics, less than 30% of researchers are women³. This implies, along with the other data presented, that stereotypes and gendered norms have important implications in real life.

In general, gender inequalities create and intensify women's vulnerabilities by constraining their ability to respond to shocks, making their lives more difficult and, ultimately, undermining their well-being. Harmful gender norms and related inequalities not only impact women and gender-diverse people, but also men, by imposing heteronormative ideals of masculinity above all else (Ellemers, 2018). This is detrimental to men themselves, as well as to others (Heilman et al., 2019). A common example is the imperative for men to be strong, self-sufficient, to refrain from displaying emotions or express vulnerability and to use violence as a means to achieve power, social status or resolve conflicts (Heilman, B., Barker, G., and Harrison, A. 2017; Whitehead, 2021). Gender roles, enforced by societies, families, peers and intimate partners, put pressure on men to be income and wealth providers, even – if not especially – in times of crises (Ait Mous et al., 2022; Equimundo, 2022)

UNESCO's Transforming MEN'talities Initiative endeavours to change mindsets and policies through research on norms of masculinity and on legal frameworks engaging men and boys for gender equality. By promoting positive masculinities and narratives that undermine hegemonic gender norms, it aims to build a culture of care, peace and non-violence, for all individuals. In India, Bangladesh, Kazakhstan, Kenya, Mexico, Morocco, Mozambique, among others, this initiative is advancing research on norms of masculinities and building coalitions of allies with civil society, decision-makers and the private sector. Eradicating gender-based violence requires a whole-of-society approach that focuses on changing social and cultural norms and acknowledges existing masculinities to embrace their positive expressions. Moreover, it is key to engage youth, particularly young boys, in early childhood's gender sensitization, as that is the time when social norms get instilled in minds, and this helps promote the values of respect, tolerance and non-violence. (Ait Mous et al., 2022; Coley et al., 2021).

When resilience is intended as people's ability to survive a succession of shocks and to thrive despite shocks, distresses and crises (Hillier, 2013), applying a gendered lens leads to an understanding of how people of diverse genders respond and engage with change and shocks. Gender-based resilience looks at gender inequalities when dissecting the main drivers and components of resilience. It also relates to the normative values of societies and what is considered to be "normal", and what can make resilience wanted or rather not needed or unwanted. This is the case, for instance, in those regions where women are marginalised or oppressed; or where people are kept in extreme poverty; or where discrimination is the living condition of people with disabilities, minorities or exhibiting a sexual orientation that differs from the mainstream. Ultimately their vulnerability affects the resilience of both communities and societies.

If gender-based resilience adopts an individual and inclusive perspective and analyses the impact of shocks and structural changes on women, men and gender-diverse identities, a gender transformative resilience model moves away from what is considered “normal” (e.g. the breadwinner model for men versus the caregiver model for women) and looks at how to make change happen. Empowering women and men who live in poverty, also through the provision of quality education to all girls and boys; employing women, men and other gender-diverse people; debunking stereotypes; ensuring reproductive rights; and making infrastructures and services available to ease the life of all people constitute the pre-requisites of gender-based resilience.

A gender-based resilience approach accounts for the way in which women, men and gender-diverse people respond to shocks and structural changes, and how this impacts societies’ resilience overall. It translates into a measurement framework aimed to assess the status quo and the progress made towards gender-transformative resilience.

Gender-transformative resilience relates to policies, interventions and behaviours that empower women and gender-diverse people, to help them thrive independently of shocks and structural changes. Building inclusive and resilient societies requires granting equal rights and access to opportunities, power, resources and services to all individuals, regardless of their gender, and eliminating harmful gender norms, roles and stereotypes as well as gender-based violence.

How can gender-based resilience be measured?

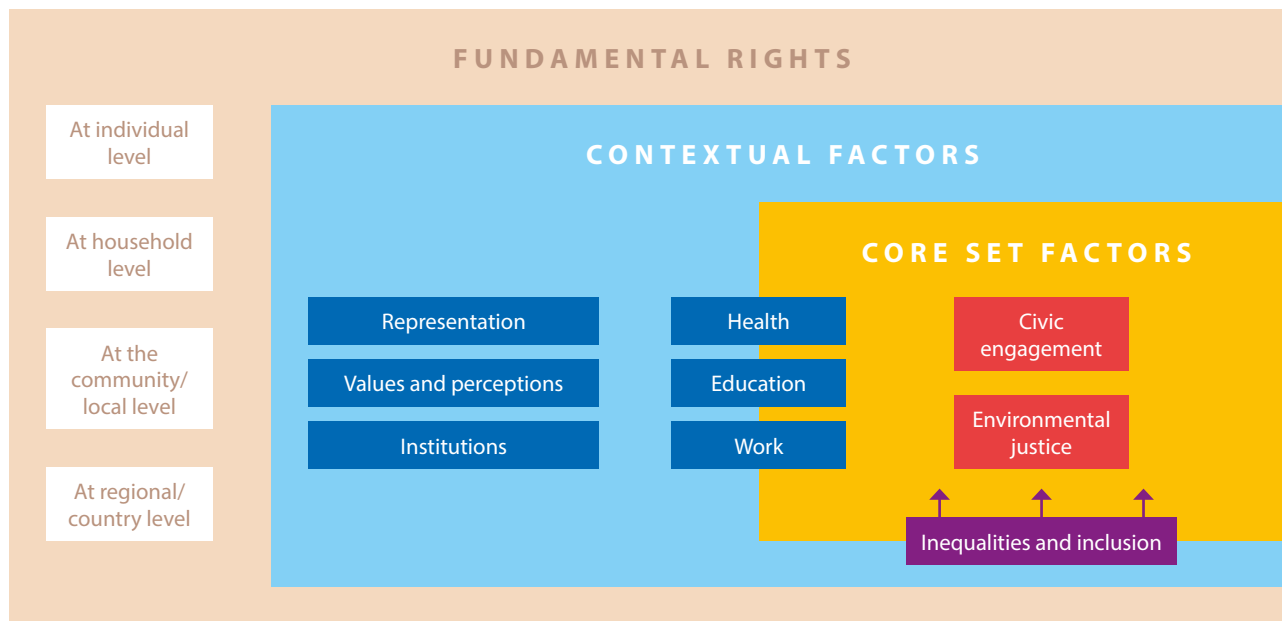
Measuring resilience is a challenging task as resilience occurs in complex systems where the interactions between social roles assigned to individuals, contextual factors, and available resources define the space of actions for institutions. Focusing on gender-based resilience adds an additional layer to this already complex picture. It requires acknowledging the extent to which social differences, roles, expectations, needs and constraints affect the ability of individuals of different genders⁴ to cope with and react to distress, and how this intersects with other factors related to their social and economic status.

The focus here is on individuals when discussing and assessing the resilience of gender-diverse people to shocks. The term shocks is intended in a broad sense, including natural disasters, systemic failures (e.g., the financial crisis of 2008), or pandemics like COVID-19. When referring to shocks, challenges such as global warming, demographic imbalances, or the digital and green transitions are also included.

⁴ As example LGBTQIA+ which stands for lesbian, gay, bisexual, transgender, queer, intersex, and asexual

1. Operationalizing the measurement of gender-based resilience: a framework

Figure 1: Measurement approach



The diagram in Figure 1 highlights the areas and dimensions to be considered. Some can be measured already at present. Others cannot, due to data availability constraints, thus underscoring the need for these data to be collected in the future.

1.1. Fundamental rights

Fundamental human rights represent the preconditions for resilience to be granted to all individuals worldwide. Among them, physical integrity is paramount: it is highly unrealistic to be resilient under physical threats. Ensuring physical integrity involves combating all forms of violence against women and gender-diverse people, guaranteeing reproductive autonomy, access to abortion and preventing child marriage. It also encompasses access to sexual and reproductive healthcare, as well as the right to preventive and curative healthcare, among others.

Fundamental rights should be ensured to individuals, at all levels of aggregation, be it the household, the community in which they live, or the region or country they belong to. For instance, at the household level, adults should share responsibilities equally, irrespective of gender. At the community and country levels, where individuals receive education, have jobs and engage in civic activities, the preconditions for resilience include the right to own land and financial assets; having

access to capital and financial resources; having the right to decent work, to vote, to freely move from one place to another; enjoying citizenship and political rights, as well as having access to justice. Central to this is the concept of agency and autonomy, i.e. the very right to make one's own decisions.

1.2. Core and contextual domains

The core domains we assess to shed light on the relationship between women's and girls' empowerment and resilience relate to dimensions such as health, education, work, and political and civic engagement. Contextual domains interact with the core domains by means aggravating, mitigating or improving the condition of women, men and gender-diverse people within the core domains.

When it comes to health, assessing health-related vulnerabilities requires looking at indicators such as: the incidence of chronic diseases, long-term healthcare, estimation of healthy life years and obesity rates among young children, disaggregated by gender. As the Constitution of the World Health Organization (1946)⁵ states, health is not merely the absence of disease or infirmity, but rather a state of physical, mental and social well-being: "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic

⁵ World Health Organisation Constitution

or social condition.”The WHO Constitution further notes that “the health of all peoples is fundamental to the attainment of peace and security”, and that “the achievement of any State in the promotion and protection of health is of value to all”.

Education is a key asset for societies. It empowers individuals and sets the basis for citizenship, by endowing people with the knowledge, skills, values, attitudes and behaviours needed to effectively participate in democratic processes. This is why the UNESCO Constitution (1945)⁶ stresses the need for “nations to advance the ideal of equality of educational opportunity without regard to race, sex or any distinctions, economic or social”. Understanding the relationship between gender equality and education aims at assessing the vulnerabilities and capacities of girls and boys in relation to educational achievement, and at measuring segmentation across fields of education. This allows shedding light on the extent to which e.g. gender stereotypes push women away from STEM subjects and men from humanistic ones⁷ (Stoet and Geary, 2018), and how this relates to resilience. Balancing gender across education fields may lead to greater innovation and creativity (Bassett-Jones, 2005), problem-solving, and can thus contribute to building resilience.

Participation in the labour market is key for resilience, as work can provide economic independence and boost individual self-esteem (Krauss and Orth, 2022a; Willis et al., 2019). At the same time, it enables individuals to contribute to their country’s growth and development (Küfeoğlu, 2022). Indicators such as long-term unemployment, youth unemployment, and differences in earnings between women and men can help assess how unequal societies are, and help identify important sources of vulnerability. Also, in fast-evolving labour markets scenarios, also due to technological change, monitoring the evolution in the gender composition of emerging jobs helps assessing a country’s ability to adapt and perform. Occupational segregation is another source of vulnerability for countries, with greater shares of women being generally active in sectors that are less well-remunerated, and that feature less attractive working conditions. It is worth recalling that the attractiveness of economic sectors where women become overrepresented decreases in terms

of work conditions and remuneration (WHO and ILO, 2022).

Social protection measures in support of unemployment, care for children and the elderly, disability and sickness are important for individuals and societies to cope with change or distress. Unpaid work related to children, family or the ill, requires time, effort and care. It is something that individuals might donate to their beloved but represents a vulnerability when its burden relies disproportionately on the shoulders of one specific group, typically women. Moreover, the longer the time dedicated to unpaid work, the less the time remaining to engage in paid jobs and to build one’s financial autonomy. This is even more the case when welfare benefits and social protection systems, including pensions, are linked to linear careers – which usually mirror men’s paths, not women’s (Andrieu et al., 2019). Paucity or lack of paid leaves for parents further makes people more vulnerable and, if unequally accessible, may represent a gender-based barrier to the resilience of any country. Similarly, the provision of quality childcare, particularly for children below 5 years of age, plays a crucial role in allowing individuals, and women especially, to reconcile work and family life.

One of the consequences of women dedicating three times as much time than men to unpaid work, results in them being trapped in precarious jobs⁸. In 2014 in the EU, 26.5% of women, versus 15% of men, had a precarious job (Buckingham et al., 2020). According to Eurostat data, in the EU in 2019 the female share of part-time employment was 74%, which to a great extent is driven by the caregiving role shouldered by women. Also, the length of maternity and paternity leave, the average number of children per woman, maternal mortality and the availability of public childcare facilities may help proxy the degree of advancement and establishment of gender equality at the country level and the degree to which each parent contributes to raise their children, at the best of their possibilities. Creating optimal conditions to take care of children means adopting forward-looking perspectives and investing in the future of a country (Shrimali, 2020).

The gender gap in wealth accumulation is another important aspect to measure, as women and men tend to have substantially different career paths – conditional on being given the opportunity to have a

6 UNESCO Constitution

7 Stoet and Geary’s (2018) paper represents a milestone in the discussion of the relation between gender inequality and participation STEM degrees. In particular, they find that sex differences in the magnitude of relative academic strengths and pursuit of STEM degrees rises with increases in national gender equality. Their mediation analysis suggests that life-quality pressures in less gender-equal countries promote girls’ and women’s engagement with STEM subjects.

8 Precarious jobs are connected with at least one of these three working conditions: 1) very low pay, below the first quintile of the income distribution, 2) very short working hours, namely fewer than 10 hours of employment per week, 3) low job security which might include either a temporary contract of 12 or less months or a permanent contract but with high risk or certainty of loss or termination of present job (EIGE, 2017)

career at all. On average, women are underrepresented in higher-paid positions and often have discontinuous career paths that reduce their capacities to make long-term investments for the old age. This increases the odds of women falling into poverty during retirement age (OECD, 2021a).

Civic and political engagement helps create a sense of belonging and a more cohesive society where individuals can share values and contribute to the improvement of their communities. It also improves the quality of policy decisions as far as active citizenship participation manages to engage a fruitful dialogue with institutions and creates trusted relationship. This is an important asset to withstand and overcome difficulties during crises.

Also, it is important to account for the environment in which individuals live and to identify possible vulnerabilities related to location vis-a-vis climate change. The latter is a reality that everyone experiences and has disproportionate consequences on the most vulnerable and marginalised groups, which are shown to suffer the most (Cianconi et al., 2020; Hickman et al., 2021). Assessing climate justice and the extent to which climate inequalities affect individuals differently across regions, depending on their gender identities, is important to find suitable solutions (Amorim-Maia et al., 2022). Key indicators in this respect may include the number of women and men affected by or dying because of climate disasters and the level of preparedness of institutions (Boyd et al., 2021). Another set of indicators can help capture the contextual factors that contribute to countries adapting faster, or not, to new situations. These include the distribution of women and men in decision-making power positions,

in both private and public institutions, as diversity and inclusion improve critical thinking, which is particularly needed in distressful situations (Yarram and Adapa, 2021).

Finally, it is key to look at societal norms and perceptions, as they nurture gender stereotypes related to the roles of women and men in societies and contribute to shape individual behaviours. Monitoring them can help gauge societal inclusiveness through indicators such as self-perceived opportunities for women to work in situations of limited job availability, or the right of women to open their own bank accounts (Castaño et al., 2019; Field et al., 2021). Monitoring public opinion about the role of working women in relation to their children, or the attitude towards unmarried couples cohabiting, and overall opinions regarding the comparative performance of men and women in politics or business can also help identify societal biases and thus inform the possible gender-based resilience of countries (Bridges et al., 2023).

Although the conceptual framework proposed is as comprehensive as possible and aims to highlight what should be measured in theory, operationalizing the framework requires taking it to existing data. And this, generally, entails being less ambitious in practice than we would have liked to. The indicators presented and discussed in this report, while capable of shedding light on important pieces of the gender-based resilience framework, do not allow us to look at each and every single issue we consider relevant. We will therefore try and broaden the scope in future editions of this work, hoping that the present report will trigger relevant data collection efforts.

Assessing the size and depth of the gender gap and its relationship with resilience

2. ■ Education as a key asset for resilience

Education is key for resilience, as it helps providing individuals and societies with the skills and competencies needed to address everyday problems as well as global challenges. It helps build the capability for citizens to work together towards the common good, sets the foundation for flourishing as individuals and as communities, creates space for understanding different cultures, fosters social inclusion and facilitates the realization of gender equality (UNESCO, 2021c).

An educated society leveraged by highly qualified human capital improves productivity and prosperity, fosters innovation, and reduces poverty and inequality (Hanushek and Woessmann, 2015). According to the UNESCO Institute for Statistics, fewer than 30% of the world's researchers are women (UNESCO, 2019a). Education further empowers individuals to actively participate in community life, political parties, and civic or voluntary activities (Mikiewicz, 2021; Putnam, 2000), thereby enhancing the overall quality of democracy. Strong and significant correlations exist between education and individual resilience, triggering a virtuous loop that benefits societies (Joossens et al., 2022).



The protection of women in science is framed in the UNESCO 2017 Recommendation on Science and Scientific Researchers (RS|SR). The RS|SR calls upon Member States to “ensure that scientific researchers enjoy equitable conditions of work” without gender-based discrimination (Article 24(b)). It further invites Member States to “actively encourage women [...] to consider careers in sciences” and to “eliminate biases against women [...] in work environments” (Article 13(c)). Despite the protection offered by these robust frameworks, a worrying trend regarding the safety of women scientists can be identified worldwide – in the online and the real world alike (UniSAFE, 2023; IPSOS, 2023). To reverse this trend, the RS|SR offers an operational framework with interventions such as fostering participatory design and implementation of policies on gender-related safety risks and threats, expanding data collection and analysis, scaling-up awareness-raising efforts and increasing national and international cooperation. At the 42nd session of the General Conference, UNESCO Member States decided to establish a new UNESCO programme to help promote the broader “freedom and safety of scientists” agenda.

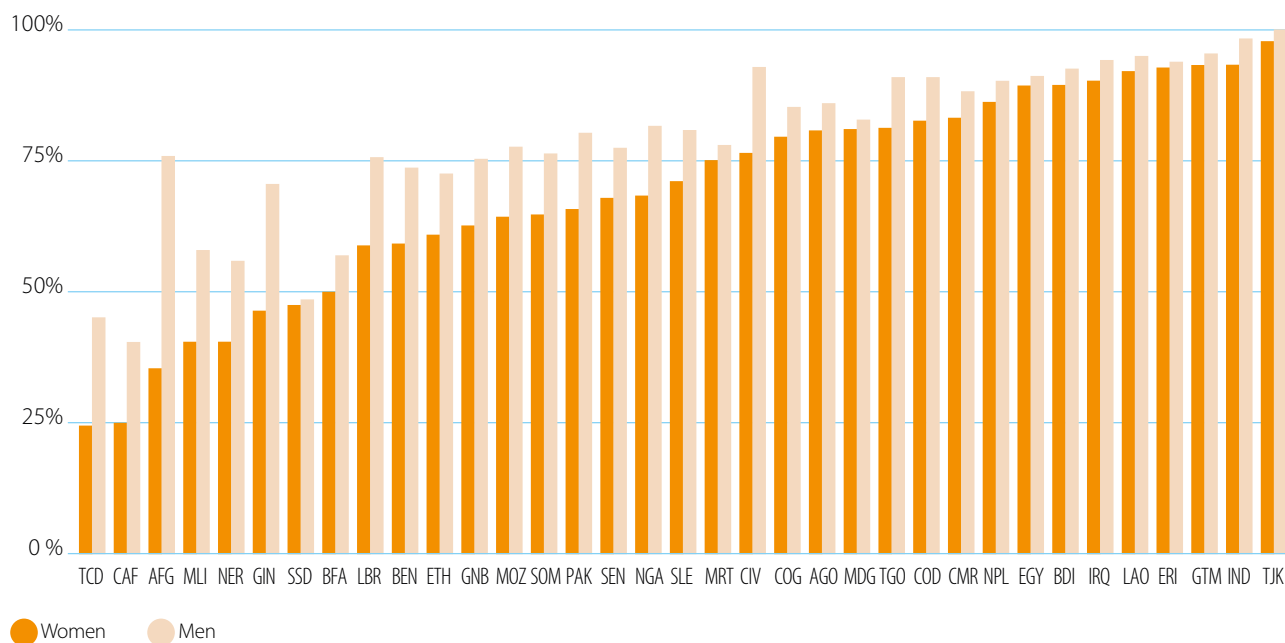
Through education, individuals of all ages, gender, social status and income levels can improve their own lives and contribute to their communities. However, this requires universal access to education, irrespective of gender identities, and ensuring everyone possesses, at the very least, the ability to read and write. Literacy is the foundation of basic education, lifelong learning, and is a prerequisite for enhancing human capabilities, stimulating creativity and achieving other rights. It not only improves the quality of life of individuals and their employability (Benavot, 2015), but it is also linked to lower childhood mortality rates (Saurabh et al., 2013) and reduced poverty levels (Preece and Institute for Education, 2005).

Investing in youth means increasing the likelihood of providing a resilient response to future shocks. One of the key indicators analysed in the context of this gender-based resilience framework, is, therefore, youth literacy.



Youth is a priority group for UNESCO. Operationalizing this institutional commitment is informed by the principles and values of inclusion, representativeness, and intergenerational dialogue. UNESCO Social and Human Sciences Sector's work on youth is anchored in four strategic priorities. First, support the production of policy-relevant knowledge by youth, at the national, regional and global levels, through the Youth as Researchers (YAR) initiative. Second, support to UNESCO Member States in developing inclusive national youth policies and strategies, reflecting social challenges facing young people, and with their participation in the process. Third, support to young people in implementing and upscaling innovative solutions and actions that address contemporary challenge. This leverages action-oriented youth networks such as the UNESCO Youth Climate Action Network – You-CAN, and UNESCO Global Youth Community (GYC). Fourth, using innovative tools on youth engagement and development, to build and strengthen the capacities of youth stakeholders at the national, regional and global levels. To advance this agenda, in 2022 UNESCO launched a Global Youth Grant Scheme supporting and upscaling youth-led actions and innovations aimed at addressing social challenges in their communities.

On average, between 2015 and 2020, 90% of young men aged 15-24 reported being able to read and write, against 88% of women in the same age group.

Figure 2: Youth literacy rate by selected country (%)

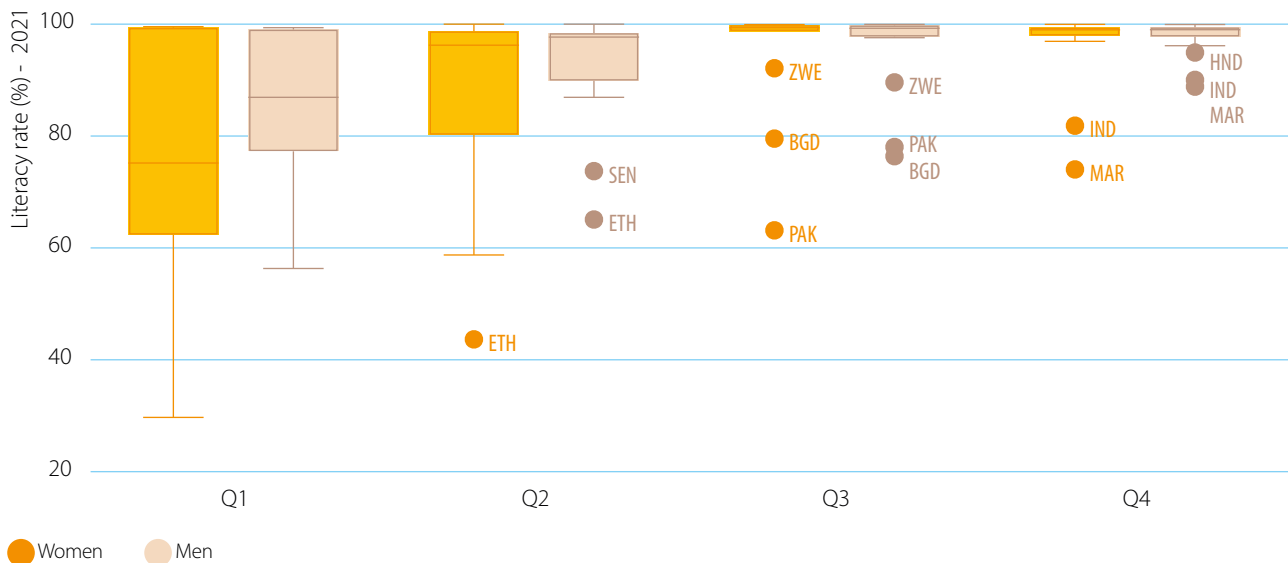
Source: Authors' own compilation based on UNESCO Institute for Statistics (UIS) data. Pooled data 2015-2022.

Note: Youth literacy rate is the percentage of people ages 15-24 who can both read and write and understand a short simple statement about their everyday life. This indicator corresponds to SDG 4.6.2. The graph shows those countries characterized by the highest gender differences.

Overall, two-thirds of countries worldwide are very close to reaching gender parity in literacy, while the remaining third is still far away from the goalpost. Figure 2 illustrates the distribution of youth literacy rate of countries with the greatest inequalities between women and men. Among these, gender disparities predominantly disadvantage women (88% versus 90% of men), the widest gap registered in Afghanistan, Chad and the Central Africa Republic where literate women were about half of men. Yet, there are countries where women's literacy rates exceed those of men, as seen in the cases of Malawi, Zimbabwe, and Lesotho.

An interesting correlation emerges between the literacy rate and GDP growth. As shown in Figure 3, in 2021, countries with a higher literacy rate of women as compared to men are also those with the highest GDP growth quartiles between 2011 and 2021. Particularly in countries located in the lowest GDP growth quartile (first quartile), the literacy rate of women is significantly lower than that of men. As the GDP growth increases (i.e., in the other quartiles), women's literacy levels align with those of men and differences diminish.

In Afghanistan, from 2001 to 2018, enrolment in education at all levels increased by 9 million students, with the participation of girls in primary school increasing from nearly zero in 2001 to 2.5 million in 2018. However, the situation has dramatically changed since August 2021. Along with other public services, the right to education for children and youth, especially for girls and women, has been hindered. Since 2022, young girls have been prevented from attending secondary education, while women have been banned from universities, exacerbating women's poverty amidst an ongoing humanitarian crisis. Despite the current restrictions, UNESCO remains actively engaged with local communities, focusing on concrete activities to ensure, protect and prioritize the continuity of learning for all, particularly for women and girls. Removing barriers to women's participation in education remains a priority (UNESCO, 2021d).

Figure 3: Association between literacy ratio in 2011 and GDP per capita growth rate in 2021 (annual %)

Source: Authors' own compilation based on UNESCO Institute for Statistics (UIS), 2011, and the World Bank national accounts data, for the GDP per capita growth rate 2021 indicator.

Note: The number of countries considered in this analysis relies on 60 observations (N=60). In the y axis GDP per capita growth rate is broken down into quartiles from the lowest (Q1) to the highest (Q4). Annual percentage growth rate of GDP per capita based on constant local currency. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for the depreciation of fabricated assets or for the depletion and degradation of natural resources.

The correlation displayed in Figure 3 suggests that the countries that invested in female education and embraced the concept of gender equality in 2011 have seemingly experienced significant benefits. Those that raised the literacy rate of women to at least equal or even to a higher level than that of men observed increased GDP growth over the course of a decade. In contrast, countries that did not adequately invest in women's education have not witnessed comparable economic growth. This is an initial piece of evidence underscoring the importance of trusting and investing in the potential and talent of young girls. A vicious circle may exist between the level of education and GDP growth: countries characterized by low GDP levels may invest less in education, which in turn leads to lower human capital and, consequently, a diminished capacity to stimulate economic growth.

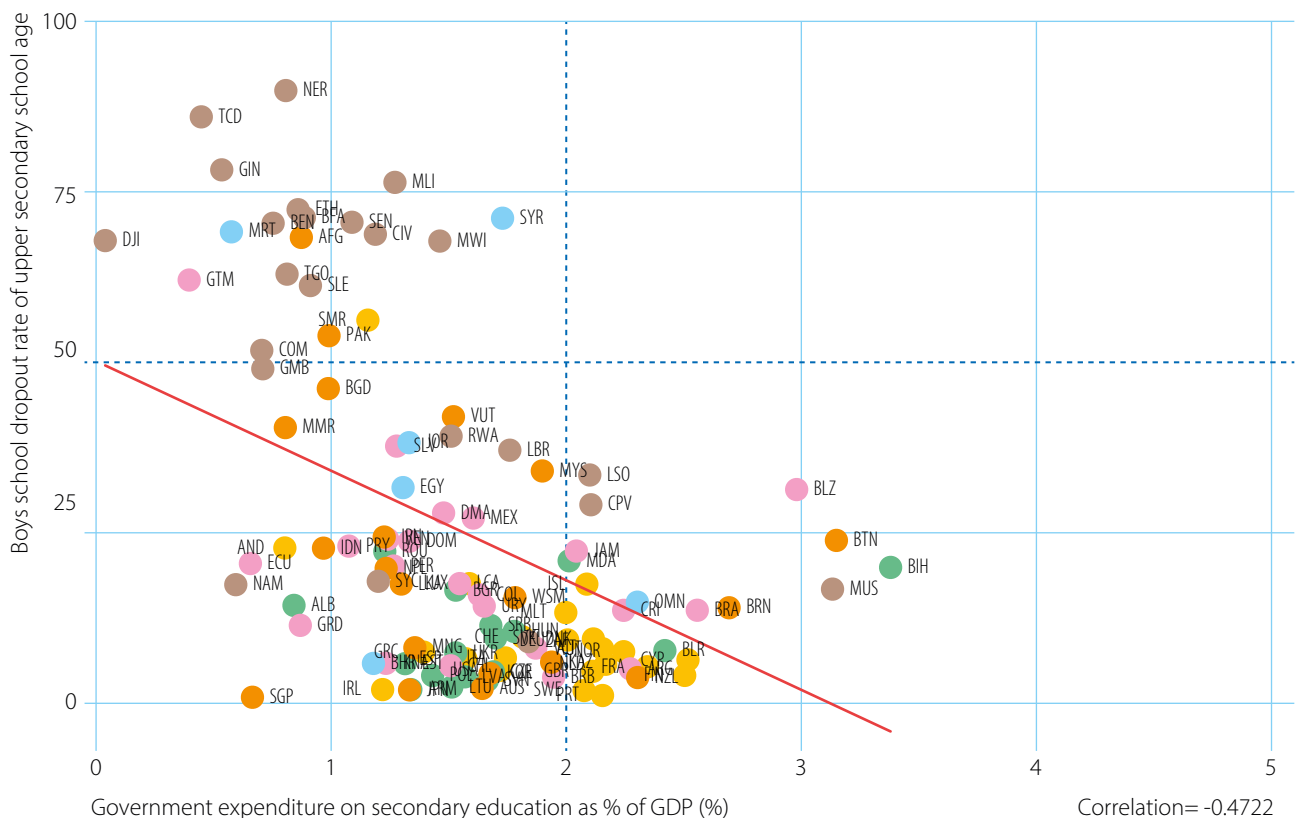
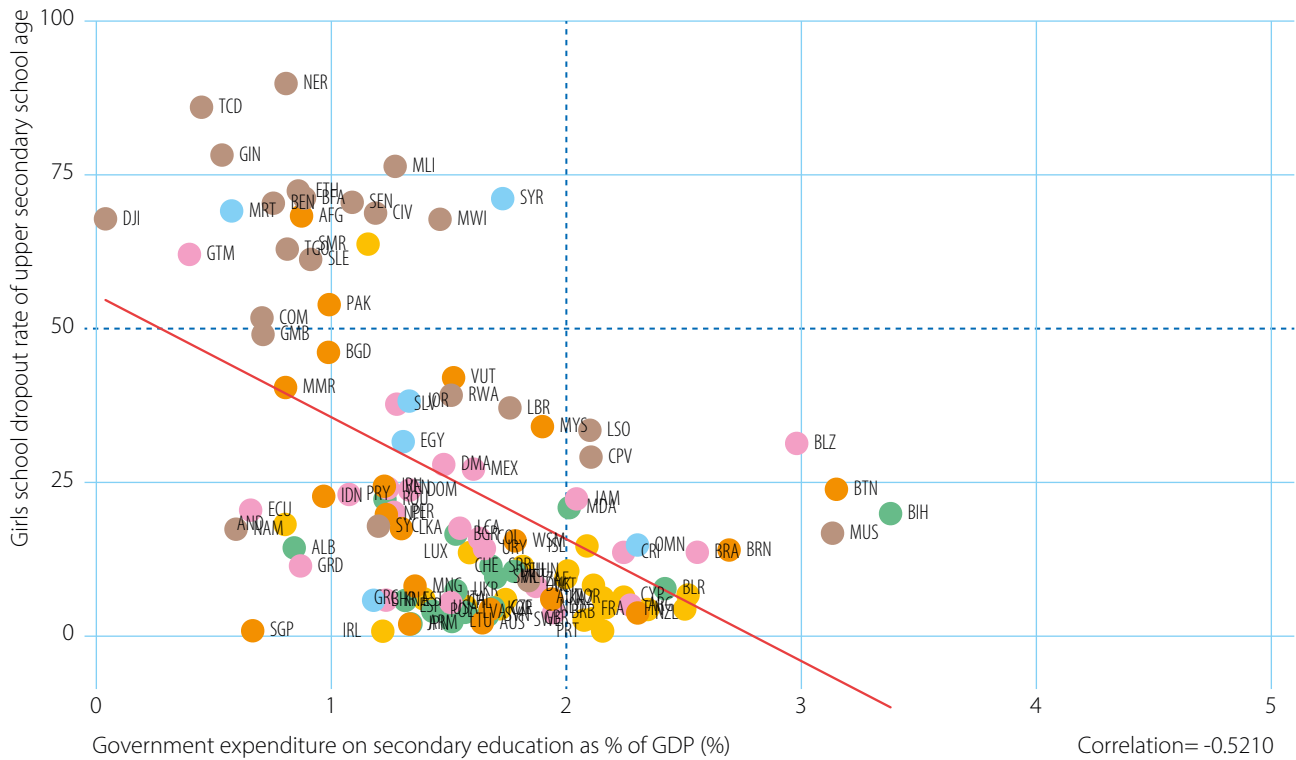
Overall, the picture that emerges highlights significant inequalities in access and opportunities. According to the UNESCO Institute for Statistics (UNESCO-UIS), globally between 2015 and 2021, almost 9 in 10 girls completed their primary education, but only 6 out of 10 completed lower secondary education. However, during the same time span, only 3 in 10 girls and 4 in 10 boys completed lower secondary education in low-income countries. Moreover, the UNESCO-UIS estimated that in 2021, 244 million children and youth between the ages of 6 and 18 worldwide were out of school, 118.5 million of which

were girls and 125.5 million were boys (UNESCO, 2022a). During the period 2015-2020, 3 in 10 children were out of upper secondary education, with no significant gender difference. However, when breaking down these statistics by geographical area, it emerges that in Arab and African States, 3 and 5 out of 10 girls, respectively, were out of school.

This calls for reforms aimed at making education truly inclusive. This entails, among other things, increased investment in education, with governments enhancing educational possibilities to ensure that quality education is available and accessible to all school-aged children. Broadening the scope of education and providing all citizens with the opportunity to learn, as a means for individual empowerment and a key for countries' prosperity, aligns with the Sustainable Development Goal (SDG) 4.⁹ Education has proven to have the power to improve individual lives, communities and the whole planet over generations. Now more than ever, education is an asset needed to find smart solutions to global challenges, spanning from global warming and loss of biodiversity to widening inequalities, democratic backsliding, and conflicts. This context urges to transform education for the future. Within its mandate, UNESCO has committed to design a new social contract for education aimed at reimagining and shaping more peaceful, just and sustainable societies (UNESCO, 2022b).

