▶ The Gender Pay Gap in Montenegro

A statistical update
and policy implications

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The gender pay gap (GPG) represents one of the clearest indications of the persistence of gender inequalities in the labour market. Its eradication is listed among the Sustainable Development Goals (target 8.5), in line with the ILO Equal Remuneration Convention, 1951 (No. 100), which calls for men and women to receive equal remuneration for work of equal value. Accordingly, over the last decade many countries around the world have increased efforts to eliminate the GPG. This report aims to inform and advance the debate on the GPG in Montenegro by providing a statistical analysis of the GPG and reviewing the country's relevant legal and policy frameworks. First, the report provides updated estimates of the GPG in the country, including its evolution over time, differences across groups and possible determinants. It then presents a description of the policies in place to reduce the GPG and how they align with the norms set in international labour standards. Based on this analysis and review, the report presents policy recommendations to eliminate the GPG.

The results of the statistical analysis reveal that the average GPG in Montenegro was equal to 21.6 per cent in 2021. This means that, on average, women earned 78.4 cents for every euro earned by men. This represents an increase compared to 2014, although results using alternative measures of the GPG are less conclusive with respect to its evolution over time. The analysis also shows that the GPG is higher for women at the top of the wage distribution and in several categories: prime-age workers, highly educated workers, foreign workers, and employees with fixed-term contracts. These wage differentials exist even though, on average, female employees in Montenegro have a higher educational attainment compared to male employees. This indicates that the GPG cannot be explained by differences between men and women in terms of education, age, sector, occupation or other observable factors. It suggests that an important part of the GPG is due to direct or indirect discrimination in pay between men and women. The report tests three hypotheses in this regard. Firstly, the evidence appears to support a relationship between the GPG and motherhood or other career breaks due to family care responsibilities. Secondly, the evidence is also consistent with horizontal discrimination, whereby women are assigned to low-quality job tasks compared to men, even when they work in the same occupation. Thirdly, there appears to be a wage penalty against feminized occupations (i.e. those occupations employing a large share of women). Moving from an occupation where men and women are equally balanced to one that employs mostly women can lower average wages by almost 50 per cent for all women and men in that occupation.

These results are then put into context in the review of the country's legal and policy frameworks to support and promote gender equality. Montenegro's Constitution includes anti-discriminatory principles and the labour code specifically refers to the right to equal pay for work of equal value. Other anti-discriminatory practices aim to promote female employment, including by preventing harassment at the workplace. In addition, a series of national plans and strategies have been adopted to proactively promote gender equality and women's empowerment. While positive overall, these laws and policies have not been sufficient to significantly reduce the GPG. The report notes that regulations on maternity leave are in line with ILO and EU standards but legislation on paternity and parental leave needs to be amended to comply with the EU Acquis. Childcare services are also generally available, and the share of children attending early childhood education and care services is high compared to other countries in the region. However, the quality of the childcare services has suffered from significant overcrowding.

The report concludes by recommending a series of measures that could be considered to help tackle the GPG and reduce other forms of gender inequalities in the labour market. Based on international best practices, it suggests policy initiatives in the areas of: (i) promoting equal pay for work of equal value, for example by introducing gender-neutral job evaluation systems and promoting pay transparency at the enterprise level; (ii) wage and collective bargaining policies to eliminate the GPG, such as regularly updating the minimum wage and promoting collective bargaining as a means to reduce gender wage inequalities; and (iii) promoting female labour force participation, including macroeconomic policies to attract women to the labour market and care policies to improve work-life balance. Additionally, the report calls for the collection of better data on men's and women's roles inside and outside of the labour market to enable better measurement of the GPG and understanding of its different drivers.

▶ 1. Introduction

THE GPG IN MONTENEGRO

▶ 1. Introduction

The gender pay gap (GPG) represents a key parameter of policy interest and one of clearest indications of the persistence of gender inequalities in the world of work. In its simplest definition, the GPG is the difference in wages between male and female employees expressed as a share of male wages.[1] The existence of a GPG is detrimental from both an equality and an economic growth viewpoint. From an equality perspective, the GPG implies that women face less favourable working conditions than men and are therefore treated unfairly. This can perpetuate gender differences inside and outside of the labour market and contribute to undesirable levels of income inequality. From the viewpoint of economic growth, the presence of a GPG can discourage women to enter the labour market and/or to advance in their careers, thus creating a reservoir of untapped potential for economies and societies at large. Moreover, the GPG reflects a lack of social justice in the world of work.

For these reasons, the GPG has come to the centre of attention of policy makers in many countries. Sustainable Development Goal (SDG) 8, "Decent work and economic growth", aims to achieve, by 2030, "equal pay for work of equal value" (target 8.5). Achieving target 8.5 would make an important contribution towards reducing the gap between "average hourly earnings of female and male employees" (indicator 8.5.1). Since 2017, the Equal Pay International Coalition (EPIC), a multi-stakeholder international coalition established by the ILO, UN Women and the OECD, has called for a reduction of pay differences between men and women to progress towards SDG target 8.5. Joining EPIC is another effective way for countries, institutions and entities (public or private) to raise awareness on the importance of reducing pay gaps between women and men for economies and societies.

At the international level, the ILO Equal Remuneration Convention, 1951 (No. 100) is based on the principle that women and men have the right to receive equal remuneration for work of equal value. This means not only equal remuneration for doing the same job, but also equal remuneration when their job functions are different but bring equal value (to the enterprise or institution) based on an evaluation conducted using objective and gender-neutral criteria (Oelz et al., 2013).

While tackling the GPG represents an important area of policy action, it is important to remember that gender differences in pay levels are part of broader disparities between men and women in the world of work. Policy efforts should also be directed towards eliminating gaps in labour force participation and employment rates between men and women. Notably, G20 leaders in the 2014 Summit in Brisbane committed to reducing the gender gap in labour force participation by 25 per cent by 2025. A coordinated approach to tackling gender differences in employment and pay levels can create positive spillover effects; for example, as more women enter the labour force, pressure increases to reduce gender wage disparities. However, for this to happen, women must be employed across multiple sectors and occupations as opposed to being segregated in low-skilled sectors or occupations (ILO 2018). Otherwise, higher female labour force participation can actually reinforce gender stereotypes and lead to an even higher GPG.

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1. The GPG is estimated only for the population of wage employees, therefore excluding individuals who are in other forms of employment. See section 3 of the report for the reasons for this choice as well as other methodological details.

Despite this increased policy attention, progress in eliminating the GPG remains slow and uneven across countries. At the global level, the GPG is around 15.6 per cent when measured at the hourly rate and reaches 20.5 per cent when computed using monthly wages (ILO 2018).[2] Additionally, the GPG remains particularly high in some countries and for certain categories of workers within countries. Importantly, in most countries, pay differences between men and women are largely unexplained, which means they are mainly structural. Therefore, achieving a similar compositional distribution of women and men, for example in terms of education, occupation, experience, working time arrangements, etc., may reduce some of the gap, but not necessarily the greater part of it. Thus, understanding both the size of the gap and its determinants is essential for countries to put forward effective policy action against pay differences between women and men.

Against this backdrop, this report provides updated estimates of the GPG in Montenegro for the 2014–2021 period.[3] This is a period during which gender inequalities have decreased in Montenegro.[4] Nonetheless, gaps between men and women remain larger than those observed in many uropean Union (EU) member states. This is especially true when it comes to access to financial resources (MONSTAT 2023). Further progress in achieving gender equality is constrained by, among other factors, institutional and cultural obstacles, including the prevalence of cultural barriers and pervasive traditional gender roles and stereotypes. This extends to the labour market, where one in every two people believe that legislation allows employers to ask female job candidates to sign a declaration stating that they are not pregnant. A similar share of individuals report that successful female professionals must inevitably neglect their families (UNDP 2021).

Section 2 provides a statistical analysis of gender gaps in labour force participation and employment rates in Montenegro. This is important because differences in pay levels should be interpreted in consideration of broader differences in the labour market. The evidence shows that Montenegro has relatively low rates of female employment and labour force participation, with only 64.4 per cent of women between the age of 20 and 64 participating in the labour market, compared to 79.2 per cent of men. The share of dependent employment among women is higher compared to the same share among men, whereas the share and number of men in self-employment is higher. This might be the result of obstacles for women in accessing entrepreneurial activities as well as preferences related to work-life balance. Women are over-represented among certain high-skilled occupations such as managerial and professional activities. This also reflects the fact that women in wage employment tend to be more qualified than men in wage employment.

Section 3 presents estimates of the GPG. These estimates are produced using the European Union Statistics on Income and Living Conditions (EU–SILC) database. These are regular annual surveys at national level constructed by EUROSTAT and the national statistics authorities of Montenegro. EU–SILC for Montenegro are available since 2013. The methodology to estimate and decompose the GPG used in this paper follows the methods from the *ILO Global Wage Report 2018/19: What Lies behind*

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2. Differences in the GPG when measured at the hourly or monthly rate can be explained by the fact that women, other than earning less than men on an hourly rate, also tend to work fewer hours per month (e.g. higher share in part-time).

3. The last available GPG estimates referred to 2012. Of course, in the meantime, other indicators have been produced in order to track the evolution of gender inequalities inside and outside of the labour market; often following concepts and methodologies common to EU member states. For instance, Montenegro now produces the Gender Equality Index following a methodology developed by the European Institute for Gender Equality (EIGE).

4. For instance, the Gender Equality Index elaborated by EIGE has increased from 55 in 2019 to 59.3 in 2023, higher than the average increase reported in EU member states. However, the average value of the indicator in the EU (equal to 68.6 in 2023) is still higher than the one observed in Montenegro (MONSTAT 2023).

Gender Pay Gaps (see ILO 2018). It is important to keep in mind, however, that there are multiple ways of estimating pay gaps, each of which have their own merits and shortfalls. The report will present a range of different estimates, showing why they might differ and interpreting possible inconsistencies.

Using a simple measure of the GPG, the gap was estimated to be 11.1 per cent in 2021 when computed at the median of the wage distribution and 21.6 per cent when estimated at the mean.[5] However, when a more robust factor-weighted measure of the GPG is used to account for compositional differences in male and female employment, the GPG rises to 13.6 per cent at the median and 25.9 per cent at the mean. The results also reveal that the GPG in Montenegro has increased from 12.5 per cent in 2014 when measured at the mean of the wage distribution, but it has remained roughly stable when measured at the median.

The difference between mean and median GPG (using either the simple or the factor-weighted method) is explained by the different ways they summarize the wage distribution. The mean takes into account all wages, including those at the upper tail, which can lead to a higher estimated measure than the median. The median considers only the central location in the wage distribution. Sometimes, it is more informative to review pay gaps at different locations of the wage distribution to complement raw aggregate values.

For example, in the case of Montenegro, men earn 25 per cent more than women in the top 10 per cent of the wage distribution. At both the bottom and middle of the wage distribution, the difference is only about 10 per cent. The difference in the GPG between the top and the bottom of the wage distribution can be attributed both to minimum wage policies that tend to reduce wage inequalities between low-paid women and men and the fact that wages at the top are subject to a more complex wage determination process. This example shows two things; firstly, there is a need to decompose the GPG at each decile of the wage distribution to better understand how to design policies that effectively reduce the pay gap across the wage distribution; and, secondly, looking at the raw mean and median GPG can be a very limiting exercise for the purpose of policy design.

In view of this, the paper provides a detailed analysis of the differences in the GPG across groups in the population by looking at the factors that underlie the composition effect. This is what is referred to as the "explained" part of the GPG. The results show that the GPG increases with age.[6] Male and female workers below the age of 25 earn similar wages, but wages substantially increase with age for male workers while remaining stable for female employees. Additionally, the GPG at the mean increases with educational attainments. This might be because men have more continuous careers, while women see frequent employment interruptions, especially at the beginning of their careers due to the unequal sharing of family responsibilities (e.g. due to childcare). The analysis also finds that the GPG is higher among foreign individuals compared to nationals and for individuals under fixed-term contracts. This suggests that certain groups of female employees may be subject to a double penalty in the labour market because of their gender as well as some other characteristic, such as nationality or type of

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5. Data on wages in the EU–SILC database refers to the previous calendar year, compared to the year of the interview. However, in the report we will refer to the year of the interview to talk about the GPG in that same year. For instance, the GPG in 2021 is the one reported in the 2021 EU–SILC survey, which however reports information on wages for 2020.

6. In order to avoid that estimates are on the GPG are contaminated by the effects of the COVID-19 pandemic, we will use GPG estimates from the 2020 EU–SILC (reporting data for 2019) in order to derive all the results for the heterogeneous analysis (e.g. by age, education, sectors). In any case, it is worth noting that GPG estimates do not differ significantly between the 2020 and 2021 EU–SILC waves. This is in line with the fact that the GPG is a rather structural indicator in the labour market (i.e. it captures long-standing gender differences, rather than cyclical fluctuations). Additionally, and as will be seen in section 2, the crisis that followed after the eruption of the COVID-19 pandemic hit similarly men and women in the Montenegrin labour market.

contract. Looking at the GPG by broad sector of economic activity and occupation, the mean GPG is positive in 11 out of 13 economic sectors. The situation is more mixed when considering the GPG by occupation, although more highly paid occupations tend to report a higher GPG.

The final part of the analysis in Section 3 examines the structural component of the GPG in Montenegro and finds that a large part of the GPG remains unexplained, especially at the top of the wage distribution. This means that the GPG cannot be explained by differences between men and women in terms of education, age, sector, occupation or other observable factors. It suggests that an important part of the GPG can be attributed to direct or indirect discrimination in pay between men and women. The report tests three hypotheses in this regard. Firstly, the evidence appears to support the relationship between the GPG and motherhood or career breaks due to other family care responsibilities. Secondly, the evidence is also consistent with horizontal discrimination, whereby women are assigned to low-quality job tasks compared to men, even when they work in the same occupation. Thirdly, there appears to be a wage penalty against feminized occupations (i.e. those occupations employing a large share of women). Moving from an occupation where men and women are equally balanced to one that employs mostly women can lower average wages by almost 50 per cent for all women and men that participate in such an occupation.

These results inform a subsequent discussion about policies to reduce the GPG in Montenegro. Section 4 highlights the current legal framework and other initiatives. Anti-discriminatory principles are included in the Constitution, and the labour code explicitly refers to the principle of equal pay for work of equal value.[7] Other legislation aims to promote female employment and to prevent harassment and sexual harassment at the workplace, which can encourage more women to participate in paid employment. Several national plans include proactive interventions to promote gender equality as well as female empowerment and women's participation in the labour market. The length of maternity leave is in line with ILO and EU standards, although benefit levels are low for women with short job tenures prior to taking leave. However, the right to paternity leave is very limited (3 days). Regarding childcare services, the share of children attending crèches and pre-primary schools is relatively high compared to other countries in the region. However, there are issues related to the quality of the services provided due to overcrowding of pre-school educational institutions.

In this context, a set of initiatives could be considered to reduce the GPG in Montenegro. While measures explicitly focused on the GPG will be essential, they will not be sufficient to tackle gender wage differentials. This is because women face a number of obstacles to labour market integration (e.g. horizontal and vertical segregation), which need to be addressed to deliver the desired results. In view of this, the reports puts forward a series of policy proposals that are informed by international best practices. In particular, interventions could be envisaged in the areas of equal pay for work of equal value (introducing gender-neutral job evaluations and promoting pay transparency within enterprises), wage and collective bargaining (promoting gender sensitive collective bargaining agreements and frequently updating the minimum wage) as well as the promotion of female labour force participation (gender friendly macroeconomic policies and care policies to improve work-life balance).

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7. However, the definition of work of equal value does not rely on a job evaluation process as recommended by the ILO.

▶ 2. Gender gaps in labour force participation and employment rates

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This section documents gender gaps in labour force participation and employment rates in Montenegro as well as differences in the types of jobs that women and men hold. This analysis is a necessary first step for the later discussion of the evolution of the GPG, as it allows to bring the discussion on gender differences in wage levels as part of a broader analysis of gender inequalities in the labour market. Indeed, a given percentage difference in average wages between men and women will lead to different conclusions depending on whether the share and composition of male and female employment is similar or different.

Consider, for instance, a hypothetical case in which the GPG is low but very few women are in wage employment compared to men. In this context, a low GPG is a good signal because gender pay inequality is not significant among those that participate. However, the estimate does not consider a counterfactual scenario where women's higher labour force participation could in fact increase the pay gap. Thus, barriers for women to access paid employment (e.g. lack of childcare services, discrimination) would in part explain the low GPG. Similarly, consider a case in which the GPG could be considered low, but women are on average more educated than men. Even in this case, a low GPG could in part be hiding a mismatch for women in employment.

The analysis in this section compares gender gaps in labour force participation and employment rates in Montenegro with the situation of other countries, both inside and outside of the EU.[8] It shows how certain differences, such as in employment rates between men and women, compare to those in other countries in the region. Indeed, most countries report some differences between male and female employment rates. For example, the female employment rate is lower than the male employment rate in all EU countries. In this context, it is key to understand whether the values for Montenegro are exceptional or in line with those of other countries.

In most of the cases, data in this section refer to 2019 in order to present a snapshot of gender differences in the labour market before the outbreak of the COVID-19 pandemic.[9] This allows a focus on structural differences in employment rates, leaving aside any temporary variation generated by the economic and labour market crisis due to the pandemic. However, it is important to keep in mind that in most countries the economic crisis that followed the pandemic had a disproportionate impact on women. This means that gender differences in employment have increased in most countries compared to what is reported in this section.[10]

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8. For ease of comparison, the countries that will be included in the comparative analysis are those for which Eurostat reports comparable labour market statistics.

9. Consistently, in most of the analysis on the GPG, the report will present data from the EU–SILC 2020 (which includes information on wages for 2019).

10. However, this is not the case in Montenegro, where employment levels have decreased more for men compared to women between 2019 and 2020 (see below for details).

With these caveats, figure 1 presents the labour force participation rate for the entire population (panel A) and for men and women separately (panel B) – where participation rates include both workers and unemployed seeking work.[11] We denote with different colours values for Montenegro and the average for the EU. The figure shows that Montenegro has a relatively low overall labour force participation rate of 71.8 per cent of the total working age population in 2019. This is around seven percentage points below the EU-27 average and almost 15 percentage points below values registered in some Northern European countries. Only Serbia, North Macedonia, Romania, Italy and Tukey report lower labour force participation rates among the countries that are considered in the analysis.

Panel B of figure 1 presents the labour force participation rate separately for men and women for the same group of countries and plots the gap between these values (blue dot). It shows a 14.8 percentage point difference between the male (79.2 per cent) and the female (64.4 per cent) labour force participation rates in Montenegro. The figure also reveals a clear empirical pattern across countries: the variation in male labour force participation is relatively low across countries (a maximum of 13 percentage points) compared to the cross-country variation observed in the female labour force participation rates (a maximum of 43 percentage points). This means that low overall rates of labour force participation are found in those countries where female labour force participation is low.

▶ **Figure 1: The labour force participation rate in 2019: An international comparison**

Panel A: Overall labour force participation rate, 2019
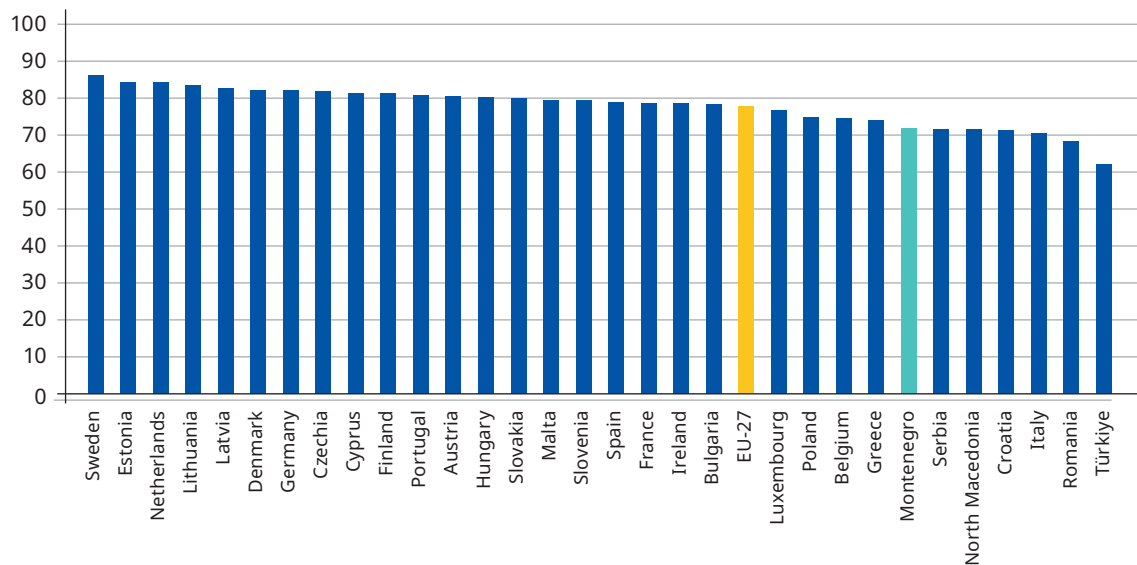
11. Here and in all subsequent figures, data will refer to the working age population between the age of 20 and 64.

