

PwC Women in Work 2024

Unmasking inequalities: Delving deeper into the gender pay gap

February 2024



Executive summary

International Women's Day 2024 is a time for us to pause and reflect on our journey towards gender equality. It is a time to recognise progress but also consider whether the pace of progress is fast enough. This is especially the case during times of economic uncertainty, as economic shocks are likely to impact women the hardest, given their overrepresentation in insecure employment and in sectors with low pay. Women face a double whammy during economic downturns, as during such times the risk of inaction towards achieving gender equality in the workplace is at its greatest. Consequently, without immediate action, we risk facing an even more unequal workplace of the future. In addition to achieving equal, inclusive workplaces, improving women's labour market outcomes can be especially powerful during times of economic turmoil. An improvement in women's employment has the potential to generate significant earnings and GDP impacts.

This year, we find that the average gender pay gap across the OECD widened from 13.2% in 2021 to 13.5% in 2022. Although women's participation in labour markets across the OECD is rising, they continue to face pay disparities compared to men. In the case of 20 out of the 33 OECD countries on our Index, the gender pay gap was larger on average in 2022 than in the previous year. For readers who are familiar with our reports from previous years, this will not come as a surprise. The latest data shows that progress towards gender equality in the workplace is too slow. At this pace of progress, it will take more than half a century to close the gender pay gap across the OECD.

Luxembourg tops the Index, followed by Iceland and Slovenia.

Luxembourg experienced improvements across all five indicators that constitutes our Index, between 2021 and 2022. It is also an OECD leader on the gender pay gap, with a gap of -0.2% as of 2022. Meanwhile, Australia demonstrated the largest annual improvement to rankings, rising from 17th place in 2021 to 10th place in 2022. The country's gender pay gap narrowed by more than four percentage points over this period, falling to 9.9%.

The UK experienced the largest annual fall on the Index of any OECD country.

Despite an increase in the UK's Index score between 2021 and 2022, the country's rank fell from 13th to 17th place. This shows that its progress is being outpaced by other OECD countries. The UK particularly lags behind on the gender pay gap, the gap widened from 14.3% in 2021 to 14.5% in 2022.

This year, we find that the average gender pay gap across the OECD widened from 13.2% in 2021 to 13.5% in 2022.





In light of the persisting gender pay gap in the UK we carried out further analysis to understand its drivers. While the gender pay gap is a useful measure, it does not account for differences between women and men with respect to other pay-determining factors, (such as qualification levels, industry and occupational grade). **We explore whether gender disparities in pay remain when holding such common drivers of pay constant. We call the remaining pay differentials ‘pay penalties’. This enables us to work towards estimating a ‘like-for-like’ comparison of the gender pay gap in terms of personal and professional background.**

We find that even after accounting for nine pay-determining factors, the majority of the pay differential between men and women persists. Our analysis shows that, on average, for every £1 earned by a man in the UK, a woman earns 90p despite similar personal and professional backgrounds. The presence of this pay penalty suggests that biases and structural inequalities in the workplace play a significant role in driving gender pay disparities. Specifically, our analysis indicates that disparities in pay are accentuated when the intersection of gender with income, age, marital status, ethnicity, industry and qualification level is considered. For instance, **the pay penalty faced by women more than doubles from when she starts her career (at the age of 16-30 years old) compared to in the later stages of her career (between the ages of 46 and 65 years).** This trend is likely driven by an increase in unpaid care responsibilities with age (and in particular the motherhood penalty), and health-related challenges at older ages (including the menopause). **Ethnicity and gender also play intersecting and often**

compounding roles in driving inequalities in the workplace. We find that Bangladeshi women face the largest pay penalty relative to White men. For every £1 earned by a White man, an equally-qualified Bangladeshi woman with similar personal and work-related characteristics earns 75p on average.

Understanding the multitude of factors and complexities that drive gender disparities in pay is a crucial step in helping to address them and make progress towards a more equal workplace. Closing the gender pay penalty could also unlock significant economic gains. We estimate that if women in the UK no longer faced a gender pay penalty, the potential increase in women’s earnings could be up to £55bn per year. Moreover, it could encourage more women to join (or rejoin) the workforce – a 5% increase in the total number of women in employment could boost UK GDP by up to £125bn every year*.

We find that, on average, for every £1 earned by a man in the UK, a woman earns 90p despite having a similar personal and professional background.

* This refers to gross economic gains per annum, based on employment, earnings and GDP data as of 2022. All figures are reported in nominal terms in 2022 prices. More detail on the methodology is provided in the Technical Appendix.

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01

Key Index results



The OECD continues to make slow progress towards gender equality at work. At the current rate, it will take over 50 years to close the gender pay gap.