9 Sustainable Development Goal 4

Figure 4: Association between school dropout by gender and government expenditure on secondary education (% of GDP)



UNESCO electoral groups: ● WE & NA ● EE ● LAC ● ASPAC ● AFR ● ARB

Source: Authors' own compilation based on UNESCO Institute for Statistics (UIS) and World Bank data, pooled data 2010-2022

Note: School dropout rate is the number of females (males) of official upper secondary school age individuals who are not enrolled in upper secondary school, expressed as a percentage of the female (male) population of official upper secondary school age individuals. This indicator corresponds to SDG 4.1.4. Government expenditure on secondary education, expressed as a percentage of GDP, includes expenditure funded by transfers from national and international sources to the government. It is computed by dividing the total government expenditure for the secondary level of education by the GDP and multiplied by 100.

Institutions and investment can play an important role in sustaining education, as shown by the significant and negative relation between out-of-school rates in upper secondary education and government expenditure in secondary education, for both girls and boys (Figure 4). This correlation is particularly strong among African States, particularly in Western and Eastern African States, where a school dropout rate of around 60% is associated with education expenditure not exceeding 1.3% of GDP. On the contrary, Asian and Pacific States do not seem to follow a consistent pattern, while Latin American and Caribbean States, on average, exhibit low levels of school dropout irrespective of government expenditure on education. The positive aspect, nevertheless, lies in the additional impact that an extra dollar spent in education may bring, for both boys and girls. In the case of girls, an extra 1% of GDP invested in education may reduce their school dropout by 22%, while for boys, the improvement would be slightly smaller, at 18%.

The Sustainable Development Goals (SDGs) are a universal call for action to promote a balanced social, economic and environmentally friendly sustainable development by 2030. These 17 interlinked objectives are designed to serve as a “shared blueprint” for peace and prosperity for people and the planet, now and into the future, and aim to end poverty, hunger, AIDS, and discrimination against women and girls, among others (UN, 2015).

Completing secondary education is particularly important for individuals to enter, remain and thrive in the labour market and increase their chances of enjoying good standards of living (Psacharopoulos and Patrinos, 2018). It is also beneficial for societies, as the global poverty rate could be halved if all adults could complete secondary education (UNESCO, 2017). As illustrated in Figure 4, Arab and African States are predominantly clustered in the part of the graph corresponding to low to medium government expenditure and high rates of girls’ out-of-school rates in secondary education, indicating the need for a deeper exploration of contextual factors influencing these results. It is interesting to note that, for member states with below-average government expenditure, school dropout rates vary significantly, even within the same region. This suggests that contextual factors, such as the quality of education provided and the barriers to learning and progressing at every stage of life, including gender-related challenges faced by girls as compared to boys, play a substantial role in this matter. This carries a remarkable economic cost for the

whole of society, besides representing a deprivation of the right to express oneself for women and girls. It has been estimated that in terms of earnings, gender inequality could lead to global wealth losses of \$23,620 per person and a loss of human capital wealth amounting to \$160.2 trillion (The World Bank, 2018).

2.1. What contributes to leaving girls behind in education?

Transforming the societal model of reference (often represented by the patriarchal model) and moving towards a gender-based resilience model calls for a better understanding of mentalities and their determinants.

There are many reasons why girls are more likely than boys to be out of school. Most of them relate to the gender roles that define the responsibilities, opportunities and rights of girls and boys. Existing studies highlight that especially in rural areas, as a general rule, individuals and societies alike tend to privilege boys’ education more than girls’, especially at times of economic restrictions (Ellermers, 2018). In very poor communities, sons usually inherit from their fathers, while girls are to follow their future husband’s family (UNESCO Institute for Statistics and UNICEF, 2015). Consequently, investing in girls’ education is thought to have no monetary advantages. Moreover, empowering girls through education might even be considered as a source of troubles, if education helps girls think on their own and lead them to rebel against their pre-set destiny as housewives and mothers (Sudarso et al., 2019; Yunus, 2021).

Very often, especially in poor and rural communities, children must juggle between family responsibilities and school. Boys are called to take up paid work or contribute to the family business while girls, besides being recruited in the family business – often with no salary – are called to assist with domestic and care work, which is typically not paid nor recognized (Deng et al., 2022; Hunt, 2008; Mekonnen, 2023). Girls’ duties are often very time-consuming, and this may translate in relatively poorer school performance for girls as compared to boys, in higher absentee rates and greater chances to drop out of school. These practices reinforce the gender stereotype that investing in girls’ education is not worthwhile (Subrahmanyam, 2016). It further contributes to creating a vulnerable society where women are not properly valued and are segregated into domestic tasks.

Creating a more inclusive and sustainable society calls for the active involvement of both women and men to address and eliminate the enduring disparities in access to, and achievement in, education (UNESCO, 2016). Despite this, as shown in Figure 5, gender segregation in education persisted worldwide, between 2015 to 2021. 64% of women decided to enrol in arts and humanities' studies¹⁰ against only 36% of men. Conversely, engineering, manufacturing and construction appear to be heavily male-dominated education fields (central panel of Figure 5): women on average account for only 26.4% of graduates. No country, with the exception of Poland (42%), is close to gender parity. For 25% of countries, at the utmost, 1 in 4 graduates are women, while for the remaining countries men double women graduates. Finally, as shown in the third panel of Figure 5, administration-related subjects are predominantly female-dominated: for every 100 graduates in business administration, 57 are women. In the majority of countries (almost 80%) women account for more than 50% of graduates in business and administration, while in Japan, Switzerland, Saudi Arabia, Netherlands, Türkiye, Korea and India men dominate it.

The gender divide within these areas of study is rooted in stereotypes positing that women are a natural fit to relative more human-centred fields, whereas men are better fits for technical and math-intensive fields (Abbate, 2012; Charles and Bradley, 2009). These stereotypes limit the choices of both women and men when it comes to selecting their fields of study and potential career paths.

Gender stereotypes are embedded within the broader belief system that includes attitudes toward gendered family roles, gender-associated perceptions of the self, and societal expectations on the roles women and men should occupy in the labour market and in their lives in general (Renfrow and Howard, 2013; UNESCO, 2022a). Gender stereotypes influence the choice of university subject for instance. This has an impact on the process of developing occupational aspirations and it is ingrained in individual's-self-image. Gender stereotypes further influence the alignment between the image of occupation and one's judgment about self-image (Makarova et al., 2019). Families' and schools' perceptions on women's capacities and future careers also inform decisions about investing in girls' education. Several studies show that families and parents expect less from girls in terms of academic performance

compared to boys, who are expected to be future breadwinners. For girls, this translates into lower levels of confidence in their academic performance, even if they are high performers in mathematics (OECD, 2015; 2019).

Differences in the extent to which these beliefs exist and translate into educational choices nevertheless emerge, as we can infer based on revealed preferences, i.e. the field of education ultimately chosen by women and men. As can be seen in left panel of Figure 5, in Finland, Greece, Poland, Lithuania and Latvia there are three times as many women as men in arts and humanities, while in the remaining 75% of countries there are twice as many women as men. Only in the remaining 7 countries, the ratio between male and female graduates is relatively closer to gender parity.

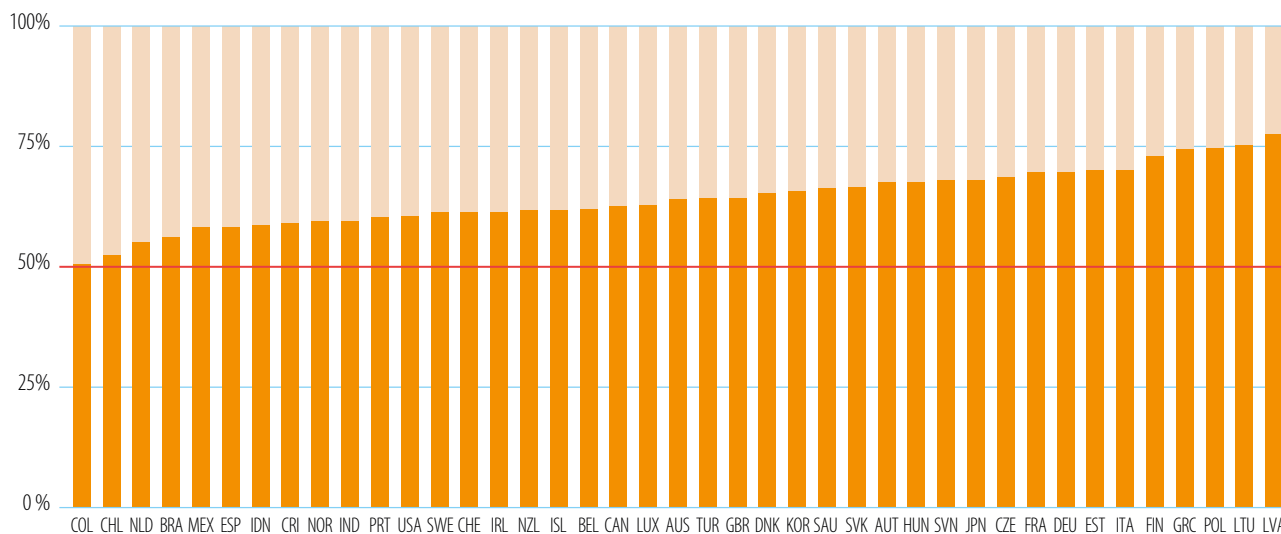
Gender differences in mathematics are closely correlated to cultural variations of available structure and opportunities for girls and women, namely towards school enrolment, women's share of research jobs, and women's parliamentary representation (Else-Quest et al., 2010). The central panel of Figure 5 seems to confirm that gender stereotypes condition girls' choices towards engineering, manufacturing and construction – a proxy for STEM subjects, namely Science, Technology, Engineering and Mathematics. The low proportion of women in STEM increases the chances of triggering a vicious cycle by spreading the gender-stereotypical image of male supremacy in technical and math-intensive fields, which in turn might affect young people's career choices and lead to a mutual reinforcement of gender stereotypes, gender gaps in the career path, pay gap and pensions gap (Andrieu et al., 2019; Nosek et al., 2009).

Neuroscience-based evidence shows that the ability to learn, including STEM subjects, depends on neuroplasticity, i.e. a brain's ability to expand and create new connections. This can be developed also through experience and with targeted interventions and it is independent of gender (UNESCO, 2017). The gender divide in quantitative subjects must therefore be heavily driven by contextual factors, including gender stereotypes (UNESCO, 2019b). Having women role models in quantitative subjects and in male-dominated careers, as well as men taking their share of unpaid care and domestic work, can contribute to dismantling gender segregation in certain subjects and fields (Amon, 2017; Bataineh et al., 2022; Blackburn, 2017).

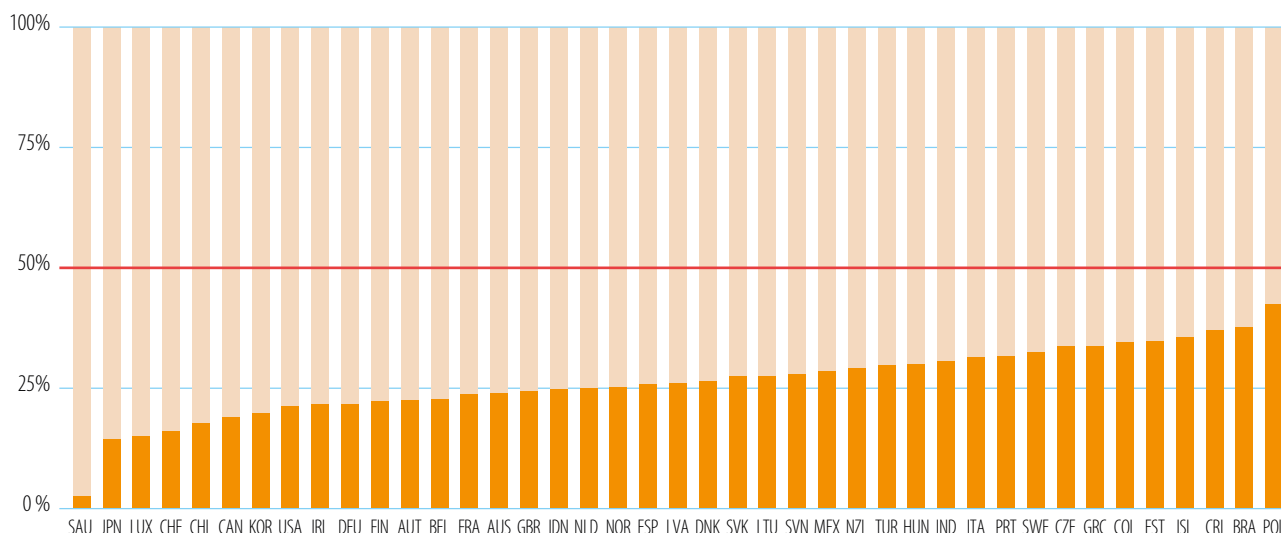
¹⁰ Arts and humanities subjects include courses in fine arts, performing arts, audio-visual arts and media production (e.g. film and video production and photography), foreign languages, philosophy, linguistics and literature, history and archaeology which lead to career perspectives ranging from schoolteachers, archaeologists, actors to movie/theatre directors.

Figure 5: Gender distribution of university graduates by fields of study in 2018 (%)

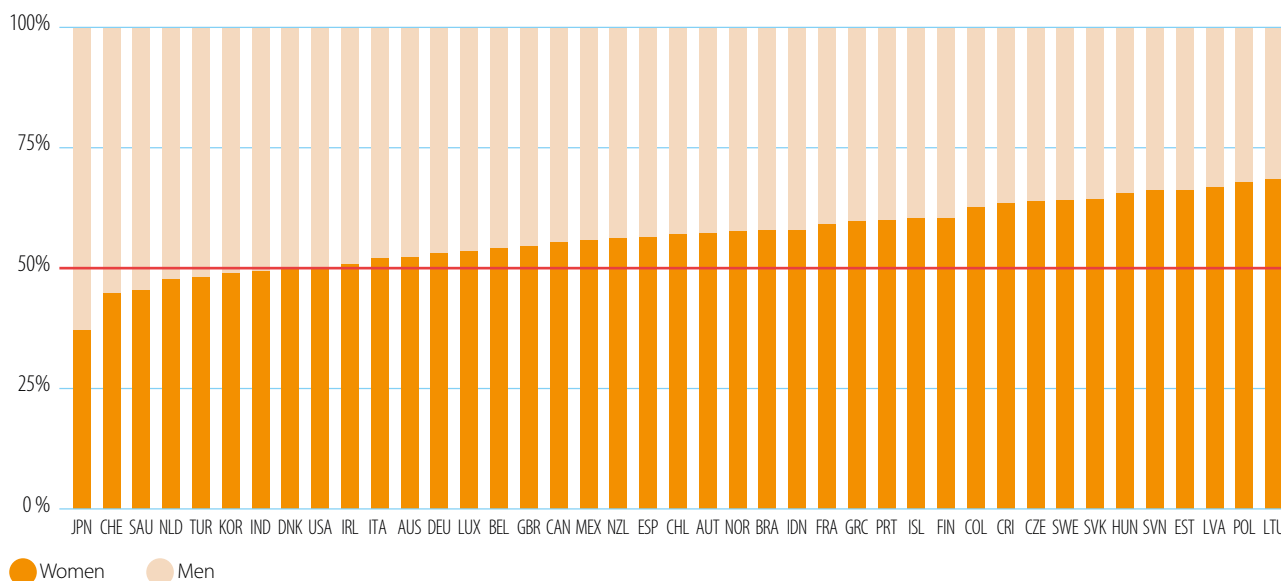
Arts and humanities



Engineering, manufacturing and construction



Business, administration and law



● Women ● Men

Source: Authors' own compilation based on OECD Family database, 2018.

Note: indicator CO3.2 Gender differences in university graduates by fields of study. Qualifications classified under ISCED 2011 levels, level 5-8, corresponding to short-cycle tertiary education and bachelor's or equivalent

Fostering the wide participation of girls and boys in STEM subjects promotes the development of innovation abilities that can help find solutions to current and future challenges (Benavent et al., 2020; UNICEF, 2020), especially in periods characterized by fast evolving technological paradigms (Amon, 2017; Bataineh et al., 2022; Blackburn, 2017). Indeed, thanks to the knowledge generated in STEM subjects, societies have progressed in relation to renewable energy, agriculture, reduced waste production, and advanced health practices, just to mention a few. The underrepresentation of women is even more prominent when considering forefront technologies, such as Artificial Intelligence (AI) (Yeung, 2020). Evidence shows that in 2020, women accounted for only 14% of authors of AI peer-reviewed articles worldwide, and 18% of authors at leading AI conferences are women, while 80% of AI professors are men (UNESCO, 2022c). AI is changing the way we work, live, produce, interact and think, and women should not be left out nor harmed by it.

Given that there is no ranking between fields of education and all of them are equally important, adopting a gender-transformative resilience means promoting the equal participation of all individuals – women, men and gender-diverse people – in all subjects, encouraging children to discover their talents independent of society's expectations and gender stereotypes, so that everybody is able to contribute to their best (Azzam, 2022; He and Jiang, 2019; Xie et al., 2020). From a gender-transformative resilience perspective, the unbalanced gender distribution across education fields has significant implications on the low rate of female participation in certain occupations, including innovation and AI-related jobs¹¹ (Miric et al., 2023).

2.2. Women in Science

In the central panel of Figure 5' it can be seen that in 2018 women accounted for 26.4% of the individuals that graduated in STEM subjects, with only a handful of countries that are close to gender parity in STEM subjects. Poland and Brazil lead with 42.4% and 37.8% respectively, while 40% of the countries display a percentage of women in STEM equal or below 25%. Seeking a scientific career in STEM fields remains predominantly male-dominated, fact that might discourage other women from seeking this type of

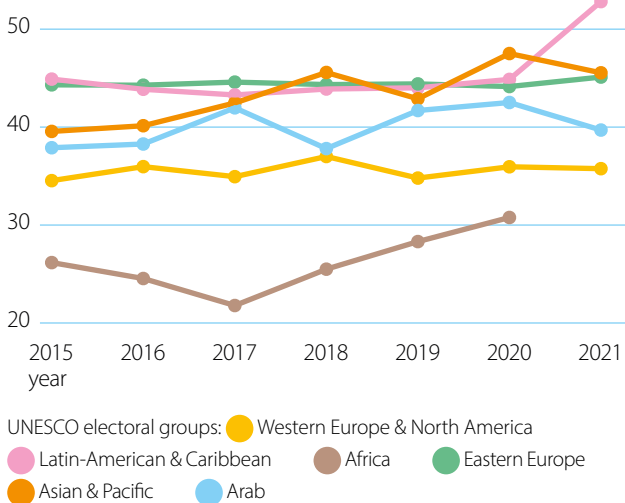
career. Gender gaps in STEM can have broader negative consequences by influencing the products that STEM fields bring to economies and societies, in terms of e.g. flawed medical studies, which might compromise women's health (Criado-Perez, 2020), or bias automated recruitment processes based on artificial intelligence (Fry et al., 2021; Manyika et al., 2019).

Moving from education to the labour market, there are three intertwined factors that underpin the underrepresentation of women in STEM jobs. First, women are less likely to undertake studies in STEM fields at the tertiary level, as shown in Figure 5. Second, among those who do enrol in STEM studies, women are more likely than men to shift out of STEM careers once they are in the labour market (Leech, 2022). Third, women exhibit lower levels of participation in the labour force more generally. These differences by gender in relation to fields of study can also be observed in terms of occupational gender segregation in research (Hammond et al., 2020).

On average among the countries for which data are available in 2015, 39% of researchers were women. This percentage increased to 43% in 2020. These data masks important differences across countries and regions. In particular, Eastern countries exhibit higher rates at an average of 41% almost constant between 2015 and 2021, partly explained as a legacy of the Soviet Union (Hammond et al., 2020). The share of women researchers in Latin America and the Caribbean is also among the highest, at an average of 44.3% with a positive increase in 2021 at an average of 50% (with more than 60% women researchers in Costa Rica and Guatemala). Countries in Asia, Pacific and Africa stand out because of the greatest variation in the share of women researchers, on average ranging respectively from 37.8%, in Asia and Pacific countries, and 28% in Africa in 2015 to 46% and 37% in 2020. In Western Europe, North America and Arab countries, the share of women researchers between 2015 and 2021 on average is 38%; it remained substantially stable with a small increase between one to three percentage points during the same period (Figure 6). Researchers do not necessarily work on STEM subjects, but their work typically contributes to the management of Research and Development (R&D) projects and to the creation of new knowledge, which is fundamental for the advancement of science (OECD, 2015).

¹¹ UNESCO Recommendation on the Ethics of Artificial Intelligence (AI) interprets AI broadly as systems with the ability to process data in a way which resembles intelligent behaviour. This is crucial as the rapid pace of technological change would quickly render any fixed, narrow definition outdated, and make future-proof policies infeasible (UNESCO, 2022c).

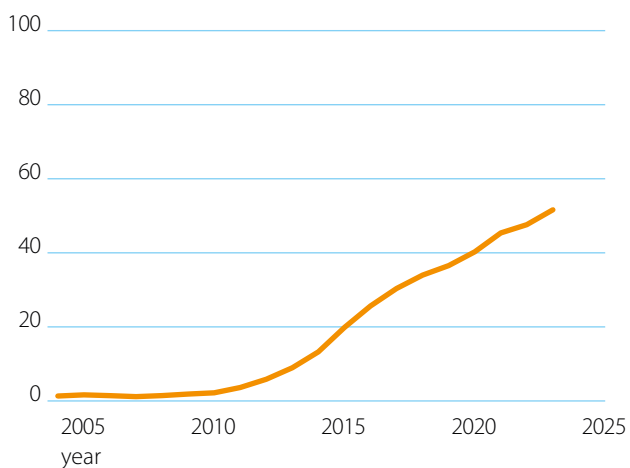
Figure 6: Percentage of women among researchers by regions between 2015 and 2021



Source: Authors' own compilation based on the UNESCO UIS database
 Note: This indicator is based on headcounts. It represents the percentage of women among researchers.

Despite a growing interest in the topic related to women in STEM fields, as shown by Google Trend data in Figure 7, finding reliable and up-to-date data on women in science is not straightforward.

Figure 7: Google trends data related to women in STEM between 2004 to 2023



Source: Authors' own compilation based on Google trend data: Women in STEM fields – topic –. Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term. The geographical coverage is worldwide and the time window goes from 2004 to November 2023. The keyword used here was "Women in STEM fields", searched as topics, which represent groups of terms that share the same concept in any available language.

Finally, recent studies show that women are underrepresented in jobs at the technical frontier (González-Pérez et al., 2020). Among the professions of the future with a high specialisation in STEM subjects, women workers in data and artificial intelligence account for 26% of workers, 15% of workers in

Engineering roles and 12% of workers in Cloud Computing roles (WEF, 2020).

2.3. Intergenerational mobility in education

Intergenerational mobility measures the extent to which the living standards of a generation are higher than those of their parents. Absolute intergenerational mobility in education refers to all individuals in a given generation having managed to climb up the economic ladder compared to their parents. Relative intergenerational mobility conversely relates to individuals coming from relatively poor origins being able to move up to middle-class or upper class among their generation (Narayan et al., 2018). Societies featuring greater intergenerational mobility in relation to education can pursue more inclusive and fairer growth paths, since the socioeconomic success of individuals is correlated more with education and their ability than with the success of their parents (Björklund and Jäntti, 2020). Low mobility further creates exclusion and misallocation of talented individuals from disadvantaged families (Chetty et al., 2020).

Intergenerational mobility should be a policy goal as it is conducive to economic efficiency, fairness and resilience (Ferreira et al., 2018; Neidhöfer et al., 2023). In societies characterized by low intergenerational mobility, talented individuals born in disadvantaged families are most likely excluded from the opportunities that are offered to those from wealthier families. This leads to a misallocation of resources and favors privileged individuals instead of enabling those with the greatest potential to contribute to the societal good. Especially in times of crisis, wasting human potential, besides being economically inefficient, unfair, and detrimental to innovation and growth, creates vulnerabilities both from a social and economic perspective. Unvalued and unleveraged talents generally belong to the bottom of the income distribution and may struggle to survive, may remain in poverty or at the margin of society, contributing to social and economic vulnerability (Matos et al., 2021). Moreover, women and men are exposed to intergenerational mobility in a different way, which often reflects gender stereotypes, at the detriment of women.

In what follows, we consider the cohorts of individuals born between 1940 to 1980 and look at the extent to which respondents have attained a higher educational level than their parents, conditional on the parents

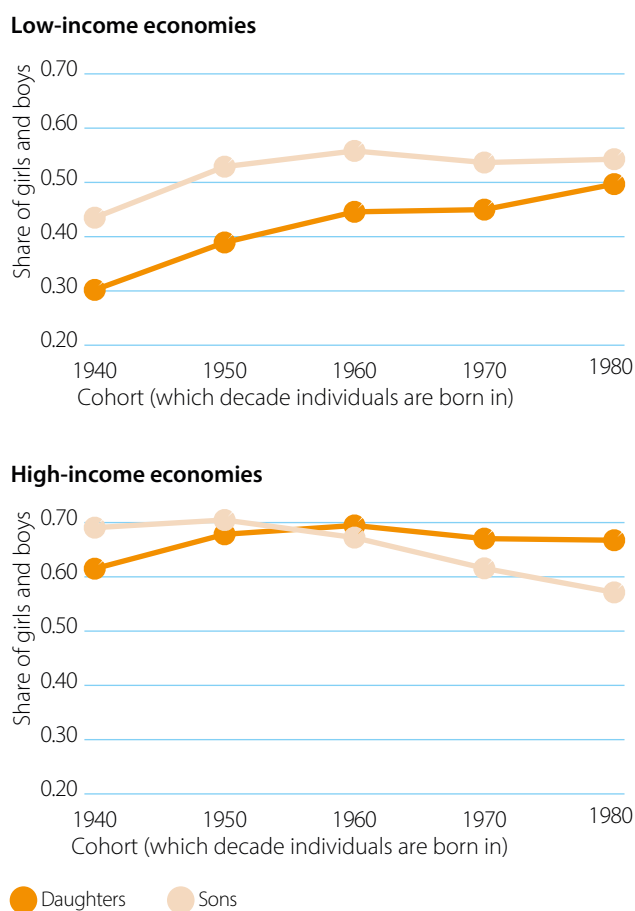
not having obtained tertiary education, such that all included individuals have a chance of surpassing their parents. Mobility is important to build trust and a more just and equitable society, to trigger inclusive growth and to create the condition to address the aspirations of young generations (Gorard et al., 2012). Without absolute mobility, living standards cannot improve and tensions between groups might increase, putting social cohesion at risk. Furthermore, regions with higher rates of mobility in education tend to also exhibit lower inequality, higher-quality public school systems, and stronger social networks (Chetty et al., 2014).

Intergenerational mobility measures the extent to which the living standards of a generation are higher than those of their parents (Narayan et al., 2018).

Results show that intergenerational absolute mobility in education follows a very different pattern in high-income economies as compared to low-income ones. In the former, the gender gap has over time been reversed in favour of women, while in the latter it still persists, despite having seen a reduction over time (Figure 8). In low-income economies women born in the 1940s have a 30% less probability to reach a better education as compared to their parents, while for the cohort born in the 1980s this gap narrows to 7%. In 40 years, the gender gap in intergenerational education mobility varies quite a lot across low-income economies. Over the period considered, significant improvements in women's absolute mobility have been registered in Latin America and the Caribbean, where the gap between women and men closed, followed by East Asia and Pacific, where women overcame men in the 1980s, although only marginally so. In contrast, in Sub-Saharan and South Asia women face much bigger barriers to better education as compared to their parents, despite the fact that the gender gap halved from the 1940s to the 1980s generation. In the Sub-Saharan region, 33% of women versus 47% of men enjoyed absolute mobility in education, while in South Asia women born in the 1980s exhibited 15% less mobility in education than men.

The situation in richer economies follows completely different patterns. Women born in the 1940s experienced 10% less than men in absolute mobility, while moving from the 1950s to the 1960s this gap reversed, and women born in the 1980s exhibited an absolute mobility in education that is 18% greater than that of men.

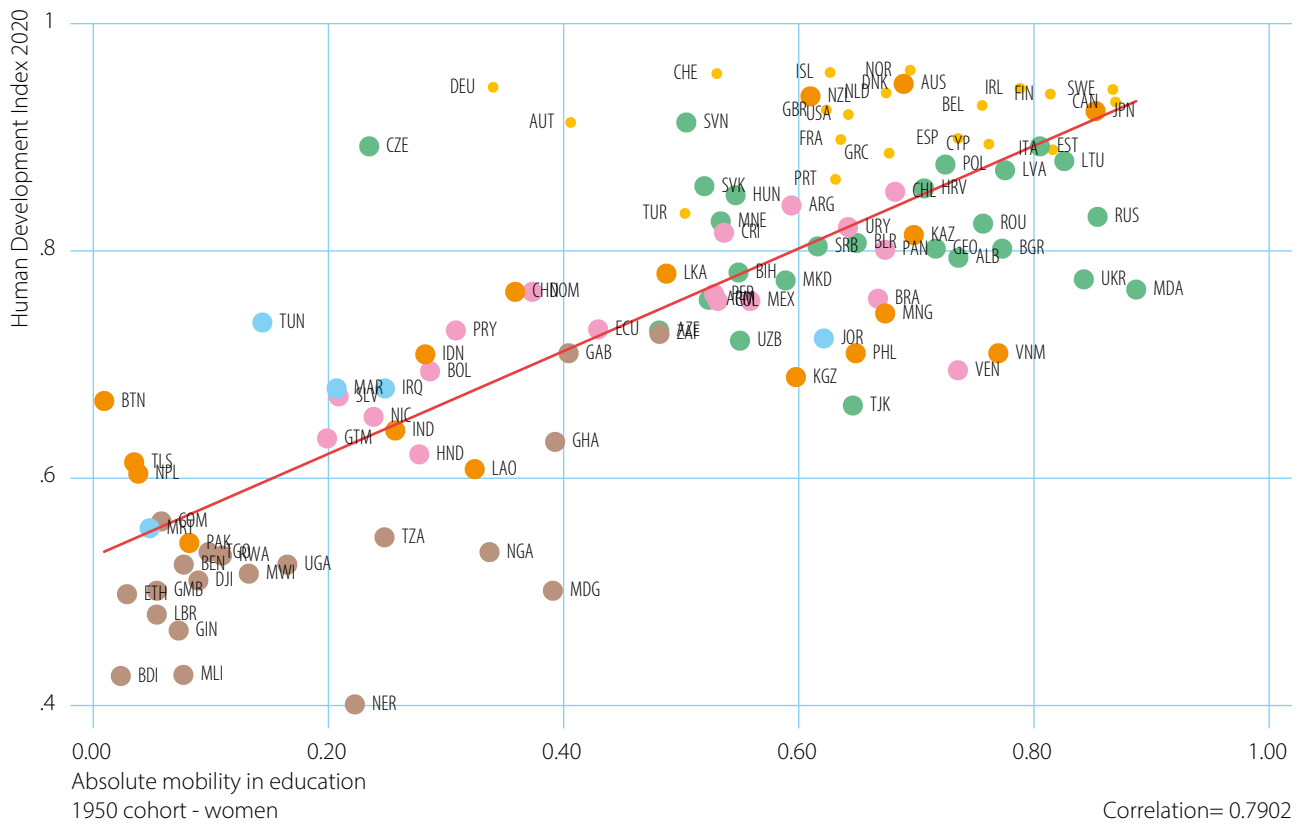
Figure 8: Intergenerational mobility in education by gender and cohort since 1940 - (absolute measure)



Source: Author's own compilation based on Global Database on Intergenerational Mobility – World Bank covering 153 economies for cohorts between 1940 and 1989.

Note: Low income economies include: Afghanistan, Albania, Angola, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, China, Colombia, Comoros, Democratic Republic of Congo, Republic of Congo, Costa Rica, Côte d'Ivoire, Djibouti, Dominican Republic, Ecuador, Egypt, Arab Republic, El Salvador, Eswatini, Ethiopia, Fiji, Gabon, Gambia, Georgia, Ghana, Guatemala, Guinea, Guinea-Bissau, Haiti, Honduras, India, Indonesia, Islamic Rep. Iran, Iraq, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kyrgyz Republic, Lao PDR, Lebanon, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, North Macedonia, Pakistan, Papua New Guinea, Paraguay, Peru, Philippines, Romania, Russian Federation, Rwanda, Senegal, Serbia, Sierra Leone, Solomon Islands, South Africa, South Sudan, Sri Lanka, Sudan, São Tomé and Príncipe, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Tunisia, Türkiye, Tuvalu, Uganda, Ukraine, Uzbekistan, Vanuatu, Venezuela RB, Vietnam, West Bank and Gaza, Yemen Republic, Zambia. High-income economies include: Australia, Austria, Belgium, Canada, Chile, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea Republic, Latvia, Lithuania, Netherlands, New Zealand, Norway, Panama, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, China, United Kingdom, United States, Uruguay. The absolute intergenerational mobility in education indicator is computed as the share of individuals whose completed educational level is higher than that of their parents.

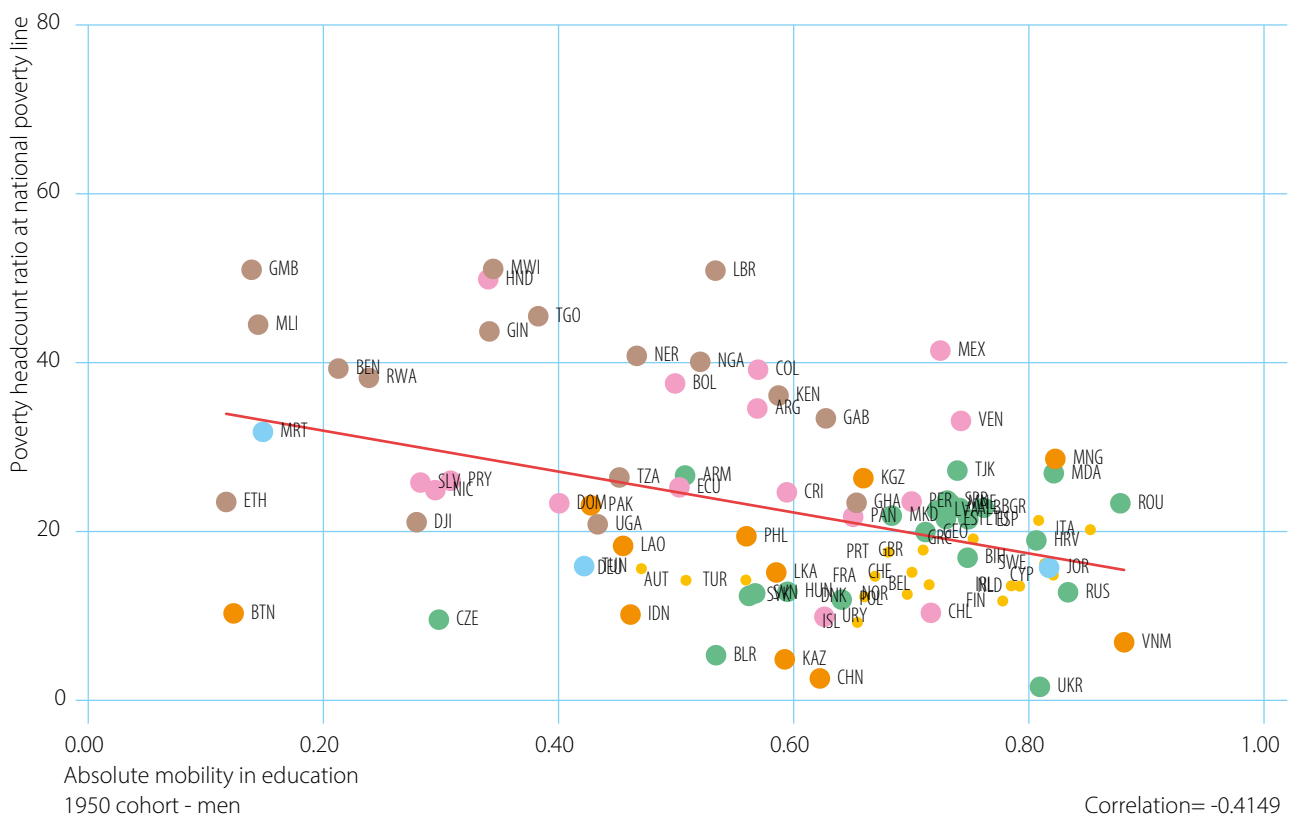
Figure 9: Association between absolute intergenerational mobility in education by gender and cohort since 1950 (absolute measure) and Human Development Index (HDI) 2020



UNESCO electoral groups: ● WE & NA ● EE ● LAC ● ASPAC ● AFR ● ARB

Source: Authors' own compilation based on Global Database on Intergenerational Mobility – World Bank and Human Development Index 2020 – UNDP.
 Note: The absolute intergenerational mobility in education indicator is computed as the share of individuals whose completed educational level is higher than that of their parents. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is a composite indicator computed as the geometric mean of normalized indices for each of the three dimensions.