Panel B: Male and female labour force participation rates, 2019

Note: Panel A reports the overall labour force participation rate for individuals aged 20–64 in 2019 (i.e. both men and women), for Montenegro and other selected countries. Panel B disaggregates the information by sex, and it reports also the difference between the male and female labour force participation rates.

Source: Author's elaboration based on Eurostat data.

A very similar picture emerges when examining total employment rates. Montenegro has the third lowest rate among countries for which Eurostat reports comparable information (see panel A of Appendix figure 1) and a relatively high gap between men and women (panel B of Appendix figure 1). Similarly, the unemployment rate in the country is one of the highest in the sample at 15.2 per cent in 2019 (panel A of Appendix figure 2). However, in this case, gender differences are not marked: the male unemployment rate is only one percentage point higher than the female unemployment rate (panel B of Appendix figure 2). This suggests that the main factors keeping women out of employment are barriers to entering the labour force. Conditional on participating in the labour market, men and women have a similar probability of being in employment.

Regarding the evolution of gender gaps in employment rates over time, figure 2 shows that between 2013 and 2019, both the male and female employment rates increased. However, the increase was faster for men compared to women. As a result, the gender difference in employment rates has increased from 10.6 in 2013 to 13.3 per cent in 2019 (blue bars). The outbreak of the COVID-19 pandemic interrupted the increase in both male and female employment rates. However, slightly more men than women lost their jobs in Montenegro at the beginning of the pandemic. As a result, the difference between the male and the female employment rates decreased slightly to 12.9 per cent in 2020.[12] However, at 12.9 per cent, the gender gap in employment is still higher than it was in 2013.

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12. This trend is in contrast with the evolution of the labour market in many other countries, where the COVID-19 pandemic has generated a disproportionate loss in employment among women.

▶ **Figure 2: Male and female employment rates (lines) and gender gap in employment rates (bar)**
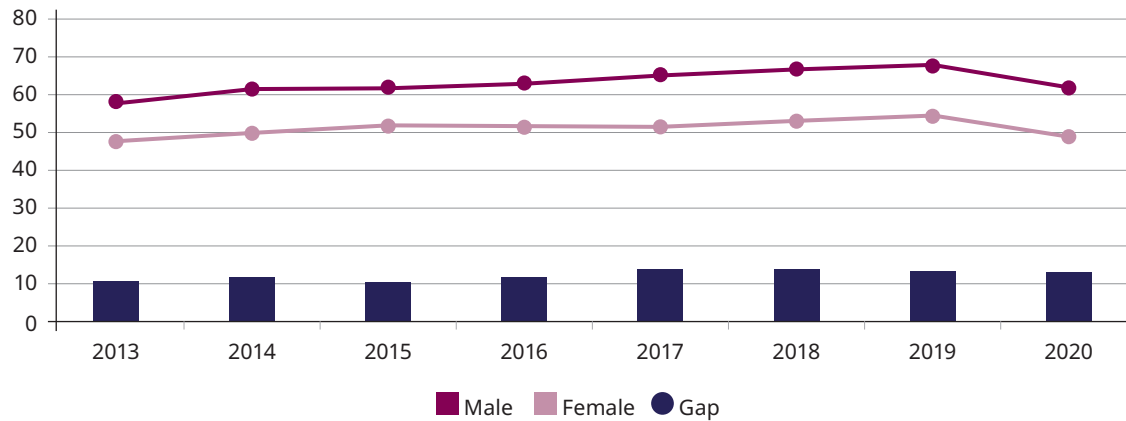
Note: The figure reports the male and female employment rates over time as well as the gap between the two rates.

Source: Author's elaboration based on Eurostat data.

The analysis presented thus far highlights that women have a substantially lower probability than men to be in employment in Montenegro and that this gap has increased slightly during the last decade. However, another important dimension to consider is how men and women in employment are distributed across different types of jobs. This has important implications in terms of job security, earnings as well as social protection coverage. This also has a bearing on the discussion that follows on the GPG, which is computed only for wage employees. In this sense, it is important to understand the extent to which men and women in employment are working as dependent employees, as well as the characteristics of their employment.

To start, the distribution of employment across its different possible statuses is examined (i.e. employees, self-employed persons with employees, self-employed persons without employees and contributing family workers). The distributions are plotted separately for men (panel A) and women (panel B) between 2013 and 2020. For men, the data shows that the share of employed individuals who are in dependent employment has continually decreased over the period of the analysis, going from around 80 per cent of total male employment in 2013 to 74 per cent in 2020. For women, the share of dependent employment has remained roughly stable, representing around 85 per cent of total female employment in 2020. This means that the share of dependent employment is higher for women than men, while men have a higher likelihood of being in self-employment. In particular, men are on average three times more likely than women to be self-employed without employees, and two times more likely to be self-employed with employees. This likely reflects differences in access to entrepreneurial activities between men and women in Montenegro. Finally, the share of individuals in employment who are contributing family workers is low for both men and women, but it is roughly twice as large among female employed individuals.

▶ **Figure 3: Distribution of employment by status in employment in 2019**

Panel A: Men

Panel B: Women
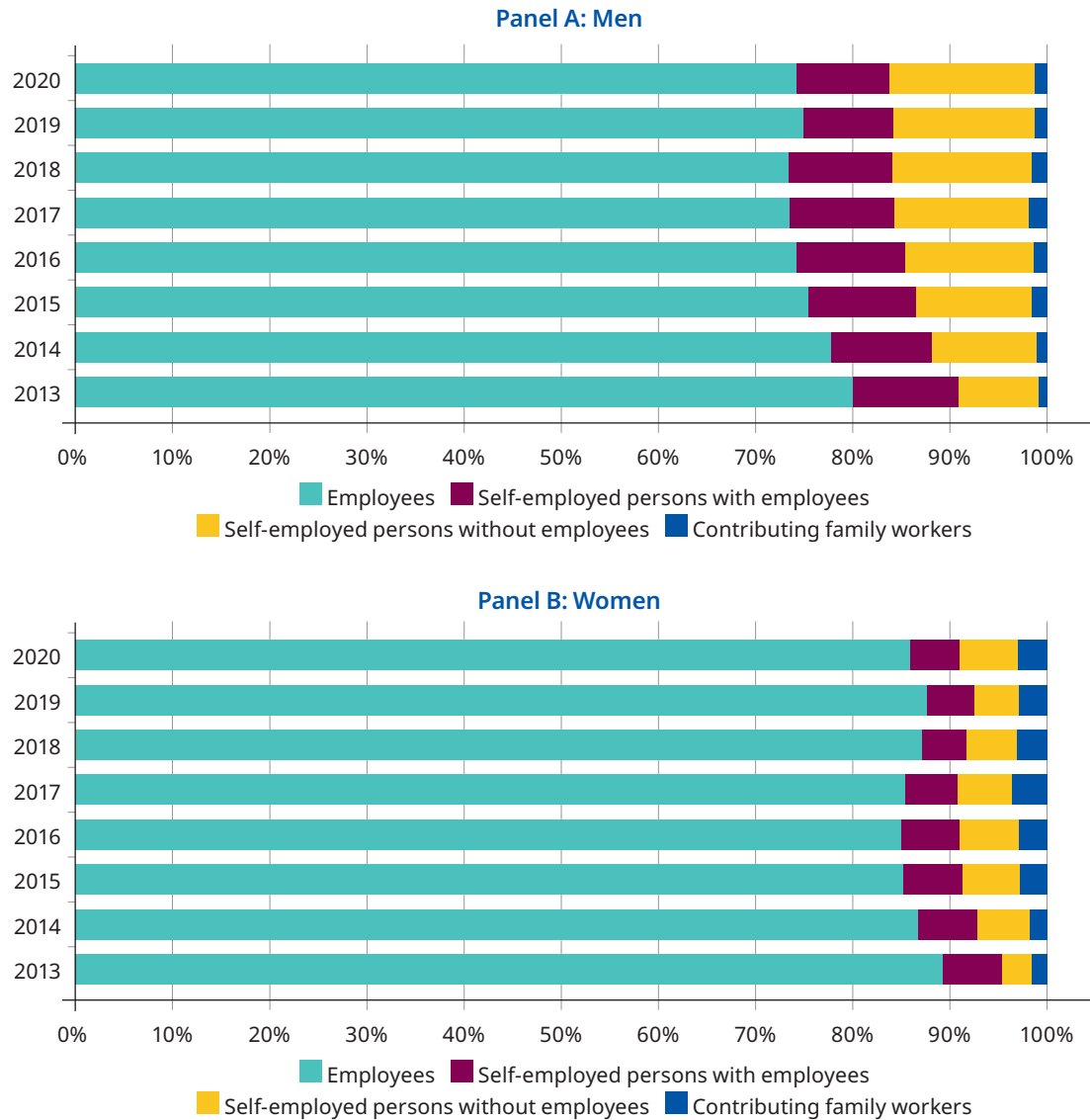
Source: Author's elaboration based on Eurostat data.

Regarding the composition of the population of employees, 48.6 per cent of all employees were women in Montenegro in 2019 (figure 4, panel A). Looking at the disaggregation by age groups, women constituted 43.9 per cent of all employees between the ages of 15 and 24 years; 49.3 per cent of all employees between 25 and 49; and 47.5 per cent of all employees between 50 and 64 years.

Another important finding emerges from the gender distribution of employees by different educational groups: women represent 40.5 per cent of employees with low educational attainments (levels 0–2 using the ISCED 2011 classification). However, the share of women increases to reach 43.4 per cent of all employees with intermediary educational attainments (levels 3 and 4) and, most notably, 59.2 per cent of highly educated individuals (i.e. those with tertiary education, corresponding to ISCED levels from 5 to 8). As a result, the average educational attainment of employees in Montenegro is higher among women than men.

Panel B of figure 4 shows the distribution of male and female employees by occupational groups. If women are clustered in specific occupations, it could imply a form of segregation in the labour market. In the case of Montenegro, the figure shows that women represent the majority of total employment in many occupational groups, including managers (54.5 per cent), professionals (64.1 per cent) and service and sales workers (52.5 per cent). However, women represent a small share of employment in two occupations: craft and related trades workers (11.3 per cent) and plant and machine operators and assemblers (5.2 per cent).

▶ **Figure 4: Share of men and women in wage employment in 2019**

Panel A: Overall, by age groups and educational attainments

Panel B: By occupational categories

Panel C: By economic sector of activity
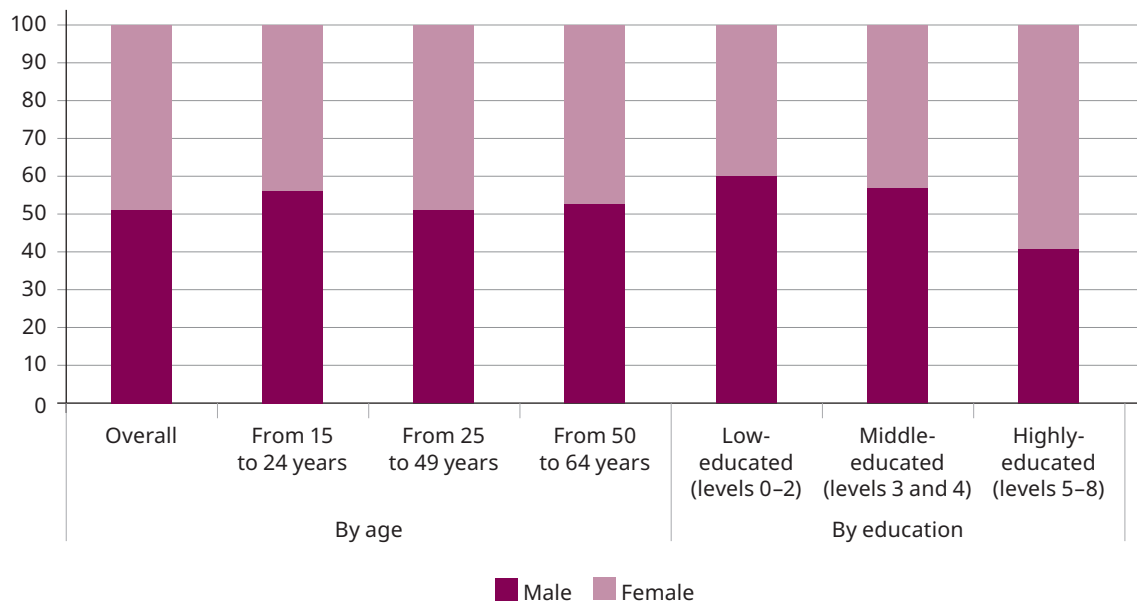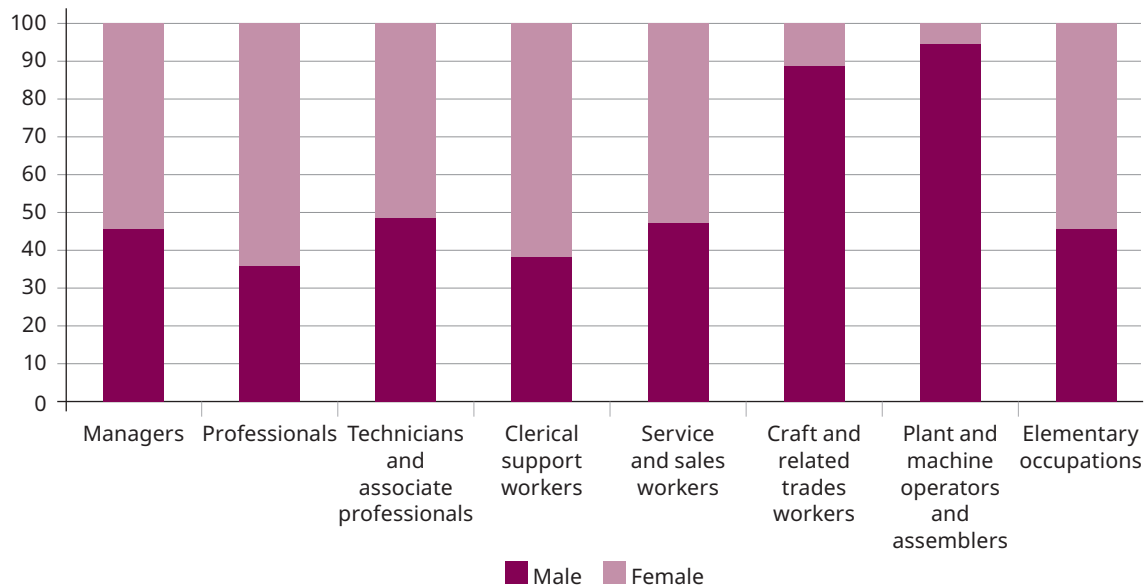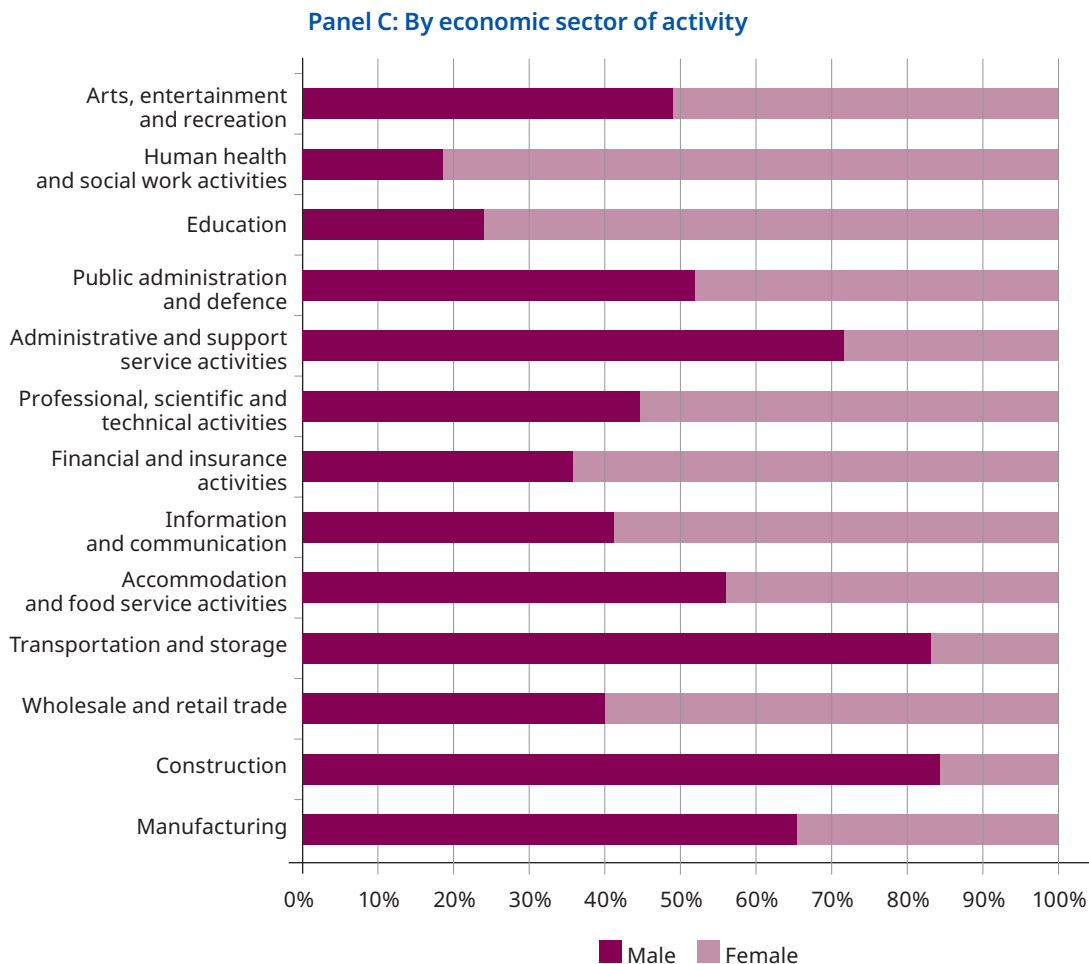
Note: The figure shows the distribution of wage employment between men and women in 2019, overall and by different groups. In particular, panel A presents the distribution by age groups and educational attainments, panel B by occupation and panel C by economic sector.

Source: Author's elaboration based on Eurostat data.

The final panel of figure 4 (panel C) presents the share of male and female employees by sector of economic activity using the revised EU classification of economic activities (NACE).[13] The findings reveal that women are over-represented among wage employees in certain specific sectors, such as "Human health and social work activities" (81.5 per cent), "Education" (76.1 per cent) and "Wholesale and retail trade" (60 per cent). Women are also over-represented in sectors such as "Financial and insurance activities" as well as "Information and communication", which however represent only a limited share of total employment. At the same time, women are under-represented in sectors like "Manufacturing" (34.7 per cent), "Construction" (15.8 per cent) and "Transportation and storage" (17 per cent).

13. Information in the figure is reported for all sectors included in the revised NACE classification, except for those for which the available information was not available in Eurostat. These sectors are "Electricity, gas, steam and air conditioning supply", "Agriculture, forestry and fishing", "Mining and quarrying", "Water supply; sewerage, waste management and remediation activities" and "Real estate activities".

The discussion presented in this section shows that there is a roughly equal number of male and female employees in Montenegro and that women in wage employment have on average higher educational attainments. Additionally, women tend to be represented in varied sectors and occupations, rather than being clustered around a few traditional activity types. Based on observable characteristics, women in wage employment should earn similar wages compared to men. The next section will test this hypothesis by providing detailed estimates of the GPG.

▶ 3. The gender pay gap in Montenegro: A statistical update

THE GPG IN MONTENEGRO

▶ 3. The gender pay gap in Montenegro: A statistical update

This section presents the estimates of the GPG in Montenegro. The analysis follows the methodology developed by the ILO and used to produce comparable estimates of the GPG across countries and over time (ILO, 2018). The analysis will draw on microdata from the EU–SILC database, which has been run in the country since 2013 and has been made available by MONSTAT for the purpose of this research.[14] This is the only individual-level source of information containing data on wages from survey respondents, which is necessary to produce a more detailed analysis of the GPG, particularly to produce estimates that go beyond the mean and median pay gaps. Other surveys that are regularly run in the country, including the labour force survey, either do not report information on earnings or provide this information only at a broader level of detail (e.g. by brackets), which does not allow a precise calculation of the GPG.