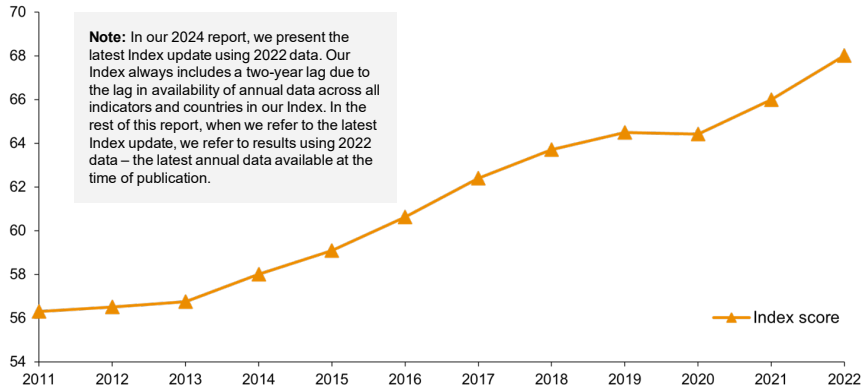
PwC's Women in Work Index measures progress made towards gender equality at work across 33 OECD countries¹. The Index is comprised of five indicators that frames our analysis and measures several key indicators of gender equality in the workplace.

Despite some progress over the past decade, our analysis shows there is still a considerable way to go to reach gender parity at work. Over the last decade, the average Index score increased from 56.3 in 2011 to 68 in 2022. In the latest Index update, the average OECD score improved by approximately two points from a score of 66 in 2021 to 68 in 2022. This is faster than the average increase of one point per

year since the start of the Index. Between 2021 and 2022, the majority of the improvement across the OECD* was driven by an increase in the female participation rate from 70.8% to 72.1% and a fall in the female unemployment rate from 6.4% to 5.3%. **However, the average gender pay gap across the OECD widened from 13.2% to 13.5% over this period. This shows that despite**

greater participation, women remain in a considerably weaker position in terms of labour market returns compared to men. Since the inception of our Index in 2011, the gender pay gap has been one of the indicators with the slowest improvement, narrowing by only 3.0 percentage points between 2011 and 2022 across the OECD.

Figure 1a: Women in Work Index OECD average score across 33 countries



Sources: PwC analysis; OECD

Table 1a: Women in Work Index Indicators – OECD average (2011, 2021 and 2022)

Indicator	Description	2011	2021	2022	Change from 2011 to 2022	Change from 2021 to 2022
Female participation rate	The proportion of women of working age (15 to 64) who either have a job or are seeking work.	66.3%	70.8%	72.1%	+5.8pp	+1.3pp
Participation rate gap	The difference between the female participation rate (see above) and the male participation rate.	12.8%	9.6%	9.2%	-3.6pp	-0.4pp
Female unemployment rate	The number of women of working age who are seeking work as a proportion of the total female workforce.	8.5%	6.4%	5.3%	-3.2pp	-1.1pp
Female full-time employment rate	The proportion of employed women who work full time.	74.3%	76.5%	77.9%	+3.6pp	+1.4pp
Gender pay gap	The difference between median hourly earnings of men and women.	16.5%	13.2%	13.5%	-3.0pp	+0.3pp

At the historical rate of progress observed between 2011 and 2022, **it would take more than 50 years* to close the gender pay gap** across the OECD.

Sources: PwC analysis; OECD

*The constant average per annum percentage points change between 2011 and 2022 is applied linearly to estimate the number of years to reach 'parity'.

Luxembourg was the top performer on the Index while Australia saw the greatest improvement in its ranking

Luxembourg ranks first on our Index, followed by Iceland and Slovenia. The top five countries on the Index in 2021 continue to rank in the top 5 in 2022, but the ordering has changed.