Figure 10: Association between absolute intergenerational mobility in education by gender and cohort since 1950- (absolute measure) and poverty headcount (%)



UNESCO electoral groups: ● WE & NA ● EE ● LAC ● ASPAC ● AFR ● ARB

Source: Authors' own compilation based on Global Database on Intergenerational Mobility and poverty headcount ratio calculated at the national poverty line as a mean 2015-2022 – World Bank.

Note: The absolute intergenerational mobility in education indicator is computed as the share of individuals whose completed educational level is higher than that of their parents. The national poverty headcount ratio is the percentage of the population living below the national poverty line(s). National estimates are based on population-weighted subgroup estimates from household surveys. This indicator corresponds to SDG 1.2.1

In regions characterised by low Human Development Index (HDI), a composite indicators measuring improvements in health, knowledge and standard of living, women enjoy fewer opportunities than men in relation to intergenerational mobility in education. Figure 9 shows that in 2020 in countries exhibiting low HDI, the generation of women born in the 1950s struggles the most as compared to men in the same countries. Gender differences are smaller in countries exhibiting higher HDI. In so far as women's role continues to be confined to family and domestic responsibilities, climbing the social ladder towards a better education than their parents remains unlikely for women in low-income families or less developed countries. This further creates a vicious circle of individual vulnerability, as women born at the margins of poverty struggle to improve their condition due to a lack of educational opportunities (Bandiera et al., 2017; Jácome et al., 2021).

Figure 10 displays the relationship between absolute intergenerational mobility and poverty headcount. If one considers all countries for which data are available, we see that, moving from left to right along the x axis, as the value of absolute mobility tends to increase, on average it is associated with a reduction of 23% in the poverty headcount among women and 24% among men. The negative and significant correlation that emerges highlights the role of women in driving this process once we restrict the analysis to low-income economies.

Women clearly emerge as the drivers of change. In low-income economies, as women achieve a higher education than their parents, i.e., moving towards a higher level of the absolute mobility indicator, on average, the poverty headcount of women born in the 1950s cohort decreased by 22% and by 30% for those born in the 1980s, while for men the relation between poverty headcount and absolute mobility in education is not significant. This argues in favour of providing education opportunities to women, and overcoming gender stereotypes that restrict them to domestic and caring activities, as this would be leading to faster and greater reductions of poverty headcounts in low-income economies.

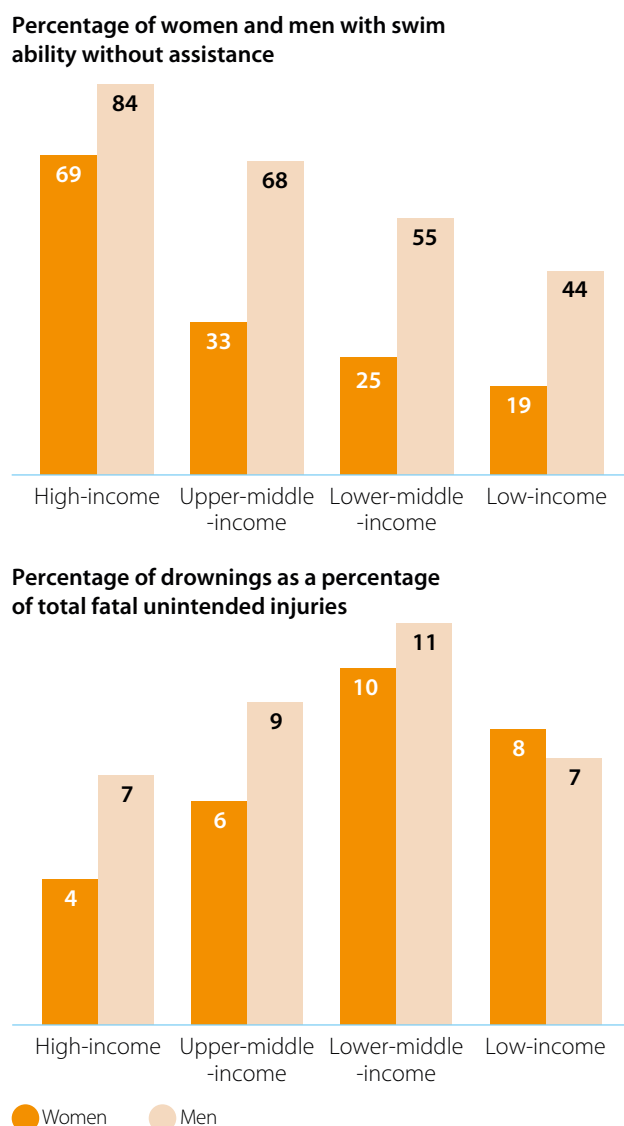
2.4. Swimming data

According to Sen's framework, a capability is an opportunity of doing and being what people choose to achieve (Sen, 1999).

Resilience, and in particular individual resilience, deals with capabilities that empower individuals and communities to react to distressful situations, adapt to the new situation or, if necessary, substantially change

the original conditions and jump forward to a new one. The ability to swim is also considered a capability through which individuals are able to transform their knowledge into achievements that they consider important for their well-being, given the constraints they face (Borgonovi et al., 2022). Resilience at a time of climate change requires equipping all, including girls and women, with the wide set of skills needed to face climate change-related threats. Given the increased risk of flooding and extreme weather events that climate change brings, water safety knowledge and the ability to swim without assistance are critical components of making girls and women safe as well as their children.

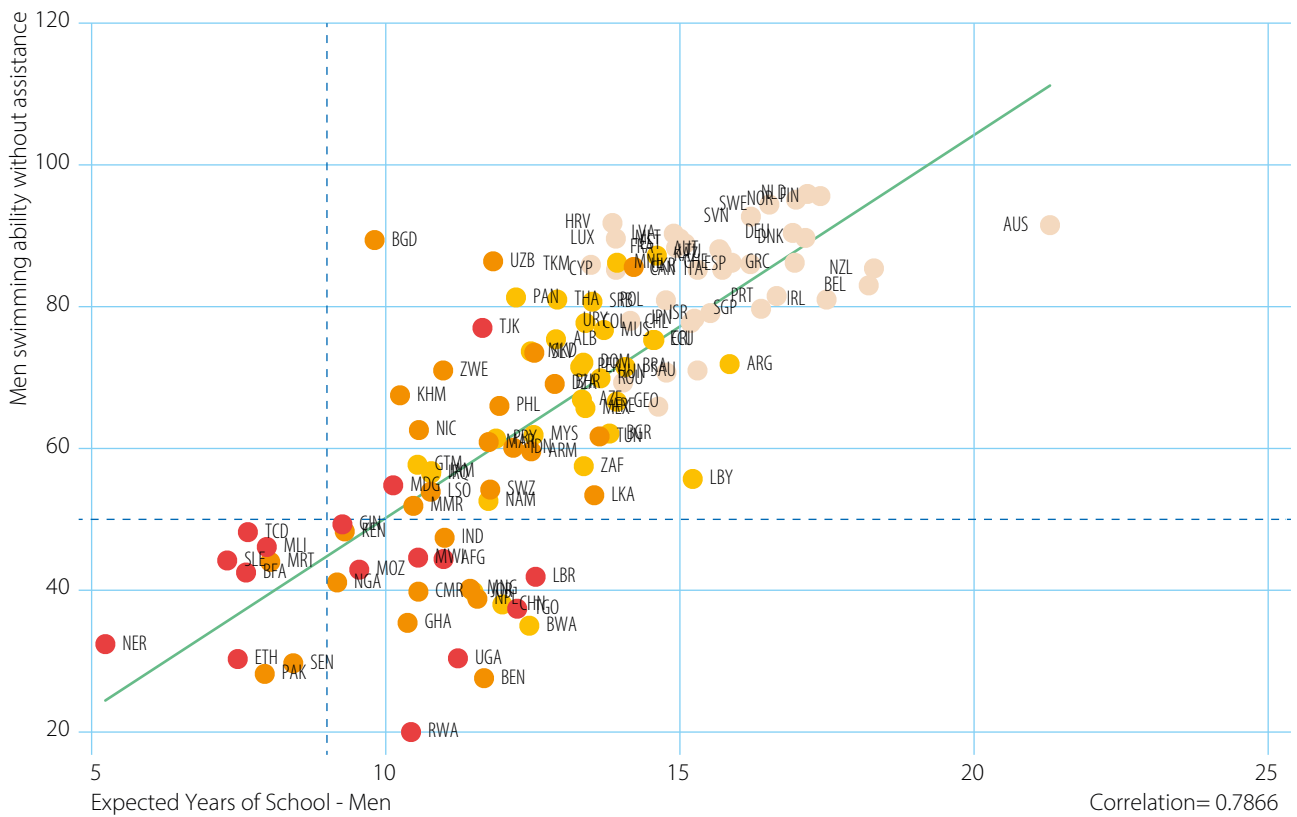
Figure 11: Swimming and drowning distribution by gender and income group in 2019 (%)



Source: Authors' own compilation based on Borgonovi et al., 2022

Note: The indicator on swimming activities relates to the percentage of the population aged 15 and older who report being able to swim without assistance. The indicator on drownings refers to the percentage of total fatal unintended injuries. To define income groups, we use the World Bank classification based on Gross National Income. Data refer to 2019.

Figure 12: Association between expected years of schooling and swimming abilities by gender



Country Income Group: ● High-income ● Upper-middle ● Lower-middle ● Low-income

Source: Authors' own compilation based on data from UNESCO Institute for Statistics (UIS) and Borgonovi et al., 2022

Note: Expected years of schooling from primary to tertiary, calculated as average between 2015-2022, measure the total number of years of schooling that a person of a certain age can expect to receive in the future, assuming that the probability of a person being enrolled in school at any particular age is equal to the current enrolment ratio for that age. More information on the methodology please consult the dedicated page: <https://uis.unesco.org/en/glossary-term/school-life-expectancy>

Across regions, women and men exhibit different swimming without assistance abilities, irrespective of the region considered. On average 40% of women report being able to swim as compared to 66% of men. This gender difference is persistent across income groups and varies from 15 percentage points in high-income countries to 30 percentage points in the upper-middle income group.

There are many reasons which may explain these differences, including gender norms that lead boys to be more physically active than girls. Cultural and religious norms linked to the opportunity to display their bodies in public or willingness to swim while menstruating are some other factors that may explain such differences. On the other hand, men are more likely to be victims of unintentional drowning than women. Overall, 8.5 % of men died of drownings as a percentage of total fatal unintended injuries as compared to 6.6% of women. Differences between women and men reduce as countries move from high to low income, where women victims of drowning are one percentage point higher than men. The fact that men are more likely to be a victim of unintentional fatal injuries than women, might be explained by the fact that men, being more confident to swim, are also more exposed to the risk of drowning as compared to women, as they engaging proportionally more in working and or leisure activities next to the water, such as lakes, rivers or the seaside (Borgonovi et al., 2022).

The risk of drowning increases drastically for women in the presence of natural water-related disasters. In 1991 90% of the victims of the cyclone in Bangladesh were women and children (Schmuck, 2002). A similar pattern was observed also in South and south-east Asia during the 2004 tsunamis (Hunter et al., 2016; Oxfam, 2005) . Women are more exposed to the dangers of natural disasters in low-income countries due to the fact that, as they live in poverty more than men, they might participate relatively more in outdoor farming activities. And this becomes dangerous in flood-prone areas. Moreover, as women participate less in decision-making, they are not involved in emergency plans nor informed about weather warnings and strategies about what to do in case of a flood emergency (Oxfam, 2012; Padmanaban, 2021; Roy Chowdhury et al., 2021). Any time women are at risk of drowning, it is also likely that their children will be exposed to a similar destiny. Countries that invested in women's empowerment have also witnessed a significant decrease in female flooding fatalities (Roy Chowdhury et al., 2021).

But, again, empowerment goes hand in hand with education and training, including in activities or sports such as swimming. The uneven distribution of swimming ability across countries emerges to be positive and significantly associated with expected years of schooling. Every additional year of schooling is associated with a similar magnitude in the improvement of swimming abilities for both girls and boys, with gender differences that remain nevertheless evident in the level of swimming abilities achieved.

3. Work as a source of empowerment

Besides being a source of financial means, work has an impact on the lives of individuals in terms of enhancing their sense of usefulness and belonging to their community. In our societies work matters both at the individual and the societal levels. For societies, work represents countries' engine to grow and develop, increases society's welfare and enhances community cohesion and safety. At the individual level, it contributes to building self-esteem to the extent to which each person believes to be capable, important and worthy within her employing organization (Krauss and Orth, 2022b; Willis et al., 2019). Moreover, work gives access to a number of essential as well as non-essential goods, services and activities. It intensifies social connections and interpersonal networks. It allows people to enjoy material well-being and pursue spiritual development, at the condition that work is decent and that work of equal value is remunerated to the same extent, as established by the Universal Declaration of Human Rights, the 2030 Agenda for Sustainable Development Goals and the founding Treaty of the European Union. Yet, despite the progress registered in labour markets and the many advances that a century ago would have been considered impossible, today, we still observe gender gaps at work. Fairer labour markets go hand in hand with a better future for women, helping to address discrimination, stereotypes and disadvantages.

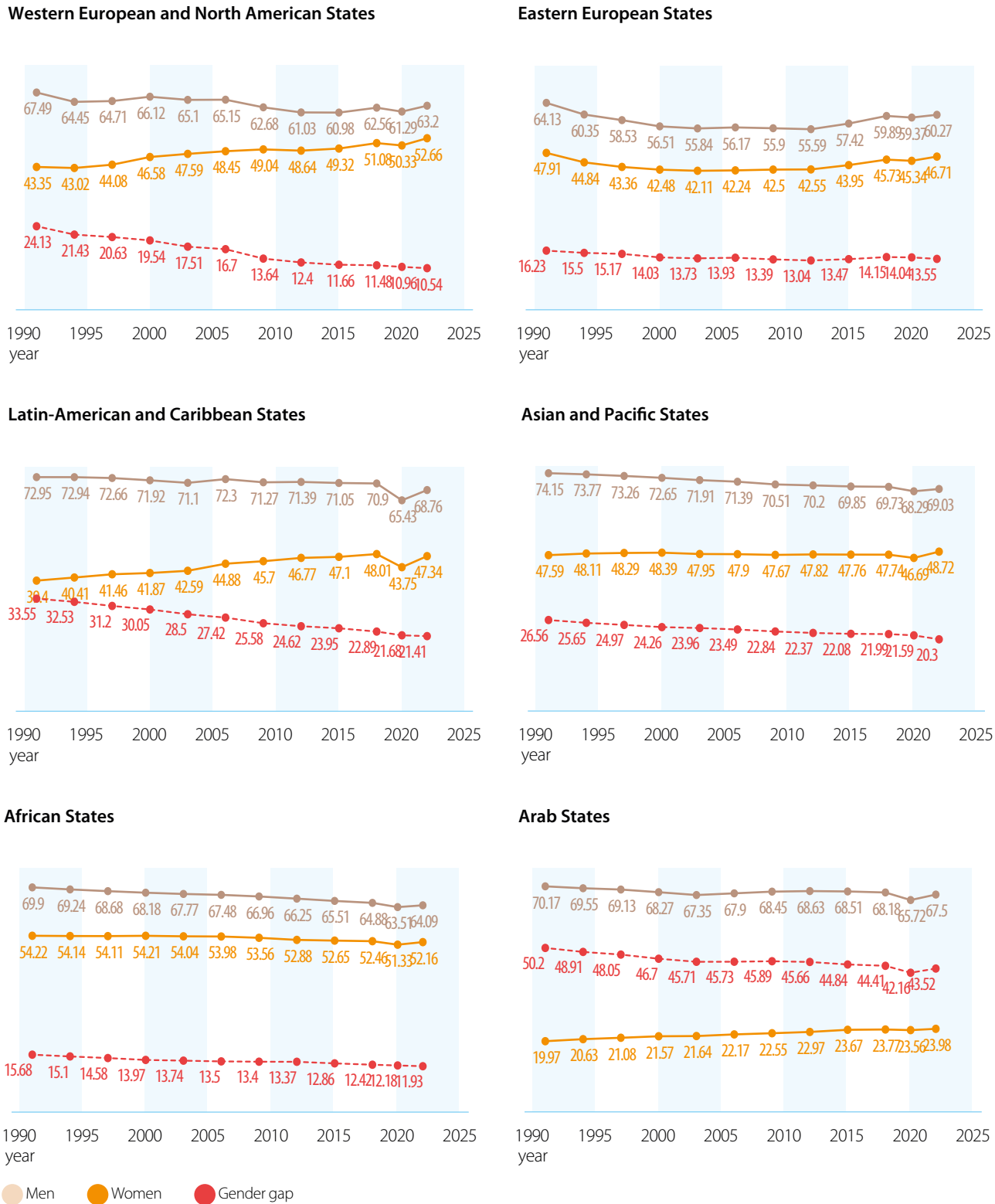
Gender inequality at work is a fact and is deeply intertwined with poverty. Women's earnings can help equalize the distribution of earnings within households and contribute to reducing household poverty (Gornick and Jantti, 2013; Nieuwenhuis, 2020). The economic independence of women matters not only for current well-being, but represents an investment in securing an adequate standard of living (Nieuwenhuis et al., 2018). This is often negatively conditioned by the opportunity cost that women pay to the unequal division of paid and unpaid work over the course of their life, with a heavy impact also on pensions (OECD, 2021b).

Organizational structure, career models, technology and automation are rapidly changing the nature of work by creating unprecedented challenges and opportunities. Building resilience in this context requires the engagement of all, irrespective of gender identities, at all levels of education and occupation.

Figure 13 displays the employment rate of women and men for the population of 15 years and above. It shows that, over the last 30 years, women have remained more excluded than men from the labour market. The difference in women's participation in labour markets worldwide observed mirrors important heterogeneities. Over the last three decades, on average women's participation in the labour market increased almost across all the 6 UNESCO groups, as shown in Figure 13. In Western European and North American States, it recorded the biggest improvement – almost 10 percentage points, reaching 53% in 2022 – , followed by Latin American and Caribbean States, which exhibited an increase of eight percentage points – reaching 47% female employment rate in 2022. African States conversely recorded a slight reduction in female employment rates, from 54% in 1991 to 52% in 2022. In all the remaining groups the employment rate of women increased between 1 to 3 percentage points. Between 1991-2022, across the 6 groups considered, the average absolute difference in terms of employment rate between women and men was 22 percentage points while in relative terms women were employed on average 33% less than men. Substantial differences across regions further emerge. Countries in the first group, i.e. Western European and North American States, registered the biggest reduction in the employment gender gap (14 percentage points -pp), followed by Latin American and Caribbean countries, with 12 pp. The biggest employment gender gap was 50 percentage points in 1991 which reduced to 43.5 percentage points in 2021 in the Arab States. The smallest employment gender gap emerges among Eastern and African States, with 2.7 percentage points between 1991 and 2022. This might in part be explained by relatively important shares of workers being in the informal part of the economy, and by low level of employment more generally. It is interesting to notice how in 2009 in Western Europeans and North American States the gender gap in 2009 was reduced by more than 2 percentage points due to male employment being negatively affected by the financial and economic crisis more than female employment.

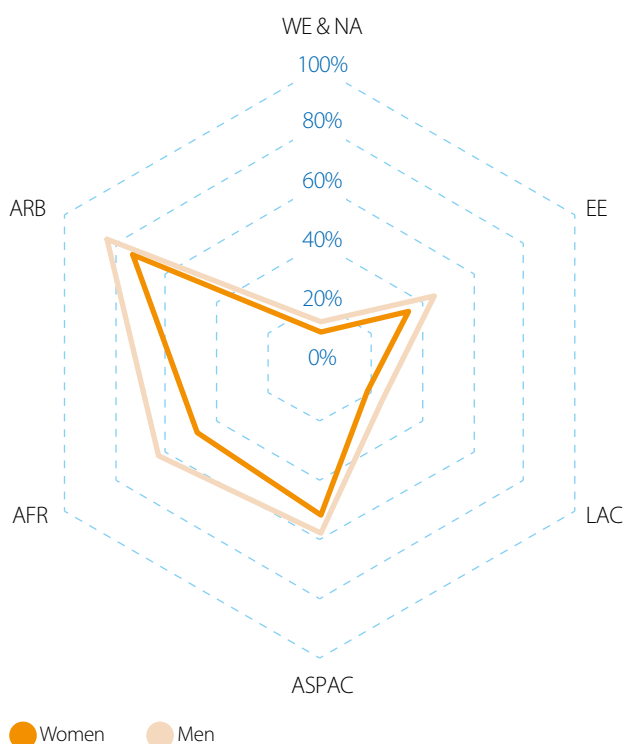
While analysing employment rates is useful to better understand participation in the labour market, analysing social norms can help explain why gender gaps in employment still persist.

Figure 13: Employment rate by gender between 1991 and 2021 (%)



Source: Authors' own compilation based on World Bank data.
 Note: The gender gap refers to the absolute difference between the employment rate of men and women, with the employment rate that is the proportion of a country's population that is employed. Employment is defined as persons of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit. Individuals aged 15 and above are considered as working-age population.

Figure 14: Share of women and men who agree with the statement: When jobs are scarce, men should have more right to a job than women (% of respondents)



Source: Authors' own compilation based on World Value Survey (WVS), pooled data 2017-2022

Note: The survey used was the European Value Survey – World Value Survey EVS_WVS_Joint. The question used was: When jobs are scarce, men should have more right to a job than women?

Figure 14 shows that worldwide between 2017-2022, 1 in 3 people believed that when jobs are scarce, men should have more rights to jobs than women.

These results reflect social norms that assign primary responsibility for caregiving activities such as childbearing, care of elderly people and housework to women. As shown in Figure 14 this stereotype affects both women and men, as there is a small discrepancy in their responses. Geographical distribution matters, with such an opinion that varies between less than 20% in Western Europe and North America to a maximum of 70% for men and 57% for women within Arab States. Within this last group the stereotype is the highest among men. This likely mirrors the gender

norms that put a higher value on men's participation in the job market over women's. Gender norms over-value men's time and talents while overlooking the potential benefits of increasing women's participation in the workforce on the economy.

On average, individuals spend one-third of their day at work, which can be a means to economic independence, but also to personal empowerment, by creating a sense of participation, increasing one's self-esteem, enabling the establishment of networks, and the recognition of having a role in life (Bansal and Kumar Singh, 2020; Cabeza-García et al., 2019). The fact that, on average, men are employed 30% more than women worldwide can contribute to undermine women's self-esteem and resilience, and at the aggregate level represents a waste of talent.

While generally having a job is better than not having one, quality nevertheless matters, and not all jobs enjoy the same tenure, pay, working conditions, rights and so on. Work can at times be a source of serious psychological and physical consequences. This is the case in instances of e.g. sexual and moral harassment (Guimarães et al., 2016), exploitation against women workers, and individuals employed under intense working schedules (Selwyn et al., 2020), in unsafe or unhealthy working environments or without access to fundamental workers' rights (Haque et al., 2020).

Finally, informality affects over 2 billion workers around the world (ILOSTAT online database). Among them, the most vulnerable are home-based workers, unpaid contributing family workers and domestic service workers, where women are often overrepresented (ILO, 2018a). Informal workers normally lack social protection, decent working conditions and earn lower wages as compared to formal workers (ILO, 2022). Empowering women, men and gender-diverse people through work calls for institutions to ensure fundamental rights in the workplace regardless of gender, race, work tasks, class or level of education (Hickey et al., 2019).

4. ■ Decision-making power positions : boosting inclusion and gender equality

Women’s empowerment does not only depend on their access to education and employment, but also on political decision-making and civic participation. Studies show that women’s political inclusion is associated with faster economic development (Duflo, 2012) and better health-related outcomes (Swiss et al., 2012).

Women remain significantly underrepresented in decision-making positions in the political as well as economic dimensions. Based on World Bank data, as shown in Figure 15, there is wide variation in women’s representation across regions ranging from a minimum of around 1 % in Yemen and Morocco in 1997-1999 to a maximum of 61% in Rwanda in the period 2020-2022. On average, in 1997 women held 10% of national parliaments, which increased to 25% in 2022.

Despite the progress achieved during the period 2000-2022, in 12% of the countries, women in national parliaments account for less than 10% of the total. Only in 27 countries out of 191 countries available, women hold 40% or more of the seats. The highest representation of women can be observed in Cuba with 53% of seats, and in Rwanda, with 61% representation. However, in 4 countries (Yemen, Papua New Guinea, Seychelles and the Democratic People’s Republic of Korea) women’s representation has deteriorated since 1997.

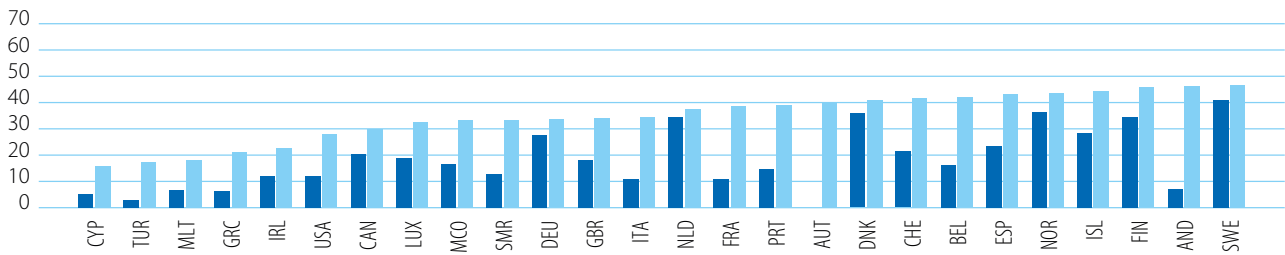
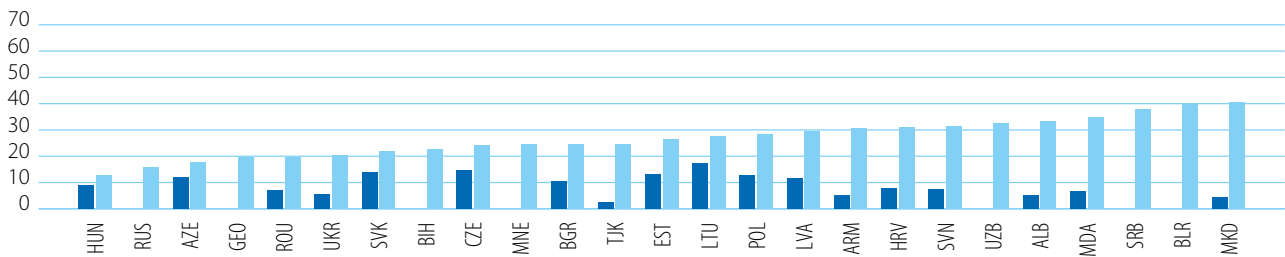
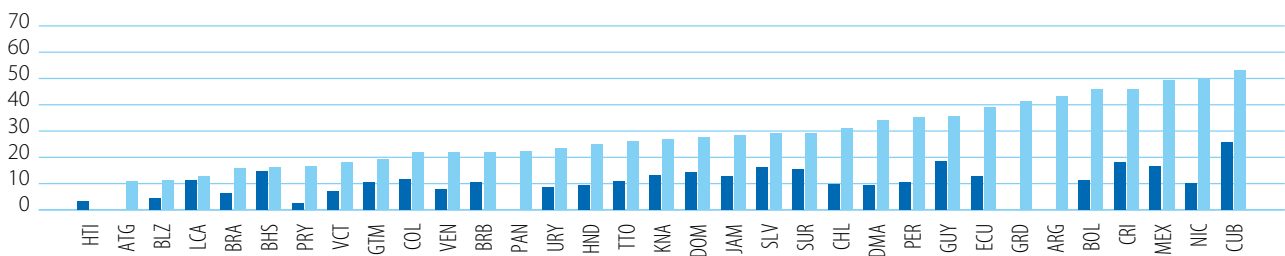
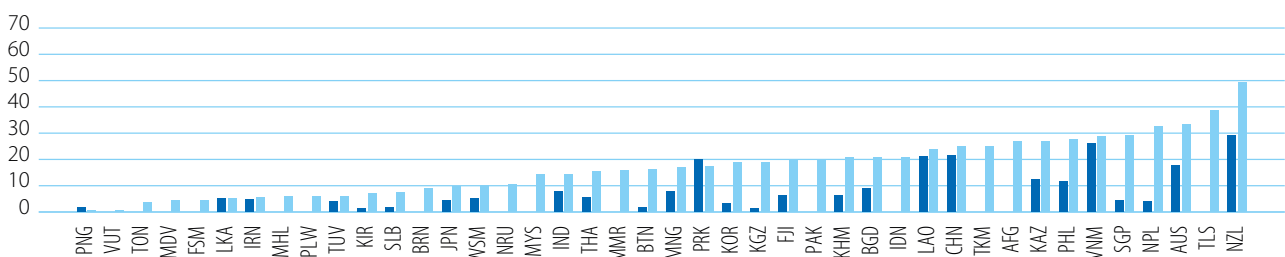
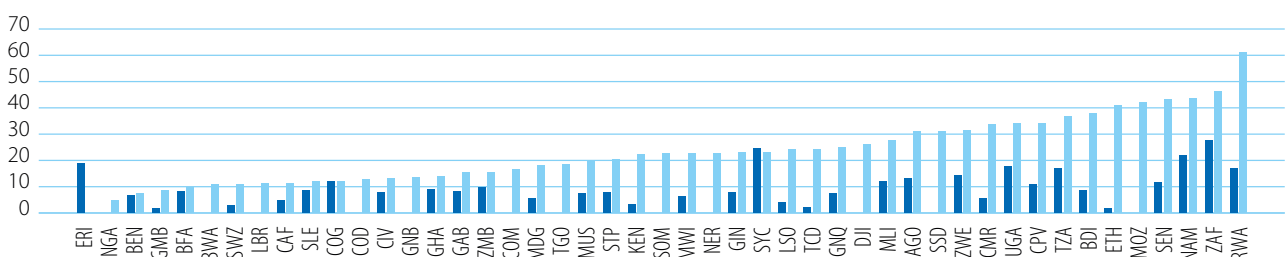
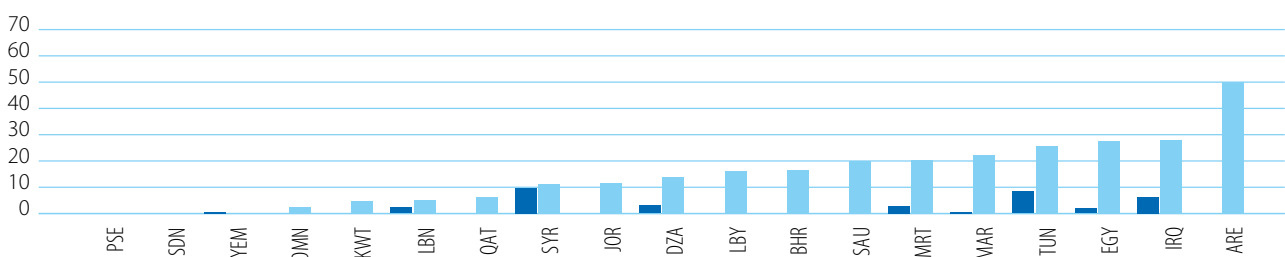
The picture drawn above (Figure 15) shows a substantial exclusion of women from the active exercise of political participation. This represents not only an impediment to the right to participate in a country’s political life, as established in the Universal Declaration of Human Rights (Article 21), but also a lost occasion to rely on the diverse experiences and views that women would bring (UNDP, 2023, 2020). There is evidence that women’s participation in politics tends to push agendas towards policy topics that relate to improving women’s and children’s condition such as education, healthcare and social assistance (Funk and Philips, 2019). While being necessary and welcome, women’s increased presence in leading roles is not sufficient to mark the difference the world needs, as the focus has to be shifted to having women be able to express their voices and seize opportunities to influence decision-making (Paffenholz et al., 2016).

Equality and diversity at all levels and in all sectors, including public administration, improve government responsiveness and make them accountable to diverse public interests, enhance the quality of services delivered and increase trust in the public administration (University of Pittsburgh and UNDP,

2021). The introduction of gender quotas in national parliaments promotes cultural change and works towards the creation of a critical mass of women in power (UNWOMEN and UNDP, 2022). The scarce participation of women in political decision-making limits the resilience of countries and the ability for collective action to find possible pathways in addressing these challenges.

The picture of women’s representation in economic decision-making positions is not very different from women’s representation in national parliaments. As shown in Figure 16, since the 1990s, women’s participation in senior and middle management positions has improved across almost all regions. The exception is represented by Eastern European States where, on average, it stayed between 39% and 35% over the thirty-year period considered. Arab countries display the smallest increase but also the shortest time series, while in Asian and Pacific States statistics evolved from 7% in 1997 to 29% in 2022. Countries of the remaining groups show on average an increase of 15 percentage points over period considered. Over three decades, among UNESCO member states, the participation of women in economic decision-making did not exceed 30% of seats in 63% of countries. Women represent half of the population, and even only because of the law of big numbers, the distribution of their talents and abilities should be as those of men. Societies and economies would greatly benefit from boosting women’s participation in decision-making positions and in policy making. Their absence or paucity is at odds with broadening perspective, increasing creativity and innovation, and diversifying the pool of competencies that are needed, especially at times of economic instability (Profeta, 2017).

Figure 17 displays on the y axis the Human Development Index, a composite indicator that measures human development achievements related to health, knowledge and living standard. It is computed as the geometric mean of normalized indices for each of the three dimensions. On the x axis, we display the proportion of seats held by women in national parliaments. As can be seen, women’s political empowerment appears to be positively associated with countries’ development: in 2021, for each unit increase in women’s representation in the national parliament, on average the HDI increases by 0.03%. The fact that women cannot engage at the best of their capabilities drains away resources from countries and increases their vulnerabilities, making them less able to respond to crises.