In its simplest form, the GPG is the difference in wages between male and female employees, expressed as a share of male wages. For instance, if men earn 10 on average and women earn 8 on average, the GPG will be equal to 20 per cent ((10–8)/10=20%).[15] This simple definition represents one of the main advantages of the GPG, and one of the reasons why it has become a popular indicator to track gender differences in the labour market. However, many decisions about data and definitions need to be taken when estimating the GPG, and these can lead to very different estimates of the GPG. In view of this, the following methodological notes describe how this research was carried out.

▶ *Sample*: The sample includes the population of dependent employees, thereby excluding self-employed and other types of workers (e.g. contributing family workers). At the same time, all types of employees (e.g. part-time and full-time, with either permanent or temporary contracts) will be used to obtain the GPG estimates. The decision to focus on employees follows the ILO methodology for estimating the GPG and it is motivated by the fact that labour income is more comparable for this group of workers, and it generally set by an employer, either autonomously or as a result of collective bargaining agreements. Compare this situation with the case of a self-employed individual who can set her own wage and working time and for whom it would be difficult to understand what lies behind the GPG (e.g. personal preferences or barriers in the labour market). Bearing these considerations in mind, it is important to note that the restriction of the GPG to wage employees implies that we are not considering other types of labour income disparities between men and women.

▶ *Age*: While estimates of the GPG include all types of employees, individuals above the age of 70 are excluded. This is because employment rates for older individuals are very low and divergent between men and women. Also, the few individuals in wage employment above the age of 70 might not be representative of the overall employed population, thus skewing the results.

▶ *Time*: Gender differences between men and women can be theoretically measured using either hourly or monthly wages. On the one hand, measuring the GPG using hourly wages can be useful for obtaining an intuitive measure of discrimination (i.e. how much women and men earn for the same amount of time, which corresponds to an hour of work). On the other hand, the GPG at the monthly level can better account for differences in the number of hours worked, as women on average work fewer hours than men in most countries, which may be related to their taking a higher share of unpaid care and family work. For this reason, the monthly GPG is generally higher than

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14. GPG estimates will however be presented only stating from the year of 2014, given that information on wages for the first year in which the survey was run is not fully reliable.

15. A negative value of the GPG would then be reported if women earn on average more than men.

the hourly GPG, and the ILO recommends estimating the GPG both at the hourly and monthly level (ILO, 2018). In practice, however, the EU–SILC database provides an accurate measure of the GPG only when estimated using the hourly rate, not when using monthly wages (see footnote 16 for details). Therefore, most of the estimates that are presented here are based on hourly wages.

▶ *Measures*: The GPG can be computed using a raw measure that simply compares summary wage estimates of men and women or by a factor-weighted measure that accounts for compositional differences in the labour force. Additionally, the GPG can be decomposed in order to understand what lies behind a given level of the indicator. More details will be provided during the discussion, but it is important to bear in mind that different estimation methods can deliver different insights on the magnitude of the GPG as well as on its determinants.

▶ *Gender pay gaps at different locations of the wage distribution:* The GPG can be computed at different locations of the wage distribution. For instance, the GPG at the mean will compare the average wage of all men and women in the sample. The GPG at the median will instead compare the wage of the individual man and the woman in the middle of their respective wage distributions (i.e. the individual at the median of the wage distribution who has an equal number of people earning more and less than him/her). Similarly, the GPG can be computed at any quantile of the distribution (e.g. the individual whose income is at the 10 per cent of the wage distribution). Estimating the GPG at different locations provides a more complete picture of pay gaps across the wage distribution, which in turn can help in the design and targeting of effective measures to reduce pay gaps in the population.

▶ *Wage definitions*: According to the ILO methodology, all types of wages should be included to compute the GPG, including both in cash and in-kind wages. However, in Montenegro, most employees receive their entire wages in cash, so this distinction will not make a big difference. At the same time, both regular wages and bonuses will be included when estimating the GPG. The analysis is conducted using a measure of gross (rather than net) earnings, as this is the variable available from the EU–SILC.

▶ 3.1 The GPG for the overall economy using different measures and definitions

Bearing these considerations in mind, figure 5 presents the estimates of the GPG at the hourly rate in Montenegro between 2014 and 2021 (panel A) and the corresponding estimates of hourly wages (panel B). Hourly wages are obtained by estimating the number of hours men and women work and computing a full-time equivalent number of employees.[16] This is the best available source of information to estimate the GPG, as it is impossible to obtain a direct measure of monthly earnings using the EU–SILC database. The GPG using this hourly measure is then computed at both the mean and median of the wage distribution. Intuitively, mean wages are higher than median wages because the mean is more sensitive to extreme values, which tend to characterize the top of the wage distribution. In other words, the presence of individuals earning very high wages will affect the mean much more than the median.

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16. In particular, we obtain a measure of hourly wages using the following steps. The EU–SILC survey reports information on wages in the previous year and the number of months spent in full- or part-time employment in the previous year. However, information on the number of hours worked is lacking, which would be needed to directly compute hourly wages. For this reason, we look at how many hours men and women in part-time employment work compared to men and women in full-time employment. This is used to rescale the number of months that an individual has worked part-time by how much part-time employment compares with full-time employment in terms of number of hours worked. This adjustment is then used to obtain an estimate of the number of full-time equivalent months that men and women have worked in the previous year, from which hourly wages are computed. While this means that our hourly estimates of the GPG are subject to some margin of error, it is also important to note that part-time wage employment is very rare in Montenegro (for both women and men).

Figure 5: The "raw" GPG and the evolution of hourly wages

**Panel A: The "raw" GPG using hourly wages,
at the mean and median of the wage distribution (2014–2021)**

Panel B: Average and median wages for men and women (2014–2021)
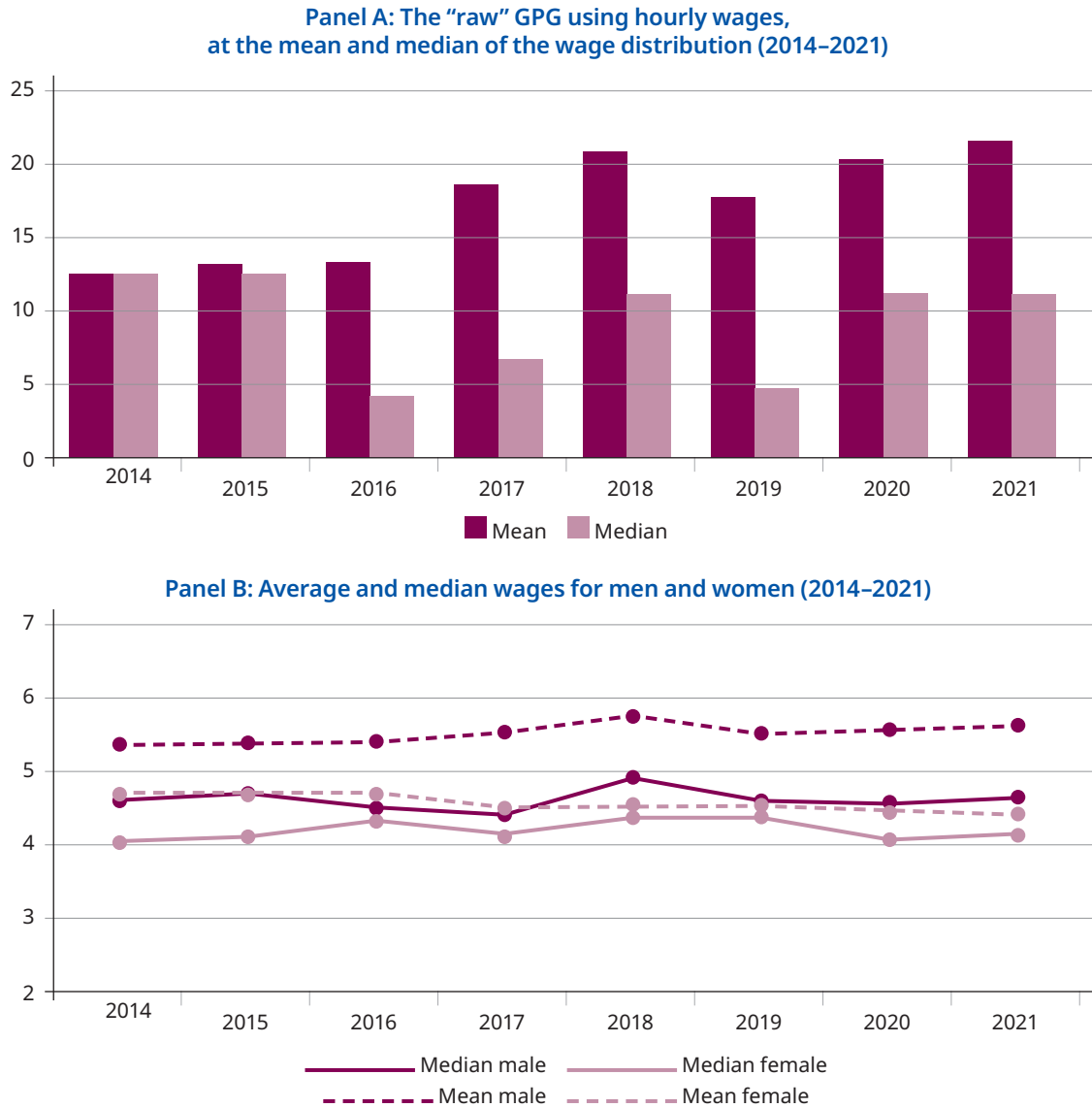
Note: Panel A reports the GPG using hourly wages, at both the mean and the median of the wage distribution between 2014 and 2021. Panel B plots instead the evolution of mean and median hourly wages for men and women between 2014 and 2021.

Source: Author's calculations based on EU–SILC data.

Starting with panel A, the analysis shows that the GPG measured at the mean of the wage distribution remained stable at around 13 per cent until 2016, before increasing to around 20 per cent between 2017 and 2021.[17] As a result, the GPG at the mean in 2021 was almost 10 percentage points higher than in 2013. In contrast, the GPG at the median of the wage distribution saw a different trend. It remained stable between 2014 and 2015 at around 13 per cent, before decreasing considerably in the years

17. As mentioned above, the report refers to the GPG of the same year in which the EU–SILC data is collected (for instance, the GPG for 2021 refers to the data from the 2021 EU–SILC). However, technically speaking, the information refers to the previous year, as the EU–SILC reports information on income for the previous calendar year (e.g. the 2021 EU–SILC will report information on wages in 2020).

between 2016 and 2019, reaching values below 5 per cent in both 2016 and 2019, before increasing to around 11 per cent in 2020 and 2021. Thus, the GPG at the median of the wage distribution in 2021 is just slightly lower than the value for 2014. Differences in the values of the GPG at the mean and at the median is not necessarily surprising, as it simply reflects the differences in the two measures. However, it is important to note that the median is probably the most appropriate measure of gender pay differences, as it is less sensitive to outliers than the mean.

The same patterns can be observed when looking at the evolution of hourly wages for men and women in the country (panel B). For both men and women, the average wage is denoted by a dashed line while the median wage by a continuous line. Three key observations emerge. First, median wages are always below mean wages for both men and women. This is because income inequality raises the average wage much more than the median wage. Second, men tend to earn higher wages compared to women. This is true for both average and median wages throughout the years of the analysis. As a result, the average female wage is roughly equal to the median wage for men. Third, real wages (adjusted for inflation) have remained roughly equal between 2014 and 2021 for both men and women. In particular, the median hourly wage for women has gone from €4 in 2014 to €4.1 in 2021, while for men the median wage has remained stable at €4.5 during the same period.[18] A similar picture emerges when looking at the probability density function of wages for men and women (Appendix figure 3). This is plotted only for 2020 (i.e. reporting wage information for 2019), and it shows how women are over-represented in the left part of the wage distribution, or among those who earn on average lower wages.

The estimates of the GPG presented above are obtained using information on hourly wages, as this is the most reliable measure of wages available using the EU–SILC database, as mentioned above. Nonetheless, the monthly GPG can give us a better sense of labour income differences between men and women if the two groups tend to work a different number of hours. It is possible to obtain an imperfect measure of monthly wages in the EU–SILC by dividing yearly wages by the number of months that an individual has worked (either full-time or part-time) in the previous year.[19] Using these estimates, we find that the GPG computed at the monthly rate is higher than the one obtained using hourly wages (Appendix figure 4). This is a pattern common to most countries irrespective of their level of economic development, and it reflects the fact that women tend to work fewer hours per month than men. However, the gap between the monthly and the hourly GPG in Montenegro is low from an international perspective. This is because a low share of men and women work part-time in the country, such that the difference in the number of hours worked between sexes is relatively small. Acknowledging that the estimates of the GPG are very similar in Montenegro when using hourly or monthly wages, the subsequent analysis focuses exclusively on the hourly GPG, given that this can be more precisely estimated.

The GPG estimates presented above all refer to the raw GPG. This is the simplest version of the indicator, which is obtained by pooling together all men and women in dependent employment and comparing their wages (i.e. hourly or monthly wages at either the mean or the median of the distribution). This indicator has the advantage of being simple to compute and intuitive to understand. However, it might generate biased estimates of the GPG if the composition of men and women in paid employment differs considerably across the wage distribution. For instance, figure 4 above has shown that women in dependent employment tend to have on average higher educational attainments than men in Montenegro. If these differences are not accounted for, we risk over- or under-estimating gender wage differentials.

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18. It is important to note that these wage statistics are obtained using the EU–SILC database, and applying the methodological choices and definitions mentioned above. As such, these statistics can differ from those obtained using alternative data sources or methods.

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19. This means that, using this measure, one does not consider whether the month is spent working full-time or part-time, but each month in employment is assigned an equal weight.

Trends in the factor-weighted GPG

The factor-weighted GPG aims to account for these compositional differences by creating different cells using two variables: education (three groups: low, medium and high) and age (four groups: 17–25, 26–45, 46–54, 55 and above). Together these variables identify (at most) 12 different cells.[20] The GPG is then computed separately within each of these cells, and the overall GPG is then obtained by taking a weighted average of the GPG across these different cells, where the weights are defined by the relative importance of a given cell within the overall population (e.g. if low-skilled individuals aged 17–24 are a relatively small group in the population, then the GPG estimates obtained for this group will have a relatively low weight when obtaining the overall measure of the factor-weighted GPG). The idea is that the factor-weighted GPG accounts for differences in the composition of the labour force by computing the GPG among more similar individuals (e.g. with the same age and educational attainments).

Figure 6 presents estimates of the factor-weighted GPG in Montenegro between 2014 and 2021, again using hourly wages and computing the indicator both at the mean and at the median of the wage distribution. As expected, these new estimates of the GPG are not too dissimilar from those obtained using the raw measure. However, the factor-weighted GPG is generally higher than the raw GPG. For instance, for 2021 the GPG computed at the mean is equal to 21.6 per cent when using the raw measure and 25.9 per cent when instead using the factor-weighted measure. At the median, the GPG increases from 11.1 to 13.6 per cent. This probably reflects differences in the composition of male and female dependent employment, and in particular the fact that women in wage employment tend to be more qualified than men on average.

▶ **Figure 6: Factor-weighted GPG using hourly wages, at the mean and median of the wage distribution (2014–2021)**
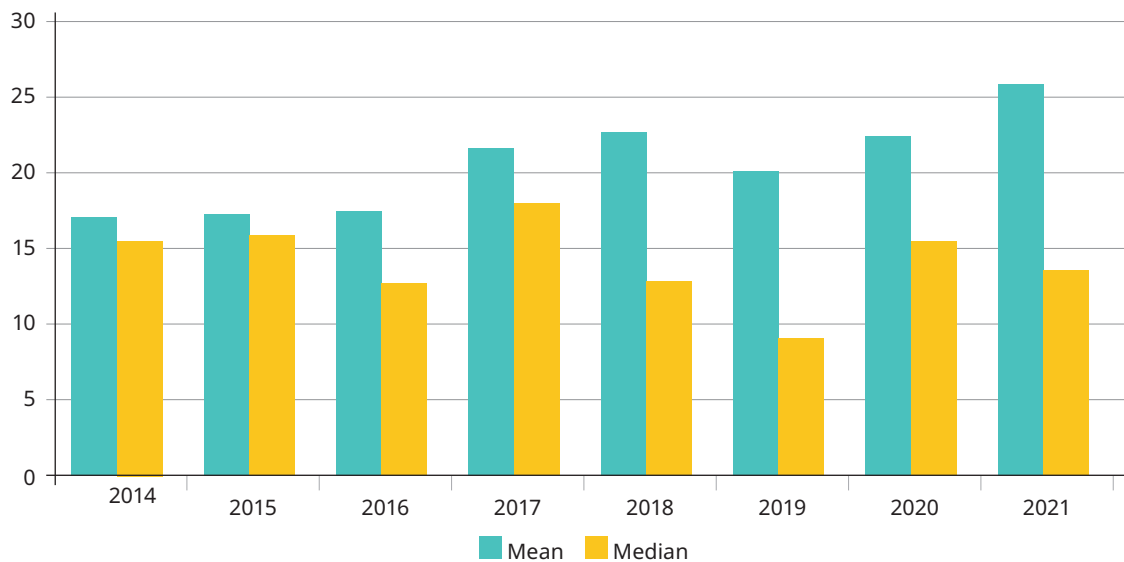
Note: The figure reports the factor-weighted GPG, estimated using the methodology in ILO (2018). Estimates are obtained using hourly wages and are presented at both the mean and the median of the wage distribution.

Source: Author's calculations based on EU–SILC data.

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20. The definition of more disaggregated cells is constrained by the limited sample size of the EU–SILC in Montenegro, absence of information on other characteristics (e.g. public and private sector of employment) and the relatively low number of individuals working in certain arrangements (e.g. in part-time employment).

The trends of the GPG over time are also slightly different when looking at the factor-weighted measure of the GPG, compared to the trends observed above for the raw GPG. In particular, even in this case, the GPG increases when computing it at the mean and decreases when estimating it at the median of the wage distribution. However, the variation across years is less pronounced, leading to more stability in the series.

The evolution of the GPG at different quantiles of the wage distribution

The analysis presented so far has shown the evolution of the GPG at the mean and the median of the wage distribution. However, it is possible to obtain a more complete picture by looking at the evolution of the GPG at different quantiles. Figure 7 presents the distribution of employment between men and women at different quantiles of the wage distribution (panel A) and the evolution of the GPG estimated at different quantiles of the wage distribution (panel B). Data refers to the 2020 EU–SILC database, reporting information on wages for 2019 in order to omit the impact of the COVID-19 pandemic.

With a few exceptions, the data presented in panel A shows that the share of women decreases as jobs are better paid. For instance, women represent around 60 per cent of total dependent employment in the second decile of the wage distribution, but less than 40 per cent of total dependent employment in the ninth decile of the wage distribution. This means that women are over-represented in low-paid jobs compared to men and under-represented in highly-paid jobs.

In line with this finding, the GPG in Montenegro increases along the wage distribution (panel B). In particular, the GPG is roughly stable (between 10 and 15 per cent) from the first to the eight deciles of the wage distribution, before increasing to reach 25 per cent for men and women in the ninth decile. This means that the GPG is roughly twice as large for individuals at the top of the wage distribution, compared to other individuals. This gap was not as large in previous years. In particular, Appendix figure 5 shows the evolution of the GPG at the first, fifth and ninth deciles of the wage distribution (corresponding to D1, D5 and D9 in panel B of figure 7) between 2014 and 2021 (rather than only in 2020 as in figure 7). The data shows that the large increase in the GPG at the top of the wage distribution is a relatively recent phenomenon, which has occurred in parallel to a decrease in the GPG at the bottom of the distribution. The GPG in the first decile decreased from around 20 per cent between 2015 and 2018 to around 10 per cent in 2019 and 2020. This decrease in the GPG at the bottom of the wage distribution can be associated with the large increase in minimum wage levels that occurred during the same period.[21]

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21. However, this trend is potentially subject to being reversed, as the GPG at the first decile of the wage distribution has increased to around 16 per cent in 2021.