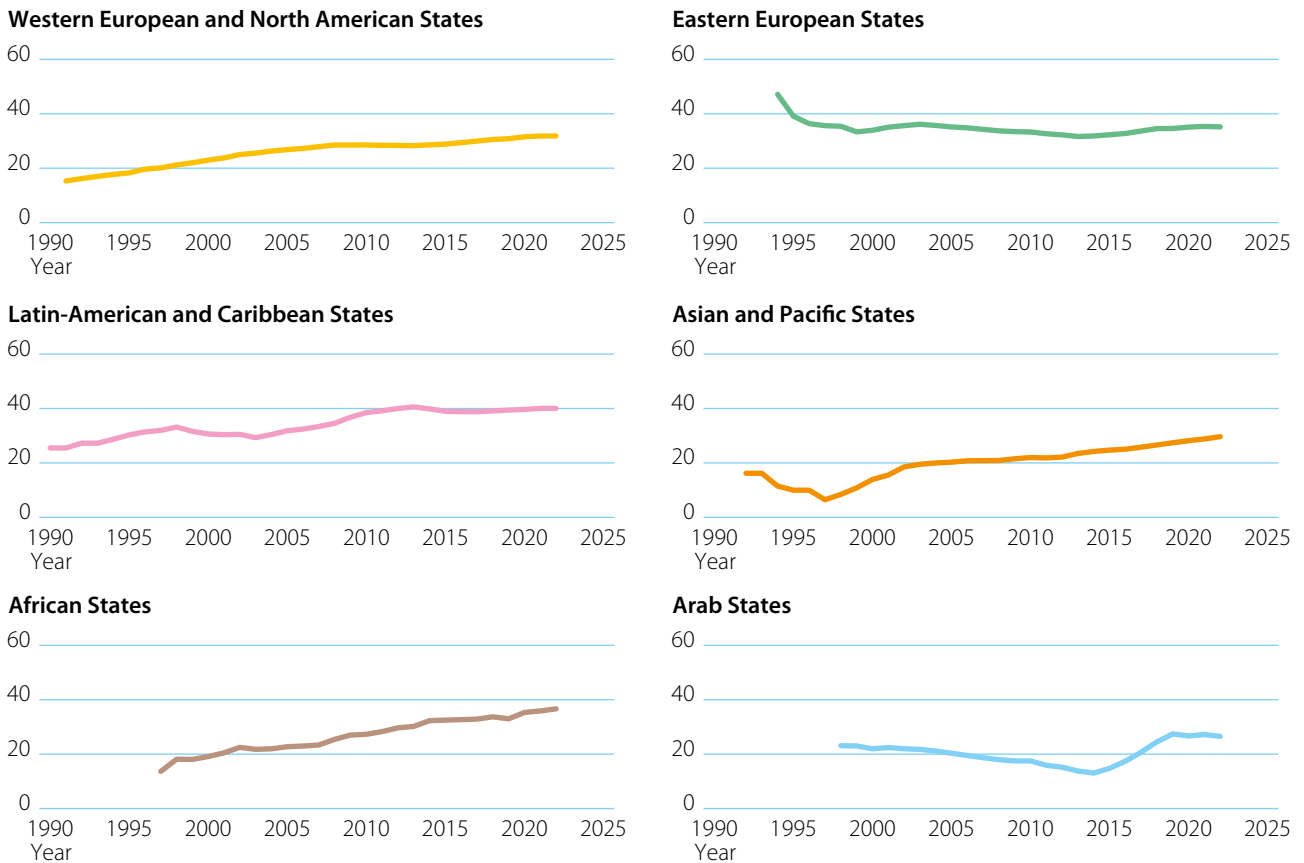
Figure 15: Share of seats held by women in national parliaments between 1997 and 2022 (%)**Western European and North American States****Eastern European States****Latin-American and Caribbean States****Asian and Pacific States****African States****Arab States**

● Average 1997-1999 ● Average 2020-2022

Source: Authors' own compilation based on World Bank data.

Note: Women in parliament are represented as the percentage of parliamentary seats in a single or lower chamber held by women. Starting from the oldest to the most recent available data, we have split the sample into two parts and computed the respective averages. This was done to rely on a wider number of countries available. This indicator corresponds to SDG 5.5.1.

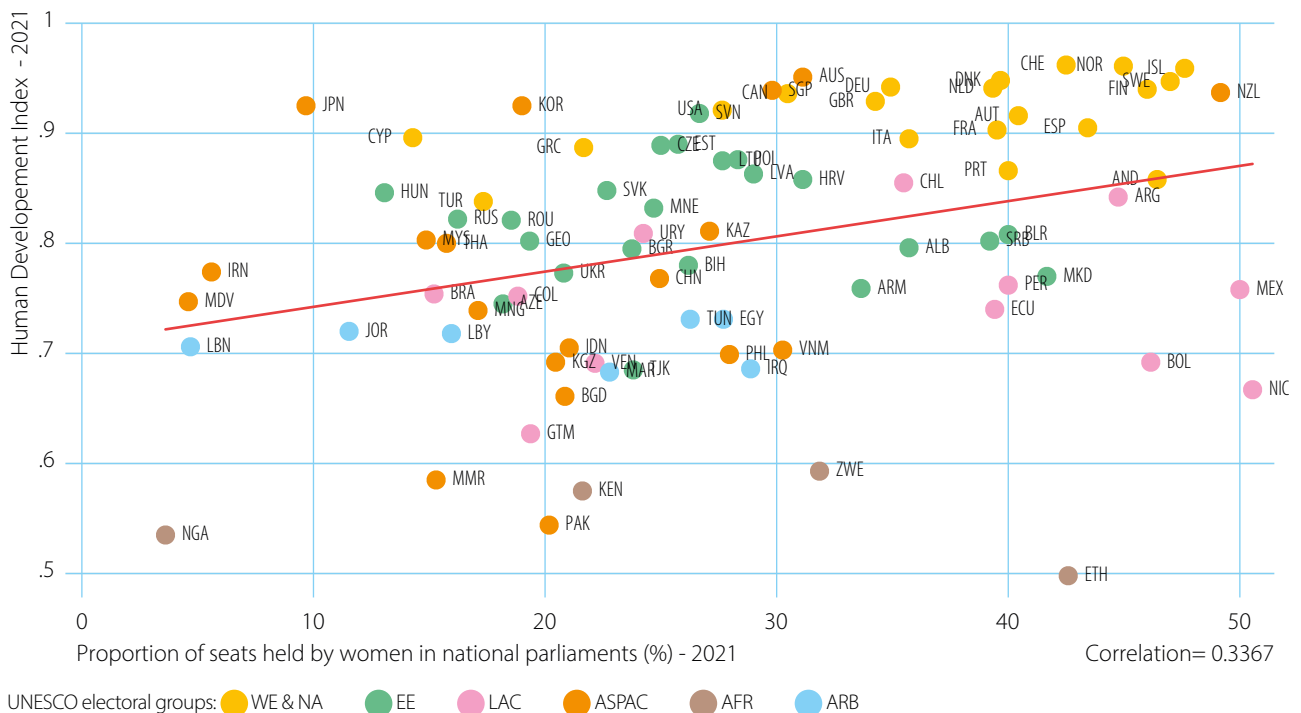
Figure 16: Female employment in senior and middle management between 1991 and 2004 (%)



Source: Authors' own compilation based on World Bank data.

Note: The proportion of women in total employment in senior and middle management corresponds to group 1 in both ISCO-08 and ISCO-88 minus category 14 in ISCO-08 (hospitality, retail and other services managers) and minus category 13 in ISCO-88 (general managers), since these comprise mainly managers of small enterprises. This indicator corresponds to SDG 5.5.2.

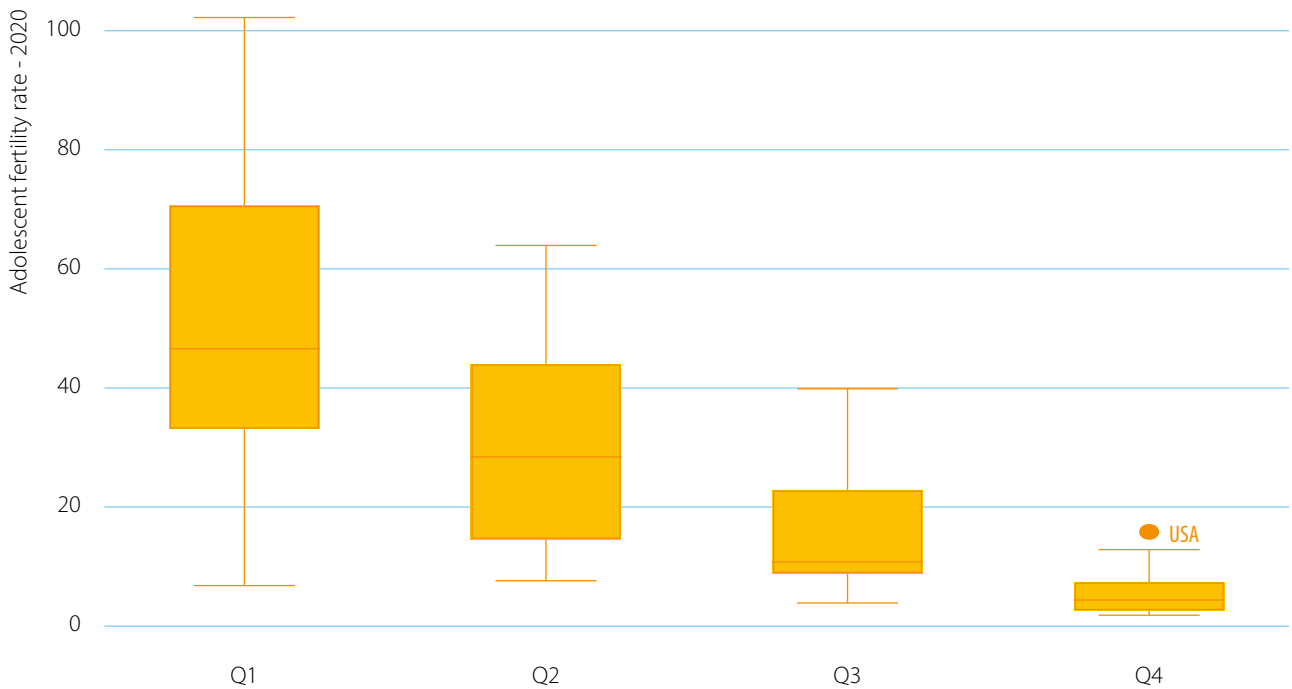
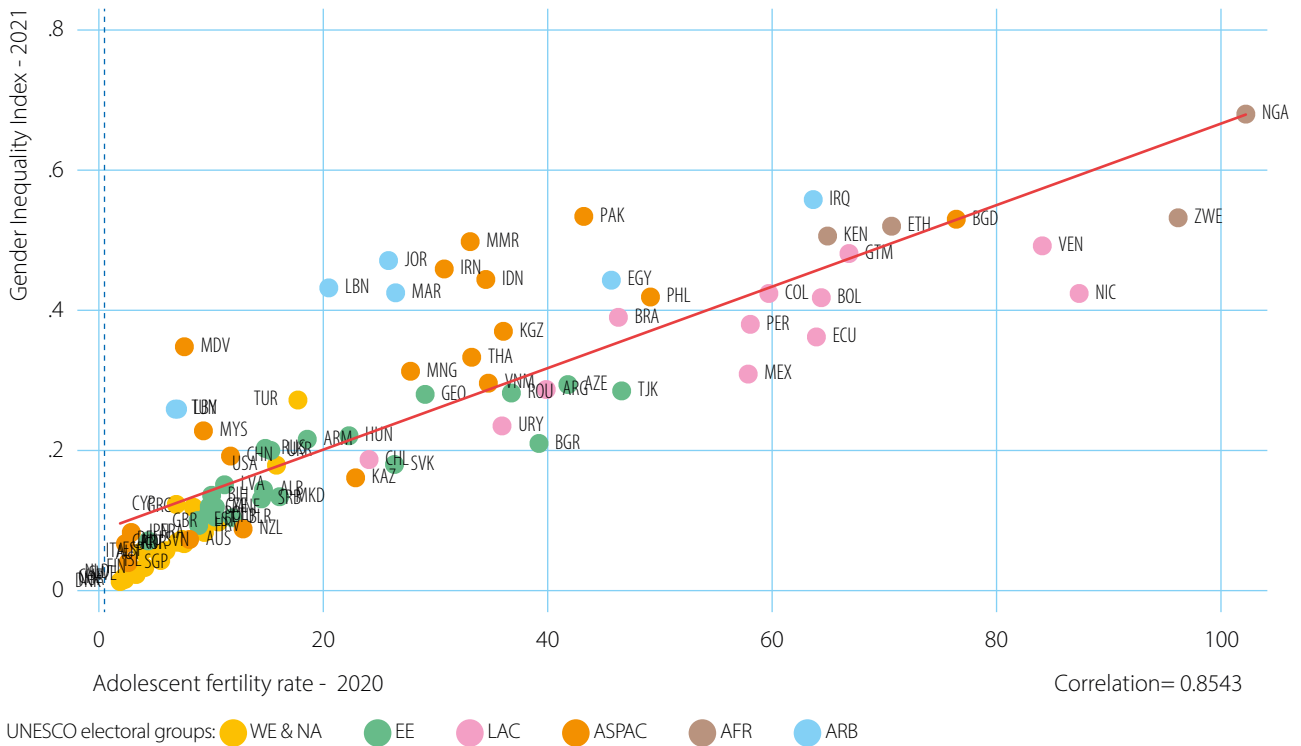
Figure 17: Association between women's involvement in political decision-making and Human Development Index, 2021



Source: Authors' own compilation based on World Bank data and UNDP data.

Note: Women in parliaments corresponds to the percentage of parliamentary seats in a single or lower chamber held by women. This indicator corresponds to SDG 5.5.1. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is a composite indicator computed as the geometric mean of normalized indices for each of the three dimensions.

Figure 18: Association between Gender Inequality Index (2021), adolescent fertility rate (2020) and Human Development Index (2021)



Source: Authors' own compilation based on World Bank data and UNDP data.

Note: Adolescent fertility rate measures the number of births per 1,000 women aged 15-19. The Gender Inequality Index (GII) measures gender-based disadvantage in reproductive health, empowerment and the labour market. In the bottom panel, on the x-axis, counties are grouped by Human Development Index quartiles (2021), with countries in the first quartile being the one displaying the lowest HDI. Such quartiles are associated with the distribution of adolescent fertility rate on the y axis. The line in the box plots the middle 50% of the distribution for adolescent fertility rate – the distribution between the first (25% mark) and the third quartile (75% mark), the central line is the median and the extreme lines are the minimum and the maximum of the distribution. The dot represents a country outlier.

To proxy both individuals' and countries' vulnerability, we use adolescents' fertility rate, which measures the birth rate of women aged 15-19. Having children at a very young age increases the probability that these women, and their children, are vulnerable, and lack resources and opportunities for socioeconomic improvements. At the same time, it increases school dropout and poverty (Balbo et al., 2013; Buhr and Huinink, 2014).

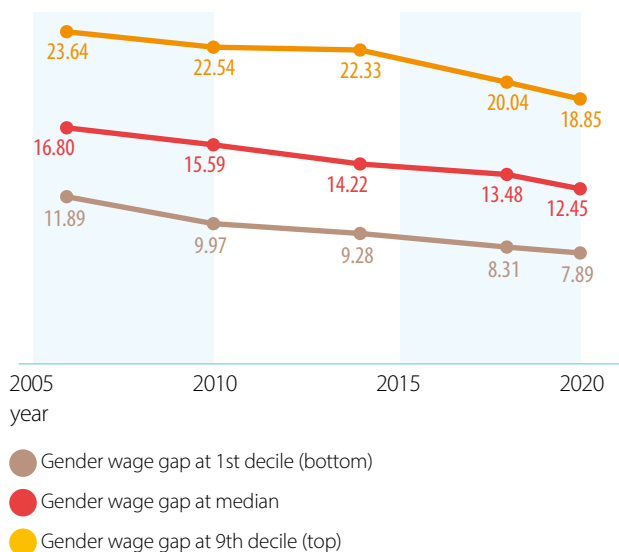
As Figure 18 (first panel) shows, a positive and highly significant correlation emerges between adolescents' fertility rates and the Gender Inequality Index, which measures gender-based disadvantage in reproductive health, empowerment and the labour market. A 10% increase in the fertility rate is associated with a 5% increase in the Gender Inequality Index. Vulnerability is higher in those countries featuring greater gender inequality. Moreover, across the 191 countries for which data are available, adolescents' fertility rate tends to be higher in countries lagging behind from a development point of view, as proxied through the Human Development Index – HDI¹². The second panel of Figure 18 (second panel) displays the correlation between adolescents' fertility with human development, and groups the information contained by quartiles, so that countries that are relatively more similar in terms of human development are considered together. As can be seen, median values of adolescents' fertility rates differ importantly by HDI quartile. Median adolescents' fertility rate in the countries exhibiting the lowest Human Development Index values (i.e. Q1) is 10.5 times higher than that of countries displaying the highest HDI values (i.e. Q4). This points to the existence of poverty traps and vicious circles, as adolescents' pregnancies represent a severe constraint to countries' development and fuel poverty for current and future generations through the intergenerational transmission of poverty (Glassman et al., 2012; Kiani et al., 2019; UNFPA, 2013).

12 The Human Development Index – UNDP – measures achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living.

5. Equal pay for work of equal value is not yet a reality

The concept of *equal pay for work of equal value* (Article 141, TFUE)¹³, was first established in the Universal Declaration of Human Rights 1948, recalled in 1951 by the Equal Remuneration Convention n. 100 by ILO. Despite the existence of legislations and treaties aimed at ensuring equal pay between women and men, gender pay gaps still exist. Worldwide the gender wage gap has narrowed, but on average women have been earning 14% less than men in the last sixteen years, Figure 19.

Figure 19: Gender wage gap between 2006 and 2021 (%)



Source: Authors' own compilation based on OECD data.

Note: The gender wage gap is defined as the difference between median earnings of men and women relative to median earnings of men. Data refer to full-time employees on the one hand and to self-employed on the other. Gender wage gap at the bottom refers to the first decile, at the top to the 9th decile of the distribution. The sample is balanced over time and includes 31 countries: Australia, Austria, Belgium, Canada, Switzerland, Cyprus, Czechia, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Hungary, Israel, Italy, Japan, Korea, Lithuania, Latvia, Netherland, Norway, New Zealand, Poland, Portugal, Romania, Slovakia, Sweden, United States.

All over the world, the gender wage gap “bites” differently depending on the earning level of the individual considered. The wage gap at the top decile of the earning distribution is wider than at the median, even if over the years it has slowly but steadily been reduced. Top women earners in 2006 made almost 22% less than their male counterparts, against women in median paid jobs having to endure a 16% pay gap. In 2010 the gap narrowed by 3 percentage points, probably as a result of the financial and economic crisis, while in 2021, the wage gap of top earners attested itself at 19.8%. Greater wage gaps for women’s top earners are consistent with the existence of glass ceilings, whereby women are constrained in their career opportunities, especially when moving to leadership positions, compared to men. (Arulampalam

et al., 2007; Christofides et al., 2013; Kulik and Rae, 2019; Toczek et al., 2021).

Although there has been some improvement over the last decades, the gender wage gap remains a feature of all labour markets worldwide, and seems very difficult to eradicate. Such a difficulty stems from the pervasiveness and multiplicity of its root causes. These include employment patterns and career progressions, segregation by educational fields, interruptions in the careers of women due to e.g. childbirth, as well as collective bargaining agreements that fail to address the issue (Bishu and Alkadry, 2017; Blau and Kahn, 2001, 2017; Boll et al., 2017; Manzioni et al., 2014). For instance, women may prefer jobs with a high level of flexibility in relation to working hours, to reconcile their family responsibilities (Goldin, 2014). However, these types of jobs may yield relatively lower wages (Heinze, 2009). Such choice that women often make stems from gender norms and stereotypes that attribute to women the burden of unpaid care and domestic work. Elements of this type, often referred to as *child penalty*, primarily impact women and mirror societies where women are expected to take care of the family, both children and the old ones, as well as the ill.

Female career paths are generally less continuous than those of men, with childcare and care of other dependent family members that constrain women’s work productivity and human capital development, e.g. through experience or education (Cullen and Perez-Truglia, 2019). In addition, gender norms and stereotypes leading to prefer individuals of a certain gender to perform certain professions, leads to discrimination on the labour market.

A recent study shows that 91% of men and 86% of women show a clear bias towards gender equality in many countries around the world (UNDP, 2020). This often translates into, conscious or unconscious, employers’ negative attitude towards women and to the prejudice that women are on average less productive than men, in particular, if employment is associated to motherhood (Becker, 1971; Jessen et al., 2019). In addition, discrimination based on a-priori beliefs risk being emphasised and replicated in the digital and Artificial Intelligence (AI) world, as algorithms tend to repeat and augment the recurrent patterns they observe in the data that are used to train them. A very well known instance of gender-based discrimination embedded in AI is the Amazon Algorithm that was supposed to review job applicants’

13 This principle is further enshrined in the Treaty on the Functioning of the European Union (TFUE) according to which countries must “eliminate discrimination on grounds of sex with regard to all aspects and conditions of remuneration for the same work or for work of equal value”

resumes with the aim of automatising the identification of top talents and was found not to select women¹⁴.

The prevalence of women in lower-paid occupations, the slower and lower accumulation of human capital by women due to family and personal constraints, coupled with gender norms that discriminate towards women workers all contribute to fuel the gender wage gap. Empirical evidence shows that the gender wage gap is 40% driven by *sticky floors* effects related to social norms, gender stereotypes and gender-based discrimination, and 60% by glass ceilings related to the motherhood penalty (Ciminelli et al., 2021)¹⁵.

The fact that the gender wage gap is the smallest at the 10th percentile, can be partially explained by the introduction of minimum wage provisions, resulting in greater wage uniformity at the bottom of the distribution of earners. Evidence about the link between minimum wages and reduced gender wage gaps has been found by many, in different parts of the world, including in the USA and Indonesia, for example (DiNardo et al., 1996; Hallward-Driemeier et al., 2015).

Gender wage gaps are further found to vary not only in relation to earning levels within countries, but also across countries. As an example, Figure 20 featuring the greater country coverage in relation to earning by gender and occupational levels and not characterised by any particular known shocks. In the case of top earners, the situation is particularly unbalanced in the case of women in countries like Korea, Japan and Israel and to some extent also in Estonia and Latvia. Exceptions to the greater gap identified at the top earners' levels are in Belgium and Spain, where the gap does not vary significantly across the income distribution. Türkiye, Romania and Cyprus remain among those with a relatively smaller gender wage gap for the top earners' cohort. Among low earners, the widest gaps can be observed in Costa Rica and Colombia, followed by Austria, Israel and Japan. Results found Japan and Israel to rank at the top among both high and low earners. This is aligned with the literature, which attributes to human resources management the responsibility of gender job segregation in Japan (Hara, 2016); and the prominent role of civil society and non-profit organisations in recruiting part-time, temporary and underpaid workers – matches women's need of balancing work and life – in Israel (Almog-Bar and Livnat, 2019).

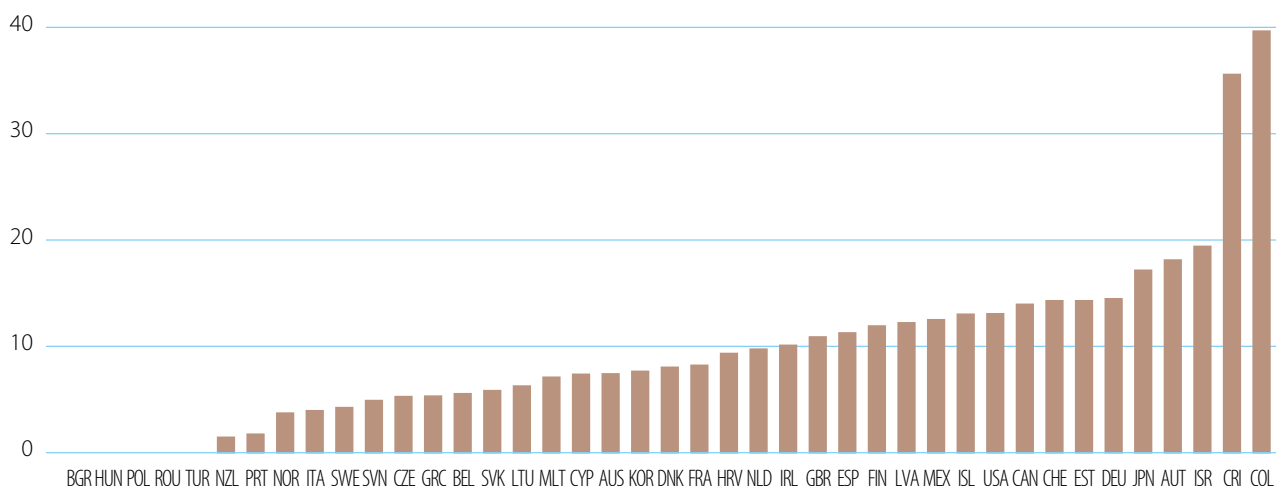
There is a significant and positive relationship between the gender pay gap of lower earners and female school dropouts (Figure 21). This can be the result of a vicious circle whereby young girls who do not complete secondary school are more likely to fall into the low-earning traps and face more difficulties to advance in their career (Boudarbat and Connolly, 2013; Brunila and Ylöstalo, 2015; Mbodji, 2023). The increase of 1% in female school dropout in lower secondary education translates into a 0.52% increase in the gender wage gap at the bottom of the income distribution, while for men it translates into a 0.48% increase in the gender wage gap at the bottom of the income distribution.

14 <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G>

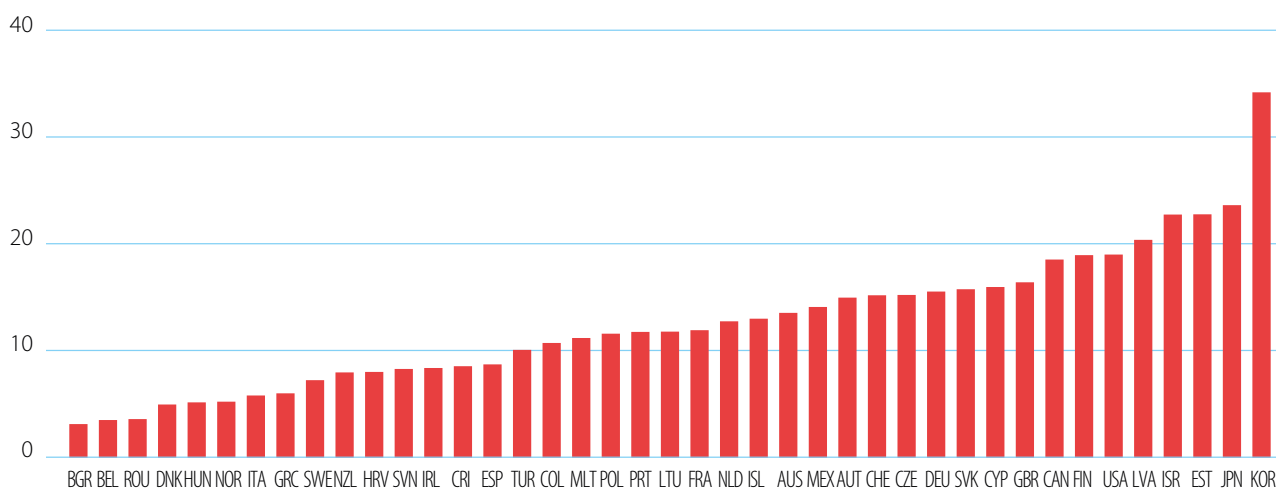
15 Ciminelli et al. look at the glass ceiling as related to the child penalty.

Figure 20: Gender wage gap by earning level and country in -2018 (%)

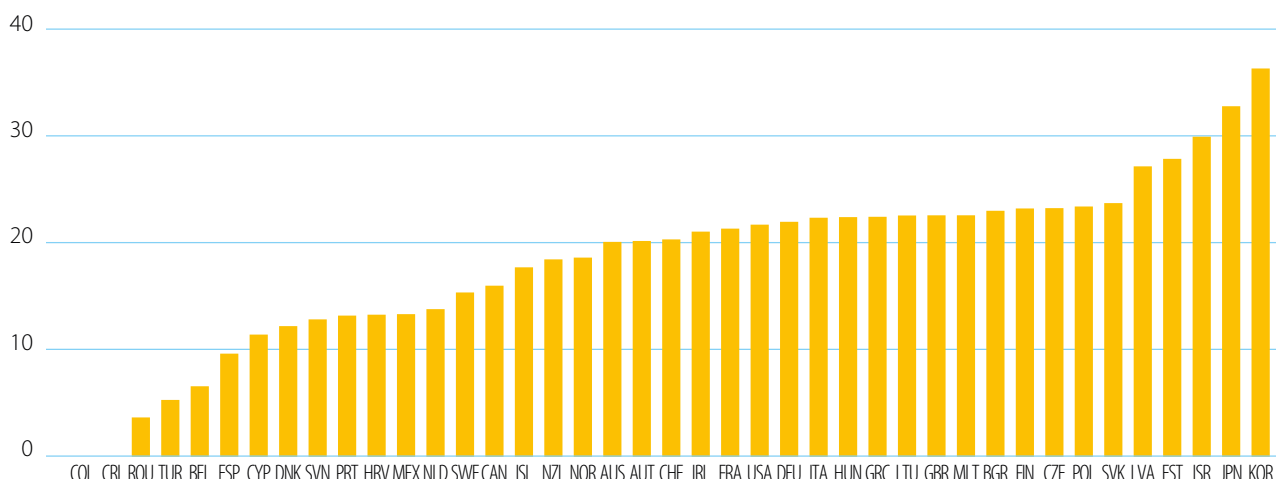
Gender wage gap at 1st decile (bottom): 2018



Gender wage gap at median: 2018



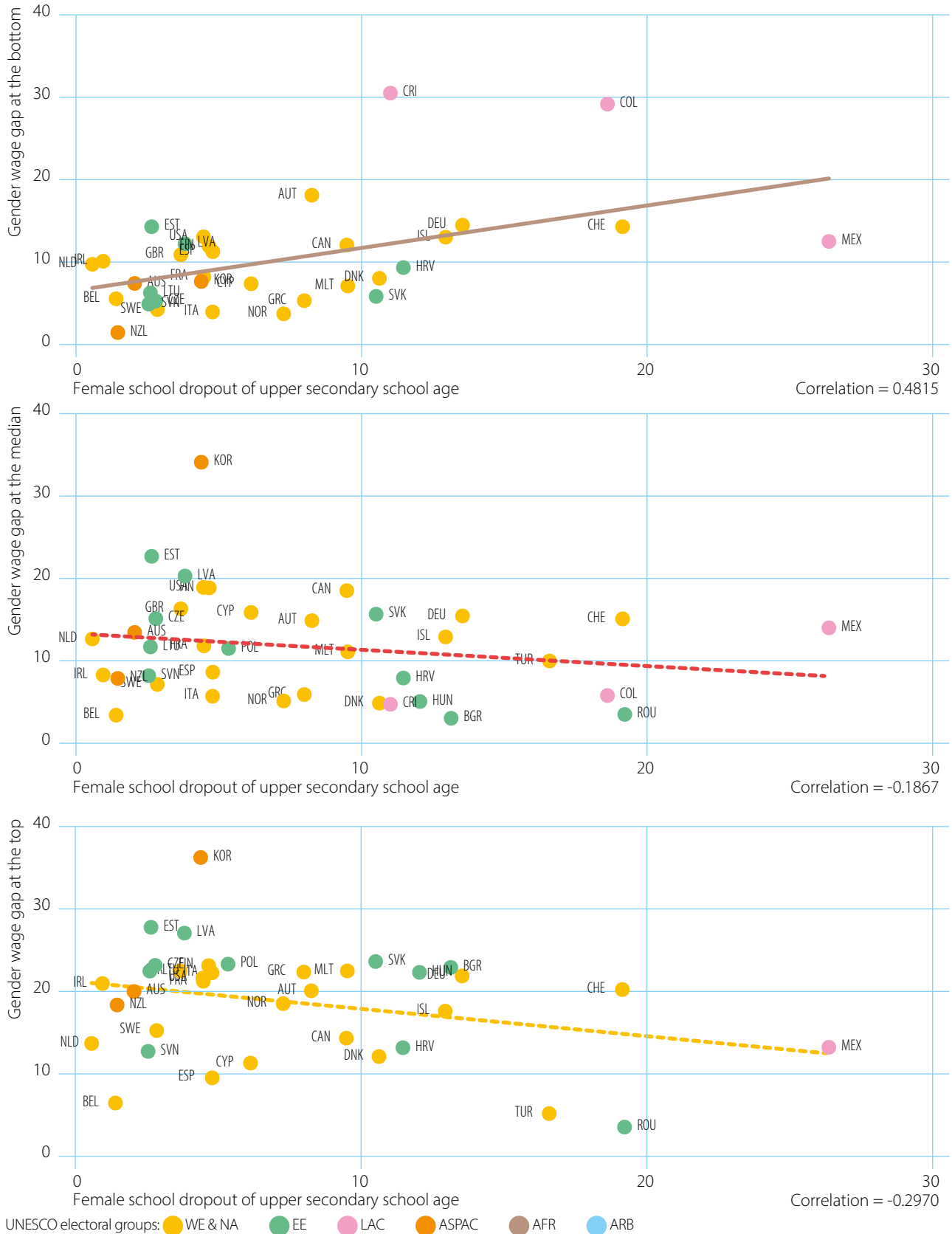
Gender wage gap at 9th decile (top): 2018



Source: Authors' own compilation based on OECD data

Note: The gender wage gap is defined as the difference between median earnings of men and women relative to median earnings of men. Data refer to full-time employees on the one hand and to self-employed on the other. It shows the gender wage gap at the first decile (bottom) , at the median, and the ninth decile (top). Data are retrieved from OECD database.

Figure 21: Association between gender wage gap and school dropout by earning level



Source: Authors' own compilation based on OECD data 2018 and UNESCO Institute for Statistics (UIS) database, pooled data 2015-2022

Note: The gender wage gap is defined as the difference between median earnings of men and women relative to median earnings of men. Data refer to full-time employees on the one hand and to self-employed on the other. It shows the gender wage gap at the first decile (bottom), at the median, and the ninth decile (top). Data are retrieved from OECD database. The school dropout rate is the number of women (men) in official upper secondary school age who are not enrolled in upper secondary school, expressed as a percentage of women (men) in official upper secondary school age. It corresponds to SDG 4, quality of education, target 1, by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes, indicator number 4, out-of-school rate (one year before upper secondary education).in official upper secondary school age. It corresponds to SDG 4, quality of education, target 1, by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes, indicator number 4, out-of-school rate (one year before upper secondary education).

The fact that this relation is not significant at the medium and top levels of the income distribution suggests that this feature is more linked to the poverty trap and argues for the need to pay particular attention to the most fragile and marginalized individuals in society to build resilience.

Closing the gender pay gap is a matter of social justice to reduce poverty, but also to redress imbalances like the one seeing women to on average make a higher upfront investment in education as compared to men, while landing in lower-paid positions (World Bank, 2023). Investing in women and enacting measures aimed to close the gender pay gap can help stimulate economic growth and improve the living conditions of a big part of the world population, thus contributing to make societies more resilient.

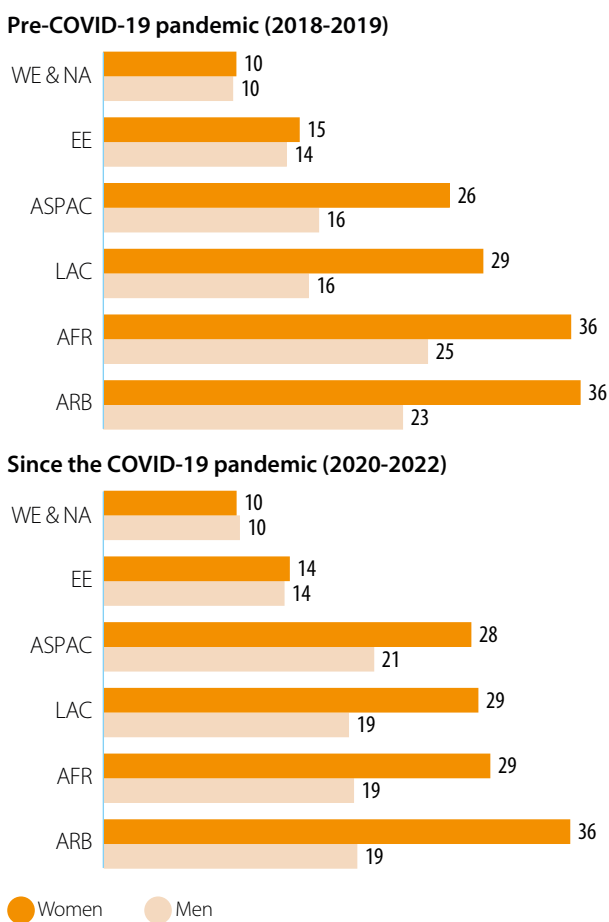
As discussed in this chapter, the roots of the gender wage gap are multidimensional and intertwined, which makes it challenging to find solutions able

to close the gender wage gap. Encouraging flexible working arrangements, for both women and men, becomes important in countries where slow capital accumulation is an important component of the gender wage gap (Ciminelli et al., 2021). To promote female labour market participation and human capital accumulation for mothers, reducing the marginal tax rate on the second earners might be a good incentive, as shown in a case study of Canada, Ireland and Sweden (Doorley, 2018). Fatherhood premium plays a key role in all countries, and the length of maternity leave can aggravate the gender wage gap (Cukrowska-Torzewska and Lovasz, 2020). The implementation of the pay transparency regulation in the EU is proposing interesting evidence: since 2018, in the UK, women's probability of working in above-median-wage occupations increased by 5% compared to pre-policy times. Even if there is not yet a direct effect on the rise of women's pay, it has encouraged firms to adopt new hiring practices in favour of women's employment (Duchini et al., 2020).

6 ■ Investing in youth is the best way to build resilient societies

Building resilient societies calls for investment in young people. As citizens and individuals that can implement long-term structural changes, they represent an important part of societies and are key to ensure societal resilience. Youth are also the ones that will be facing and will need to address climate change, that will try and thrive in new and transformative technological paradigms such as AI and, hopefully, the ones that will succeed in closing all gender gaps and achieving truly inclusive societies.

Figure 22: Percentage of NEET youth by gender and region before and since the COVID-19 pandemic



Source: Authors' own compilation based on World Bank data, comparison between pre-COVID-19 times (2018-2019) and since the COVID-19 pandemic (2020-2022)

Note: The share of youth not in education, employment or training (NEET) is the proportion of young people who are not in education, employment, or training out of the corresponding age group (15-29). This indicator corresponds to SDG 8.6.2.

Being actively engaged in society is a pre-requisite to achieving all these important objectives and strengthening societal resilience in the face of the many challenges that lie ahead.

Yet, since the early 1980s, the “Not in Education, Employment or Training – NEET phenomenon has emerged. The need to conceptualise vulnerabilities among young people emerged in the UK as a consequence of a change in the benefits regime which left most of those

aged 16-18 years without access to unemployment benefits (Drakaki et al., n.d.; Eurofound, 2012; Furlong, 2007). Since then, NEET rates have been growing around the world. This represents a problem as being NEET creates vulnerabilities for both individuals and countries. At the individual level, a NEET condition is associated with several negative economic, psychological and health effects (Caroleo et al., 2020; Parola and Donsi, 2019).

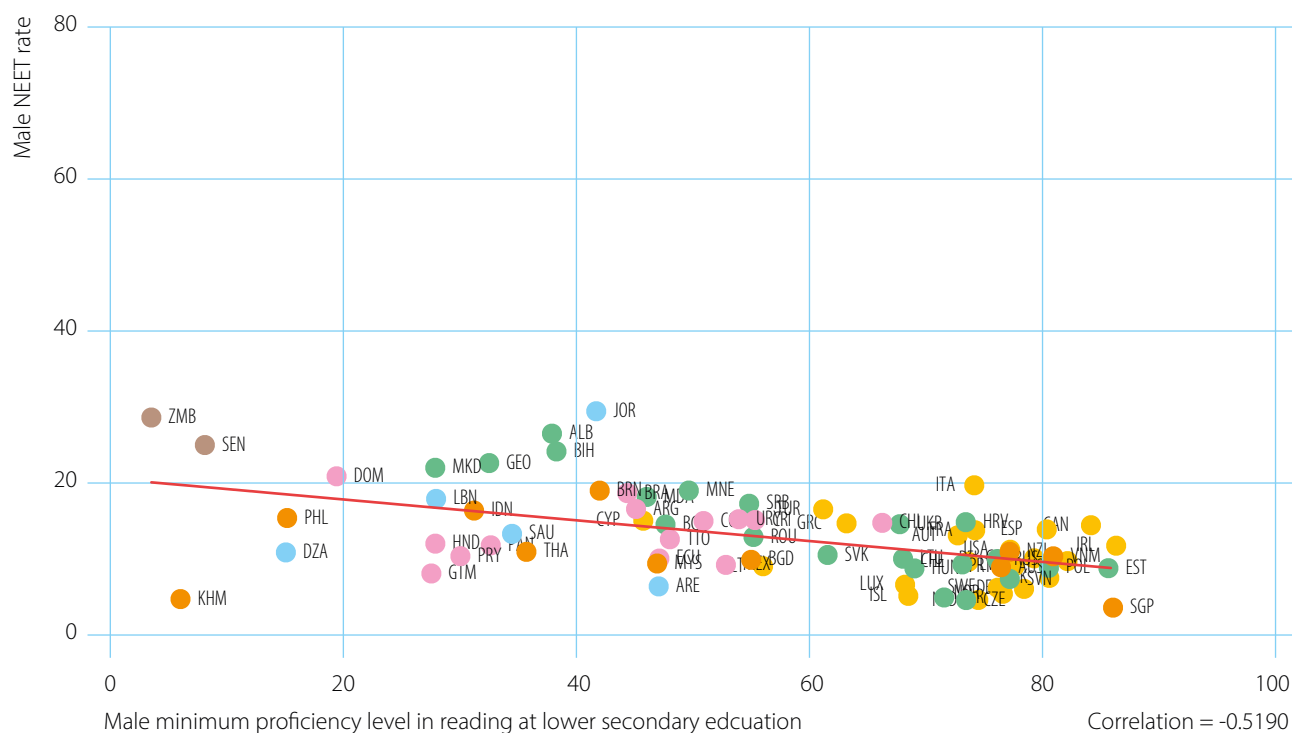
Not in Education, Employment or Training (NEET) refers to young individuals aged 15-29 who are unemployed and are not enrolled in education or vocational training (ILO, 2023).

Globally, between 2000 and 2021, the percentage of NEET individuals aged 15-24 years was 14% for men and 23% for women, with countries' specific rates that vary significantly between and within regions. Across Western Europe and North America, the percentage of NEET individuals is quite similar for women and men: about 10%, on average with no difference before and during the COVID-19 pandemic. In Eastern European countries, NEET rates increased slightly and set at around 14% for both women and men, with no changes observed in the aftermath of the pandemic. For the remaining groups, almost one-third of young women are NEET versus 16% of men in Latin-American and the Caribbean as well as in Asia Pacific States. In the remaining groups, the male NEET rate grew to 23% during the period 2018-2019, while in the period after the COVID-19 pandemic, this percentage did not change significantly. A few countries exhibit different patterns in terms of NEET rates. For instance, in Türkiye, one-third of young women are NEET, while only 16% of young men fell into this category before the COVID-19 pandemic, going to 18% since the COVID-19 pandemic.

However, there are countries where the gap has been reversed, and where young men are worse off compared to young women, such as in Latvia, Lithuania, Armenia, Bosnia Herzegovina, Croatia, Moldova and Montenegro. There are no significant differences between NEET rates before and after COVID-19, which might be due to the short window of observation since the pandemic (Figure 22).

Many factors increase the probability of young people becoming NEET. Contextual factors include: living in remote areas, having an immigration background, unstable family environment, or low household income and other individual characteristics such as living with a disability (Eurofound, 2012). The probability of becoming NEET increases with age: compared to people aged 15-19 years old, a substantial increase is observed in those aged 20-24 (Holmes et al., 2021).

Figure 23: Association between NEET rate and students with minimum proficiency in reading at lower secondary education level by gender (%)



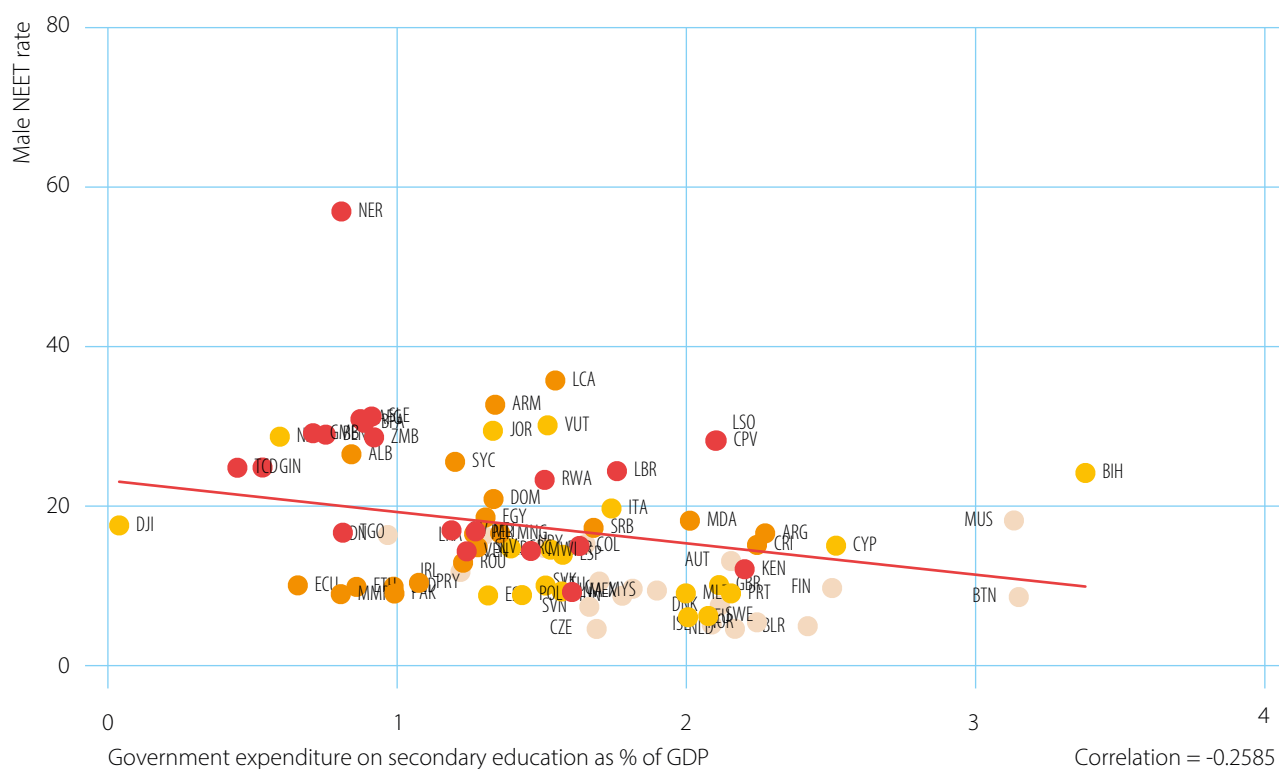
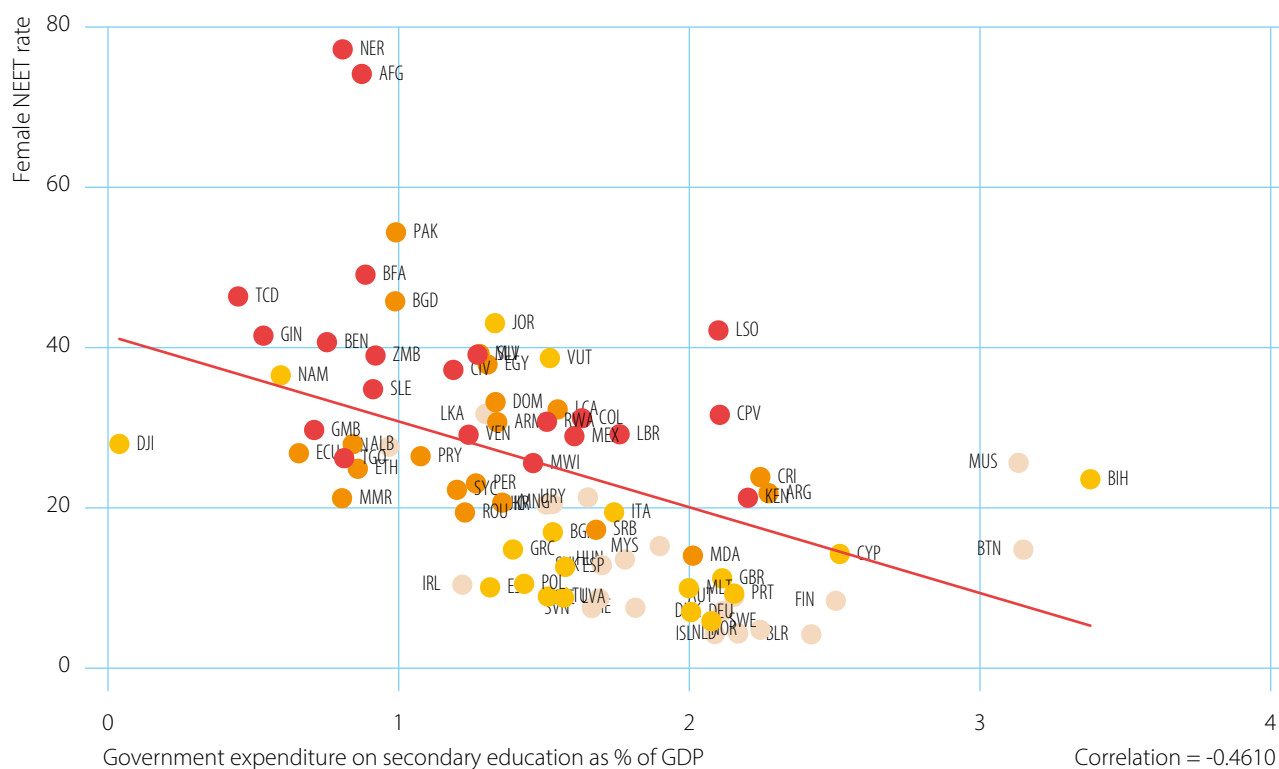
UNESCO electoral groups: ● WE & NA ● EE ● LAC ● ASPAC ● AFR ● ARB

Source: Authors' own compilation based on UNESCO Institute for Statistics (UIS) World Bank data, pooled data 2015-2021

Note: The NEET indicator is the share of youth not in education, employment or training (NEET) which is the proportion of young people who are not in education, employment, or training to the population of the corresponding age group (15-29). This indicator corresponds to SDG 8.6.1 ,

The indicator *students with proficiency in reading* is the percentage of women (men) at the end of lower secondary education reaching at least a minimum proficiency level in reading. A minimum proficiency level (MPL) is the benchmark of basic knowledge in a domain (mathematics, reading, etc.) measured through learning assessments. The indicator is calculated as the number of girls (boys) and or young people at the relevant stage of education n in a given year t achieving or exceeding the pre-defined proficiency level in a given subject s , expressed as a percentage of the total number of children and or young people at stage of education n , in year t , in any proficiency level in subject s . This indicator corresponds to SDG 4.1.1.

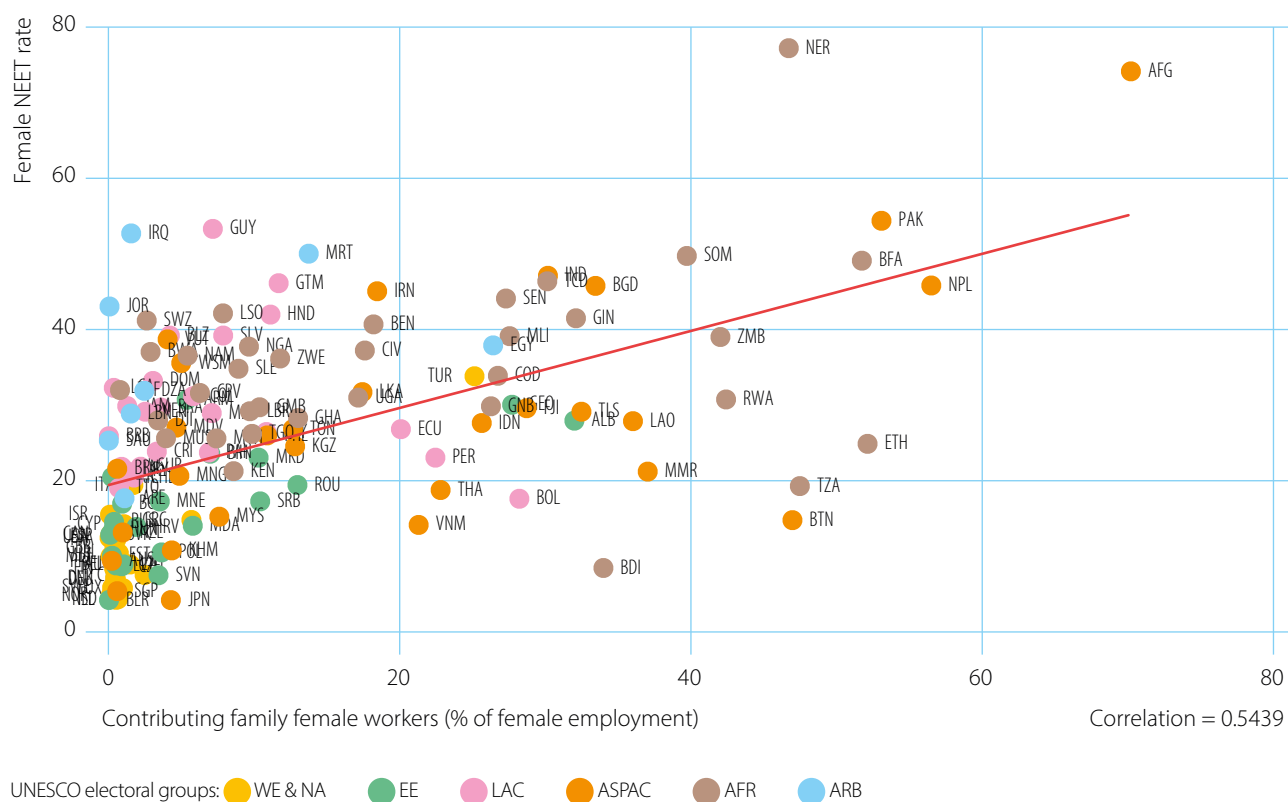
Figure 24: Association between NEET rate, government expenditure on education (% of GDP) and poverty headcount (%)



Poverty headcount ratio – quartile ● Q1 (low) ● Q1 ● Q3 ● Q4 (high)

Source: Authors' own compilation based on World Bank data, pooled data 2015-2021.

Note: The NEET indicator is the share of youth not in education, employment or training (NEET) which is the proportion of young people who are not in education, employment, or training to the population of the corresponding age group (15-29). This indicator corresponds to SDG 8.6.1. Government expenditure on secondary education, expressed as a percentage of GDP, includes expenditure funded by transfers from national and international sources to the government. It is computed by dividing the total government expenditure for the secondary level of education by the GDP and multiplied by 100. Poverty headcount ratio calculated at the national poverty line as a mean 2015-2022 – World Bank. This indicator corresponds to SDG 1.2.1. National poverty headcount ratio is the percentage of the population living below the national poverty line(s). National estimates are based on population-weighted subgroup estimates from household surveys. Poverty headcount rate is categorized in quartiles.

Figure 25: Association between female NEET rate and contributors to family work (%)

Source: Authors' own compilation based on World Bank data, pooled data 2015-2021

Note: The NEET indicator is the share of youth not in education, employment or training (NEET) which is the proportion of young people who are not in education, employment, or training to the population of the corresponding age group (15-29). It corresponds to indicator SDG 8.6.1. Contributing family workers; refers to women and it is calculated as a percentage of female employment. This indicator refers to those women workers who hold self-employment jobs as own-account workers in a market-oriented establishment operated by a related person living in the same household.

Besides contextual factors related to the socio-economic status of the family of origin and the context where individuals interact, the education system plays a crucial role in shaping young people's school-to-work transition (Giret et al., 2020). Greater educational achievement, measured by the minimum proficiency level in reading at lower secondary education, correlates positively with lower NEET rates, although this correlation emerges to be substantially different for girls and boys. For an increase of 1% in reading proficiency, the NEET rate decreases by 36% among girls and 14% among boys (Figure 23). While we leave to the literature the discussion about the different aspects of education systems across countries associated to the likelihood of becoming NEET (Raffe, 2014; Vugt et al., 2022), it is important to underline the different impact on girls and boys that government investment in education may have in reducing NEET rates, also in poor countries. Our estimates suggest that an increase of 1% in government expenditure in

secondary education as a percentage of GDP reduces female NEET rates by 10% against 4% for males (Figure 24).

In Figure 24, countries are coloured according to their position in the distribution of poverty headcount rate, going from shades of light blue to indicate low poverty rates (first quartile), to dark blue dots associated with higher poverty rates, i.e. those countries in the fourth quartile that exhibit high poverty rates. Results show a positive and significant correlation between poverty and NEET rate, stronger for women (0.59) as compared to men (0.45) and a negative and significant correlation with the expenditure on secondary education (-0.46 for women and -0.26 for men). Targeted investment in women's and girls' education would return a faster reduction of NEET rates also in those countries featuring high rates of poverty. This would lead to more resilient and inclusive societies, i.e. women can be more powerful agents of development.

The NEET condition is a problem, since NEET youth do not improve either their skills or competencies nor work or prepare themselves for the different challenges that life may present them with. They usually connect with the labour market through precarious jobs, and do not receive adequate training. Yet, not all NEETs are inactive. A positive and significant relationship emerges between female NEET rates and women's involvement in family business, usually with no monetary payments besides a possible compensation in the form of family income. Figure 25 shows that an increase of 1% in women contributing to their family business,

translates into 0.5 NEET rate increases. Conversely, no significant correlation emerges in the case of men. This means that, once more, women, as compared to men, are employed for free in family businesses and this prevents them from receiving a formal education and achieving a level of independence that would allow them to make a decent living. Countries featuring relatively high rates of NEETs and of unpaid family workers are in fact typically characterised by little job growth, fact that contributes to increase individuals' vulnerability and triggers greater risks of falling into the poverty trap.

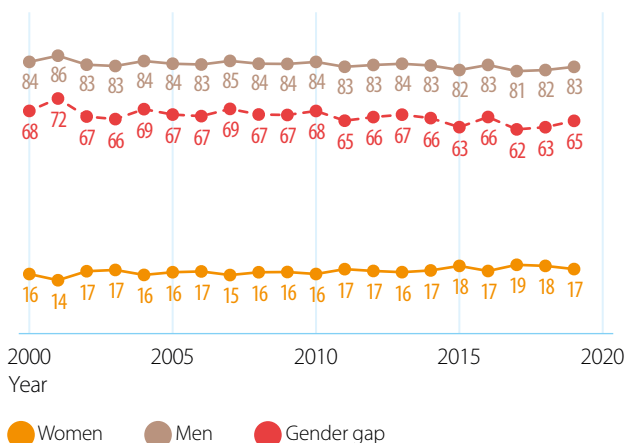
7 ■ Innovation to shape a more inclusive future

Addressing the pressing challenges of today and tomorrow, including climate change, resource scarcity, and environmental degradation as well as being at the frontier in health-related research or other domains benefitting societies requires an ability to innovate. Innovation is further key to empowering societies and allowing them to address their needs, overcome shocks and stay resilient. It acts both through its anticipatory capacity of enhancing technological preparedness and developing solutions or through the development of mitigating strategies, or the implementation of transformative strategies to bounce forward better¹⁶.

Research has long shown that a positive relationship exists between innovative performance, as proxied by patents and, economic performance (Dernis et al., 2015; Griliches, 1998; Jian et al., 2021).

To assess the extent to which women contribute to innovative output, we use patent data related to the five largest intellectual property offices (IP5)¹⁷ featuring at least one woman inventor, over the period 2000-2019.

Figure 26: IP5 patent families: all technologies (%)



Source: Authors’ own compilation based on OECD, STI Micro-data Lab: Intellectual Property Database, <http://oe.cd/ipstats>, April 2023.

Note: The indicators are calculated as the share of fractional counts of IP5 families with a least one woman (man) inventor identified in the original data. The identification of women inventors is based on country-specific gender name dictionaries applied to inventors’ names listed in patent documents (Dernis et al., 2015). Fractional counts are expressed in terms of technology, and not in terms of country inventor. IP5 patent families refer to sets of patents filed in at least two patent offices worldwide, one of which in the five largest IP offices (European Patent Office – EPO, Japan Patent Office – JPO, Korean Intellectual Patent Office – KIPO, US Patent and Trademark Office – USPTO – and China National Intellectual Property Administration – CNIPA).

With the aim to understand the role of women in innovation dynamics, Figure 26, looks at the number of women and men listed as inventors in patents filed over the period 2000-2019. To this end, we rely on IP5 patent families’ related data, as they provide a proxy to measure innovations of comparable importance applied worldwide (Borgonovi et al., 2018). Since the year 2000, taking all technologies together, every ten inventors, only about two are women, i.e. there is marked under-representation of women in the inventive process. Moreover, the gender gap in inventorship has barely reduced over the 20-year period considered, fact that does not lead to hoping for the best in the future. If this trend continues at the same pace, women’s participation in patenting activities, either as the only inventor or as part of a mixed team inventors, would barely reach 50% in 2080 (Borgonovi et al., 2018).

Having more women inventors would allow not only to have greater diversity in approaches and focus but would lead to have better solutions to societal problems and to broaden the scope of inventions (Owen and Pansera, 2019; Ritter-Hayashi et al., 2019).

While the overall participation of women in inventions remain low, difference emerge across technology fields, as shown in Figure 27. Over the last twenty years the participation of women inventors increased steadily across all technologies, and particularly so in electric engineering technology. Conversely, women’s participation in patenting in chemistry registered a relative peak up to 2004, followed by a slowdown in the following years. Women seem to be more represented in chemistry-related fields. The size of the area in the pentagon between the blue and the yellow lines mirrors the extent to which women remain out of innovative activities, which in turn might reflect the many hurdles, constraints, stereotypes, obstacles and discrimination they face. This harms societies and their ability to find solutions to the many challenges and shock that constantly arise, making them much more vulnerable (OECD, 2020).

16 OECD virtual workshop (2020) What role for science, technology and innovation in building resilience?

17 IP5 patent families refer to sets of patents filed in at least two patent offices worldwide, one of which in the five largest IP offices (European Patent Office – EPO, Japan Patent Office – JPO, Korean Intellectual Patent Office – KIPO, US Patent and Trademark Office – USPTO – and China National Intellectual Property Administration – CNIPA).

Figure 27: Share of patents by gender, region and IP5 patent families in 2019 (%)



Source: Authors' own compilation based on OECD, STI Micro-data Lab: Intellectual Property Database, <http://oe.cd/ipstats>, April 2023.

Note: The share of patents invented by gender is computed as the share of the IP5 patent families with at least one woman or man inventor when all genders are identified.

8 ■ Who cooked
Adam Smith's dinner?

Every day individuals spend time cooking, cleaning and caring for children or dependent family members, which represents an indispensable set of activities that contribute to the well-being of individuals, families and communities. Such (mostly) unpaid work has an estimated economic value that ranges between 10% and 39% of global GDP. In some cases, this care economy, as it is at times called (Yeates, 2005), is worth more than manufacturing, commerce, or transport (United Nations, 2017).

Unpaid care and domestic work make a substantial contribution to countries’ economies as well as to individual and societal well-being. It enables households to function, subsidizes public care services when they are not available, gives a substantial contribution to the economy, and becomes fundamental in case of missing social services (Stiglitz et al., 2010). It is an asset for any society or country and contributes to its overall resilience, and normally the provision of care services is guaranteed independently of the economic or social conditions in the country.

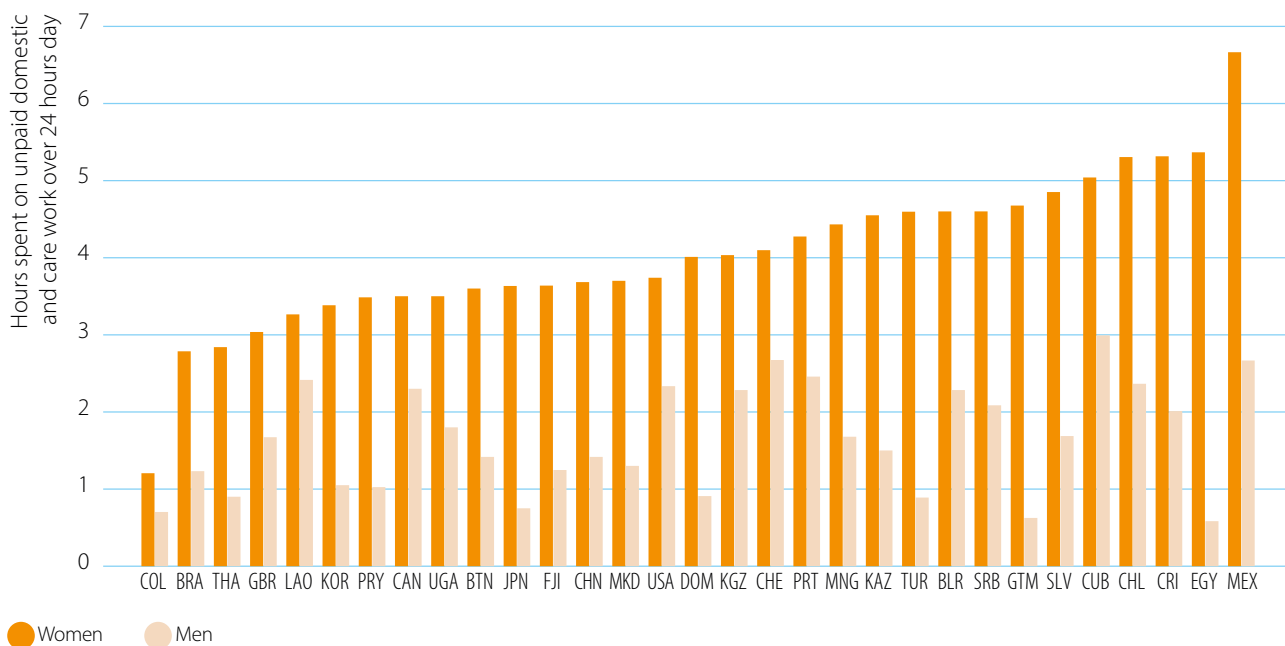
Despite its importance for the whole society, unpaid care and domestic work remains mostly invisible,

unrecognized and unaccounted for in national accounts or decision-making indicators. Unpaid care and domestic work is not included in national account data nor in the computation of the GDP, as, technically, unpaid work falls outside the standard definition of economic output. As an intangible service, it is difficult to assign an observable price for the services provided (Carlson, 2021; Hubens et al., 2021).

Neglecting unpaid care and domestic work leads to an incorrect assessment of the value of time and well-being, which in turn produces a false series of policy assessments on gender equality.

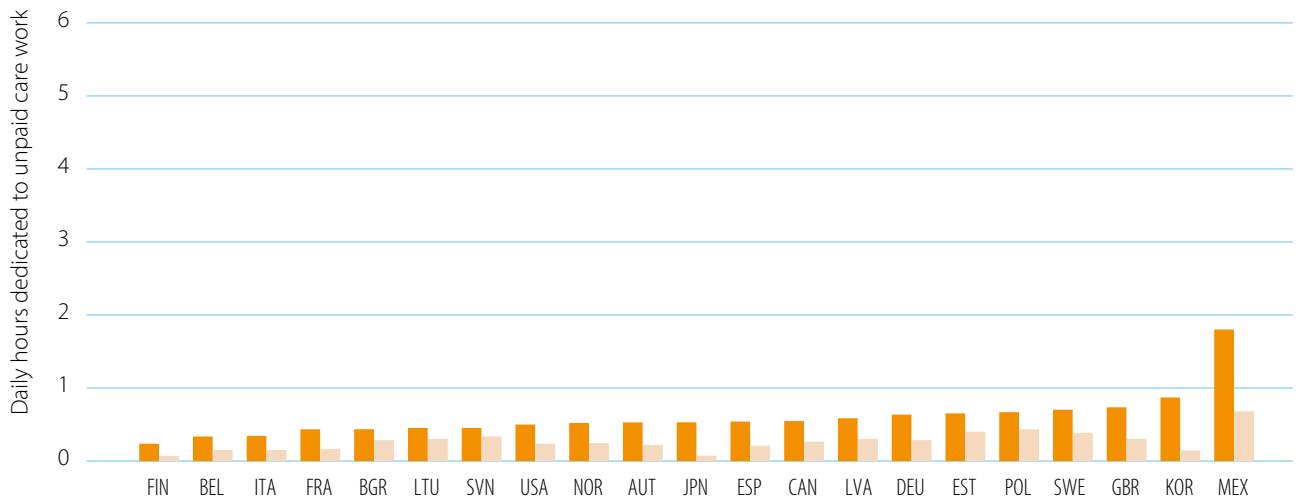
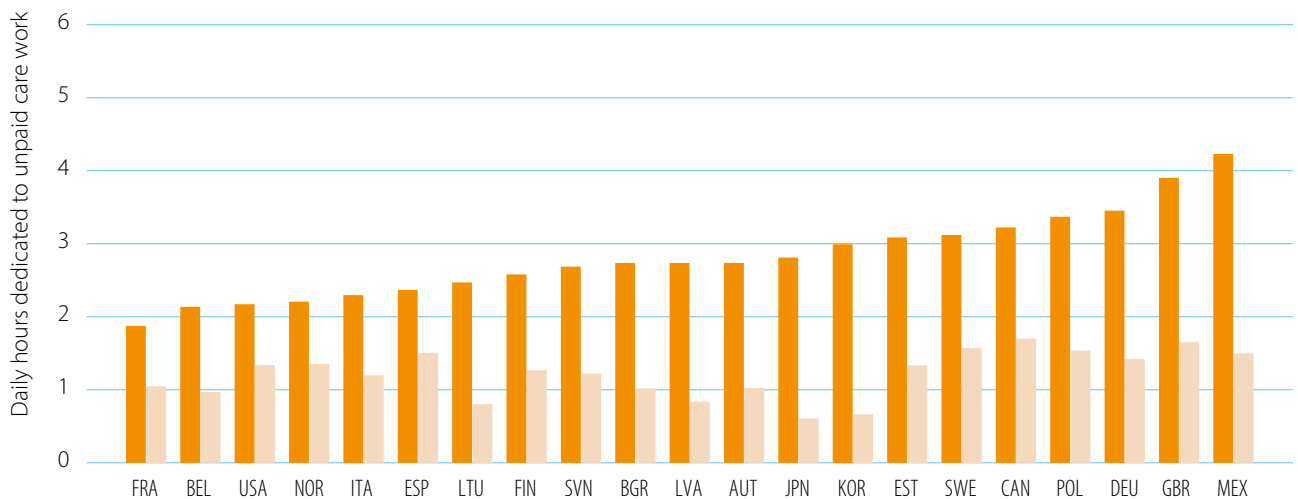
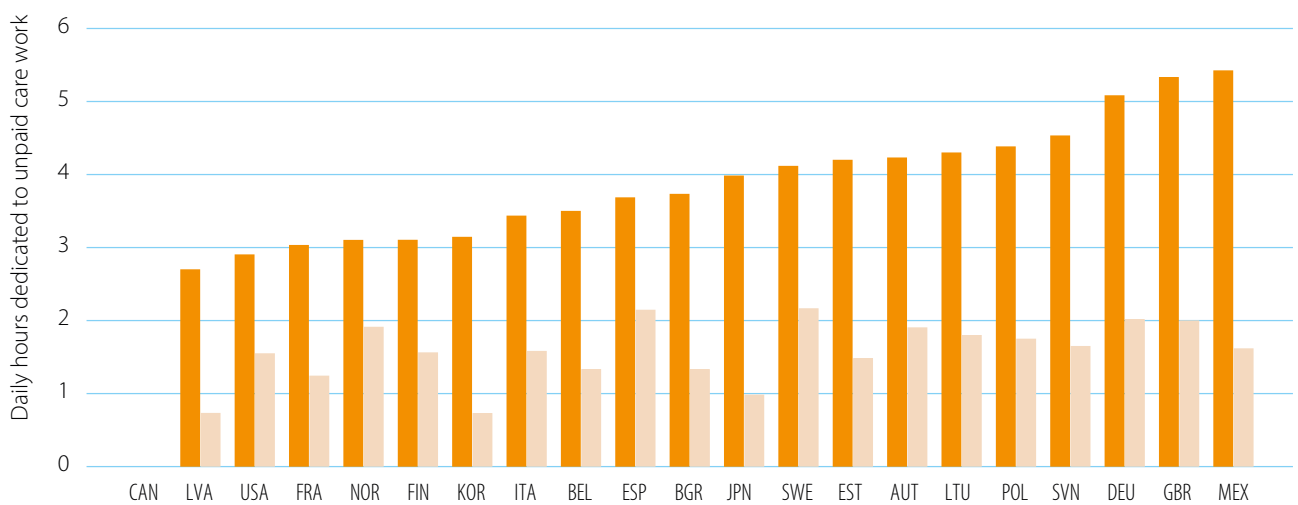
Adam Smiths’ dinners were cooked by his mother (Marçal, 2016). Because unpaid care and domestic work is disproportionately shouldered by women, their personal and professional opportunities and development are hindered. Sharing unpaid care and thus reducing gender gaps would create more equal societies where women, men and gender-diverse people can thrive and be empowered, which is fundamental for building individual and societal resilience (Narayan et al., 2023).