▶ **Figure 7: Employment distribution and GPG at different quantiles of the wage distribution, 2020**

**Panel A: Male and female employment distribution
at different quantiles of the wage distribution**

Panel B: The GPG at different quantiles of the wage distribution
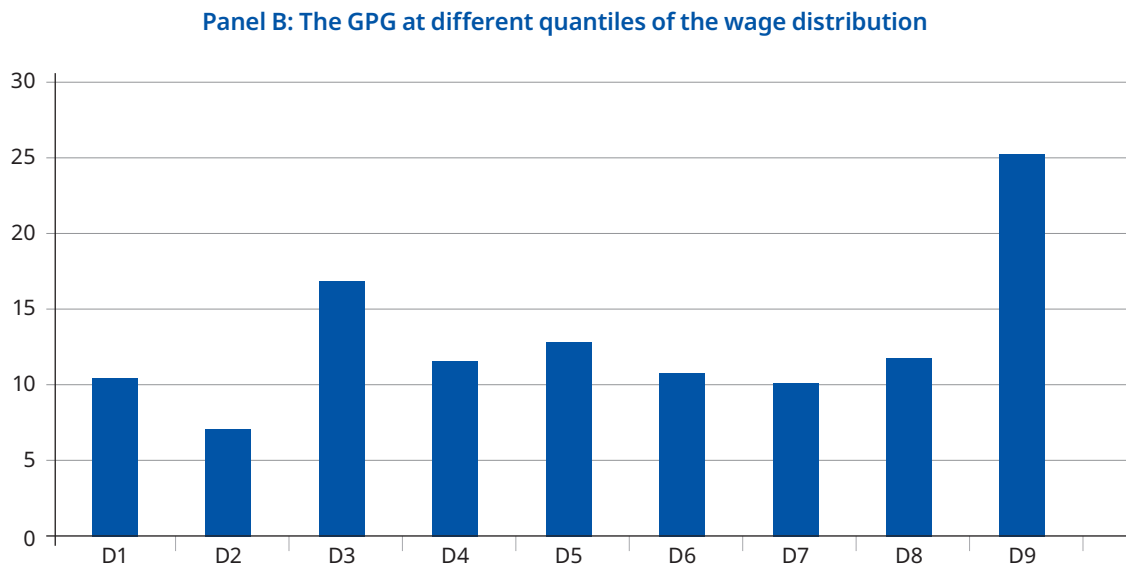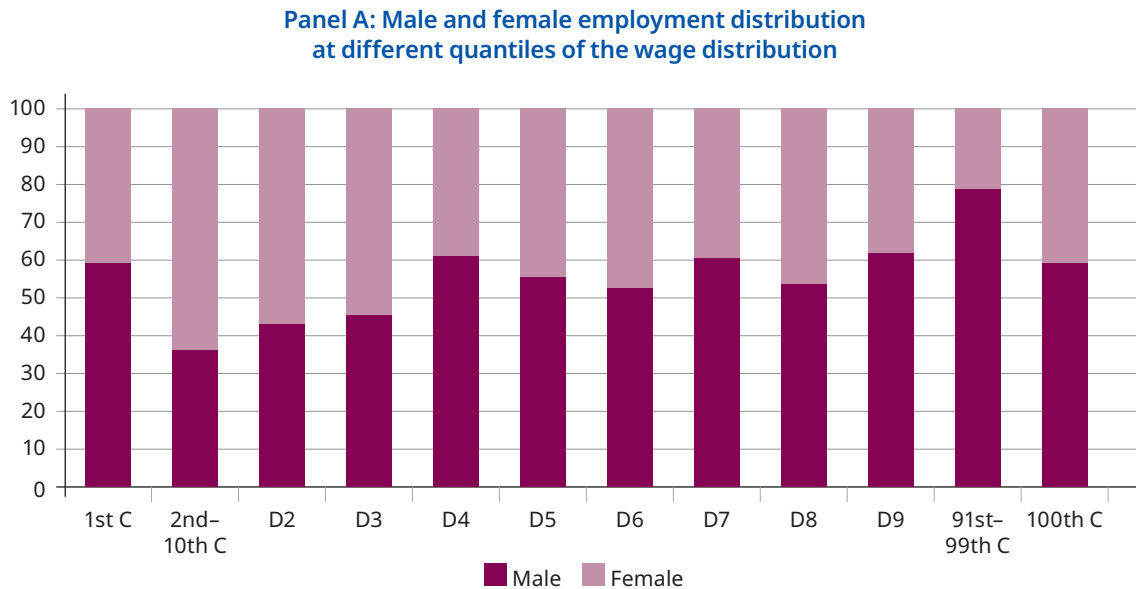
Note: Panel A reports the distribution of overall wage employment by sex, for different quantiles of the wage distribution. For instance, "D2" denotes the share of male and female employees in the second decile of the wage distribution. The last decile is "D9", including individuals with the highest 10 per cent of wages. Panel B reports instead the GPG estimated separately for each decile of the wage distribution. For instance, the GPG at the first decile of the wage distribution ("D1") is around 10 per cent, while the GPG at ninth decile ("D9") is around 25 per cent.

Source: Author's calculations based on EU–SILC data.

Montenegro's GPG compared to countries grouped by economic development

It is also interesting to see how the GPG in Montenegro compares with countries characterized by different levels of economic development. Once again, this comparison is possible because estimates are produced by the ILO following the same methodology. However, it should be noted that gaps in data and differing sources across countries may generate inconsistencies, which should be kept in mind when interpreting the results. For these reasons, rather than focusing on specific country-by-country comparisons, the GPG in Montenegro is compared to group-level averages obtained by pooling together countries of the same level of economic development. This follows the standard ILO classification of (i) high-income countries, (ii) upper-middle income countries, (iii) lower-middle income countries, and (iv) low-income countries.[22]

Figure 8 presents data on the GPG in Montenegro and the averages across these different groups. The data refers to 2020 for Montenegro and to the latest available year as reported in ILO (2018) for the different country group averages. The estimates are presented using the raw GPG (panel A) and the factor-weighted GPG (panel B), both at the mean and at the median of the wage distribution. Looking at the raw GPG, Montenegro has a relatively high GPG when estimated at the mean, but a relatively low GPG when this is computed at the median. A similar picture emerges for the factor-weighted GPG, although differences across country groups are smaller in this case. When using the raw GPG, Montenegro reports the highest value when computing it at the mean (with a 4-percentage point gap compared to the second highest group) and the lowest value when estimating it at the median. When computing the factor-weighted GPG, Montenegro still registers the highest value for the GPG computed at the mean, although the gap with the second highest group is now reduced to 1.5 percentage points, However, it now reports the third lowest value when estimating the GPG at the median of the wage distribution.

▶ **Figure 8: The GPG in Montenegro and in different country groups**

Panel A: The hourly raw GPG

Mean   Median

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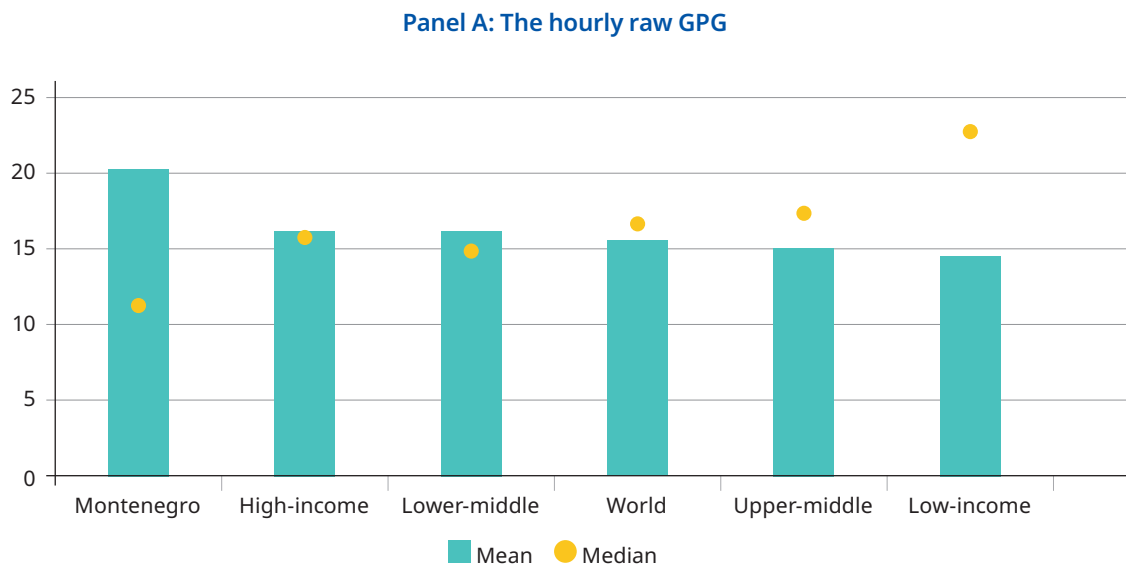
22. Following this classification, Montenegro would enter the upper-middle income country group.

Panel B: The hourly factor-weighted GPG
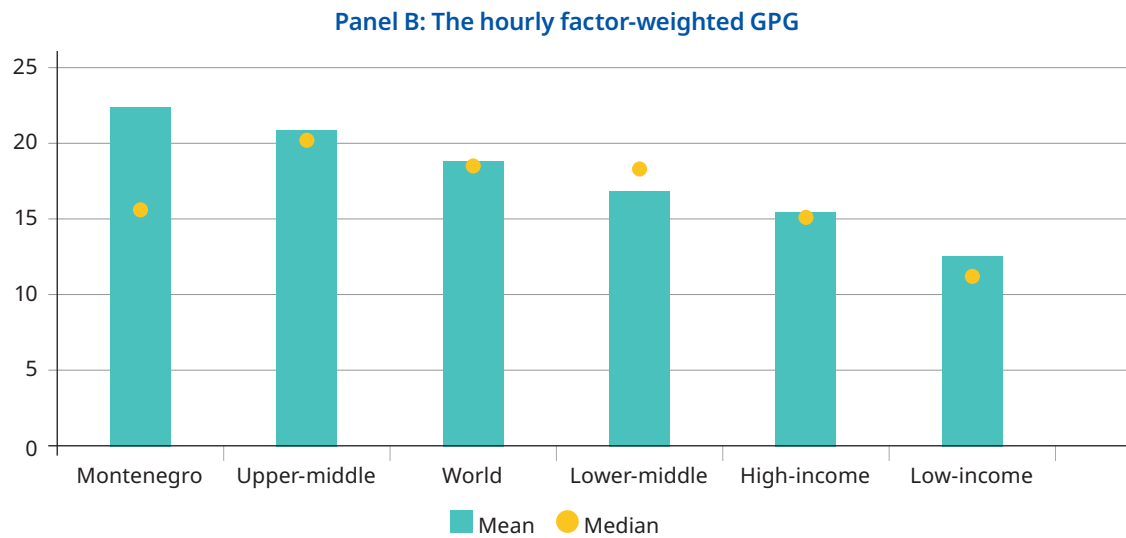
Source: Author's calculations for Montenegro and ILO (2018) for the other country groups.

▶ 3.2 The GPG for different groups in the population

The discussion presented so far has examined the evolution of the GPG for the overall population of wage employees, irrespective of their individual or household characteristics. However, it is also important to understand whether the GPG is particularly high among certain groups in the population, for example young versus old individuals, low- versus high-educated workers, nationals versus foreigners. Indeed, policy considerations and possible interventions to tackle the GPG will differ based on an understanding of the groups for which the GPG is particularly high. Additionally, this can shed light on particularly high degrees of discrimination affecting women in employment, who in certain cases might be facing a double penalty, such as the impact of both age and sex on employment conditions.

This section presents data on the GPG disaggregated along different dimensions. For each case, the analysis presents information on the GPG estimated using hourly wages, given the aforementioned constraints in using the EU–SILC data. Additionally, information on the GPG both at the mean and the median of the wage distribution is included. Note that the estimates of the GPG for different sub-groups are presented as raw measures. This is because the small sample size in the EU–SILC would make it problematic to overlap different dimensions at the same time (e.g. low-skilled workers of a given age group working in a specific sector or occupation). [23]

Regarding sample size, for certain categories, the analysis includes only a small number of male and female employees in a given group. For example, few women work as dependent employees in the armed forces. In these cases, estimates need to be interpreted with caution as they can vary considerably from one year to the next. The report presents all available estimates irrespective of the sample size used to obtain them. However, the discussion flags estimates obtained with small sample sizes in order to clarify that they need to be interpreted with caution and can be subject to significant variation over time. While issues of sample size can emerge in every country, they are particularly common in the present context, given the relatively small sample of the EU–SILC survey in Montenegro.

23. However, we have already examined that there are not extremely large differences in the GPG when this is measured using the "raw" or "factor-weighted" measures.

Before presenting the results, two final considerations are worth highlighting. First, data on the GPG for different groups will refer to 2020, unless stated otherwise. This means that the GPG will be measured using information on 2019 wages as reported retrospectively in 2020. This is done to avoid that GPG estimates are affected by any trend associated with the COVID-19 pandemic. However, the analysis will flag any notable change in the GPG that has occurred over time to understand whether the 2020 data presented in the report constitutes an exception or is rather representative of a more stable trend. Second, for each group, the analysis will present data on average hourly wages (adjusted for inflation), in addition to the data on the GPG. This is done to give an understanding of the wages that women and men in a specific group earn and to interpret a given level of the GPG in light of overall wage levels. Indeed, it is important to jointly consider differences in pay levels between men and women (as expressed by the GPG) as well as to analyse their pay levels in absolute terms, as policy considerations might vary considerably based on the groups for which the GPG is the highest (e.g. among highly or poorly paid individuals).

The GPG disaggregated by age

Figure 9 presents the raw GPG for individuals of different age groups (panel A) as well as average hourly wages for men and women of these same age groups (panel B). Panel A shows that the GPG peaks among prime-age workers (i.e. the 26 to 45 and 46 to 54 age groups), while being lower for youth and older individuals. This is true when looking at the GPG estimates at both the mean and the median of the wage distribution, although the details differ.[24] The fact that the GPG increases with age until reaching a maximum among prime-age workers is in line with the fact that women's employment trajectories experience more frequent interruptions and obstacles than men in making significant career progress. This can be due to employment and wage penalties related to motherhood status (see below for additional details on this) or other forms of discrimination that impact the middle of an individual's career, such as women not being promoted to managerial positions. This is also clear when looking at the evolution of average hourly wages across different sub-groups (panel B). In particular, we find that average wages are roughly equal among men and women below the age of 25. However, male wages increase substantially with age, while female wages remain roughly constant over the course of their career.

The absence of an increase in female wages with age is puzzling. This may have two independent but related explanations. First, the number of hours worked remains roughly equal with age for men, while it decreases for women. Male employees between the age of 17 and 25 work on average 44.7 hours per week. This remains stable at 44.6 for male employees aged 26 to 45, before decreasing only slightly to 44.1 for men aged 46 to 54. Female wage employees between the ages of 17 and 25 work an average of 43.8 hours. This decreases to 42.8 for female employees aged 26 to 45 and to 42.7 for those aged 46 to 54. In short, between the age groups 17–25 and 26–45, the average number of hours worked decreases by only 0.1 hours for men and by 1 hour for women. This might be because women take up an increasing share of unpaid work at home, forcing them to reduce the number of hours worked.[25] This, in turn, might result in their employment in relatively less qualified and non- managerial positions, which might be associated with lower hourly wages.

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24. In particular, when looking at the GPG at the mean, young individuals tend to have a negative GPG (i.e. women earn more than men) while the GPG for older individuals is positive and large. Instead, if we look at the GPG estimated at the median of the wage distribution, this is higher among young individuals (less than 25) compared to older individuals (55 and above). For this reason, one cannot conclude definitively whether the GPG is higher among young or old individuals, but simply mention that the GPG is lower for these groups, compared to values registered for prime-age workers.

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25. However, the vast majority of both men and women in Montenegro continue to be employed full-time, with part-time employment representing only a tiny minority of total dependent employment.

A second possible reason behind the lack of an increase in female wages with age relates to the distribution of employment by sector of economic activity. While the EU–SILC does not have information on public vs. private sectors employment, the distribution of employment by broad sector of economic activity provides a rough proxy. Almost 40 per cent of female employees in Montenegro work in one of the following sectors: "Public Administration", "Education", "Human health and social work". These are industries where a large share of employees work in the public sector. By contrast, less than 25 per cent of male employees are employed in one of these three sectors. This means that women are more likely than men to be public employees. These jobs might be appealing for women because they are generally associated with a higher degree of work-life balance. However, career progressions and wage increases are generally smaller in the public sector.

▶ **Figure 9: The GPG and wages by age groups, 2020**

Panel A: Hourly raw GPG

Panel B: Average hourly wages
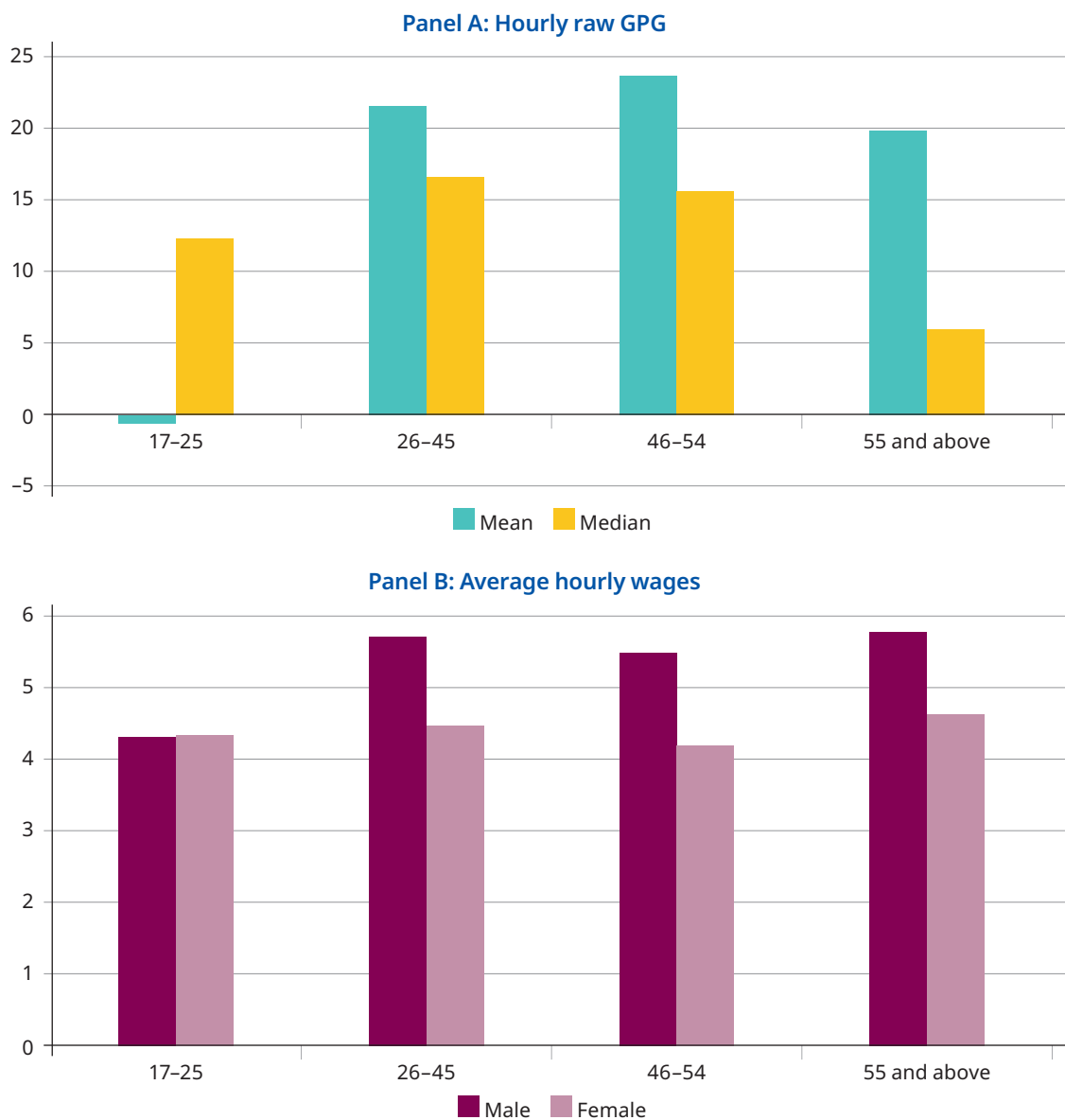
Note: Panel A reports the "raw" GPG estimated using hourly wages, for different age groups. Panel B reports average hourly wages for men and women in these same age groups. All estimates are obtained using data from the 2020 EU–SILC survey, and refer to wage information for 2019.

Source: Author's calculations based on EU–SILC data.

The GPG disaggregated by educational attainment

Additional interesting findings emerge when analysing wage differences between men and women of different educational attainments (figure 10). Looking at the evolution of hourly wages (panel B), the analysis shows that, as expected, wages increase with educational attainments. On average, highly educated individuals earn much more than low-educated individuals. This positive relationship holds for both men and women in employment, although the returns to education are larger for men. In particular, the average man with a high level of education earns 94 per cent more than the average man with a low level of education. For women, the difference is 70 per cent.

▶ **Figure 10: The GPG and wages by educational attainments, 2020**

Panel A: Hourly raw GPG

Panel B: Average hourly wages

Note: Panel A reports the raw GPG estimated using hourly wages, for different education groups. These are defined as "Low education" (ISCED 2011 levels 0–2), "Middle education" (ISCED 2011 levels 3–4) and "High education" (ISCED 2011 levels 5–6). Panel B reports average hourly wages for men and women in these same groups. All estimates are obtained using data from the 2020 EU–SILC survey, and refer to wage information for 2019.