Figure 28: Time spent on unpaid care and domestic work by gender (hours per day)



Source: Authors’ own compilation based on World Bank data, average 2015-2020

Note: This indicator measures the average time women spend on the household provision of services. This indicator corresponds to SDG 5.4.1. Data are expressed as a proportion of time in a day. Domestic and care work includes food preparation, dishwashing, cleaning and upkeep of a dwelling, laundry, ironing, gardening, caring for pets, shopping, installation, servicing and repair of personal and household goods, childcare, and care of the sick, elderly or disabled household members, among others.

Figure 29: Unpaid care work by gender and number of children (hours per day)**No children****One child under school age****Two or more children under school age**

● Women
 ● Men

Source: Authors' own compilation based on OECD data calculated between 1999-2010: LMP2_5_Time_use_of_work_and_care-Family database

Note: School age refers generally to children under age 7, except for the United States and Japan where data refer to children under 6, and to children under 5 in Mexico.

Care work includes all episodes of care work declared as primary or secondary activity, except for Austria, Canada, Finland, France, Italy, Korea, Norway, Spain and the United States where only care as a primary activity is considered. Care work also includes the time spent to care for household members or to informally help other households.

Time is in limited supply – days are 24 hours long for everybody. As all individuals split their days between work, leisure, rest, etc., every extra minute and hour that women spend in unpaid care and domestic work, as compared to men, is time that they take away from training, paid work or simply leisure. All over the world, independent of location, income, age or race, unpaid care and domestic work is generally supposed to be a women’s business. This is the result of engrained gender norms that expect women to remain at home and take care of children, the old or the ill.

On average, women worldwide spend four hours on unpaid care and domestic work, while men spend only an hour and a half performing these very tasks. In Mexico, women spend a quarter of their day in unpaid caring and domestic work, whereas men only dedicate 2 hours to these tasks. The biggest gap between the time spent in unpaid work is registered in Egypt and Guatemala, where men spend respectively 8 and 6 times less time in caring and domestic work compared to women (Figure 28). Even in the absence of children in the household, women, on average, spend twice as much time as men in care work. Such gender disparities further widen as the number of children increases (Figure 29). In the case of couples with only one child below school age, the unpaid care work of mothers is three times as much as that of men, with an average of almost 3 hours per day spent by mothers against one 1 and 10 minutes by fathers. Notable differences of more than 2 hours can be observed in the case of Mexico, Korea, United Kingdom and Japan.

For those couples with 2 or more children, women continue to carry a disproportionate burden in all the considered countries, with a minimum of 1 hour and 20 minutes difference observed in the case of Norway to a 4 hours difference in Mexico. Mexican women, with 2 or more children, spend 5 and a half hours in unpaid care work, with important implications on their employment rates, among others (Figure 29).

Results in Figure 30 show a 4.4% decrease in the female employment rate for each additional hour of unpaid domestic and care work. Countries where on average women spend 4 hours of unpaid work per day are associated with a female employment rate of almost 50% (Figure 30 first panel). The inequality of time women and men spend in unpaid domestic and care work is also negatively correlated with the employment rate of women. In countries where women spend up to 2 hours more than men in unpaid care and domestic work, the employment rate of women is around 50%,

and it reduces to 30% – 40% when women spend 4 hours more than men (Figure 30 second panel).

Finally, results show a negative and significant relation between unpaid work and female entrepreneurship rates. On average the percentage of firms run by women decreases by 12.5% for each additional hour a day that women dedicate to unpaid domestic and care work. (Figure 30 third panel). Worldwide, women-owned small and medium enterprises account for a third of businesses in the formal economy, but estimates do not consider the informal micro-level businesses, especially present in developing countries. Women’s entrepreneurship can be an important vehicle to enhance economic empowerment, improve incomes and reduce poverty. It might represent a suitable means for job creation in many sectors, including the green economy, related to sustainable energy and climate-resilient agriculture (UN, 2017; Al-Qahtani et al., 2022).

Unequal distribution of unpaid work undermines women’s participation in the labour market and in entrepreneurship. Not only it hampers women’s rights, autonomy and well-being; it also contributes to unbalanced power relations at home and at work and prevents society from harnessing its full range of resources (DeGroot et al., 2020). From a human-rights perspective, it is unjust, and from an economic perspective, it is inefficient, especially in times of crises. To maximize the returns on investment in women’s and girls’ education, countries would benefit from designing and implementing family-friendly social protection policies to encourage an equally distributed work-family life balance (Gaelle et al., 2014; Hong et al., 2019; Klasen et al., 2021).

The fact that unpaid work does not enter the computation of the GDP has fed a long-standing debate. Many feminist economists (Bakker, 2007; Hoskyns and Rai, 2007; Picchio, 1992) argue for the need to make it visible; other researchers ask to recognise its contribution to the progress of societies (Stiglitz et al., 2018; Verlee, 2011), and many others highlight the methodological challenges of such an endeavour (Picchio, 2003; van de Ven, 2018).

Figure 30: Association between the female employment rate (%) and unpaid work (hours per day)

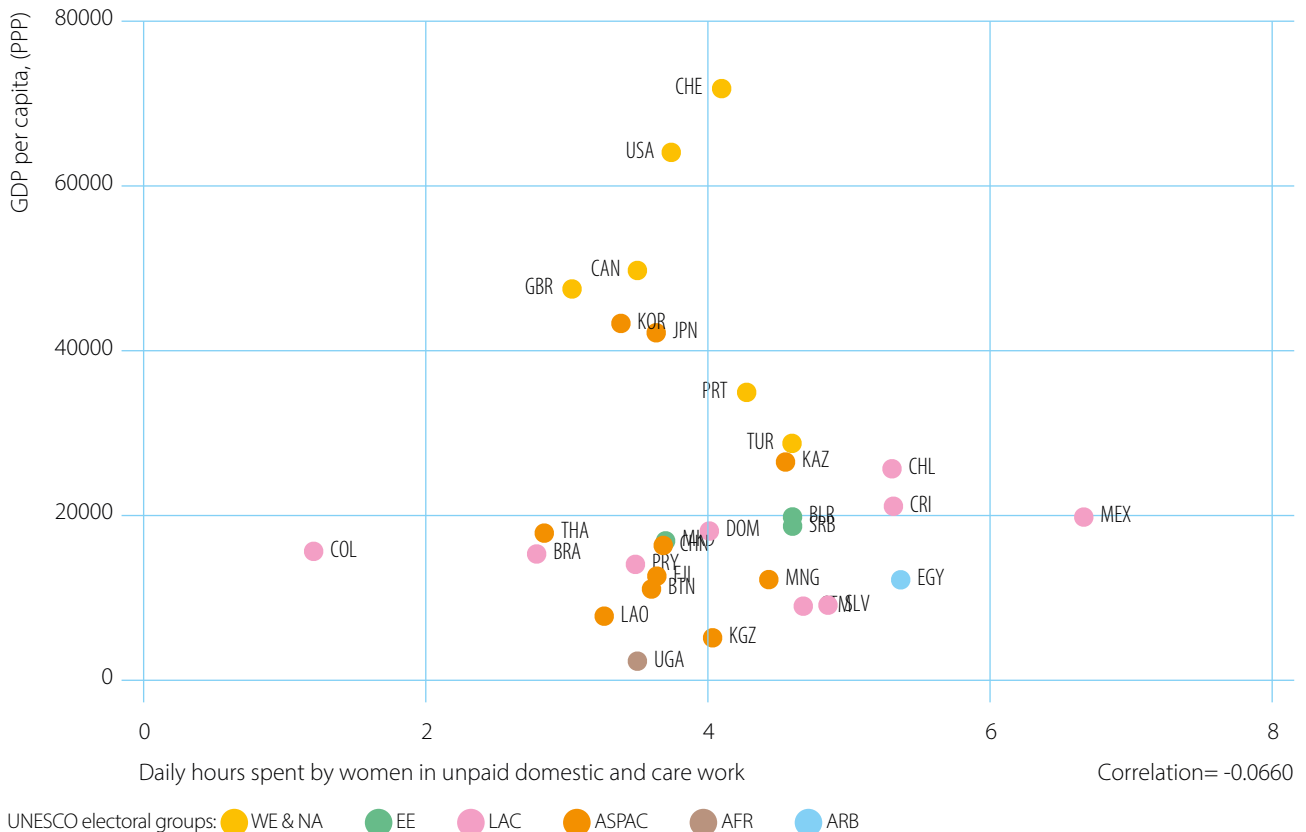
Source: Authors' own compilation based on World Bank, pooled data 2015-2022

Note: Employment to population ratio is the proportion of women employed of age 15 and above over the female country's population. Employment is defined as persons of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit.

Firms with women's participation in ownership are the percentage of firms with a woman among the principal owners.

Daily hours spent by women in unpaid domestic and care work measures the average time women spend on household provision of services for their own consumption. This indicator corresponds to SDG 5.4.1. Data are expressed as a proportion of time in a day. Domestic and care work includes food preparation, dishwashing, cleaning and upkeep of a dwelling, laundry, ironing, gardening, caring for pets, shopping, installation, servicing and repair of personal and household goods, childcare, and care of the sick, elderly or disabled household members, among others. The gender gap in unpaid domestic and care work is the difference between unpaid domestic and care work of women and men over the number of hours spent by men in these activities.

Figure 31: Association between GDP per capita (PPP) and unpaid work (hours per day) by gender



Source: Authors’ own compilation based on World Bank data, pooled data 2015-2022

Note: The indicator of daily hours spent by women in unpaid domestic and care work measures the average time that women spend on the household provision of services. This indicator corresponds to SDG 5.4.1. Data are expressed as a proportion of time in a day. Domestic and care work includes food preparation, dishwashing, cleaning and upkeep of a dwelling, laundry, ironing, gardening, caring for pets, shopping, installation, servicing and repair of personal and household goods, childcare, and care of the sick, elderly or disabled household members, among others.

GDP per capita, PPP (current international \$) provides per capita values for gross domestic product (GDP) expressed in current international dollars converted by purchasing power parity (PPP) conversion factor.

The correlation shown in Figure 31 suggests that in those countries with a GDP per capita above 4000 USD, on average, women devote less than 4 hours to unpaid work, while in countries with a lower GDP per capita, women’s and girls’ unpaid work appears uncorrelated with GDP. Most likely, this stems from two main factors. On the one hand, for the “wealthier” part of the population, women above the identified earning threshold can afford to outsource domestic and care work, thereby reducing their own involvement in unpaid work. On the other hand, education and advances in men’s involvement and cooperation in family life may push men to more actively participate

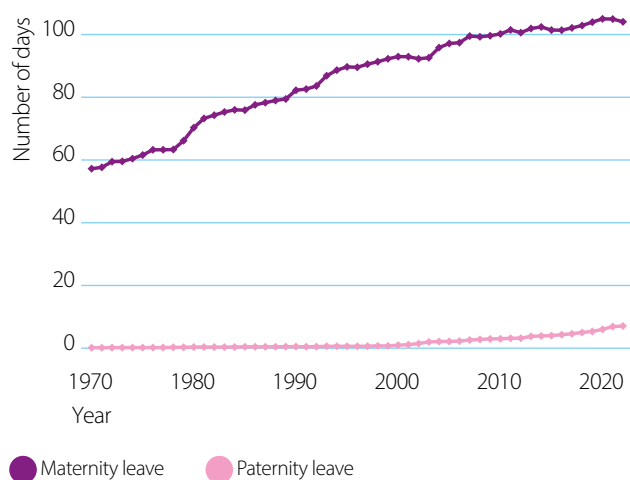
and share unpaid care and domestic work at home (Pailhé et al., 2021; Düval, 2023).

To some extent, there exists an additional invisible hand, beyond the one that Adam Smith discusses. This hand refers to those who undertake the responsibilities of cooking, cleaning, childrearing and caring for elderly or dependent family members (Marçal, 2016). Reorganizing equitably the share of unpaid work between all members of society and households, regardless of hegemonic gender roles and norms, would help place it on equal footing with paid work and consequently allow women to reallocate their time, energy and expertise in other fields, whether in paid occupations or leisure.

9 ■ Motherhood and fatherhood: a quest for resilience

Fundamental rights for motherhood and childhood-related care, assistance and social security are enshrined in the Universal Declaration of Human Rights, which marks its 75th anniversary in 2023. Moreover, the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) calls for special measures to guarantee maternal protection. Ensuring maternal leave in national social protection systems aims to prevent unequal treatment of women in the workplace due to their reproductive roles and, to promote equal opportunities and treatment in employment and occupation, while ensuring health and economic security for mothers and their children (Addati et al., 2014; Moore, 2022).

Figure 32: Maternity and paternity leave between 1970 and 2021 (%)



Source: Authors' own compilation based on the World Bank data

Note: Length of paid maternity leave (expressed in calendar days) refers to leave available only to the mother for the birth of a child to be taken just before, during and immediately after childbirth. Length of paid paternity leave (expressed in calendar days) refers to leave available only to the father for the birth of a child.

While it is self-evident that maternity leave is an important asset for mothers to be able to recover from birth-giving and take care of the newborn(s), having the other parent participate in child-rearing helps rebalancing duties and rights among parents and in relation to the newborn. Figure 32 shows the progressive increase of paid leave days granted to mothers as compared to those for fathers. Starting from the 1970s, the days of paid maternity leave offered by countries worldwide increased from 57 days to a maximum of 105 days in 2020, marking an increase of 84% extra days in the last fifty years. Conversely, only from 2000, countries allowed for one day or more of paid paternity leave. In 2022 on average countries around the world granted seven days. Today, maternity leave is acknowledged as having a beneficial effect on the mental and physical health of both mothers and children,

including a decrease in infant mortality rates, postpartum maternal depression and improved infant attachment and child development (Avendano et al., 2015; Le and Nguyen, 2022; Milligan and Stabile, 2011; Van Niel et al., 2020). There are also significant socioeconomic benefits associated with the implementation of maternity leaves on mothers' employment and wages after childbirth, as well as increased fertility (Baum and Ruhm, 2016; Goldsmith, 2019; Rossin-Slater et al., 2013). Over time, an increasing number of countries have been mandating maternity leave provisions up to or of more than 14 weeks, as prescribed by the International Labour Organization (ILO, 2000).

Not only has coverage in terms of countries expanded over time, but also in terms of the number of leave days available to mothers. Between 1970 to 2000 women had on average 75 days of maternity leave while for paternity leaves for fathers were a rare event. When it comes to father's leave, in 1970, only 13 countries granted leave for fathers. Ten years later they were 20 and in 1990 there were 25 out of 189 countries. From 2000, the approach to paternity leave changed and by 2022, 109 countries implemented policies granting leave to fathers with an average number of 12 days, compared to 114 for mothers.

As of 2022, although all countries considered, except the United States of America, granted paid maternity and paternity leaves, there are substantial differences in their duration and payment. On average countries made available 19.5 weeks of paid maternity leave, in line with the ILO's Maternity Protection Convention and the EU's Directive on maternity leave¹⁸. Large differences nevertheless emerge ranging from a maximum of 58 weeks in Bulgaria, 43 weeks in Greece and minimums of 6 in Portugal or zero in the United States (Figure 33).

When it comes to the level of remuneration of maternity leaves, 42% of the countries offer full compensation of average earnings to mothers. The majority of countries grant payments that replace over 50% of previous earnings during the maternity leave period. Payment rates related to maternity leave are the lowest in Ireland (25.6%) and the United Kingdom (29.5%), where full-rate equivalent paid maternity leave lasts for 6 and 11 weeks, respectively.

The availability of paid parental and home care leaves, which according to the OECD definition¹⁹ is another form of care leave granted to mothers, on average covers 32 weeks across the countries considered, while

¹⁸ EU directive on maternity leave

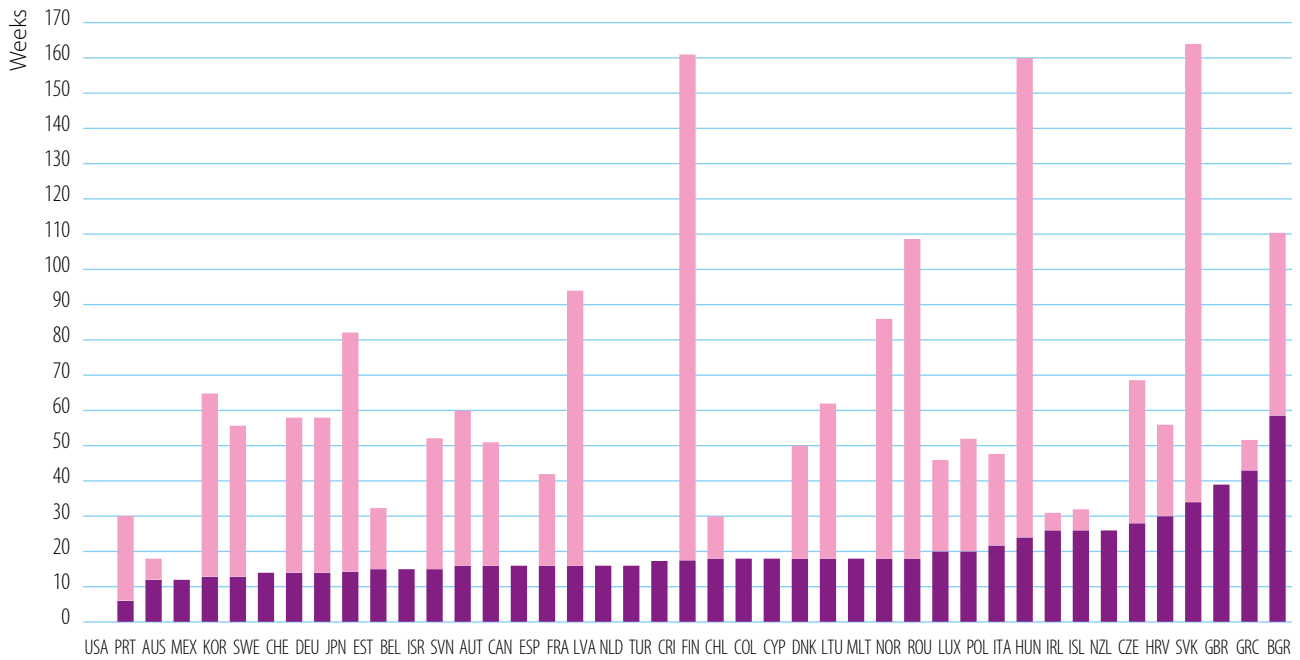
¹⁹ Parental and home care leave available to mothers: covers all weeks of employment-protected parental and home care leave that can be used by the mother. This includes any weeks that are an individual entitlement or that are reserved for the mother, and those that are a shareable or family entitlement. It excludes any weeks of parental leave that are reserved for the exclusive use of the father. Indicator PF2.1A (column 4)

only 30% of countries do not provide any entitlements. Romania, Slovakia, Hungary and Finland offer parental leave entitlements for mothers between 2 to 3 years. Yet, results show that extended maternity leave can work as a double-edged sword for mothers: paid parental leave for mothers is positively associated with a higher level of female employment, but when excessively long it is

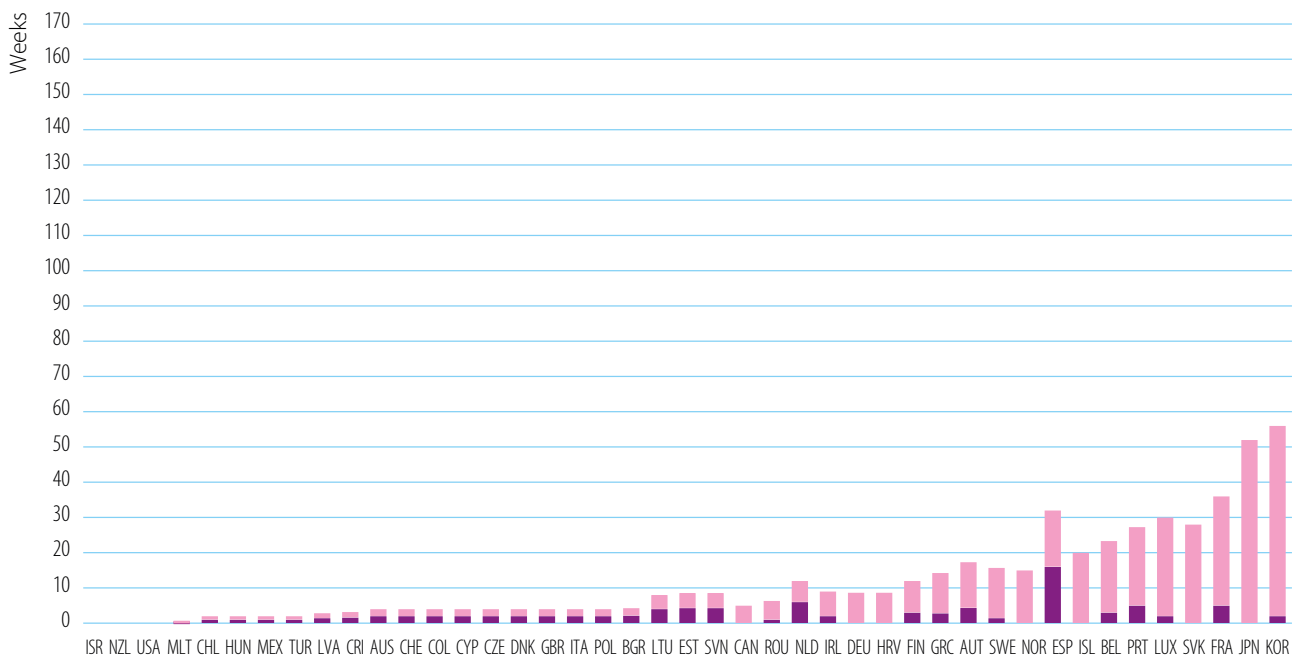
associated with a reduction in women’s wage. Conversely, there is agreement on considering an entitlement leave of three months as beneficial for both maternal and child health (Bergemann and Riphahn, 2023; Girsberger et al., 2023; Kunze, 2022; Olivetti and Petrongolo, 2017; Ruhm, 1998; Schönberg and Ludsteck, 2014; Bütikofer et al., 2021; Nandi et al., 2018)

Figure 33: Duration of maternity and paternity leave -2022 (weeks)

Leave reserved to mothers - 2022



Leave reserved to fathers - 2022



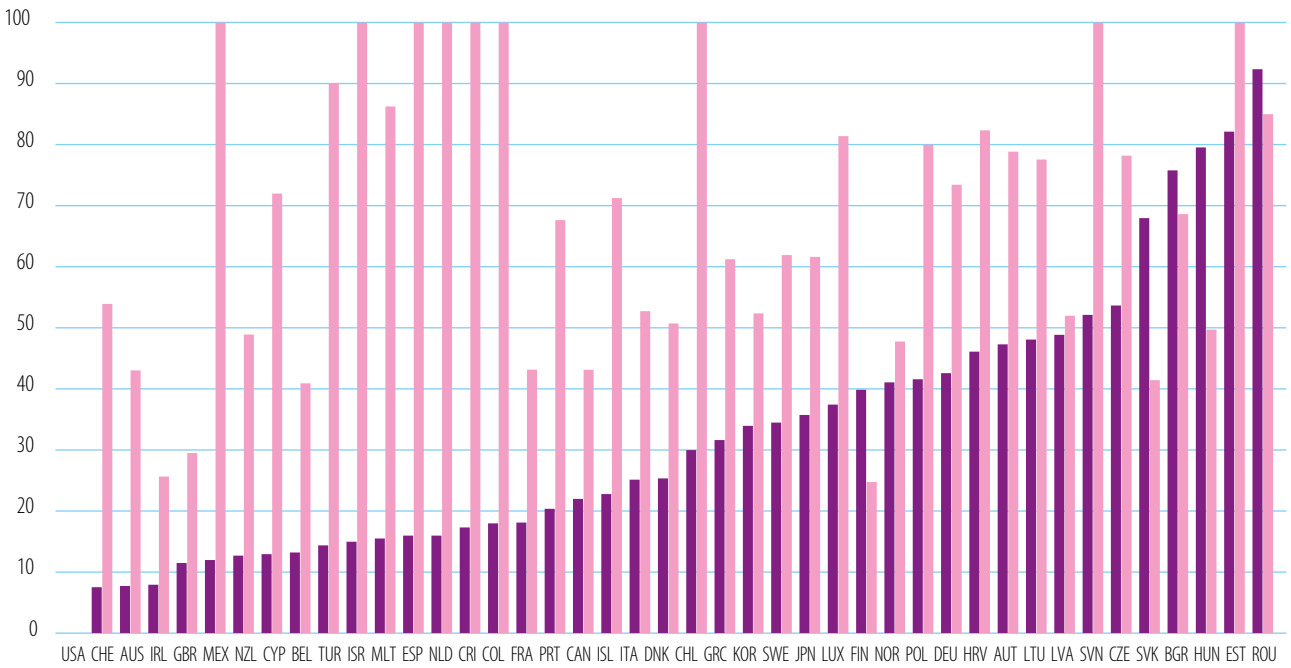
● Weeks of maternity/ paternity leave ● Paid parental and home care leave available to mothers/fathers

Source: Authors’ own compilation based on OECD data 2022 PF2_1_Parental_leave_systems – Family database

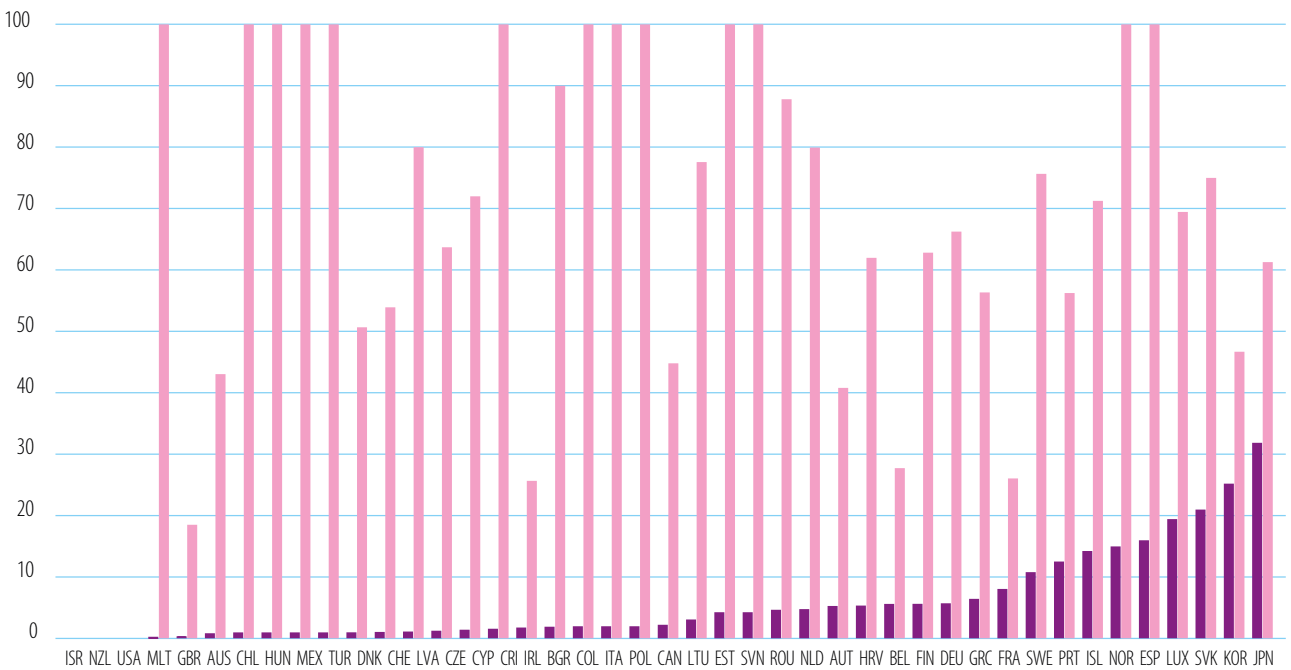
Notes: Information refers to paid parental leave and subsequent periods of paid home care leave to care for young children (sometimes under a different name, for example, “childcare leave” or “child raising leave”). Data refer to paid leave entitlements in place as of April 2022. Data reflect entitlements at the national or federal level only, and do not reflect regional variations or additional/alternative entitlements provided by states/provinces or local governments in some countries (e.g. Québec in Canada, or California in the United States).

Figure 34: Duration (weeks), entitlements and payments of paternity leave in 2022 (%)

Total paid leave reserved to mothers – 2022



Total paid leave reserved to fathers - 2022



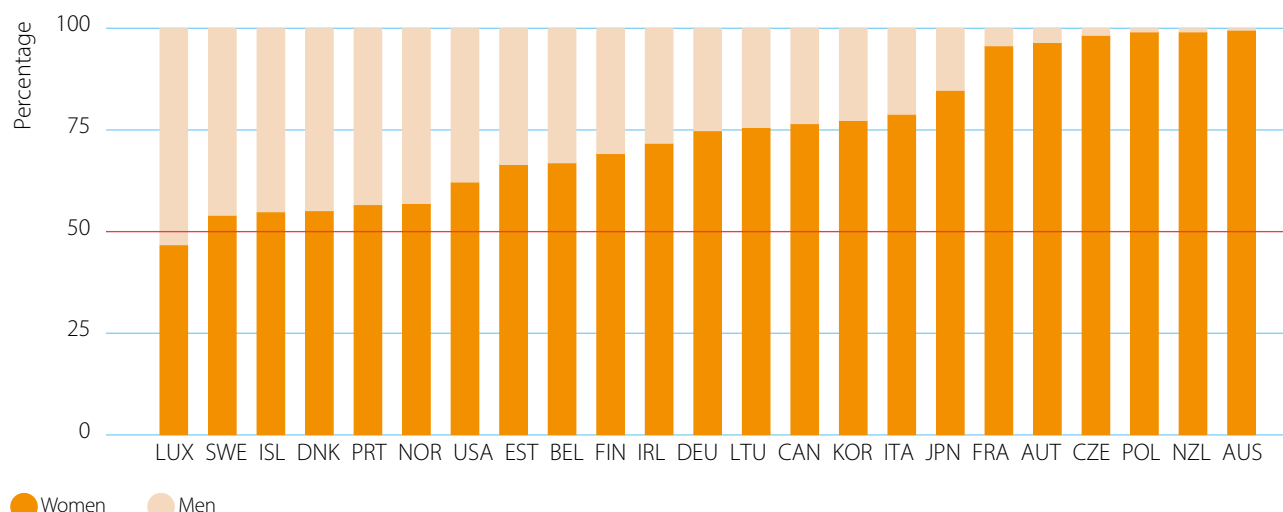
● Full-rate equivalent – weeks ● Average payment rate (%)

Source: Authors’ own compilation based on OECD data 2022: PF2_1_Parental_leave_systems – family database.

Note: Total paid leave is the sum between paid leave and paid parental and home care leave.

The average payment rate refers to the proportion of previous earnings replaced by the benefit over the length of the paid leave entitlement for a person earning 100% of average national full-time earnings. If this covers more than one period of leave at two different payment rates, then a weighted average is calculated based on the length of each period. In most countries benefits are calculated on the basis of gross earnings, with the “payment rates” shown reflecting the proportion of gross earnings replaced by the benefit. In Austria, Chile, Germany, Lithuania and Romania (parental leave only), benefits are calculated based on previous net (post income tax and social security contribution) earnings, while in France benefits are calculated based on post-social-security-contribution earnings. Payment rates for these countries reflect the proportion of the appropriate net earnings replaced by the benefit. Additionally, in some countries maternity and parental benefits may be subject to taxation and may count towards the income base for social security contributions. As a result, the amounts actual amounts received by the individual on leave may differ from those shown in the table.

Full-rate equivalent is calculated as the duration of leave in weeks weighed by the payment rate, as a per cent of average earnings, received by the claimant over the duration of leave.

Figure 35: Gender distribution of users of paid leave (%)


Source: Authors' own compilation based on OECD data – PF2-2-Use-childbirth-leave-family database

Notes: Data refer to recipients/users of publicly administered parental leave benefits or publicly-administered paid parental leave, and do not include users of maternity or paternity leave unless the country in question does not make a distinction between the different leaves (i.e. in Denmark, Iceland, Norway, Sweden, Portugal). For Australia and Japan, data refer to recipients of 'Parental Leave Pay' only. For Belgium and the Czech Republic, data is an average of users in each month of the given year and, in the case of Belgium includes the 'corona parental leave' between May and September 2020. For Canada, data do not cover parents in Québec, which since 2006 has administered its own parental benefits under the Québec Parental Insurance Plan. For Denmark, data refer to recipients of any benefits the Maternity Act entitles parents to (maternity and paternity leave benefits, parental allowance). For Finland, data refer to recipients of the sharable parental allowance plus the paternity allowance after the parental allowance period. For France, data refer to recipients of PreParE (Prestation partagée d'éducation de l'enfant). For Germany, data include both recipients of 'Elterngeld' and 'ElterngeldPlus'. For Iceland, data refer to recipients of any benefits in relation to maternity/paternity (i.e. benefits paid during either the mother- or father-quota or during the sharable period of parental leave). For Ireland, data refer to recipients of parent's benefits (i.e. for parent's leave, not for parental leave, which is unpaid). For Korea and Japan, data refer to recipients of employment insurance parental leave benefits, and for Japan cover private sector employees only. For Lithuania, data refer to recipients of both the parental benefit for children under one year of age and the parental allowance for children aged between one and two. For Luxembourg, data refer to recipients of the first (right after birth) and second parental leave (before 6th birthday). For Norway, data refer to recipients of either the 100% or 80% parental leave option. For Portugal, data refer to recipients of benefits for 'Licença Parental Inicial' (Initial Parental Leave) only. Data for the United States are estimates of users of paid leave around birth of the first child, based on the Survey of Income and Program Participation (SIPP). Besides public paid leave insurance benefits for pregnancy and/or family caregiving in some US states and districts, and contrary to other countries, this also includes employer-provided schemes. Data refer to 2021 for the Czech Republic, Estonia, Finland, Germany, Ireland, Japan, Norway and Poland. Data refer to 2020 for Austria, Belgium, Canada, Denmark, Korea, Lithuania, Luxembourg, Portugal and Sweden. Data refer to 2018 for Iceland and Italy. Data refer to 2017 for Australia and New Zealand. Data refer to 2016 for France. Data refer to a pooled average between 2016 and 2020 for the United States.

Only recently, countries have introduced paid paternity and parental leave²⁰ for fathers. The former refers to leave dedicated to fathers only, while the latter can be used by both parents. The potential impact of this measure serves multiple purposes, such as improving the health of children and their development and, changing the traditional gender norms by engaging fathers in active childcare. It further recognizes fathers' rights to parenthood, together with their responsibility to share unpaid care and domestic work (Hyland and Shen, 2022). Yet, the comparison between maternity and paternity leave is striking, as shown in Figure 34. Across the countries for which data are available, on average fathers are granted two weeks of paternity leave and nine of parental leave, compared to the 19.5 weeks of maternity leave and 32.5 weeks of parental leave reserved for mothers.

Almost 77% of countries offer paid paternity leave and even though 32 countries out of 43 offer compensation equal to more than 50% of previous earnings, the average length of paternity leave is only two days. Around one-fifth of countries make available at least one month of paternity paid leave and among them, Estonia, Portugal, Slovenia and Spain grant full payments to replace earnings of the previous year. Spain is the only country where fathers are entitled to 16 weeks of 100% fully paid paternity leave.

Extending parental leave to fathers can be an effective tool to promote gender equality, as it would give both parents the same caring responsibilities and rights towards the newborn. Furthermore, more equitable parental leave policies increase also the likelihood that women will return to paid work after

20 Paternity leave: employment-protected leave of absence for employed fathers at or in the first few months after childbirth. Paternity leave is not stipulated by international convention. In general, periods of paternity leave are much shorter than periods of maternity leave. Because of their short length, workers on paternity leave often continue to receive full wage payments. In some countries (e.g. Iceland), father-specific leave entitlements are part of the parental leave scheme, rather than a separate right. Parental leave: employment-protected leave of absence for employed parents, which is often supplementary to specific maternity and paternity leave periods, and frequently, but not in all countries, follows the period of maternity leave. Entitlements to parental leave itself are often individual (i.e. each parent has their own entitlement), but entitlements to public income support during parental leave are frequently family-based, meaning that only one parent can claim income support at any one time (except for a short period after childbirth). In some countries, certain periods of parental leave are reserved for use only by the mother or father and cannot be transferred; in others (such as Austria and Germany), 'bonus' paid weeks are offered if both parents use a certain portion of the family entitlement. Assuming that the family wishes to maximize the total length of leave on offer, this implies that a certain number of weeks are effectively 'reserved' for fathers or the 'second' parent.

maternal leave (Patnaik, 2013). Yet, results show that even when parental leave is available to both mothers and fathers, the uptake of statutory parental leave is disproportionately used by mothers. This can partially be explained by both fears of stigma, i.e. men fearing to be among the few requesting leave and being badly looked at or considered, and the possibly negative impact that this can have on their career, due to their absence from work (Rudman et al., 2013). On average across the countries for which data are available, 25% of men take up parental leave. In Luxembourg, mothers and fathers share more equal parental leave, respectively 47% and 53%, followed by Sweden with 46% for fathers and 54% for mothers, while in Australia, New Zealand and Poland, the fathers' share is about or less than 1% (Figure 35).

The unequal distribution of paid leave's users reflects the traditional model of a single breadwinner model, typically men. But, as the dual-earner household model spreads around the world, the traditional division of labour at home has to be adjusted to allow both parents to be active, both in the labour market and as caring parents. The benefits of an equal sharing of maternity and paternity leave would increase parents' satisfaction, with all parents being able to enjoy quality time with the newborn and, at the same time, it would have a positive effect on the child's cognitive skills and school performance (Chung and Van Der Horst, 2018; Cools et al., 2011; Harkness et al., 2019).

Encouraging fathers to take up parental leave can help change the mentality of both men and women towards the need to care for the newborn. Further, implementing a "use it or lose it" strategy²¹ might consolidate the practice of fathers using parental leave because if they do not, their children will spend less time with their parents.

Worldwide, maternity protection is enshrined in the ILO-Maternity Protection Convention (2000) which has been ratified by 43 over 187 countries. The convention sets a benchmark to guide the design and implementation of labour and social policies at the national level. Even when a country has not ratified the Convention, it is customary to refer internationally recognised minimum standards. Furthermore, the Beijing Platform for Action (1995) calls for maternity protection and the harmonization of work and family responsibilities. In particular, in March 2010, the 54th Session of the United Nations Commission on the Status of Women adopted a declaration on the occasion of the 15th anniversary of the Beijing Conference and passed Resolution 54/4. The latter acknowledges the significance of maternity and motherhood, and states that such policies and programmes should also promote shared responsibility on the part of women and men in parenting children and caring for other family members. In the European Union, the EU directive on work-life balance for parents and carers aims to allow parents balance their professional and family responsibilities by encouraging more equal sharing of caring responsibilities between mothers and fathers. The directive, adopted by the Council and entered into force in 2019, sets a minimum standard of 10 days of paid paternity leave for fathers and strengthens the right to 4 months of parental leave by making two out of the four non-transferable from a parent to another. It nevertheless leaves to Member States the decision about the level of compensation for this period.

To re-balance the distribution of caring responsibilities between mothers and fathers it is paramount to act on multiple fronts and encourage fathers to take up parental leave, and provide affordable and available childcare services. Providing affordable, available childcare services of good quality set the basis for a resilient society where children increase their chances to have a better education and returns to education in adulthood, women are free to continue working and both economies and societies benefit (World Bank, 2022).

21 The so called "use it or lose it" strategy is discussed in a Background paper for the European Parliament

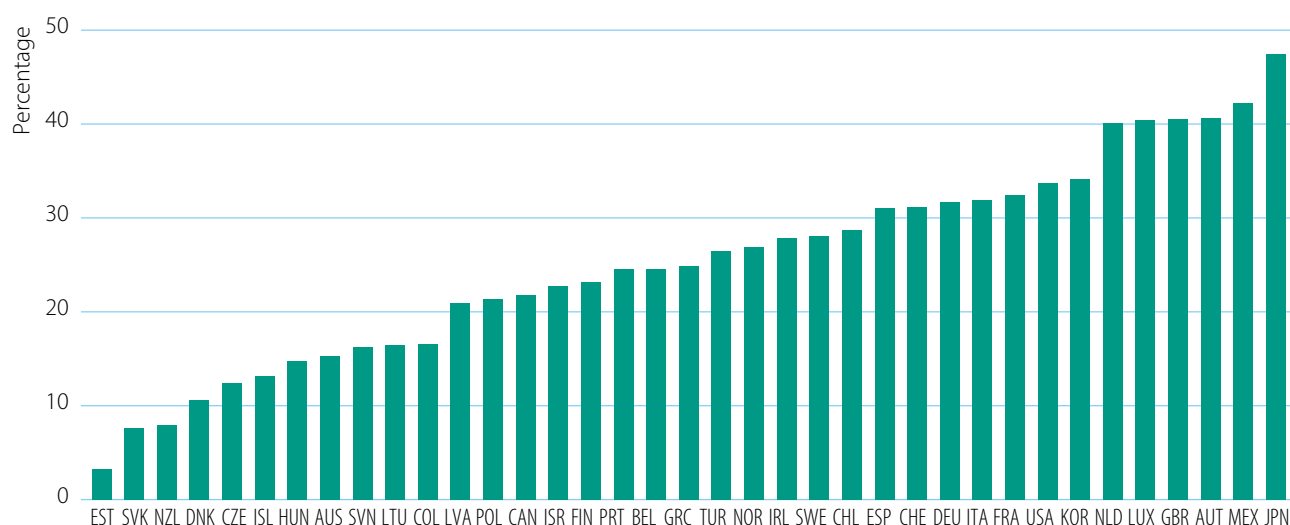
10. ■ The gender pension gap

The role played by employment over the active life of individuals in terms of economic independence is accomplished by pensions during the old age. The (at times important) gender wage gaps that exist in the labour market translate into cumulated disadvantages upon retirement, which represents an additional source of vulnerability for women.

Pension systems are not gender-neutral and may amplify imbalances as a consequence of social policy choices. In addition to mirroring previous employment conditions, there are many aggravating factors that contribute to the gender pension gap. The first relates to the fact that the employment and pension system was designed by men for men, with women's needs being accounted for only in part and their representation being overlooked. Even today, in many countries women are not sufficiently represented, and this leads to taking women's interests for granted (Blau and Kahn, 2001, 2017). Furthermore, long-term social changes such as population ageing, at least in high-

income countries, and social inequalities have deeply modified resource allocation to the detriment of old women and men, as well as vulnerable people. They are affected by the cumulative impact of thirty years of gradual institutional reforms in the economic fiscal and pension system. Today's older women witnessed in their working lifetime major transformations, both in the role they played in the labour market, as well as in a society where, starting from high-income economies, women slowly but steadily have been taking more active roles. These transformations impact today particularly those women who are simultaneously carrying echoes of past disadvantages and premonitions of future vulnerabilities. The great recession 2007-2009 as a consequence of the sovereign debt crisis led to numerous cuts in pension payments, thus fuelling pensioners' insecurity (de la Porte and Natali, 2014; Hinrichs, 2021). More recently, the COVID pandemic marked a severe impact on employment, with consequences on pensions as well.

Figure 36: Gender pension gap (%)



Source: Authors' own compilation based on OECD, LIS, HFCS and EU-SILC data

Note: The gender gap in pensions is calculated as the difference between the mean retirement income of men and women (aged 65+) over the mean retirement income of men (aged 65+), among pension beneficiaries. Calculations are based on the LIS, except for: France, Latvia and Portugal where the HFCS (Wave 3) was used; and Iceland, Sweden and Türkiye where results come from the EU-SILC (published on Eurostat's website). Data come from the latest available survey, conducted in: 2013 for Japan, Luxembourg, the Netherlands, Norway and the Slovak Republic; 2014 for Australia; 2015 for Hungary and Slovenia; and after 2015 for all the other countries. Data refer to 2017 for Iceland and 2018 for Türkiye, Korea, Israel, and New Zealand. In Belgium when partner A's pension rights are less than 25% of those of partner B, the pension of A is not paid out and B receives a family pension (calculated at 75% of wages instead of 60%).

Concerns about the deterioration of the sustainability of the pension system arise as older workers – who are more vulnerable to illnesses, have large pension entitlements, but have with a lower likelihood to re-enter the labour market once out – may seek to retire. Older people with the characteristics described above can contribute to increase the pool of pension beneficiaries. This in turn may contribute to jeopardise the sustainability of public pensions' expenditures

(Feher and de Bidgain, 2020), creating a serious issue with the resilience of the financial national systems.

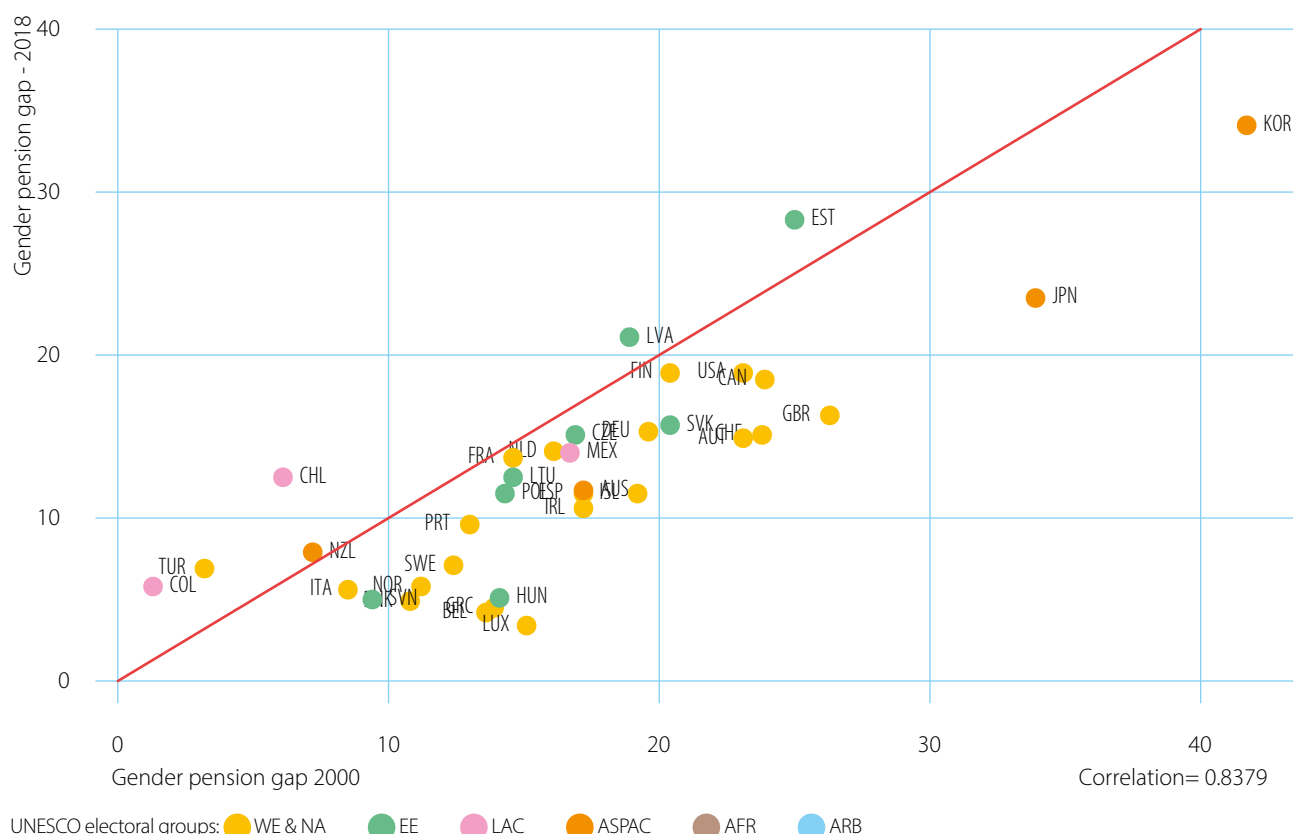
The gender pension gap reflects past gender inequalities and older women are more likely to exhibit lower pension than men. This is often caused by the gender wage gap endured during working age, and women's intermittent careers due to caring responsibilities. In many countries, as women have been exclusively in charge of unpaid care and domestic

work, they cannot claim pension entitlements (Brown and Crompton, 2020). Social insurance rights are often only a derived right, such as a widow’s pension (Lis and Bonthuis, 2020).

The gender pension gap displayed in Figure 36 is expressed as percentage of men’s average pension and represents the difference between the average retirement income of men and women in the latest year available. It is calculated on the population of pension beneficiaries aged 65+, excluding those with no pension at all. The calculation relies on multinational household surveys harmonized across countries and takes into account both private and public pension systems. Among the countries for which data are available, on average women aged 65+ receive 26% less than men from the pension system. The size of the gap varies between a minimum of 3% in Estonia to a maximum of 42% in Mexico and 47% in Japan (Figure 36). It is worrying to note that, in almost twenty years’ time, and despite the increased participation

of women in the labour market, the gender pension gap decreased only by 4 percentage points between 2000 and 2018 (Figure 37). In countries below the 45-degree line, the gender pension gap reduces while those above have experienced an increase. In the majority of the countries considered, the gender pension gap has been closing, even if at a low rate: in almost half of the countries below the 45-degree line, the gender pension gap shrank by less than 5 percentage points in almost twenty years. One-third of countries in 2018 reached the lowest pension gap of around 5%, with Luxembourg and Belgium at 3.4% and 4.2%, respectively. Yet, among those with the highest gaps, which is above 20%, two worsened (Latvia and Estonia with 11.6% and 13.2% increase respectively). It is worth noticing that data on pensions are missing for almost 80% of the UNESCO member states, fact that calls for the need to collect data in the future, especially as populations age in many parts of the world.

Figure 37: Association between gender pension gap in 2000 and in 2018 by country (%)



Source: Authors’ own compilation based on OECD data

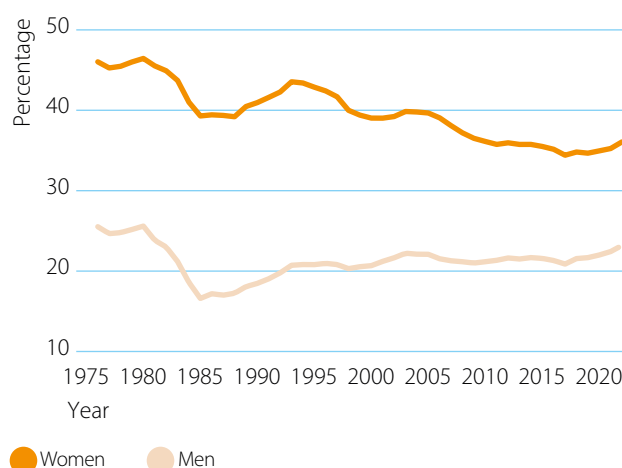
Note: Note: The gender gap in pensions is calculated as the difference between the mean retirement income of men and women (aged 65+) over the mean retirement income of men (aged 65+), among pension beneficiaries.

During retirement individuals can live out of income and wealth of different type (such as financial investments, rent of estates, or inheritances) or pension. It very much depends also on possible retirement saving arrangements, which are in turn linked to occupational and personal pension plans. Private pensions importantly contribute to explain the overall pension gap. On average men receive more income than women from this source, which often complements income coming from public pensions (OECD, 2021).

Yet, the root source of the pension gap partly depends on the different working patterns that women and men display during their working age and how these differences are reflected within the various pension systems. The biggest difference is represented by the lower proportion of women participating in the labour market as compared to men, with a wider gap that emerges in relation to countries exhibiting more marked patriarchal roles, especially in the past.

Since 1976, not only did women participate less, but 47% of women worked part-time across the countries for which data are available, against 27% of men. Thirty-five years later, this gap has been only marginally narrowed, with 36% for women and 23% for men in 2022, respectively (Figure 38). The disproportionate use of part-time work by women over the last three decades is partially responsible for the pension gap, as in some countries it prevents entering into the pension scheme. In general, it implies lower wages than working full-time and therefore a lower pension entitlement within any contribution-based pension scheme.

Figure 38: Part-time employment rate between 1975 and 2021 (%)



Source: Authors' own compilation based on World Bank data

Note: Part time employment refers to regular employment in which working time is substantially less than normal. Definitions of part time employment differ by country. The graph is based on a smoothed time series using two-year lags moving average estimations.

The convergence of the global gender wage gap, intermittent career paths, a disproportionate burden of unpaid care and domestic work, occupational downgrading, forced part-time work, and overrepresentation in the informal sector, coupled with limited access to social protection and financial institutions, collectively forms a harmful combination of lifelong disadvantages (ILO, 2018a; 2023; 2016). This intricate interplay of factors disproportionately penalizes women in their later years and contribute to higher poverty levels in retirement (UN DESA, 2022). Consequently, this exacerbates vulnerabilities at both individual and national levels. Adopting a gender transformative resilience perspective entail identifying groups at risk of poverty due to low pensions entitlements. This approach would enable targeted interventions informed by structured and structural data collections related to pension gap indicators, facilitating effective policy design and monitoring.

11. Gender stereotypes, norms and discrimination against women and girls

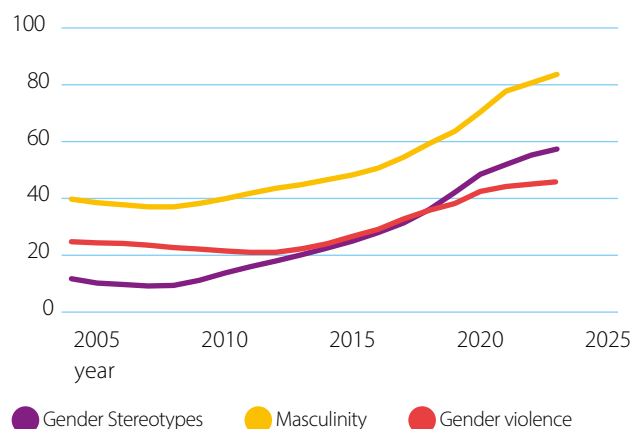
In light of all we have seen thus far a question emerges: why is progress towards gender equality so slow? What are the (subtle but powerful) factors that hinder the realization of gender equality along many dimensions? One of them is social norms and stereotypes forcing individuals into power relations and behaviours that leave some, and women for sure, at disadvantage. In what follows, we try to bring to light how gender norms lead individual choices and behaviours to conform to stereotypes.

Norms affect what is expected of people and have an impact on what is deemed appropriate for them to do. Social norms establish rules of behaviour for individuals within social groups but also reflect and set power relations between them, including by enforcing strict rules for stereotypical gender expressions. Power relations can empower or disempower individuals and therefore influence the way they react to distress (Legros and Cislighi, 2020).

Individuals have multiple social identities based on factors such as race, class or sexual orientation, or shaped by societal roles, such as being a mother or father, employee or employer. These characteristics intersect with gender and shape their experiences, opportunities and coping strategies in case of distress. Some identities are fixed, and some are not and change throughout life. Identities are socially constructed and influenced by cultural beliefs, norms and practices. Identities, behaviours and sense of belonging are connected: behaviours affect people’s perceptions of themselves and of others, which reinforces the gender identities through the sense of belonging to the mentioned group (Charles, 2012).

Given that the range of options and preferences one can have is frequently influenced by people’s beliefs about what behaviour is most appropriate and accepted within their social groups, beliefs can erect or reinforce barriers for those who choose not to abide by the norms. In addition, norms affect autonomy and freedom and the choices one makes regarding their personal life, including what to study and the professional careers one chooses, are often influenced by gender norms and social expectations.

Figure 39: Google trend data on stereotypes from 2004 to 2023



Source: Authors’ own compilation based on Google trend data. Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term. The geographical coverage is worldwide and the time window goes from 2004 to October 2023. All keywords are searched as topics, which represent groups of terms that share the same concept in any available language.

Acknowledging the existence of gender stereotypes is the first step towards dismantling the harmful ones. Figure 39 uses Google trend data and shows the interest related to the topics of gender stereotypes, masculinity, and gender-based violence from 2004 to October 2023. Results show that during the last 15 years on average there has been an increasing interest related to stereotypes and gender norms, which mirror increasing awareness about these issues. While these figures cannot be considered as statistically significant, given that Google trend data may be affected by a number of biases (e.g. related to the people making these searches), they nevertheless propose an instant snapshot of whether and to what extent these issues are being discussed in society. This is an important step towards addressing a problem that is complex and difficult to deal with. When unaware of their stereotypes, it is likely that people continue to behave in a discriminatory fashion.

There are several forms of gender-based discriminations and gender stereotypes against women and girls. As an example, parents’ and teachers’ expectations influence their children’s studies and self-esteem. It is an issue when, for instance, teachers expect girls not to perform in STEM subjects, and consequently do not encourage or support them in pursuing STEM studies and careers. (OECD, 2022). Stereotypes are also related to the division of unpaid care and domestic work within households, as well as low-pay work, to name a few. Discriminatory gender stereotypes are a form of symbolic violence,

in addition to leading to gender-based violence and violence against women materialized in various forms: emotional, economic, physical and sexual as recognised in the Istanbul Convention²². Adopted by the Committee of Ministers in 2011, the Convention recognises gender-based violence against women as a violation of human rights and as a form of discrimination. This widespread phenomenon hits predominantly women and girls- regardless of their latitude or social class. Compounding forms of discrimination increase the risks of being subject to violence, as is the case for women and girls with disabilities. The rate of sexual assault against women with disabilities is twice that of the general population of women, and research estimates that between 40% to 70% of girls with intellectual disabilities are sexually abused before reaching 18 years old (UN, 2013).

It represents a major obstacle to personal fulfilment and one of the most widespread and devastating human rights violation one could experience. According to UN Women's and WHO estimations, one in three women worldwide experience physical or sexual violence (UNWOMEN and WHO, 2018). Violence against women has serious short and long-term physical and mental consequences for women and for the well-being of their children, who often are very young.

Gender-based violence refers to any type of harm that is perpetrated against a person or group of people because of their actual or perceived sex, gender, sexual orientation and/or gender identity. Gender-based violence affects women disproportionately (UN, 1993).

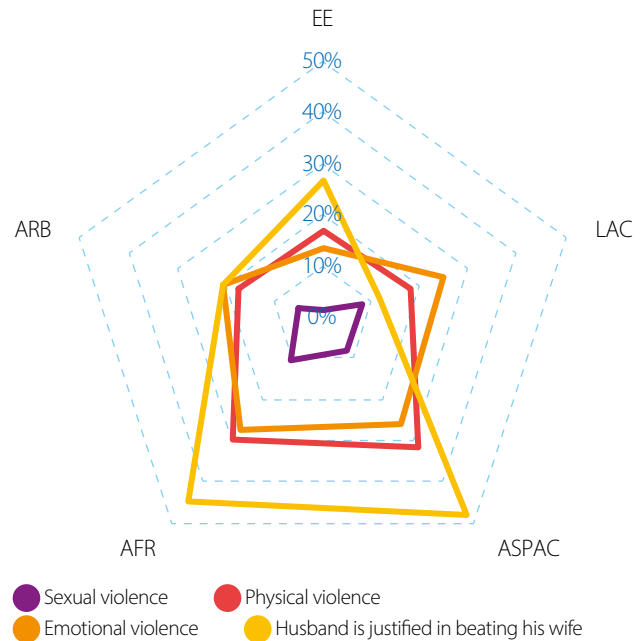
Violence against women and girls is any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering for women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in the private life (UN, 1993).

One of the root causes of gender-based violence, and of violence against women and girls, is the exacerbation of unequal power relations between men, women and gender-diverse people, fuelled by gender stereotypes. Worldwide, 30% of women believe that domestic violence might be justified under certain circumstances²³ (Figure 40) This represents the vision of

one over three women and mirrors the stereotypes and power relation with men, for whom the use of physical punishment is believed to be legitimate in case of women's behaviour away from the norms.

Figure 40: Different forms of violence against women and girls and of gender stereotypes (%)

(No information was available related to Western Europe and North America States)



Source: Authors' own compilation based on World Bank pooled data 2015-2020.

No information was available related to Western Europe and North America States.

Note: Sexual violence measures the percentage of ever-married women ages 15-49 who have ever experienced sexual violence committed by their husband or partner. Sexual violence is operationalized as being physically forced to have sexual intercourse when you do not want to; having sexual intercourse out of fear for what your partner might do or through coercion; and/or being forced to do something sexual that you consider humiliating or degrading.

Physical violence measures the percentage of ever-married women ages 15-49 who have ever experienced physical violence committed by their husband or partner. Physical violence is operationalized as acts that can physically hurt the victim, including, but not limited to: being slapped or having something thrown at you that could hurt you; being pushed or shoved; being hit with a fist or something else that could hurt; being kicked, dragged or beaten up; being choked or burnt on purpose; and/or being threatened with or actually having a gun, knife or other weapon used on you.

Emotional violence measures the percentage of ever-married women ages 15-49 who have ever experienced emotional violence committed by their husband or partner. Emotional violence is operationalized as any intentional conduct that seriously impairs another person's psychological integrity through coercion or threats.

The indicator Women who believe a husband is justified in beating his wife measures the percentage of women ages 15-49 who believe a husband partner is justified in hitting or beating his wife partner for any of the following five reasons: argues with him; refuses to have sex; burns the food; goes out without telling him; or when she neglects the children.

²² The Council of Europe Convention on preventing and combating violence against women and domestic violence (Istanbul Convention)

²³ This indicator measures the percentage of women who believe a husband is justified in beating his wife for any of the following five reasons: 1. When she argues with him, 2 when she burns the food, 3 when she goes out without telling him, 4 when she neglects the children, 5 when she refuses sex with him.

Figure 41: Association between physical violence, stereotypes and income distribution (%)



Source: Authors' own compilation based on World Bank pooled data

Note: Physical violence measures the percentage of ever-married women ages 15-49 who have experienced physical violence committed by their husband/partner in the 12 months preceding the survey. This indicator corresponds to SDG 5.2.1. Physical violence is operationalized as acts that can physically hurt the victim, including, but not limited to: being slapped or having something thrown at you that could hurt you; being pushed or shoved; being hit with a fist or something else that could hurt; being kicked, dragged or beaten up; being choked or burnt on purpose; and/or being threatened with or actually having a gun, knife or other weapon used on you.

Income quintile share ratio S80/S20 is the ratio of total income received by the 20% of the population with the highest income (top quintile) to that received by the 20% of the population with the lowest income (bottom quintile).

Freeing women, and all individuals, from gender discrimination means granting them equal dignity and equal opportunities and dismantling the mentality of considering women in relation to their role in society, as wives, mothers or sisters, and dependent on their own husbands, fathers or brothers.

As mentioned, physical or emotional integrity is a necessary precondition to build individual resilience. Yet, violence affects the life of women at any latitude; since 2015 worldwide 7% of women were victims of sexual violence throughout their life, 22% experience emotional violence and 23% physical violence²⁴.

Women are not the only victims of violence: in 2019 out of the 140000 respondents to the FRA-LGBTI II survey²⁵ 98000 declared they have been victim of physical attack, 25000 victim of sexual attack and 10000 of both physical and sexual attack in a domestic context (ILGA Europe, 2022). Furthermore, consistent with the literature there is a significant and positive relationship between physical violence and the attitude of women in justifying a husband in beating his wife (Butchart et al., 2010; Hindin et al., 2008; Yoshikawa et al., 2014), and no relation with income distribution (Figure 41). This supports the fact that to eradicate gender-based violence one needs to undermine the foundations of patriarchy and make women, and gender-diverse people, aware of their value, their independence and their talent.

The eradication of gender-based violence must become a collective responsibility at the individual, community and political levels. It needs encompassing education aimed to prevent violence and make young people aware; advocacy campaigns raising awareness in the adult population, engaging men in the fight against gender-based violence; as well as applying clear and strict laws to prosecute criminals.

As gender stereotypes and norms are rooted in society, it is difficult to trigger a change of perspective in people. A gender transformative approach should act to challenge gender norms, promote the active roles of women at community or political levels, and address power inequalities between women and men. Usually, it is a slow process driven by positive initiatives such as national laws or recommendations. Gender quotas in parliaments and in listed companies, pay transparency initiatives or minimum wage directives are examples of positive actions that can help trigger the change needed.

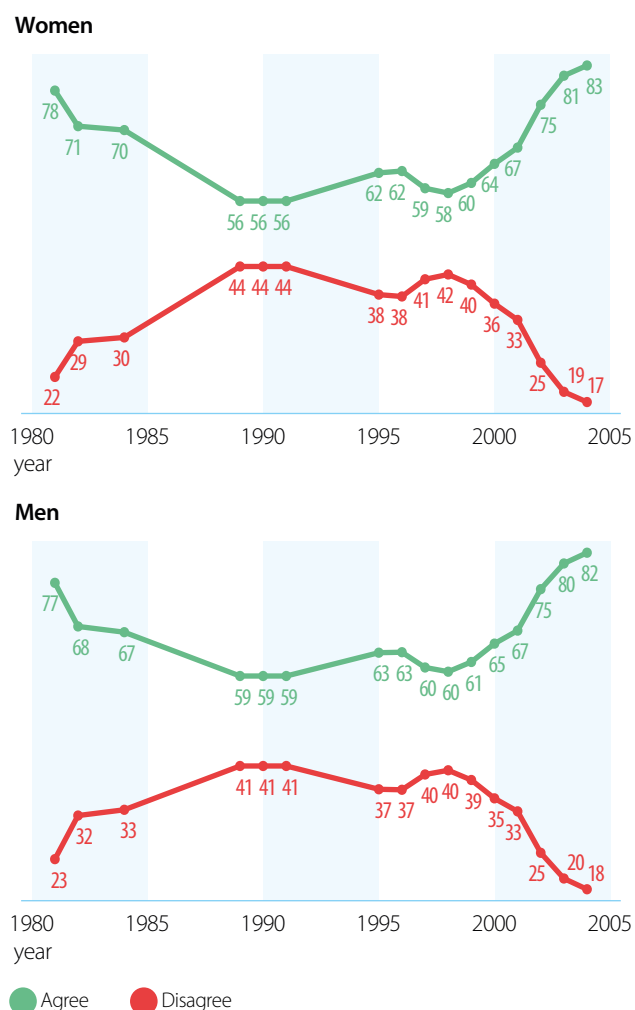
24 Indicators shows the percentage of women who have experiences sexual, physical and emotional violence as percentage of ever-married women aged 15-49. Aggregated data for group I – Western Europe and North America States, are excluded because only Türkiye is present in the data.

25 The FRA-LGBTI II is a survey on discrimination against and victimisation of Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) people across the EU carried out by the Fundamental Rights Agency as a follow up to the Agency's 2012 LGBTI survey.

12. ■ Exchanging caregivers and breadwinners

Across the world, the patriarchal society usually assigns women the role of caregiver and men that of breadwinner (Arendt, 1998; Eagly et al., 2000; Fraser, 1987). This has ingrained stereotypes according to which the sense of fulfilment for women is realized mainly through motherhood. In Figure 42, the gap between those who agree and disagree with the statement of considering motherhood as the fundamental source of fulfilment for women grew to its maximum of 65 percentage points in 2004. In the 1980s this belief was true for on average 69% of women and men. The situation slightly improved in the 1990s when around 60% of people, both women and men, expressed their agreement with the statement above mentioned. Since the second half of the 1990s, the percentage of those who agreed and disagreed definitely diverged for both women and men.

Figure 42: Share of women and men who agree and disagree with the statement: "A woman has to have children to be fulfilled" (% of respondents)

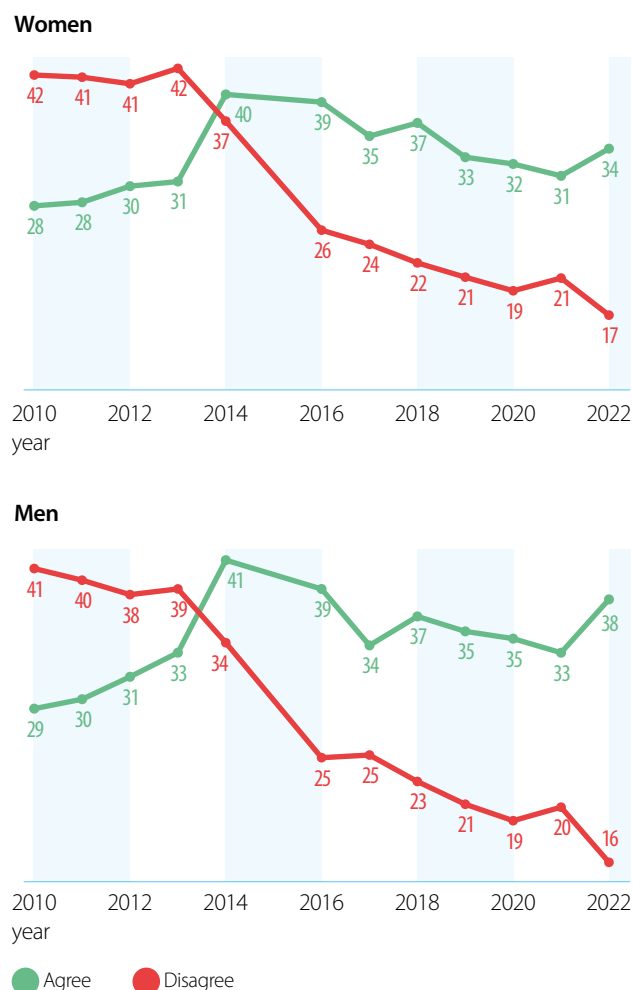


Source: Authors' own compilation based on World Value Survey trend data 1981-2004
 Note: the graph presents a smoothed time series using two-year lags moving average estimations.