Source: Author's calculations based on EU–SILC data.

This can also help to explain the evolution of the GPG by educational attainments (panel A). In particular, we find that the GPG is equal to around 16 per cent among low-educated individuals, both when estimated at the mean and at the median of the wage distribution. However, the GPG at the median remains roughly constant with educational attainments. However, the GPG at the mean increases for more educated individuals, reaching 27 per cent for individuals with tertiary education.

The GPG disaggregated by nationality and contract type

Figure 11 considers the GPG in terms of nationality (foreign citizen or national) and type of contract (permanent or temporary). Panel A of figure 11 shows the GPG for these dimensions, both at the mean and at the median of the wage distribution. Panel B of figure 11 shows these two dimensions in terms of average hourly wages for men and women.

▶ **Figure 11: The GPG and wages by nationality and type of contract, 2020**

Panel A: Hourly raw GPG

Panel B: Average hourly wages

Note: Panel A reports the raw GPG estimated using hourly wages, for different groups defined by nationality (left) and contract type (right). Panel B reports average hourly wages for men and women in these same groups. All estimates are obtained using data from the 2020 EU–SILC survey, and refer to wage information for 2019.
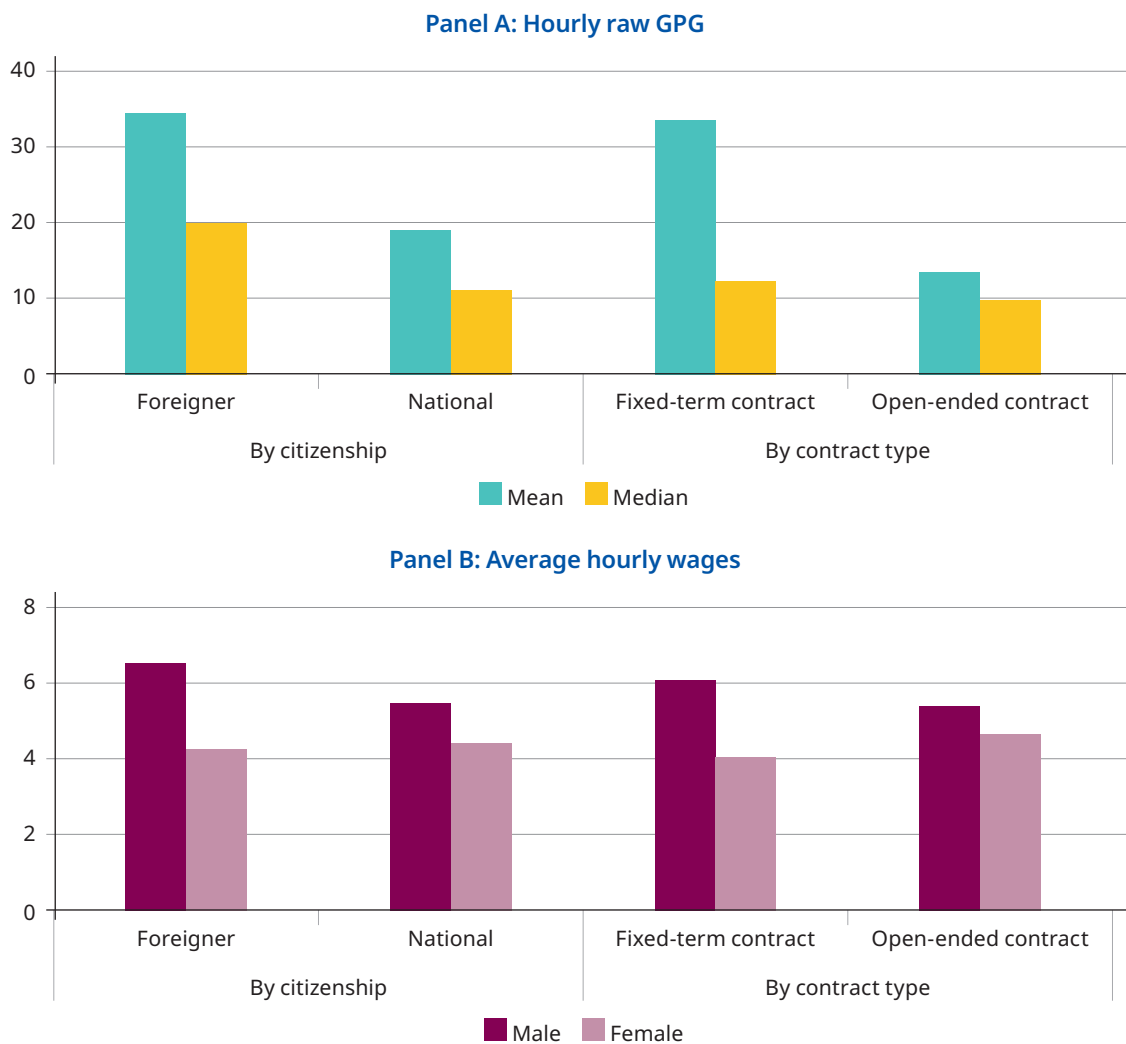
Source: Author's calculations based on EU–SILC data.

Starting with nationality, the GPG is much higher for foreign women compared to Montenegrin nationals. This is true both at the median, where the GPG is 20 per cent for foreigners and 11 per cent for nationals, and at the mean, where the GPG for foreigners is close to 35 per cent and just below 20 per cent among nationals. These patterns seem to be driven by the different composition of the male and female employed population of foreign citizens compared to the population of employed individuals of Montenegrin nationality. On average female foreigners tend to earn lower wages compared to female nationals. This may suggest that migrant female workers have lower educational attainments and/or work in lower-qualified positions compared to national female workers. However, male foreign individuals earn on average higher wages compared to male national employees. This might be due to positive selection among male migrants (e.g. expatriates working in relatively high-skilled occupations) or other differences in personal characteristics.

Secondly, it is interesting to look at the GPG for individuals employed in temporary versus open-ended employment contracts because individuals in different types of employment may have different bargaining power. In particular, fixed-term employees might have limited room for negotiating higher wages owing to their precarious position in the labour market. This can overlap with other differences in bargaining power between men and women, further widening the GPG. The analysis on this dimension reveals that for women wages tend to increase as they move from fixed-term to open-ended contracts (in line with expectations). However, male wages are higher among fixed-term employees compared to permanent employees. As a result, the GPG is substantially higher among fixed-term employees compared to individuals with open-ended contracts. This is true irrespective of whether one estimates it at the mean or at the median of the wage distribution. Thus, it can be concluded that fixed-term female employees suffer a particularly disadvantaged position in the labour market as a result of a double penalty related to their sex and their employment contract, which results in particularly low wages.

The GPG by economic sector and occupation

Having analysed the GPG along a series of individual and labour market characteristics, it is useful to review pay differences between men and women by sector of economic activity and occupation. However, it is important to note that sectors and occupations of employment arise from a sorting into categories that may reflect existing discrimination in the labour market. For instance, female employees might be clustered in specific sectors and occupations of employment due to gender stereotypes or other forms of discrimination. This means that computing the GPG within a specific sector or occupation can be misleading if the male and female employees working in that sector or occupation have already gone through some form of discrimination. Additionally, it is important to note that the GPG estimates that we obtain for certain sectors or (especially) occupations result from a low number of observations.[26] Therefore, estimates should be interpreted with caution, as they might suffer from small sample bias and show large variation over years.

With these considerations in mind, figure 12 presents GPG estimates at the mean and the median of the wage distribution for the 13 main sectors available in the EU–SILC database. For ease of exposition, the figure shows average hourly wages by sector, without differentiating between male and female hourly wages as in previous figures. The values of the GPG (denoted by the bars) should be read on the left axis, while the values for hourly wages (dots) should be read on the right axis. The picture that

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26. For instance, the GPG for the "Armed forces" occupation in 2020 will be computed using 23 male observations but only one female observation. Similarly, the GPG for "Skilled agricultural, forestry and fishery workers" will be computed using five observations for men and two observations for women. As far as the sample is nationally representative, the small number of observations should not necessarily represent an obstacle to obtain accurate estimates of the GPG. However, in practice, there may be problems of small sample size bias, leading to inconsistent estimates and sharp variations over time. For these reasons, estimates for these occupational groups should be interpreted with caution.

emerges is a positive GPG in almost all sectors. The GPG at the mean is positive in 11 sectors, close to zero in one sector ("Information") and negative only in one sector ("Real estate, professional and administrative activities"). The GPG is particularly high in certain male dominated sectors such as "Construction", "Agriculture" and "Transportation" (in the latter case, only at the mean). However, a positive GPG also exists in female-dominated industries such as "Education" and "Health", suggesting that in these sectors, the relatively few men that are employed are in managerial positions. A lower level of the GPG is registered in the "Public Administration", "Finance" and "Accommodation". There is no clear correlation between the level of the GPG and the average wage in a given sector.

▶ **Figure 12: The GPG and hourly wages by economic sector, 2020**
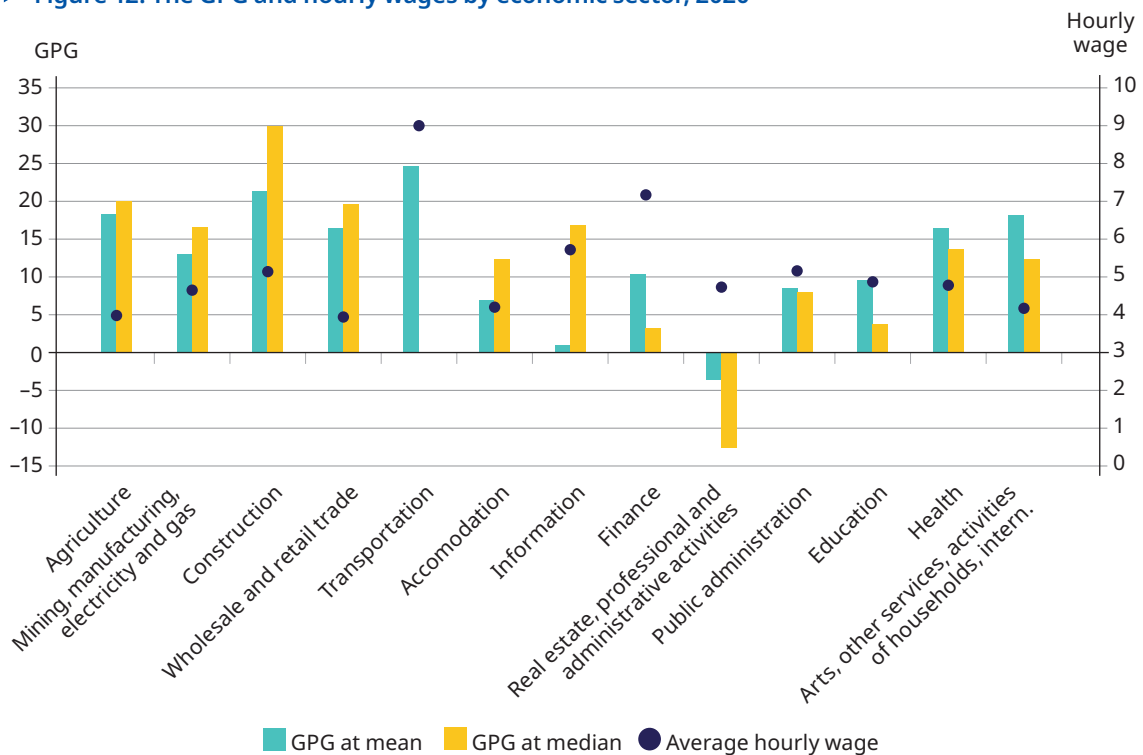
Note: The figure reports the GPG at the mean and the median of the wage distribution by sector of economic activity, as well as average wages by sector of economic activity. Values of the GPG should be read on the left axis, while values for hourly wages should be read on the right axis. All estimates are obtained using data from the 2020 EU–SILC survey and refer to wage information for 2019.

Source: Author's calculations based on EU–SILC data.

Similarly, when estimated at the mean across the ten main occupations available in the EU–SILC database, the GPG is positive in nine occupations out of ten (figure 13, panel A).[27] At the median, however, the GPG is positive in six occupations out of ten. Particularly large values of the GPG are found in male-dominated occupations such as "Plant and machine operators and assemblers" as well as among "Craft and related trades workers". However, the GPG is small among "Clerical support workers", "Managers" and individuals employed in "Elementary occupations". While this shows that there is some heterogeneity in the size of the GPG across low- and high-skilled occupations, we also see that, on average, higher-paid occupations tend to be characterized by a higher GPG.

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27. The only exception is "Armed forces", for which estimates are however not very reliable due to small sample size as discussed above.

▶ **Figure 13: The GPG and hourly wages by occupation, 2020**

Panel A: The GPG and hourly wages by occupation

■ GPG at mean   ■ GPG at median   ● Average hourly wage
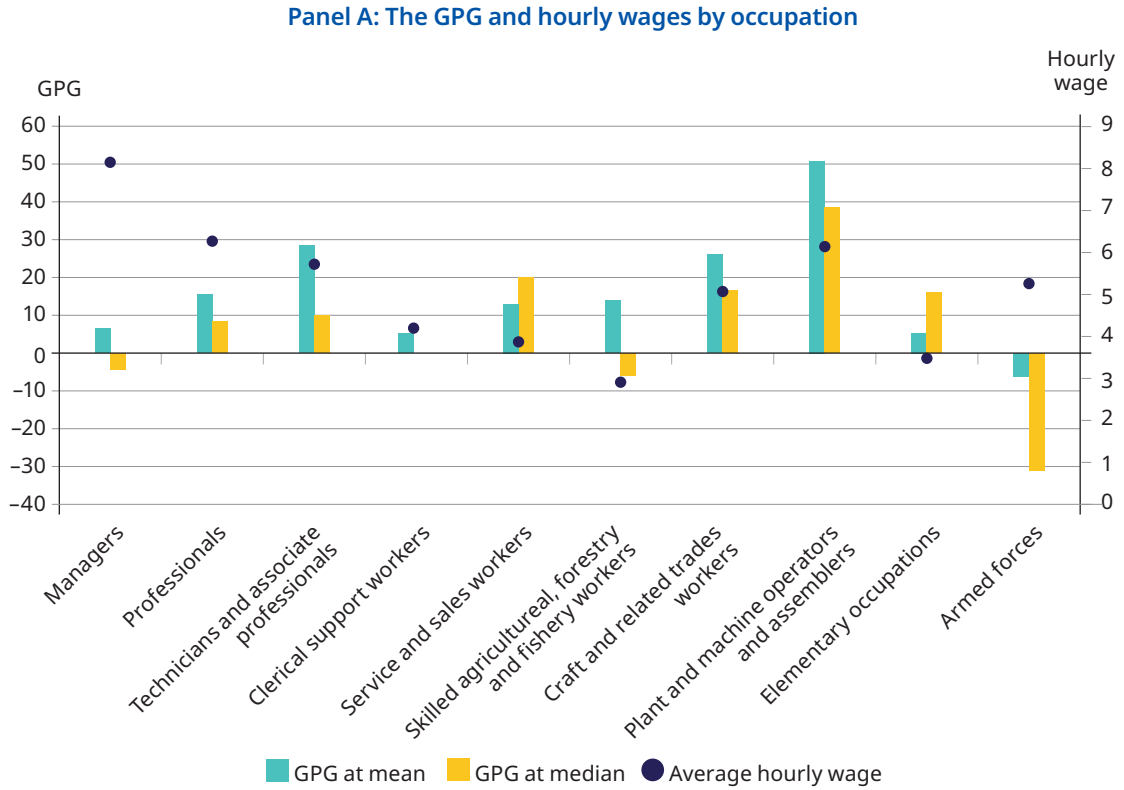
Panel B: Correlation between hourly wages and the GPG by occupation
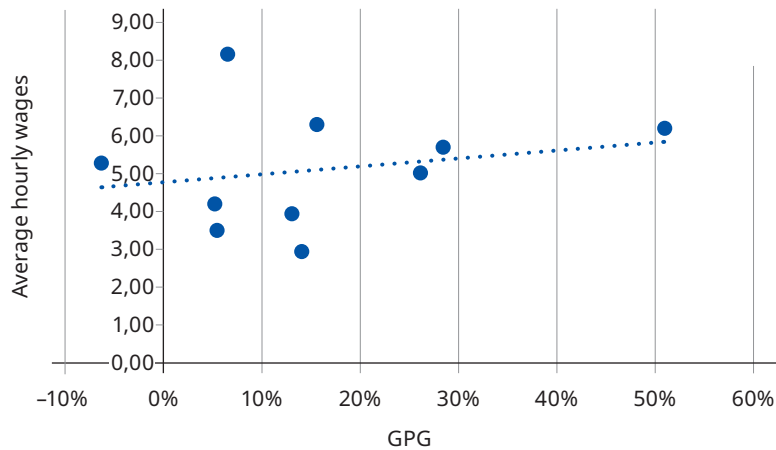
Note: Panel A figure reports the GPG at the mean and the median of the wage distribution by occupation, as well as average wages by sector of economic activity. Values of the GPG should be read on the left axis, while values for hourly wages should be read on the right axis. Panel B presents the correlation between the GPG in a given sector (computed at the mean) and the average hourly wages in that same sector. All estimates are obtained using data from the 2020 EU–SILC survey, and refer to wage information for 2019.

Source: Author's calculations based on EU–SILC data

This hypothesis is tested further in Panel B of figure 13, which looks at the correlation between average wages for both men and women and the GPG in each given occupation using data for Montenegro for 2020. The results show that occupations associated with higher wages (on the y-axis) also report on average higher values of the GPG (on the x-axis). Once again, this is in line with evidence presented above on the GPG by decile of the wage distribution, and the finding that the GPG is highest among highly paid individuals.

▶ 3.3 What drives the GPG in Montenegro?

The analysis so far has looked at the overall value of the GPG as well as estimates for different groups of the population. In the rest of this section, the analysis will try to explain what lies behind pay differences between men and women in Montenegro. The answer to this question can have important policy implications. For instance, if the GPG is entirely driven by differences in observable characteristics, such as differences in educational attainments between men and women, policies to target the GPG should aim to encourage educational attainments among women and/or incentivize their enrolment in specific educational degrees with higher returns. Instead, if the GPG remains unexplained after accounting for differences in observable characteristics, this might point to other factors influencing the GPG, including discrimination. This would imply that policy efforts should be more focused on guaranteeing non-discrimination and equal pay for work of equal value.

Decomposing the GPG into explained and unexplained components

To understand what lies behind the GPG in Montenegro, it is helpful to conduct a decomposition exercise as presented in ILO (2018) that follows a methodology introduced by Fortin et al. (2011). This requires decomposing the GPG into an explained and an unexplained component. The explained component of the GPG refers to differences in labour market attributes (e.g. sector or occupation) or other individual characteristics (e.g. nationality and age), while the unexplained component is the remaining part that cannot be explained by differences between men and women in these characteristics. In other words, the unexplained part is the GPG that remains after having accounted for all observable differences between men and women. Variables that have been included in the analysis are gender, age, nationality, educational attainments as well as a full sector of occupation and industry dummies. These variables will contribute to the explained component of the GPG, while anything else will be considered as unexplained.[28]

Figure 14 presents the results of this exercise. It shows the decomposition of the GPG at each decile of the wage distribution. The analysis separates the observable components between education (yellow) and other observable characteristics (green). The remaining component (blue) is related to the unexplained part of the GPG. Each contribution can enter the decomposition positively (i.e. by increasing the GPG) or negatively (i.e. by reducing the GPG). For instance, if education in a given quintile has a positive contribution to the GPG, this means that, based on differences in educational attainments between men and women, women should earn less than men. If instead it enters

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28. Of course, one is constrained in terms of the variables that can be included in the analysis, since the EU–SILC (as most other surveys) does not report information on other important characteristics that can also impact wages, such as individual ability or the amount of unpaid care work conducted at home. This means that the terms "explained" and "unexplained" should not be interpreted in absolute terms, but in relation to the researcher, who can observe only some of the many dimensions that affect wages.

negatively, the opposite would be true – women should be earning more than men in that same decile, based only on educational attainments. Recall the results presented in panel B of figure 7 showing that the GPG was higher at the top of the wage distribution.

The results reveal that the GPG in Montenegro is mostly driven by the unexplained component. This is true across almost all deciles of the wage distribution, but particularly so from the third decile onwards. Looking at the role of education, this contributes positively to the GPG in the first three deciles. This means that women have lower educational attainments than men in these same deciles of the wage distribution, which partially justify their lower pay levels. However, even for these deciles, an important role is played by the unexplained component (except than in the second decile). Additionally, differences in education do not explain the GPG for individuals from the fourth to the eighth decile of the wage distribution, while they enter negatively the decomposition for individuals at the top of the wage distribution. This means that women are more qualified than men in the top decile of the distribution and should therefore be earning more than them based on their educational attainments.

Finally, other observable characteristics generally play a minor role in explaining the GPG. However, they contribute to a positive GPG for the top three deciles of the wage distribution. This can be interpreted by the fact that men at the top of the wage distribution tend to be employed in certain sectors or occupations that are associated with higher wages. This suggests that the particularly large GPG at the top of the wage distribution is driven, at least partially, by relatively highly paid women and men performing different jobs (e.g. in terms of sectors or occupations). However, even for this decile, a larger role is still played by the unexplained component of the GPG.

▶ **Figure 14: The decomposition of the GPG at each decile of the wage distribution, 2020**
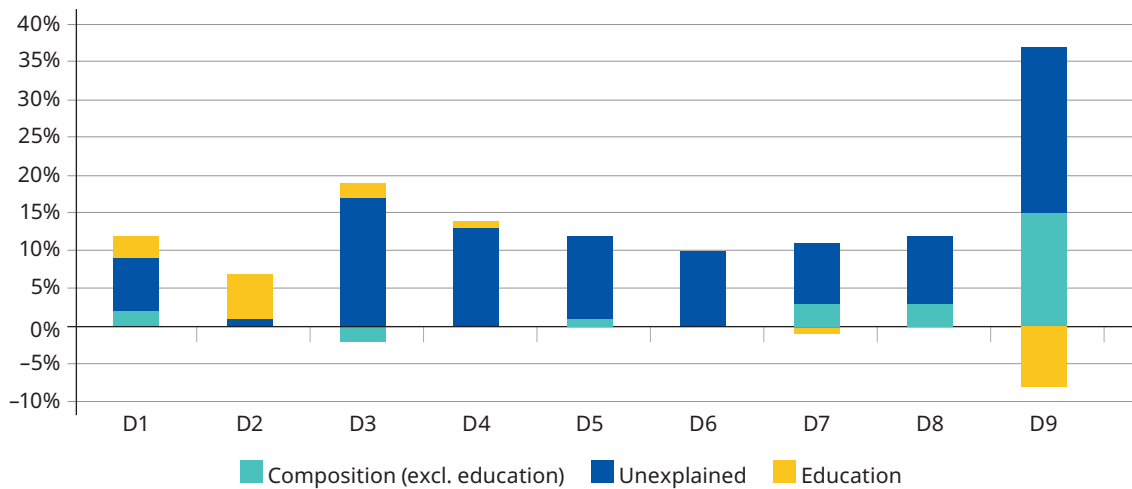
Note: The figure reports the decomposition of the GPG between the explained component related to education, the explained component related to other characteristics and the unexplained component. The decomposition follows the methodology introduced by Fortin et al. (2011), as presented in ILO (2018).

Source: Author's calculations based on EU–SILC data.

The discussion above highlights that the GPG in Montenegro cannot be entirely explained by differences in the observable characteristics introduced in the model, such as age, education, nationality, occupation and industries, and is instead largely explained by other unobservable factors. It is worth noting that similar patterns are observed across many countries characterized by different levels of economic development (ILO, 2018). It is, in fact, very common across countries that the GPG is mostly driven by

its unexplained component. The unexplained component plays a particularly large role at the top of the wage distribution, and education contributes very little to the GPG and in many cases enters negatively the decomposition, as women tend to be more educated than men in many countries.

Interpreting the unexplained component of the GPG

While it is unclear what lies behind the unexplained part of the GPG, some suggestive evidence can be provided to interpret it. In the rest of this section, we will test three hypotheses, which likely account for the large unexplained component of the GPG. These are: 1) women's care responsibilities lead to career interruptions and a preference for non-managerial employment with manageable workloads associated with lower pay; 2) horizontal segregation; and 3) wage penalties against feminized occupations.

1. Women's care responsibilities

First, we will check whether pay differences between men and women can be ascribed to a motherhood pay gap (i.e. the fact that women tend to earn lower wages after having given birth) or other family and care responsibilities. Women around the world are responsible for the vast majority of unpaid family work, especially for children, disabled persons and older individuals in the household. Due to these care responsibilities, women tend to have more interrupted career trajectories than men, for example exiting and re-entering the labour market after childbirth. A possible hypothesis is therefore that the GPG reflects different care responsibilities that women and men have, which might result in women accepting jobs with a more manageable workload to more easily fulfil other unpaid care work at home. This can refer to both care responsibilities for children as well as other care responsibilities in the household. This care gap may lead to both career interruptions and preferences in terms of work-life balance, such as flexible work arrangements, which are associated with lower pay levels.

▶ **Figure 15: Age, labour force (LF) participation and the GPG, 2020**
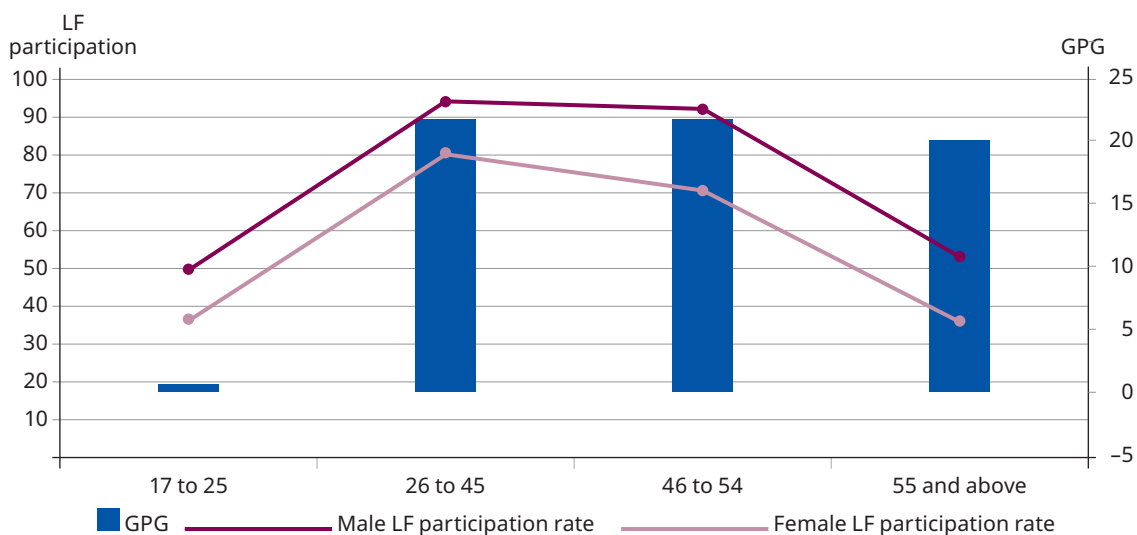
Note: The figure reports the GPG for different age groups (computed using hourly wages and estimated at the mean of the wage distribution) and the male and female labour force participation rates. All estimates are obtained using data from the 2020 EU–SILC survey and refer to wage information for 2019. The values of the GPG by age groups are the same as those presented in figure 8 (panel A), looking at the mean of the distribution.

Source: Author's calculations based on EU–SILC data.

While one cannot directly test for the impact of these care responsibilities in explaining the GPG, the evolution of male and female labour force participation and the GPG for different cohorts of individuals provides some indirect evidence (figure 15). First, we observe that the male labour force participation rate is always higher than the female rate. Note that the gap in labour force participation is constant among youth (17–25) and prime-age workers (26–45). This implies that women are not permanently leaving the labour force after having a child.[29] Instead, we find a large increase in the GPG with age. This might suggest that women, while remaining in the labour market, opt for different career paths compared to men after childbirth, such as more flexible work arrangements and less supervisory responsibility in order to accommodate a higher share of unpaid family work.[30] Regarding the evolution of the same indicators for older age groups (46 to 54 and 55 and above), the GPG remains high, but the gap between male and female labour force participation also widens. This would support the idea that women who have long-term care responsibilities (e.g. for older individuals in the household) exit the labour market earlier than men and/or transition earlier to jobs which are associated with lower wages.

2. Horizontal segregation

The unexplained component of the GPG may also be related in part to differences in the returns to education for men and women, even when they work in the same occupation. Figure 16, panel A presents the average educational score for men and women by broad occupational group, with occupations moving from high- to low-skilled from the left to the right on the x-axis. Details on which specific one-digit occupational groups enter into each of these broad occupational groups is contained in the accompanying note. The panel shows that, on average, women tend to have higher educational attainments in all occupational groups, except for low-skilled occupations, where the gap is quite small in any case. However, panel B shows that there is a positive GPG in all these different occupational groups. That is, even within the same occupation, women earn less than men despite having higher educational attainments on average. The GPG is particularly high in low-skilled occupations, which is the only sector in which men have slightly higher educational attainments.[31] This suggests that women earn less than men in the same occupation and even if they have higher educational attainments. This is consistent with possible discriminatory practices at the workplace, including horizontal segregation. It reflects a practice of relegating women towards less-skilled job tasks even within the same occupation. Once again, this is a pattern common to other countries at different levels of economic development (ILO, 2018).[32]

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29. However, it is still possible that women experience career breaks by temporarily leaving the labour force. This can still play a role in explaining future obstacles to career progression.

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30. However, as mentioned above, the role of part-time employment is very limited in Montenegro. This means that men and women tend to continue working full-time.

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31. The high GPG in low-skilled occupations is driven by trends for "Plant and machine operators and assemblers", where the GPG is above 50 per cent, when estimated at the mean of the wage distribution (see figure 12, panel A, for details).

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32. Findings presented here on the GPG by broad occupational groups are not in conflict with those presented above on the GPG at different deciles of the wage distribution (panel B of figure 7), although a few clarifications are worth mentioning. In particular, the very high GPG among low-skilled occupations seem to contradict the finding discussed above, when we showed that the GPG is the lowest among individuals at the bottom of the wage distribution. However, individuals at the bottom of the wage distribution are not necessarily employed in low-skilled occupations. For instance, "Plant and machine operators and assemblers" report the third highest wage on average, among the ten occupations with available information (see panel A of figure 12). At the same time, there is some relationship between the broad occupational groups identified here and the presentation of the GPG by decile of the wage distribution. For instance, the GPG for "Managers and professionals" is around 20 per cent, in line with a GPG of 25 per cent for individuals in the first decile of the wage distribution.

▶ **Figure 16: Horizontal segregation between men and women, 2020**

Panel A: Educational score for men and women, by broad occupational category

■ Male education   ■ Female education

Panel B: GPG by broad occupational category
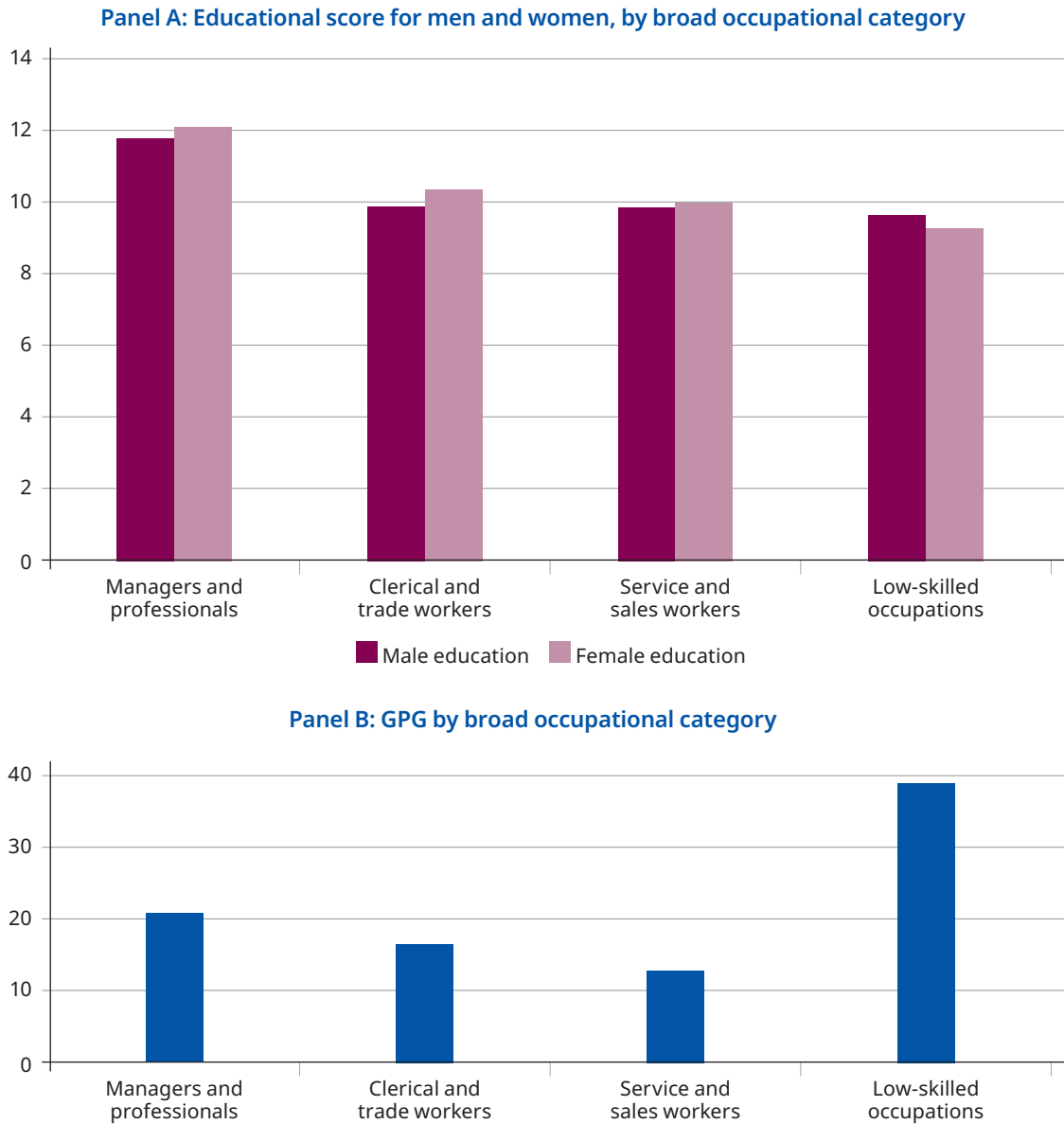
Note: Panel A shows the average educational scores for men and women in different occupational groups. Occupational groups are defined as follows: "Managers and professionals" includes the following one-digit occupations: (i) "Managers", (ii) "Professionals", and (iii) "Technicians and associate professionals". "Clerical and trade workers" includes: (i) "Clerical and support workers" and (ii) "Craft and related trades workers". "Service and sales workers" includes: (i) "Service and sales workers". "Low-skilled occupations" includes: (i) "Skilled, agricultural, forestry and fishery workers", (ii) "Plant and machine operators and assemblers", (iii) "Elementary occupations", and (iv) "Armed forces". Educational scores are obtained by assigning a value of 5 to individuals with low educational attainments (ISCED 2011 levels 0–2), a value of 10 to individuals with middle educational attainments (ISCED 2011 levels 3–4) and a value of 13 to individuals with high educational attainments (ISCED 2011 levels 5–6). These values have been selected in order to emulate the increase in years of education as individuals achieve higher educational attainments. Panel B presents the GPG for the same occupational groups as defined above. All estimates are obtained using data from the 2020 EU–SILC survey and refer to wage information for 2019.

Source: Author's calculations based on EU–SILC data.

3. Wage penalties against feminized occupations

A final hypothesis to test is whether the GPG is driven by wage differences across occupations. This relates to the possible undervaluation of women's work in highly feminized occupations and to the fact that wages are lower in highly feminized jobs, for example in health care work and teaching. These occupations are those with a large percentage of women as a share of total dependent employment in the same occupation. This issue could apply irrespective of the educational requirements of a given job or of the type of tasks individuals perform.

In order to test this hypothesis, figure 17 plots the relationship between occupational feminization (on the x-axis) and mean hourly wages (on the y-axis). Occupational feminization is proxied by the share of female employees in a given occupation, which can theoretically go from zero to 100. The results show that wages are relatively stable in occupations where women represent between zero and 40 per cent of total employment. If anything, there is a slight increase in average wages as the share of women increases (note the slightly upward slope of the curve until the share of women reaches 40 per cent of total employment). After that threshold, the average wage starts decreasing rapidly. As a result, highly feminized occupations, or those where women represent on average 80 per cent of the workforce, pay on average 50 per cent less than occupations where a roughly equal number of men and women work.

▶ **Figure 17: Wages by degree of feminization**
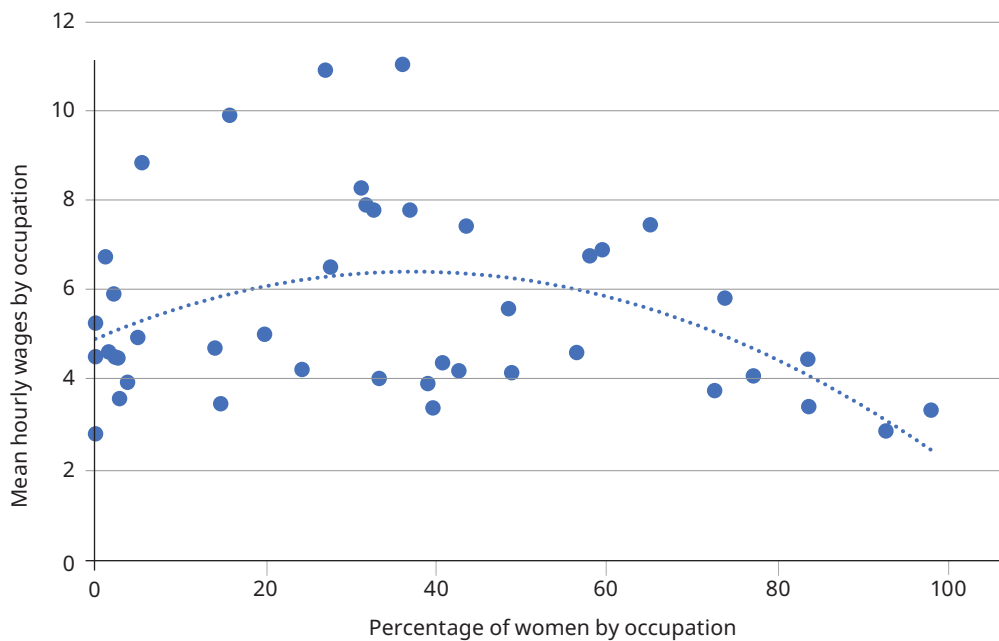
Note: The figure reports the relationship between average wages in detailed two-digit occupations and the share of women working in that same occupation (as a share of total wage employment in that same occupation). A polynomial of degree two is used to fit the data points. The figure is computed by pooling together EU–SILC data from 2014 to 2021, in order to have adequate sample size in each detailed occupation group.

Source: Author's calculations based on EU–SILC data.

For further insights on the wage penalty that affects feminized occupations, consider wages in two different occupational categories[33] that both fall within the broader occupational category of "Low-skilled occupations" as defined in figure 15 and might have similar levels in terms of educational requirements, but are different in terms of the share of women employed. For instance, "Plant and machine operators and assemblers" is traditionally a male-dominated occupation. In 2020, around 96 per cent of wage employees in this occupation in Montenegro were men. Despite being a relatively low-skilled occupation, wages in this sector are quite high, in fact it represents the third highest paid occupation in the country, with an inflation-adjusted average hourly wage of €6.2 in 2020. Within the broad group of "Low-skilled occupations", the picture changes if one considers "Elementary occupations". While a fairly balanced occupational group in terms of employment distribution (in 2020, women represented 53.1 per cent of total wage employment), wages are much lower in this occupational group at only €3.5 per hour in 2020. This exemplifies well the wage penalty associated with feminized occupations: even within occupations that require similar educational requirements, wages tend to be substantially lower in traditionally feminized (or balanced) occupations, compared than in male-dominated occupations.

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33. Out of the ten occupational groups for which information is available in EU–SILC, as reported in figure 12.

▶ 4. The legal and policy framework to reduce the GPG in Montenegro

THE GPG IN MONTENEGRO

▶ 4. The legal and policy framework to reduce the GPG in Montenegro

The discussion presented so far has highlighted the presence of important gender gaps in employment in Montenegro. As reviewed in section 2, women have substantially lower employment and labour force participation rates than men. In particular, the female employment rate is low from an international perspective and the gap between the male and female employment rates has increased during the last decade. Section 3 presented novel estimates on the GPG in Montenegro using EU–SILC data. The analysis reveals that female wages are on average 20 per cent lower than male wages. The GPG is also particularly high for certain groups of workers, such as prime-age individuals, foreigners, individuals with higher educational attainments and fixed-term employees. Finally, the analysis has shown that most of the GPG cannot be explained by differences in observable characteristics between men and women. Rather, the evidence points to the influence of other factors: (i) women's care responsibilities – women's careers tend to be interrupted due to their higher share of care responsibilities for both children and other family members; (ii) horizontal segregation – women earn on average less than men even when employed in the same occupation and even if they have on average higher educational attainments; and (iii) feminized occupations are penalized – on average, male-dominated occupations are associated with higher wages.