What emerges is coherent with the cultural model known in the literature since the 1990s as intensive mothering (IM), according to which childbearing is the primary responsibility of mothers who should unselfishly make a tremendous investment in their child (Hays, 1996). This model implies that raising a child is one of the most important things a woman can do for society, and in any event, it is more worthwhile than paid work (Verniers et al., 2022).

This gender stereotype about motherhood is strongly rooted in the mentality of the majority of both women and men all around the world, as shown in Figure 42. Being able to monitor this cultural model, its evolution and its consequences on the well-being of mothers, and fathers, is paramount to designing effective policies. However, it requires the use of up-to-date and reliable data. Unfortunately, no recent data exist that would allow monitoring these trends.

Figure 43: Share of women and men who agree and disagree with the statement: "It is a problem if women have more income than their husbands" (% of respondents)



Source: Authors' own compilation based on World Value Survey trend data 2010-2022
 Note: the graph presents a smoothed time series based on two-year moving averages.

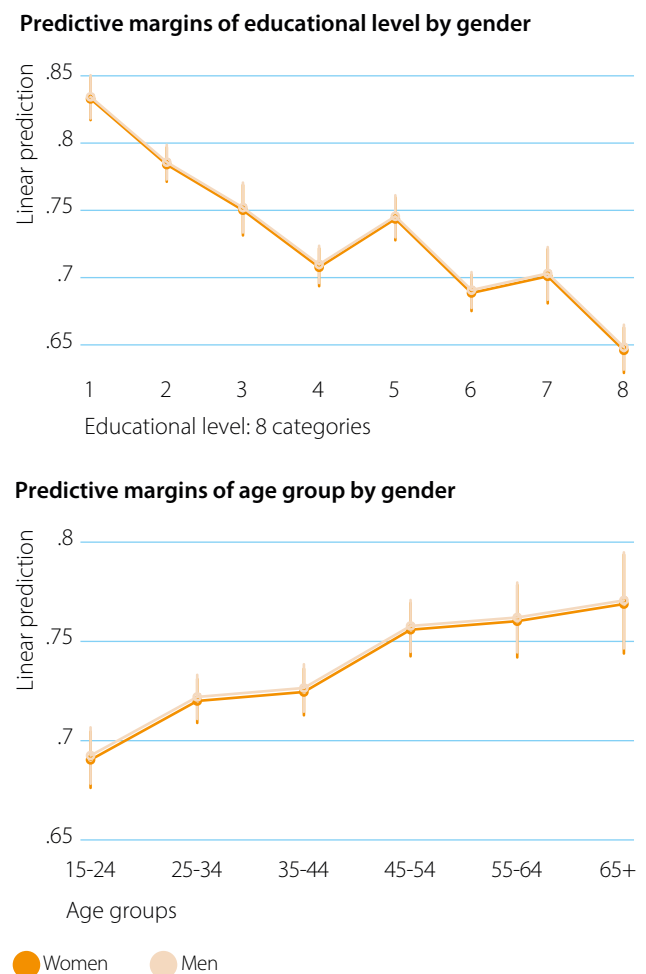
In many countries and across the world, a particularly difficult-to-undermine stereotype is one that holds normal for men to be the breadwinner; the representation of men as the sole provider for his dependent wife and children consolidated with the Industrial Revolution, in e.g. Western Europe, and with the Factory industry development in South Asia. This was, followed and consolidated by the spatial separation between household and workplace, and the gender division of roles in the private and public sphere (Janssens, 1997). Although today women have succeeded to conquer more and more space in the public sphere and in the workplace, the belief that men have to be the ones earning the most is still very strong. According to Figure 43, in the last 12 years on average, 33% of women and 34% of men agreed that it is a problem if women earn more than their husbands, against 29% of women and 28% of men who disagree. 38% of people, with no significant gender differences, are positioned in the middle, neither agreeing nor disagreeing. In 2022, results show a drop in the agreement by 28 percentage points which leaves hope for a real change and a readiness to shift the stereotype of women as solely caregivers rather than breadwinners.

12.1. What drives many to believe that only motherhood fulfils women?

An analysis aimed at understanding the root causes of this stereotype shows no significant difference between women and men. However, the probability of believing in this stereotype significantly decreases as the level of education increases. Lastly, the probability of being trapped in this stereotype increases with age (Figure 44)

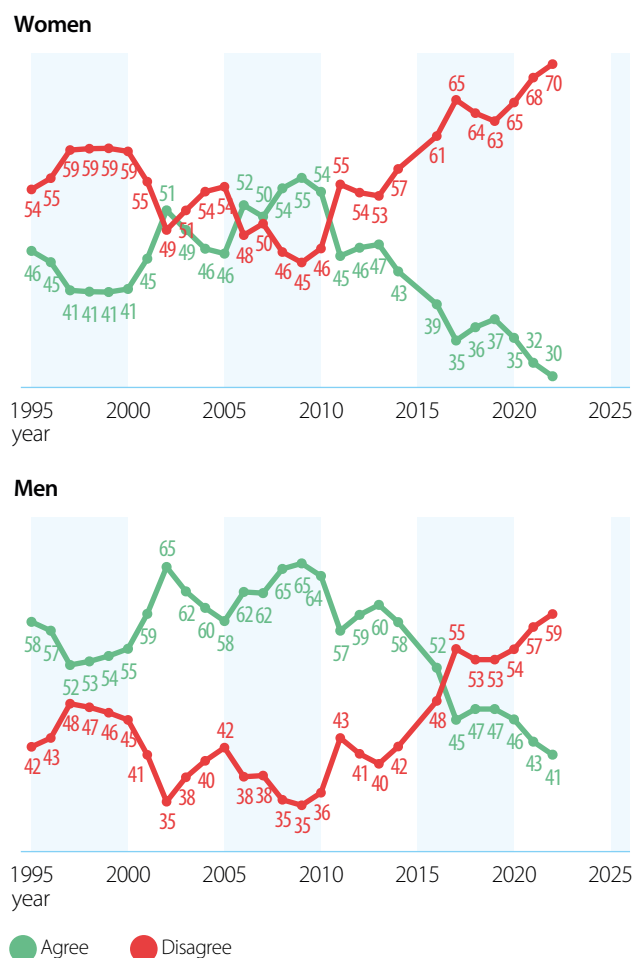
These results suggests that education is one of the strongest drivers of empowerment and one of the most efficient instruments to combat stereotypes. Despite this, and at odds with the value that education brings to women and to societies, national accounts consider education as a cost. If it were to be considered as an investment, governments' attitude towards young generations would likely change and public opinion would start considering them as the most important resources to take care of, and as one of the best investments for the resilience of a country. Education is key to providing all individuals with cognitive skills, emotional intelligence and self-awareness, which are fundamental components of individual resilience.

Figure 44: Probability of agreeing with gender stereotypes related to motherhood by education, gender and age



Source: Authors' own compilation based on World Value Survey data 2018
 Note: Dependent variable: *a mother needs to have children to be fulfilled*. Independent variables: sex, age, education level and employment status. Educational level categories are the following: 1 Inadequately completed elementary education, 2 Completed (compulsory) elementary education, 3 Incomplete secondary school: technical/vocational type/Secondary, intermediate vocational qualification 4 Complete secondary school: technical/vocational type/Secondary, intermediate vocational qualification, 5 Incomplete secondary: university-preparatory type/Full secondary, maturity level certificate, 6 Complete secondary: university-preparatory type/Full secondary, maturity level certificate, 7 Some university without degree/ Higher education – lower-level tertiary certificate, 8 University with degree/ Higher education – upper-level tertiary certificate.

Figure 45: Share of women and men who agree and disagree with the statement: “Men make better political leaders than women do” (% of respondents)



Source: Authors’ own compilation based on World Value Survey trend data 1995–2022

Note: the graph presents a smoothed time series which uses two lags moving average estimation. Smoothing the time series allow taking care of peaks and troughs due to composition effects or measurement errors.

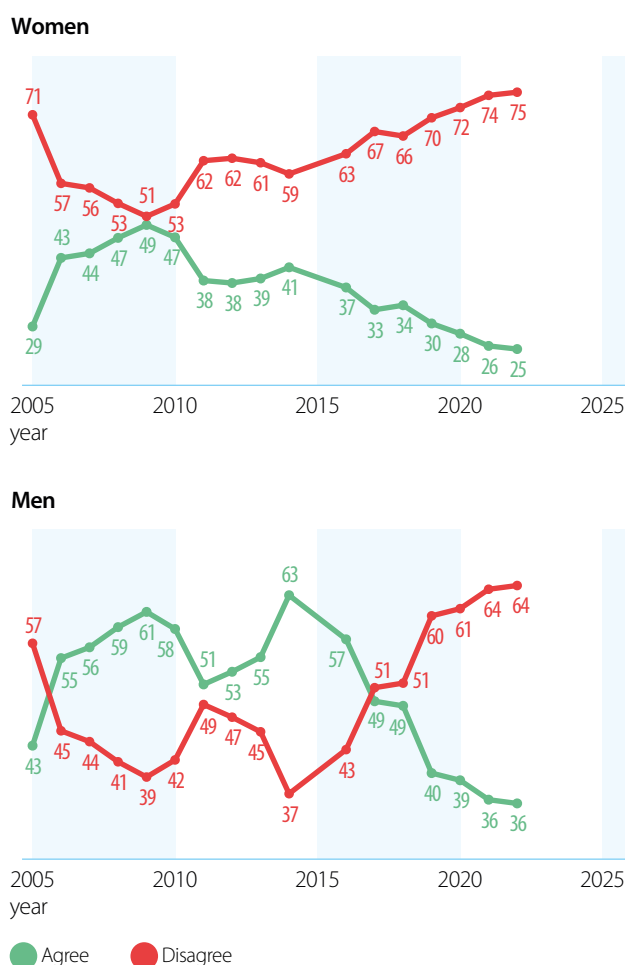
12.2. Leadership

How do people perceive women’s political leadership of women compared to men’s?

As shown in Figure 45, over the last thirty years, women’s and men’s respective opinions have differed significantly. Since 1995, on average 56% of women disagreed with the statement that “Men make better political leaders than women do” against 44% of men. The patterns of agreement and disagreement have not been smooth for women: from 1995 to the early 2000 women mostly disagreed; changed their mind between 2006–2010 – around the years of the financial and economic crisis; and starting from 2011, the gap between agreement and disagreement increased progressively until 2022, with a 70% of women in disagreement with this statement. The situation for

men is much different and from 1995 to 2016: on average 55% of men reported they disregarded the political leadership of women. Yet their predominant opinion against women political leaders changed and flipped from 2017 to 2022, with 59% of men supporters of women political leadership against 41%. While these data show the evolution of certain gender stereotypes over time, they also likely reflect e.g. gender quota interventions in the political system, which have contributed to changing the mentality and culture of people.

Figure 46: Share of women and men who agree and disagree with the statement: “Men make a better business than women do” (% of respondents)



Source: Authors’ own compilation based on World Value Survey trend data 1995–2022

Note: the graph presents a smoothed time series which uses two lags moving average estimation.

When it comes to the opinions on the ability to conduct business, on average between 2005 to 2022 (Figure 46), 63% of women disagreed with the statement that “Men make a better business than women do”. Since 2009, when women were almost equally distributed between agreement and disagreement, the majority of women have been in support of women’s business abilities as compared

to men's abilities, with a peak of consensus of 75% in 2022. In contrast, between 2006 and 2016 on average 57% of men believed more in men's business quality as compared to women's, but since 2017 men have been recognizing more women's entrepreneurship qualities, with 64% of men in support of women's business abilities in 2022. Positive actions such as gender quotas for the CEOs of listed companies may help change opinions in this respect. The effect of gender quotas can be twofold. First, it gives the opportunity to increase the critical mass of women in decision-making positions, to change the culture at work towards a more inclusive one, and to build a network of talented women (Thabhiranrak and Jermstittiparsert, 2019). Second, it helps people appreciate and value the activities of women in business and get used to the idea that also women can successfully hold those positions (Lewellyn and Muller-Kahle, 2020).

Towards the inclusion of other gender-diverse identities in the collection of data

Despite our best intentions, we were unable to unpack the analysis thus far performed along more than two gender dimensions and look at gender-diverse identities. According to the 2019 Fundamental Rights Agency LGBTI survey²⁶, in the European Union, almost 28000 respondents identified themselves as lesbian, 52000 as gay, 54600 as bisexual, 2000 people as heterosexual and almost 3600 specified a different sexual orientation than the above-mentioned. This is clearly an underestimation of existing gender identities in Europe, but at least it represents an attempt to analyse the living conditions and vulnerabilities that gender-diverse people experience throughout their lives.

The survey shows that LGBTI persons are discriminated against in many aspects of their life. Despite human dignity, the right to liberty, security and freedom of expression being established in the Charter of Fundamental Rights, half of LGBTI respondents is almost never or rarely open about being LGBTI, and among the youngest (15-17 years old) 37% are never open about it. Overall, one in three always or often avoids certain places like café, restaurant, bar, night clubs or shops for fear of being assaulted because they are LGBTI. More than a third of respondents felt discriminated

against in areas of life other than work, while 20% reported experiencing discrimination at work in the year before the survey. Furthermore, the survey also reveals that LGBTI people are also victims of hate and violence: 11% of LGBTI respondents were physically or sexually attacked in the EU, while trans (17%) and Intersex (22%) experienced attacks at higher rates. What is alarming is that only 4% of those attacks were reported to the police and 25% of those who did not report the suffered violence to the police, said they did not do it because of fear of homophobic or transphobic reaction by them.

The picture drawn above returns a living condition for LGBTI persons where in the best case they are not welcome and the worse they are not accepted even aggressed. All this contributes to increasing vulnerability, with psychological and practical consequences in their life. LGBTI peoples are invisible and threatened in their fundamental rights of being themselves. The need exists to give them dignity in the public debate and in real life. One possible way to build resilience and inclusivity may start from the collection non-binary data, which would serve multiple purposes. This would not only help inform policymakers with sound and timely information, but also raise awareness about their living conditions, and help make the general public accept and support their existence and rights.

²⁶ The FRA-LGBTI 2019 II survey interviewed a total of almost 140000 persons aged 15 years or older who described themselves as lesbian, gay, bisexual, trans or intersex. It is an online survey and covers the EU-28 Member States and the north Macedonia and Serbia. The EU-28 sample is composed of 42 % gay males, 20 % bisexual women, 16 % lesbian women, 14 % trans persons, 7 % bisexual males and 1 % intersex persons. In Estonia and Lithuania, bisexual women form the largest categories. In 2012 FRA launched a first LGBTI online survey, the two surveys are comparable (European Union Agency for Fundamental Rights., 2020). The responses have been further disaggregated in the mentioned categories by ILGA Europe.

Conclusions

This report proposes a new gender-based resilience framework which aims to shed light on the underlying determinants of discrimination against women; provide hard evidence about the extent to which this happens; and uncover the relationship that exists between gender inequalities and the resilience of countries. When assessing resilience, we look at both vulnerabilities and strengths towards environmental, social and economic challenges and shocks.

The gender transformative resilience approach that emerges can enable a deep transformation making local communities, societies and countries more resilient, by means of allowing for equal opportunities, dignity and right of expression. Shocks and crises, despite creating distress, might nevertheless represent an opportunity to change gender norms through collective action, by civil society, institutions and other relevant stakeholders. Individual responses to shocks as well as structural changes depend both on personal attitudes, and on contextual and social factors, which all need to be better understood, assessed and leveraged.

When operationalizing the gender transformative resilience concept, the report proposes a measurement framework that encompasses both indicators related to fundamental rights, as they are prerequisites for the resilience of each individual; and contextual determinants, as they provide an indication of the extent to which the capacity to adapt or transform is conditioned by external factors. Our framework includes indicators related to participation in education and in the labour market, earning in the form of wages and pensions, as well as individuals' engagement in innovation and in leading positions in the economic and political spheres. Evidence is also provided in relation to individuals' distribution of time between work and family. While already providing a deep and comprehensive picture of existing gender-based inequalities, and the way these related to resilience, this work does not meet our ambition. We were constrained importantly not only by the lack of relevant information in terms of type as well as time and country coverage, but also by the lack of information for non-binary gender types. Still, we believed it was important to bring under the spotlight the evidence that exists and lay bare the shortcomings we encountered, to motivate relevant stakeholders, and governments especially, to engage in relevant data collections.

Whatever the angle considered, the story we uncover is one whereby the lack of equal opportunities and

rights that women face translates into societal and economic vulnerabilities, despite the fact that investing in women brings important returns. Countries lag behind when women struggle to get educated, or to improve on the education of their parents, when adolescent fertility rates are high and when women's empowerment is hindered by gender stereotypes. Looking at the persistent gender segregation in education fields returns a picture where women are underrepresented in engineering, manufacturing and construction, and men in art and humanities. At a time when the digital transformation is changing the nature of work and, with it, the jobs and skills needed to live, work and thrive with AI, individuals – i.e. all individuals – need to be endowed with a mix of relevant socio-emotional and technical /cognitive skills (Samek and Squicciarini, 2023). These can be best acquired through participation of people of different gender in all fields of study. Also enabling a resilient response requires engaging both women and men at all levels of education and in any occupation. Yet, over the last thirty years, women remained more economically excluded than men from the labour market and men overall remained more than twice as likely as women to be employed.

Worldwide women who want to work might experience social pressure linked to the stereotypes that consider activities related to care such as childbearing, care of elderly people and housework as the main women's responsibility, while men are seen as the main breadwinner in the household. Evidence of this is shown by the opinion of 33% of people between 2017-2022, who believe that when jobs are scarce, men should have more rights to jobs than women. This stereotype, which aligns with the responses of women and men, represents a discriminatory gender norm which puts a higher value on men's participation in the job market over women's. Gender norms over-value men's time and talents while overlooking the potential benefits of increasing women's participation in the workforce on the economy.

Achieving gender equality at work requires institutional interventions: supporting and reinforcing women workers' rights; helping to adapt infrastructures to the need of vulnerable groups; reinforcing social protections and public care services; supporting women through work transitions; listening to the voice of civil societies; and encouraging the representation of women in the institutions.

Not only the participation of women in the labour market is low, but they are also underrepresented in

leading positions of economic and political power. Between 2020-2022 around the world, 24% of seats in the national parliament were held by women, and 35% was the proportion of women in total employment in senior and middle management.

Given that women's increased presence in leading roles is necessary but not sufficient to mark a difference, the focus has to be shifted to the extent to which women have space to express their voices and opportunities to contribute to and influence decision-making in politics and in the economy. The more women are present in the public space the more gender equality advances, and the more resilient, and less vulnerable, a country would be.

Evidence shows that countries with higher gender-based inequalities also exhibit greater vulnerabilities to shocks and crises. In 2021 for every unit shift in the UNDP – Gender Inequality Index, women's representation in the national parliament decreased by 29%. Indeed, using the adolescent fertility rate of 2020 as a proxy of individual and country vulnerability, there is a positive and highly significant association with the Gender Inequality Index. Adolescent pregnancy represents a severe constraint to countries' development: across the 194 UNESCO Member States, it tends to be higher in countries with lower human development, as measured by the UNDP Human Development Index. If adolescent pregnancy can lead to female school dropout, and intergenerational transmission of poverty, empowering women of all ages and statuses contributes not only to their well-being but also to the one of their families and communities.

Resilience is about thriving despite adversities, and societies thrive when women, girls and gender-diverse people are able to thrive too.

Yet today the reality provides a different picture also when analysing the gender wage gap. Worldwide, female earners in 2021 made almost 20% less than their male peers. This also depends on glass ceilings, whereby women experience reduced career opportunities in leadership positions compared to men. The gender wage gap is also driven by the child penalty which summarizes a series of "choices" women make in giving preference to jobs with a high level of flexibility in the working hours to reconcile their family responsibilities, very often at the price of lower wages. The combination of these elements together with discontinued careers due to childcare or care of another dependent family member, traps women in

lower-paid occupations, and a slower human capital accumulation as compared to men.

If we were able to share family responsibilities more equally between all actors involved, choices to accommodate family responsibilities would be also equally distributed across the population without creating vulnerabilities.

The gender wage gap represents a particularly severe vulnerability for those at the bottom quintile distribution of earnings. In these countries, low income is positively associated with school dropout in upper secondary education, for both girls and boys. This relation is not significant at the medium and top levels of the income distribution which suggests that the process of building resilience needs to pay particular attention to the most fragile and marginalized women and men, to prevent school dropout rates.

Facing the most burning challenges such as climate change, resource scarcity, and environmental degradation or being at the frontier in health-related research requires a high capacity to innovate. Innovation capacities across different technologies could be determinant in preventing future shocks. Fostering competencies in critical technologies such as health, engineering or digital technologies can further help mitigate ongoing threats and improve the lives of millions of people.

The gender dimension of innovation, measured through patent data, shows that between 2000-2019, taking all technologies together, of every ten inventors, only about two are women. This clearly marks their under-representation in inventive processes' development and appropriation through intellectual property rights. As far as the distribution of talents between women and men is equally distributed over the population, probabilities are high that their underrepresentation can be attributed to social and cultural constraints.

Gender-based inequalities are registered also in the management of time and in particular in the time spent on unpaid domestic and care work, which is again highly conditioned by social norms and gender stereotypes. Worldwide, between 2015-2022 women spent four hours in unpaid care and domestic work, while men spent only an hour and a half a day. This disproportion is maintained in couples with either zero, one or two children: independently by the number of children, on average women spend one hour and a half more than men in unpaid work. As women shoulder most of the care and domestic work, every hour

spent on this means less time in the labour market, or in leisure activities. Results show that on average countries where women spend four hours of unpaid work, tend to have a female employment rate of almost 50%.

Unpaid work has an economic value which is estimated to be between 10% and 39 % of the global GDP, but which does not enter its computation. Despite its invisibility from national accounts and decision-making measures, unpaid and care work increases household welfare to the detriment of women's active participation in economic and political life.

Even when caring activities are recognized, for instance in the case of paid maternity leave, this can work as a double-edged sword for mothers. Excessively long maternity leave can have negative consequences on mothers' employability and wages. Despite much progress achieved, much more is needed. In 2022, 109 countries implemented policies granting leave to fathers with an average number of 12 days, while mothers are entitled to 114 days.

As the dual-earner household model become more prominent around the world, the traditional division of labour at home has to be adjusted to allow both parents to be active in the labour market and as caring

parents present at home. Implementing a "use it or lose it" strategy might consolidate the practice of fathers using parental leave, and succeed in avoiding that social pressure leads not to take parental leave. Moreover, providing affordable and available childcare services of good quality sets the base for a resilient society where children increase their chances to have a better education and returns to education in adulthood, women are free to continue working and the whole economy and society benefit from this situation.

The asymmetry in the caring responsibilities of men and women, the pay gap, and the broken careers or part-time work that childbirth may trigger create a potentially explosive combination of factors that penalize women, also when they retire. The gender pension gap increases the odds of women falling into poverty and increases their own and their countries' vulnerability.

The gender perspective analysed so far across the different domains argues for a transformative change that assigns women a central role in constructing resilience.

Resilient women build resilient societies.

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Glossary

Capacity	Refers to the combination of all the strengths, attributes, resources, mechanisms or strategies available to a community, society or organization that can be used to achieve agreed goals, cope with hazards and conflict, and prepare for, mitigate and respond to risks and disasters.
Decent work	Refers to the productive work in which rights are protected, which generates an adequate income, with adequate social protection. Also means sufficient work, in the sense that all should have full access to income-earning opportunities.
Discrimination	Refers to any unfair treatment or arbitrary distinction based on a person's race, sex, religion, nationality, ethnic origin, sexual orientation, disability, age, language, social origin or other status.
Diversity	Refers to peoples' differences, which may relate to their race, ethnicity, gender, sexual orientation, language, culture, religion, mental and physical ability, class, and immigration status. The term recognizes that individuals' preferences and self-expression fall outside commonly understood norms or standards.
Employment rate	A measure of the extent to which available labour resources (people available to work) are being used. They are calculated as the ratio of the employed to the working age population.
Gender	<p>Refers to the socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. Gender is relational and refers not simply to women or men, or girls and boys, but to the relationship between them</p> <p>-The formulation 'women and men' or 'girls and boys' is used throughout the document for ease of reading. It is not meant to exclude people who identify as non-binary.</p> <p>- UNESCO recognizes that gender interacts with other characteristics such as age, ethnicity, wealth, status, ability, geographical location, and sexual orientation, and that there is diversity in gender identity and expression.</p>
Gender analysis	An assessment exercise to understand the differences and similarities between women and men with regards to their experiences, knowledge, conditions, needs, access to and control over resources, and access to development benefits and decision-making powers. It is critical step towards gender-responsive and gender-transformative planning and programming.
Gender aware	Means knowing that there are concerns, differences and inequalities between women and men. Gender and development (GAD) The GAD approach focuses on seeking to address unequal gender relations which prevent inequitable
Gender bias	Is the tendency to prefer or favour one gender over another. It is a form of unconscious or implicit bias, which occurs when we attribute certain attitudes and stereotypes to another person or group of people.

Gender disparities	Refers to the differences in women’s and men’s access to resources, status and well-being, which usually favour men and are often institutionalised through law, justice and social norms.
Gender equality	Equality between women and men – “Gender equality” refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men are the same but that women’s and men’s rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. Gender equality is not a women’s issue but concerns all men, women, girls and boys. Equality between women and men is both a human right and a precondition for, and indicator of, sustainable people-centred development. Under the conditions of gender equality, women and men enjoy the same status and have equal opportunity to realize their full human rights and potential to contribute to national, political, economic, social and cultural development, and to benefit from the results. It is the equal valuing by society of both the similarities and the differences between women and men and the different roles they play.
Gender equality in education	Means that the right to education of all learners – girls and boys, women and men – is respected equally. Learners of all genders are given equal access to learning opportunities, resources and protections, and learners of all genders benefit from and are treated in education equally
Gender equality through education	Refers to the fact that education has a key role to play in addressing the wider issue of gender equality. Educational institutions can promote new attitudes and patterns of belief, transforming the way people think about traditional gender roles and helping to build long-term sustainable change. Achieving equal outcomes for both female and male learners can help to empower people of all genders to create better lives.
Gender equity	refers to the process of being fair to girls and boys, women and men. Because women have often historically been placed at a disadvantage, being fair can involve taking temporary measures to level the playing field for all genders. Equity, therefore, is the means we use to achieve equality.
Gender equity in education	Refers to the special treatment or action taken to reverse the historical and social disadvantages that prevent female and male learners from accessing and benefiting from education on equal grounds. For example, equity measures can favour girls in order to empower them and help them overcome disadvantages of chronic discrimination and catch up with boys. Equity measures, also referred to as ‘positive discrimination’ or ‘affirmative action’, do not necessarily mean that everyone receives the same treatment, but are implemented to ensure fairness and equality of outcomes. For example, providing scholarships or stipends for girls is considered as an incentive for increasing their access to education.
Gender gap	In the context of economic inequality, gender gap refers to the systemic differences in the social and economic roles and wages of women and men. There is a debate about how much of this is the result of gender differences, lifestyle choices, or discrimination.
Gender inequality	Refers to the legal, social and cultural situation in which sex and/or gender determine different rights and dignity for women and men, which are reflected in their unequal access to or enjoyment of rights, as well as the assumption of stereotyped social and cultural roles.

Gender stereotypes	Refers to ascribing certain attributes, characteristics and roles to people based on their gender. Gender stereotypes can be negative (i.e., women are bad drivers, men can't change diapers) and benign (i.e., women are better caregivers, men are stronger). Gender stereotyping becomes harmful when it limits a person's life choices, such as training and professional path, and life plans. Compounded gender stereotypes occur when layered with stereotypes about other characteristics of the person, such as disability, ethnicity or social status.
Gender-based violence	<p>Refers to any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.</p> <p>It can include sexual, physical, mental and economic harm inflicted in public or in private. It also includes threats of violence, coercion and manipulation. This can take many forms such as intimate partner violence, sexual violence, child marriage, female genital mutilation and so-called 'honour crimes'.</p>
Gender-responsive	Refers to activities that are gender sensitive and that articulate policies and initiatives which address the different needs, aspirations, capacities and contributions of women and men.
Gender-sensitive	Refers to activities that acknowledge differences and inequalities between women and men as requiring attention.
Gender-transformative	Refers to policies and initiatives that challenge the root causes of existing and biased/discriminatory policies, practices, programmes and affect change for the betterment of life for all.
Gender-transformative approaches	Refers to programmes and interventions that create opportunities for individuals to actively challenge gender norms, promote positions of social and political influence for women in communities, and address power imbalances between persons of different genders.
Gross Domestic Product (GDP)	The main measure of a country's national economic output. It is the total value of all final goods and services produced in a particular economy
Hours worked	Defined as the total number of hours actually worked per year divided by the average number of people in employment per year. Actual hours worked include regular work hours of full-time, part-time and part-year workers, paid and unpaid overtime, hours worked in additional jobs, and exclude time not worked because of public holidays, annual paid leave, own illness, injury and temporary disability, maternity leave, parental leave, schooling or training, slack work for technical or economic reasons, strike or labour dispute, bad weather, compensation leave and other reasons.
Intersectionality	Intersectionality refers to the way in which different forms of discrimination and disadvantage combine and overlap. Characteristics such as gender, age, disability, ethnicity, geography and socio-economic status can intersect with each other, causing multiple levels of disadvantage and marginalization.
Intergenerational mobility	Intergenerational mobility measures the extent to which the living standards of a generation are higher than those of their parents
Labour force	Refers to the sum of all persons of working age who are employed and those who are unemployed.

Neet	Represents the share of young people who are not in employment, education or training (NEET), as a percentage of the total number of young people in the corresponding age group, by gender.
Occupational sex segregation	Refers to a situation in which women and men are concentrated in different types of jobs and at different levels of activity and employment, with women being confined to a narrower range of occupations (horizontal segregation) than men, and to the lower grades of work (vertical segregation).
Patriarchy	<p>Refers to a traditional form of organizing society that often lies at the root of gender inequality. According to this kind of social system, men, or what is considered masculine, is accorded more importance than women, or what is considered feminine. Traditionally, societies have been organized in such a way that property, residence, and descent, as well as decision-making regarding most areas of life, have been the domain of men.</p> <p>This is often based on appeals to biological reasoning (that women are more ‘naturally’ suited to be caregivers, for example).</p>
Peacebuilding	<p>The UN Secretary-General’s Policy Committee has described peacebuilding as:</p> <p>‘A range of measures targeted to reduce the risk of lapsing or relapsing into conflict by strengthening national capacities at all levels for conflict management, and to lay the foundation for sustainable peace and development. Peacebuilding strategies must be coherent and tailored to the specific needs of the country concerned, based on national ownership, and should comprise a carefully prioritized, sequenced, and relatively narrow set of activities aimed at achieving the above objectives’ (UN PBSO, 2010: 5).</p>
Prevention	Refers to the activities that are undertaken to avoid the adverse impact of disasters, including through physical risk reduction and environmental protection. This concept encompasses mitigation
Resilience	Resilience is the ability to plan and prepare for, absorb, withstand, recover from and adapt to adverse events and disruptions’. (It) ‘means working to thrive through adversity rather than survive despite adversity by learning how to identify and capitalise upon any opportunities that crises, disruptions and longer-term evolutions may offer’.
Sex	Refers to the biological characteristics that distinguish women and men
Social protection	Refers to a country’s system of benefits for people and families when they are poor, sick, disabled, out of work, elderly or young and dependent on others. The benefits may be provided by the state’s social security system, through private insurance, through personal savings, through various social customs and relief organizations, or through some combination of these sources.
Sustainable Development Goals (SDGs),	Sustainable Development Goals (SDGs), or Sustainable Development Agenda 2030, refer to the set of 17 goals adopted in September 2015 by the Member States of the United Nations to end poverty, protect the planet and ensure prosperity for all. These goals succeed the Millennium Development Goals. Sustainable Sustainable Development Goal 5 focuses on girls’ and women’s empowerment and gender equality.
Unemployment rate	The unemployed are people of working age who are without work, are available for work, and have taken specific steps to find work, it is measured as the number of unemployed people as a percentage of the labour force.

Unpaid care and domestic work

Refers to non-market, unpaid work carried out in households (by women primarily, but also to varying degrees by girls, men and boys) which includes both direct care (of persons) and indirect care (such as cooking, cleaning, fetching water and fuel, etc.) These activities are recognised as work, but typically not included in the System of National Accounts or – in the case of activities like fetching water/fuel – are theoretically included but often not well documented or accounted for

Vulnerability

Refers to the characteristics and circumstances of a community, society, system or asset that make it susceptible to the damaging effects of a hazard or conflict. Vulnerability may derive from various physical, social, economic or environmental factors

Working age population

The working age population is defined as those aged 15 to 64.

Abbreviations

AIDS	Acquired immuno deficiency syndrome – is human immunodeficiency syndrome, a series of diseases caused by the human immunodeficiency virus or HIV.
CEDAW	the Convention of Elimination of all Forms of Discrimination Against Women.
EU	The European Union.
ILO	The International Labour Organization, a United Nations agency.
ISCED	Refers to international classification for organising education programmes and related qualifications by levels and fields. designed UNESCO to serve as an instrument suitable for assembling, compiling and presenting comparable indicators and statistics of education, both within countries and internationally.
OECD	The Organisation for Economic Co-operation and Development.
STEM	Science, technology, engineering, and mathematics.
UIS	UNESCO Institute for Statistics.
UNDP	The United Nations Development Programme.
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNESCO group countries	All members of UNESCO are organized into six regional electoral groups by decision of the General Conference at its 40th session for the purpose of elections to the Executive Board. They are the following <ul style="list-style-type: none">• Group I (Western European and North American States)• Group II (Eastern European States)• Group III (Latin-American and Caribbean States)• Group IV (Asian and Pacific States)• Group V (a) (African States)• Group V (b) (Arab States)
UNICEF	The United Nations Children’s Fund
WB	The World Bank.

Empowering women for the good of society

Gender-based resilience

“Diversity is a fact. Inclusion is an act.”

This report contributes first-time hard evidence about the impact of gender discrimination on the resilience of economies and societies. Here, resilience is understood as “the capacity to withstand or recover quickly from shocks”. The analysis shows the extent to which the gaps that women endure in relation to wages, non-paid work, the glass ceiling, and violence, among others, weaken countries.

The report proposes an encompassing framework to identify key determinants and mechanisms shaping gender-based discrimination. It then takes this framework to existing data and identifies some of the many challenges that women are confronted with, assesses the magnitude of the different facets that this problem takes, and highlights how they relate to societal dynamics, economic performance and resilience to shocks.



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