This section reviews Montenegro's current legal and policy framework to tackle the GPG, both directly and indirectly. Based on this assessment, the following section provides policy recommendations on how to reduce the GPG, including directly targeted measures and other types of interventions that promote better employment conditions and gender equality that can also influence the GPG. This comprehensive approach aligns with results obtained in the empirical analysis presented above that demonstrates that the GPG has different causes. In this context, simply relying on interventions that explicitly aim to reduce the GPG, such as a ban against gender wage differentials for individuals in the same job, will not eliminate the GPG. Rather, a series of policies and regulations, both inside and outside of the labour market, are needed to address gender wage differentials.

▶ 4.1 The legal framework

Montenegro's Constitution prohibits any form of direct or indirect discrimination (Article 8). In addition, the Constitution explicitly permits positive measures favouring disadvantaged groups where these interventions are aimed at eliminating the existing disadvantage that this group faces. This means that proactive interventions or affirmative measures can be implemented to promote employment and working conditions of women in the country. The Constitution also guarantees equal opportunities (Article 18) and the right of employees to adequate wages (Article 64). In sum, the legal framework is supportive of the working conditions of women in the labour market.

These principles are further reinforced and detailed in the Montenegrin labour law. In particular, Article 99 on Equality of Earnings explicitly mentions that an employee is guaranteed equal pay for the same work or for work of the same value. In this sense, the labour code is aligned with the principles and rights established in ILO Conventions and Recommendations, in particular the norms set out

in the ILO Equal Remuneration Convention, 1951 (No. 100), which introduced the principle of equal pay for work of equal value. The Convention also states that ILO member States shall take measures "to promote objective appraisal of jobs on the basis of the work to be performed" with a view to determining what constitutes work of equal value. In this case, the Montenegrin labour code specifies that work of equal value means work for which the same level of educational qualification is required, i.e. professional qualifications, responsibility, skills, working conditions and work results. The labour law also establishes that, in case of violations of the principle of equal pay for equal work or equal pay for work of equal value, an employee who has been discriminated against has the right to be compensated for the unpaid part of the salary.[34]

Additional measures in the labour code aim at preventing any form of discrimination.[35] Article 7 prohibits any form of discrimination against jobseekers and workers based on a series of characteristics such as sex, age, nationality or race. The labour code also explicitly prohibits harassment and sexual harassment (Article 10). In particular, the law prohibits harassment and sexual harassment both at work and in connection to work (e.g. education, training, promotion).[36] The law also protects a worker who reports or testifies in a case of harassment or sexual harassment. Similar principles are set out in the Law on the Prohibition of Harassment at Work, which refers to mobbing as any form of active or passive conduct at work that is intended to, or actually undermines, the dignity, reputation, personal and professional integrity of the employee and which causes fear or creates an intimidating, humiliating or offensive environment (Article 2). The Rulebook on Codes of Conduct for Employers and Employees Regarding Prevention and Protection from Mobbing further defines a series of behaviours that can be classified as harassment or sexual harassment in the workplace.

Other laws include direct or indirect provisions supporting gender equality in the labour market. The Law on Gender Equality establishes the principle of equal participation for men and women in all areas of the public and the private sector (Article 2). The law also establishes that men and women should realize equal benefits from work. The same law defines gender-based violence as the result of any action that might cause physical, mental, sexual or economic damage, or the threat of this act (Article 7). The Law on Civil Servants and State Employees defines these principles in the context of state employment. In particular, Article 10 affirms that public sector jobs are available to anyone under equal conditions. Article 68 establishes that civil servants have the right to equal pay for equal work. Additional details on pay conditions in the public sector are set in the Law on Earnings of Public Sector Employees. This law defines the principles that should be followed to define earnings, the different components of public sector wages and the possible supplements to basic wages. Even in this case, the law calls for uniformity of earnings in the public sector for work in the same or in similar jobs as well as for work in positions that require the same level or sub-level of qualifications.[37]

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34. However, it is important to note that this definition is not necessarily in line with the principles set out by the ILO, which instead require equal value to be defined based on a gender-neutral job evaluation (see section 5 for details).

35. Similar provisions are included in the Law on the Prohibition of Discrimination, which however deals with discrimination in general, rather than discrimination in the labour market. In particular, the Law on the Prohibition of Discrimination prohibits discrimination based on sex, gender identity and sexual orientation, among others.

36. Forms of harassment include those perpetuated using audio and video surveillance as well as social media in violation of a person dignity. Sexual harassment is instead defined as any unwanted verbal, non-verbal or physical behaviour of sexual nature which aims to violate the dignity of a person.

37. Even in this case, the process that is defined to determine whether there is a case of wage discrimination does not entirely follow the principles and recommendations set out by the ILO, and in particular it does not allow enforcement of the principle of equal pay for work of equal value.

Finally, it is also important to acknowledge the legislation that regulates maternity, paternity and paternal leave as well as breastfeeding breaks. The labour code in Montenegro establishes that women have the right to 98 days of maternity leave (28 days before birth and 70 days after).[38] The length of maternity leave in Montenegro is in line with the requirements of ILO Convention No. 183 and the EU Pregnant Workers Directive 92/85/EEC, but the maternity benefit is often inadequate, especially for women with short insurance contribution histories. Women with at least 12 months of contribution receive a maternity benefit equal to 100 per cent of their average wage before giving birth. However, the replacement rate decreases to 70 per cent for women with 6 to 12 months of contribution, 50 per cent for women with between three and six months and only 30 per cent for women with less than 3 months. This can result in maternity benefits of only €32.87 monthly (ibid).

Regarding paternity leave, Montenegro does not grant leave days to new fathers in the legislation, although 3 days of paternity leave are included in the General Collective Agreement. This is not in line with the EU Work-life Balance Directive (2019/1158), which calls for a minimum of 10 working days of leave for new fathers. The limited provision of paternity leave contributes to a culture in which women are entirely or mainly responsible for children. This can decrease their attachment to the labour market, reducing the probability that they re-enter employment at the end of the maternity leave.

However, Montenegro is one of the few countries in the Western Balkans offering parental leave above four months, as requested by the EU Directive. Eligibility for parental leave starts at the end of the maternity leave period and lasts until the child reaches the age of 1 year. Parental leave can be shared equally between parents and transferred from mothers to fathers, but only after the mother has taken at least 30 days of parental leave. It does not include a non-transferable quota of two months that has to be used by each parent, as called for in the EU directive, however.[39] The replacement rate for parental leave is the same as for maternity leave, meaning that full replacement is available only for individuals with at least 12 months of previous contributions

Finally, women have the right to breastfeeding breaks at work of up to two hours a day (which can be taken in two parts) until the child reaches the age of 1 year. These breaks are considered as working time and are paid on the basis of the employee's average wage. Therefore, the legislation in Montenegro is in line with Article 10 of the ILO Convention No. 183.[40] However, the fact that women have the right to breastfeeding breaks only until the child reaches the age of 1 year can compromise mothers' ability to breastfeed their child until the age of 2, as recommended by the World Health Organization.

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38. Fathers have the right to take paternity leave instead of the mother from the day the child was born, in the event that the mother died during childbirth, was seriously ill, abandoned the child, was deprived of parental rights or is serving a prison sentence.

39. This means that fathers cannot take the full amount of parental leave. For this reason, the legislation on parental leave in Montenegro is not harmonized with the EU Work-Life Balance Directive (2019/1158/EU) .

40. The Convention does not explicitly recommend the number and duration of breastfeeding breaks, leaving to national legislations the possibility of determining these aspects.

▶ 4.2 Strategic documents

This sub-section reviews various interventions that promote gender equality in Montenegro. Most of these interventions are elaborated around strategic plans. While the thematic focus of these plans vary, they all have either an implicit or an explicit goal of promoting gender equality in the labour market. This can involve direct labour market interventions or interventions in other policy domains, such as the care economy, that also have labour market benefits for women.

The overall objective of the National Strategy for Gender Equality[41] is to promote gender equality in the country. This has been operationalized in target values for the Gender Equality Index.[42] For 2024, the target value is 57 compared with 55 in 2019.[43]

This target is meant to be achieved through three different operational objectives. The first objective is to increase the application of the normative framework described above, which establishes the principles of gender equality and prohibits discrimination based on sex or gender.[44] The second objective requires improving policies in the areas of education, culture and the media, with the aim of reducing gender stereotypes and prejudices against women. The third objective is to increase the participation of women in areas that enable access to economic, natural and social resources. Within this last objective, there are different interventions that are planned in the area of female employment. These include: (i) the organization of initiatives to support female entrepreneurship; (ii) the creation of a protocol for protection against gender-based discrimination and sexual harassment in the workplace; (iii) the organization of tripartite consultations on how to promote work-life balance; (iv) the development of a methodology to measure unpaid care work and other forms of unpaid work in the household; (v) the institution of initiatives targeted to high-school students with the purpose of promoting the role of women in science.

As confirmed in the empirical analysis above, female employment and the GPG can be affected by care responsibilities for children. For this reason, provision of public childcare services is central for promoting gender equality in the labour market. The National Strategy on Preschool Education for 2021–25 aims at reinforcing these services by focussing on increasing the quality, coverage and fairness of preschool education. The Strategy has three general objectives. The first is to increase the coverage of childcare services to 30 per cent of children aged 0–2 years and 90 per cent for children 3–6 years. The second objective aims to modernize childcare services by integrating the latest scientific knowledge and international best practices on how to support the child development. The final objective targets children from vulnerable groups, with the aim of providing support to parents and increasing the educational involvement of these children.

In line with the legislation prohibiting gender-based violence and harassment, Montenegro is implementing a National Plan for the Implementation of the Council of Europe Convention on Preventing and Combating Violence against Women and Domestic Violence (Istanbul Convention) for the period 2023–2027. The main objectives of the Plan are to protect women from all forms of

41. This strategy spans from 2021 to 2025, but the reference here is to the 2023-24 Action Plan.

42. This index is computed in all EU member states and it measures gender equality around six different domains: work, money, knowledge, time, power, and health. The index value is presented on a score from 1 to 100, where 1 represents complete inequality, while the value of 100 represents complete equality.

43. The target seems to have been already achieved, as Montenegro reported a value of the Gender Equality Index of 59.3 in 2023 (MONSTAT, 2023).

44. This objective is associated to a target indicator that aims at increasing the percentage of public policies that integrate gender mainstreaming from 8 per cent in 2021 to 15 per cent in 2024.

violence, suppress all forms of discrimination against women and develop a comprehensive framework to protect and assist all victims of violence against women. Examples of measures that are envisaged as part of the Plan include (i) the harmonization of the definition of gender-based violence in national legislation to be sure that it adheres to the definition established in the Istanbul Convention, (ii) the provision of an adequate level of funding for non-governmental organizations that provide specialized support for women who are victims of violence, (iii) the implementation of awareness campaigns and information programmes to improve understanding and influence public opinion on the topic of gender-based violence and harassment, and (iv) the organization of training for experts on how to deal with victims and perpetrators of all acts of violence.

It is also worth mentioning the Strategy for the Development of Women's Entrepreneurship (2021–2024).[45] The Strategy is articulated around three goals, notably: (i) building an environment favourable to the development of female entrepreneurship; (ii) improving access to finance and competitiveness among female entrepreneurs; and (iii) advocating for the interests of female entrepreneurs. Under the first goal, interventions include activities to promote an enabling policy environment for female entrepreneurs and provide advisory and training support to female entrepreneurs. Under the second strategic goal, activities include interventions to increase access to finance and interventions to improve the availability of programme supports for female entrepreneurs. Finally, as part of the third strategic goal, interventions include measures for favouring access to new markets for female entrepreneurs and for promoting the implementation of women's entrepreneurial policy. Nearly all activities under this plan have been implemented.

Finally, two additional instruments aim to increase women's participation in the political arena. First, the Action Plan for a Gender-Responsive Parliament of Montenegro 2022–2024 aims to promote gender equality in the Parliament through an inclusive approach, support gender balance in political representation and reinforce the role of the Parliament as an advocate of gender equality. Second, the OSCE Mission in Montenegro, in cooperation with the Ministry of Justice, Human and Minority Rights promoted the adoption of instruments for assessing the level of gender mainstreaming of strategies and national laws. This led to the development of an instrument for evaluating the level of gender mainstreaming in strategic documents, including (i) public policy preparation, (ii) the analysis of the content of the policy and (iii) its monitoring and evaluation. The result of this exercise revealed that only 8.3 per cent of the 97 valid strategies were gender-mainstreamed in November 2021.

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45. Although female entrepreneurship is not directly related to the GPG (remember that the GPG is only computed for the population of wage employees), this can still have important implications for the GPG and other gender inequalities in the labour market. For instance, female entrepreneurs are less likely to discriminate against female employees. Additionally, promoting female entrepreneurship can address other forms of gender inequalities in the labour market (i.e. different levels of labour force participation).

▶ 5. Policy recommendations

▶ 5. Policy recommendations

This section provides policy recommendations on how to reduce the GPG in Montenegro. These have been developed in line with the findings of this report and lessons from international best practice. Recall that the analysis of the GPG presented in section 3 of the report showed that the GPG is particularly high for certain groups of workers, has not decreased during the last decade and remains largely unexplained. The review of the existing legal and policy framework presented in section 4 highlighted that, while legislation is in place in Montenegro to promote equal pay for work of equal value, there are still policy gaps that need to be filled to ensure that this principle is enforced in practice. International experience and the available knowledge concerning best policy practices is also highly useful for informing policy choices. While the contexts in which these policies have been implemented might differ from that in Montenegro, lessons learned in other countries, when adequately adjusted to reflect country specificities, provide important insights for reducing the GPG.

Based on these considerations, the following policy recommendations will be presented along four broad categories: (i) policies to promote equal pay for work of equal value, (ii) wage and collective bargaining policies to eliminate the GPG, (iii) policies to promote female labour force participation, and (iv) better data to measure the GPG. It is important to note that, while these recommendations will be presented separately, they can generate important synergies if jointly implemented.

Policies to promote equal pay for work of equal value

▶ *Job evaluations for measuring work of equal value:* The Montenegrin Constitution includes the principle of equal pay for work of equal value, and it is thus in line with the rights and principles set in the ILO Equal Remuneration Convention No. 100. However, the labour code defines work of equal value as work for which, among others, the same educational qualifications are required, the same working conditions apply and the same work results are obtained (see above in section 4.A). This means that, in practice, the legislation enforces the principle of equal pay for equal work, but not the broader principle of equal pay for work of equal value. This is the case of many other countries, as only a minority of ILO member States have fully embodied the principle of equal pay for work of equal value in their legislation (World Bank 2018, Oelz eat al. 2013). Doing so requires setting up clear and gender-neutral job evaluation procedures, which allow measurement of the content of the work performed by individuals and the comparison of jobs of different natures based on this assessment. Importantly, the evaluation should be based on the requirements of the job being evaluated (e.g. skills required) and its demands (e.g. tasks being conducted), but not other aspects (e.g. occupation, sectors), which should not be used to differentiate jobs which are instead of equal value. This allows comparison of jobs in different sectors or occupations, based on their requirements and demands. As a result, different job profiles (e.g. construction workers and care workers) can, in principle, be assigned to the same value even if their sector and occupation is completely different. Box 1 provides an example from Switzerland where enterprises can freely use a test to measure the value of the different job profiles that are present in the firm to check whether the principle of equal pay for work of equal value is respected.

▶ **Box 1: The Swiss Equal Pay Tool for Enterprises**

According to the Swiss Public Procurement Act, public authorities cannot contract with private enterprises that do not respect gender wage equality. The Swiss Federal Office for Gender Equality has provided enterprises with a tool that allows them to conduct gender-neutral job evaluations to check for possible discrimination and act accordingly. This job evaluation tool starts from the assumption that each job is associated with demands (aspects of the job that can be detrimental to the worker, either physically or mentally) and requirements (the set of skills that are necessary to conduct a job). In order to conduct this evaluation, the employer needs to (i) identify all existing jobs and functions within the enterprise, (ii) evaluate each job (i.e. associate each job to a set of demands and requirements), (iii) enter information on all employees, and (iv) attribute each employee to a given job.

The tool automatically produces a theoretical ranking of employees based on how much they should be paid according to the assessment of the requirements and demands of their jobs. This ranking is then compared with the actual ranking within the enterprise (i.e. ranking all employees based on their wages). Gender wage discrimination is identified as a situation in which a female (male) worker is paid less than a male (female) colleague despite being in a job that would justify a higher pay level, based on the results of the job evaluation as described above.

▶ *Pay transparency*: Another tool to promote the principle of equal pay for work of equal value is to promote pay transparency, especially at the enterprise level. While this does not equate to promoting equal pay for work of equal value (at least in the absence of a job evaluation system as detailed above), pay transparency can still go a long way in reducing the GPG. This is because workers will be more aware of how their salaries compare with those of their peers and can demand adjustments, either individually or through the support of trade unions, in cases where they believe they have been treated unfairly. In addition, consumers can also decide to favour enterprises with a gender equal pay policy, thus creating incentives for firms that eliminate the GPG. Accordingly, the EU is calling its member states to promote pay transparency at the enterprise level. In particular, the EU Directive 2023/970 requires that firms with at least 250 employees prepare annual reports on working conditions in the enterprise, detailing, among others, the distribution of male and female employment at different levels and pay conditions of men and women in the enterprise. During the last decade, other countries have enacted legislation that requires employers to regularly assess their pay practices, measure gender pay differences and take actions to eliminate the GPG (ILO 2018). In some countries, the elimination of the GPG is compulsory for enterprises. For instance, in Iceland, since 2018, companies with more than 25 employees are obliged to obtain a certification from an independent entity certifying that their policies are gender neutral. In other countries, such as Switzerland, the elimination of this GPG is not compulsory for enterprises in general, but it is required if enterprises want to participate in public tenders.

Wage and collective bargaining policies to eliminate the GPG

▶ *Minimum wages to reduce the GPG:* The analysis in section 3 showed that the GPG is relatively low among individuals at the bottom and in the middle of the wage distribution compared to individuals at the top of the distribution. Among other factors, this could be due to the presence of the minimum wage and its regular increase in recent years. Indeed, empirical evidence from different countries has shown that minimum wages are particularly effective in reducing the GPG (ILO 2018). This is because minimum wages can contribute to reducing all forms of wage inequalities, including those between men and women. While the immediate effects of minimum wages first materialize among low-paid workers, its positive effects on the reduction of inequality can also affect workers in the middle and at

the top of the distribution. Of course, for this to be the case, a few conditions must apply. To start, it is important that minimum wage legislation does not discriminate, either directly or indirectly, against women. This could happen, for instance, if certain sectors or occupations that are female dominated, domestic workers for example, are excluded from the minimum wage. This does not seem to be the case in Montenegro, as the minimum wage applies equally to all sectors and occupations. It is also important that minimum wage legislation is adequately enforced. Challenges to enforcement can arise when a large share of employment is of an informal nature, in either registered or unregistered enterprises. Finally, it is important that the level at which the minimum wage is set is sufficiently high to be binding, such that it pushes up wages of low-income earners. For these reasons, policy efforts to reduce the GPG through minimum wage legislation should include the following: (i) regularly up-dating the minimum wage to ensure that it guarantees adequate living conditions for all (while not hampering employment growth); (ii) ensuring the enforcement of minimum wage legislation in all sectors and occupations; and (iii) promoting the formalization of the informal economy.

▶ *Collective bargaining for greater gender equality*: Collective bargaining can also contribute to the reduction of the GPG. As with minimum wages, collective bargaining can contribute to reducing wage inequalities, including those between men and women (Pillinger et al. 2016). Additionally, collective bargaining can be strategically directed towards the elimination of wage disparities be-tween men and women, either within or across sectors. This happens if, for instance, collective bar-gaining promotes the reconciliation of family and work responsibilities, introduces gender-neutral job evaluations or encourages pay transparency within the enterprise. Clearly, the effectiveness of collective bargaining in terms of reducing wage inequalities will depend on the level at which collective bargaining takes place in a country. Empirical evidence has found that centralized bar-gaining is more effective for reducing the GPG (Sissoko 2011). This means that, in countries where collective bargaining takes place at a more decentralized level, social partners would be advised to produce guidelines to orient negotiations of their respective members to promote gender equality. Two additional considerations need to be taken into account. First, for collective bargaining to ef-fectively reduce gender inequalities, it is important that women are adequately represented in the leadership of both trade unions and employers' confederations. This is because women are more likely to uphold gender mainstreaming in the definition of pay and working conditions. Second, it is essential that social partners do not loosen their commitment to gender equality when other competing needs arise, such as wage moderation and the need of preserving jobs during economic crises. In these cases, it is important that social partners consider both the direct and indirect ef-fects of policies that are introduced, as gender-blind approaches can have more negative effects on women, even if they do not explicitly discriminate against them.

Policies to promote female labour force participation

▶ *More and better jobs for women*: As documented in section 2, the rate of female employment in Montenegro is low from an international perspective, and a large gap exists between male and female employment rates. Additionally, there has not been significant progress in closing the gender em-ployment gap in the last decade. This occurs even though women are often as qualified as men, and in some cases have higher educational attainments. Accordingly, the analysis in section 3 has shown that the GPG in Montenegro cannot be fully explained by differences in observable characteristics between men and women, such as age, educational attainments, sectors or occupations. Rather, the GPG remains mostly unexplained and can be linked to issues such as occupational segregation and the undervaluation of female work. In this context, increasing female labour force participation, while positive in itself, can also generate positive effects in lowering the GPG. Indeed, higher participation of women in the labour market can contribute to fighting gender stereotypes and promoting equal working conditions for men and women. For these positive effects to materialize, however, it is impor-tant that women who enter the labour market are represented in all occupations and types of jobs, including supervisory and managerial positions. Similarly, it is important that female employment is not concentrated in traditionally female-dominated sectors, such as health care and education, but

rather fairly represented across all sectors, including traditionally male-dominated and highly-skilled sectors, such as information and communication technology and science and technology. All of this requires a set of policy interventions, ranging from educational policies to gender-friendly macro-economic policies and public investments. In addition, information and media campaigns should be initiated, also targeting high-school students, challenging traditional stereotypes on the role of women inside and outside of the labour market.

▶ *Care policies for better work-life balance*: The analysis in section 4 showed that the GPG in Montenegro can at least partially be explained by differences in care responsibilities between men and women, both around the time of childbirth and later in life. The unequal sharing of unpaid care within the households can lead to fewer women entering the labour market. It can also imply that women accept jobs with more manageable workloads, which however are often associated with lower wages. All this contributes to widening the GPG. In this context, policy efforts should be directed towards two different objectives. The first one is to promote a more equal sharing of care responsibilities between men and women within the household. This can include, among others, introducing paternity leave for new fathers, which is currently absent in the legislation. This will have direct positive effects in terms of a more equal sharing of care responsibilities around the time of childbirth. Additionally, it can have long-term effects on the distribution of tasks between parents later in life – new fathers who are involved in the care of their children from the very beginning are more likely to remain involved as they grow up. The second objective that should be pursued concerns improving the coverage and quality of childcare services. Montenegro performs relatively well compared to other countries in the Western Balkans with respect to the share of children enrolled in early childcare (this is equal to 29 per cent for children aged 0–2 years and 73 per cent for children 3–6 years (ILO forth.). However, higher childcare coverage has been achieved mostly by increasing the average size of education groups, rather than by building new childcare facilities (Peeters, 2016). As a result, the average number of children per education group is 31, which exceeds the legal maximum of 25 children. Overcrowding is particularly acute in large urban centres, such Podgorica and Herceg Novi, where the number of children per education groups can reach 40. Overcrowding and poor quality can discourage women from enrolling their children in childcare services.

Better data to measure the GPG

▶ *Better data to measure the GPG:* The analysis in section 3 showed that estimates of the GPG can vary greatly depending on methodological choices (e.g. estimating the GPG at the mean or at the median of the wage distribution or using hourly or monthly wages). Moreover, the analysis of what lies behind the GPG relies on a number of assumptions due to the absence of adequate data. In this context, having access to good quality data on male and female work inside and outside of the labour market would allow better measurement and understanding of the GPG. The EU–SILC data that has been used in this report allows for an adequate measure of the overall level of the GPG, but the analysis on its determinants is clearly constrained by data limitations. Information to conduct this type of analysis could be collected, for instance, through an ad-hoc module on male and female work inside and outside of the labour market. Such an ad-hoc module could be added to either the EU–SILC or the labour force survey to solicit information on care responsibilities within the household (e.g. who is the primary responsible of children, how much time is spent by men and women in unpaid care work), preferences over work-life balance and other information on professional qualifications and the nature of work performed (e.g. tasks and responsibilities to measure work of equal value). Of course, developing and implementing an ad-hoc module comes with non-negligible organizational and financial costs. However, it is important to note that the root causes behind the GPG are relatively constant over time. This means that, while baseline estimates of the GPG could be updated annually through the current EU–SILC survey, the more in-depth analysis on the causes behind the GPG (which would rely on information collected in this new ad-hoc module) could be performed at longer time intervals, for example every two or five years.

▶ 6. Conclusions

THE GPG IN MONTENEGRO

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This report has presented novel estimates on the GPG in Montenegro, drawing on data from the EU–SILC survey between 2014 and 2021. The results showed that the GPG is around 21 per cent when computed at the mean of the wage distribution and around 11 per cent when computed at the median. At the same time, the empirical analysis demonstrated that trends in the GPG have not shown any clear signs of improvement over the last decade. Higher levels of the GPG are obtained by taking into account differences in the composition of the labour force through a factor-weighted GPG. Additionally, the GPG is particularly high for certain groups of workers, such as highly educated individuals, prime-age workers, foreigners and workers under temporary employment contracts. The GPG is also higher for individuals at the top of the wage distribution. The analysis also investigated what lies behind the GPG. A simple decomposition exercise showed that the GPG cannot be explained by differences in observable characteristics between men and women in employment, such as age, education, sector or occupation. Rather, the GPG remains largely unexplained, especially at the top of the wage distribution. The report presents suggestive evidence that the GPG is related to the presence of a motherhood pay gap, horizontal segregation within occupations, and wage penalties for feminized occupations.

The report has also reviewed the existing legislation and policies to eliminate the GPG in Montenegro. While the Constitution prohibits any form of discrimination between men and women and the labour code explicitly includes the principle of equal pay for work of equal value, there are still quite a few policy gaps to fill to bring about significant change. The length of maternity leave may be adequate, but benefit levels can be low for women with a short history of contributions. Additionally, there is no right to paternity leave in the legislation. The coverage of childcare services is rather high from an international perspective, but there are concerns about overcrowding and the quality of the services provided. The report provided possible areas of policy intervention with the aim of reducing the GPG. These include interventions to promote equal pay for work of equal value, wage and collective bargaining policies to reduce the GPG, policies to increase female labour force participation, and efforts to improve the quality of data to measure and understand the GPG. The report also notes that coordinated actions around these different domains can generate positive synergies and greatly contribute to the eradication of the GPG.

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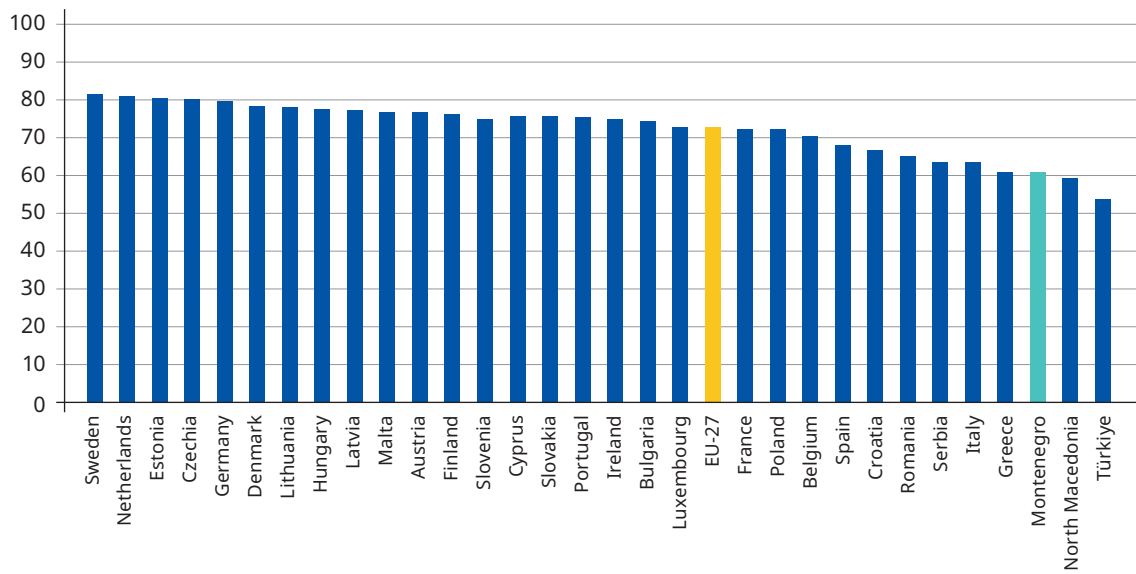
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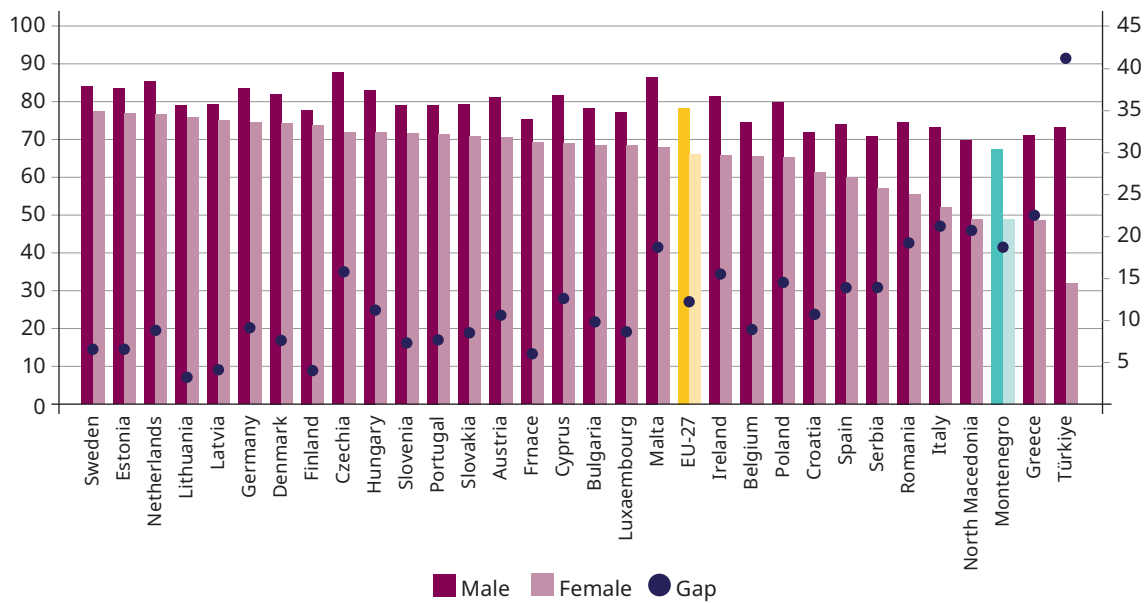World Bank Group. 2018. *Women, Business and the Law 2018*.

▶ Appendix

THE GPG IN MONTENEGRO

▶ Appendix

▶ **Appendix Figure 1: The employment rate in 2019: An international comparison**

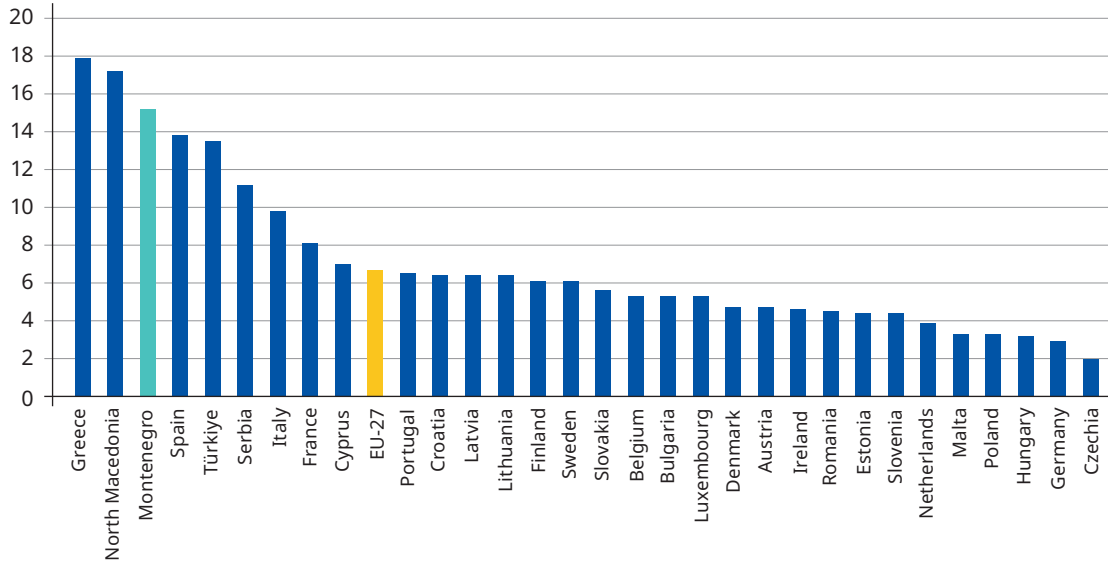### Panel A: Overall employment rate, 2019

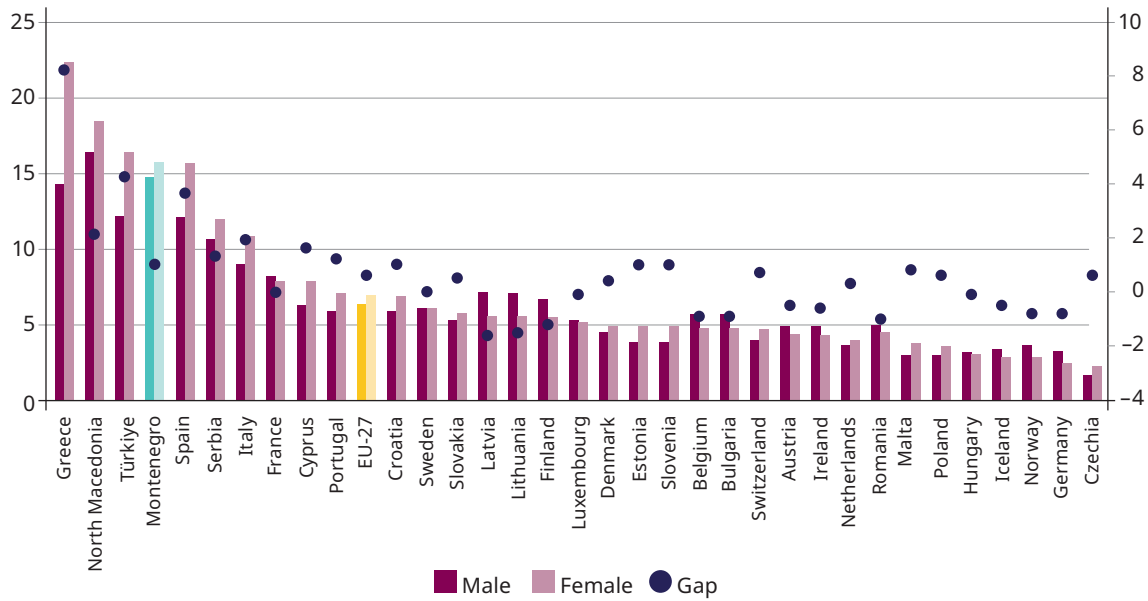### Panel B: Male and female employment rates, 2019

Source: Author's elaboration based on Eurostat data.

▶ **Appendix Figure 2: The unemployment rate in 2019: An international comparison**

Panel A: Overall unemployment rate, 2019

Panel B: Male and female unemployment rates, 2019

**Source**: Author's elaboration based on Eurostat data.

▶ **Appendix Figure 3: Probability density function of hourly wages, 2020**

Note: The figure reports the probability density functions of male and female wages in Montenegro, using data from the 2020 EU–SILC survey. The vertical lines report mean (continuous lines) or median (dashed lines) wages for men (in blue) and women (in red).

**Source**: Author's elaboration based on EU–SILC data.

▶ **Appendix Figure 4: Monthly GPG at the mean and median (2014–2021)**
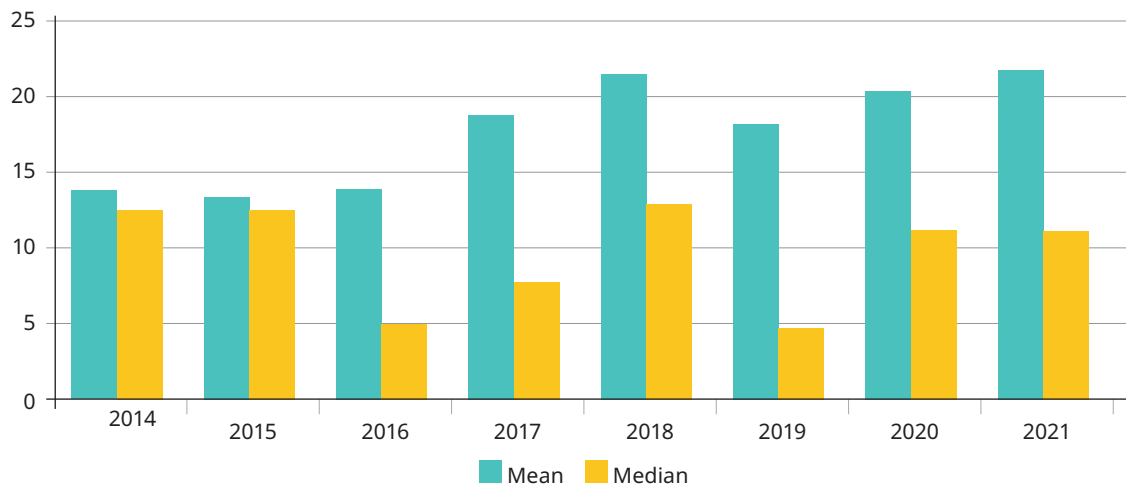
Note: The figure reports the GPG using monthly wages, at both the mean and the median of the wage distribution between 2014 and 2021.

Source: Author's calculations based on EU–SILC data.

▶ **Appendix Figure 5: The GPG at different quantiles of the wage distribution, 2014–2021**
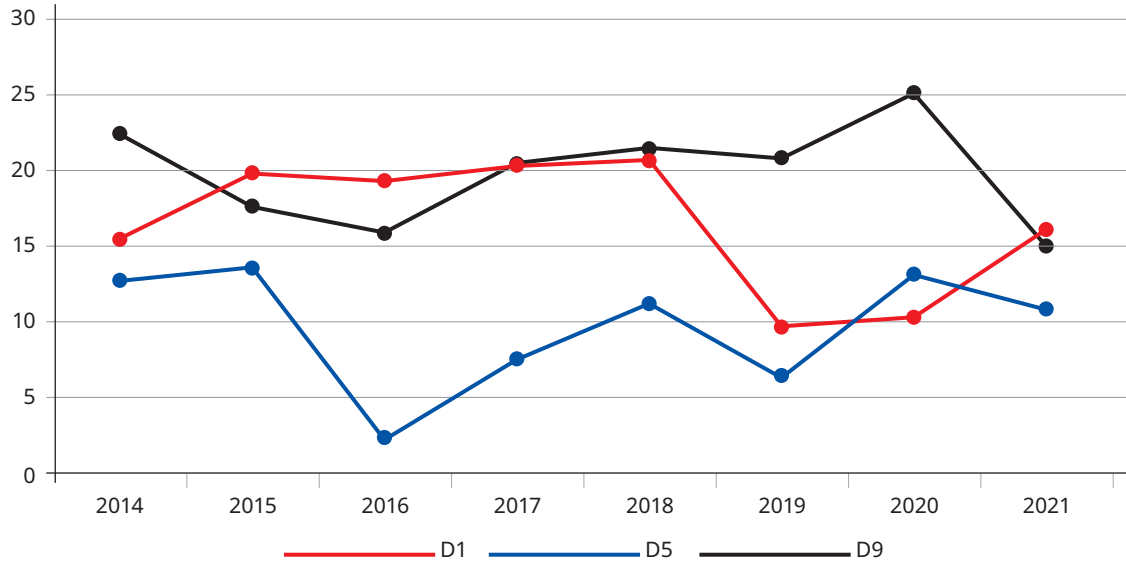
Note: The figure reports the GPG using hourly wages at different quantiles of the wage distribution. In particular, "D1" corresponds to individuals in the first decile, "D5" corresponds to individuals in the fifth decile, "D9" corresponds to individuals in the ninth decile.

Source: Author's calculations based on EU–SILC data.

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