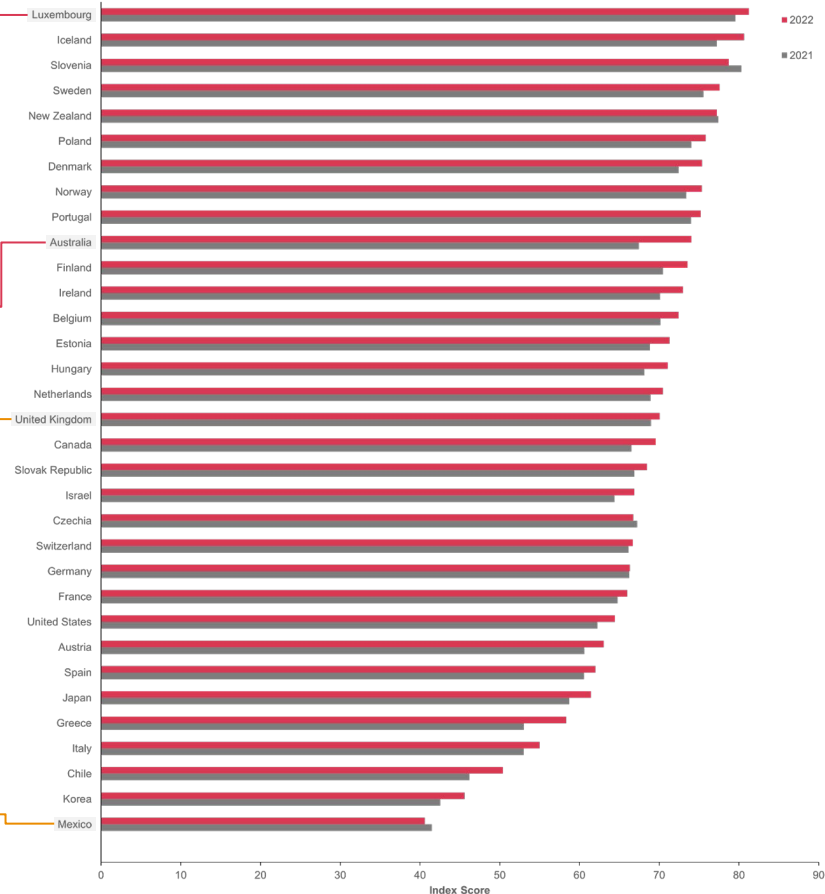
Australia saw the largest improvement in the rankings while the UK saw the biggest fall. Korea and Mexico remain at the bottom of the Index.

Luxembourg's strong performance was driven by an improvement on all indicators and especially by the fact that the country continues to have the lowest gender pay gap across the OECD. At -0.2%, **Luxembourg's gender pay gap is negative**, meaning that on average, the median level of pay is higher for women than men.

Australia recorded the biggest improvement in its rank, rising 7 places from 17th place in 2021 to 10th place in 2022, with a 6.6 point increase in its Index score. This was driven by an improvement across all 5 indicators and in particular, the gender pay gap which fell by 4.3 ppts (from 14.2% in 2021 to 9.9% in 2022) and the female unemployment rate which dropped by 1.4 ppts (from 5.1% in 2021 to 3.7% in 2022).

Conversely, the **UK experienced the largest fall in the ranking**, dropping 4 places from 13th in 2021 to 17th in 2022. This is the largest annual fall in the rankings that the UK has experienced in a decade. This was largely a relative change despite a 1.1 point increase in the UK's Index score, implying that the UK is being outpaced by other countries in terms of progress made towards achieving gender equality at work. **The UK's gender pay gap also increased by 0.2 ppt from 14.3% in 2021 to 14.5% in 2022.**

Chile, Korea and Mexico ranked at the bottom of the Index. All three countries recorded low female participation rates in 2022, at 58%, 62% and 50% respectively. This compared to an average female participation rate of 72% across the OECD.



The UK experienced the largest fall in ranking on our Index between 2021 and 2022, dropping from 13th to 17th place.

Despite a 1.1 points increase in its Index score from 69.0 to 70.1 between 2021 and 2022, the UK fell by four places in terms of rank over this period, falling to 17th place on our 2022 Index. This suggests that the progress made by the UK is being outpaced by other OECD countries.

Between 2021 and 2022, the UK made small absolute improvements on female employment. In particular, the UK recorded a 0.8 ppt improvement in the female unemployment rate which fell from 4.3% in 2021 to 3.5% in 2022. The UK now has one of the lowest female unemployment rates across the OECD, ranking in the top 10 countries for this indicator. Nonetheless, the UK continues to lag behind the OECD in terms of the female full-time employment rate. On this indicator the UK ranks 28th out of 33 OECD countries, with a rate of 68.4% in 2022, compared to the OECD average of 77.9%.

The UK's gender pay gap widened between 2021 and 2022. The UK improved on all indicators except the gender pay gap over this period. The gender pay gap increased from 14.3% in 2021 to 14.5% in 2022. However, the UK's rank on the gender pay gap alone improved marginally from 20th place in 2021 to 19th place in 2022. This was because the gender pay gap widened in 20 out of the 33 countries on the Index over this period, demonstrating that a persisting gender pay gap is a challenge faced by many OECD nations and not the UK alone. Despite the improvement in rank, at 14.5%, the UK's gender pay gap is still larger than 18 of the other 32 OECD countries assessed on our Index. It is also larger than the average gender pay gap across the OECD of 13.5%. We take a closer look at the UK's gender pay gap on the next slide.

Table 1b: The UK's performance on the Women in Work Index, 2022 vs. 2021

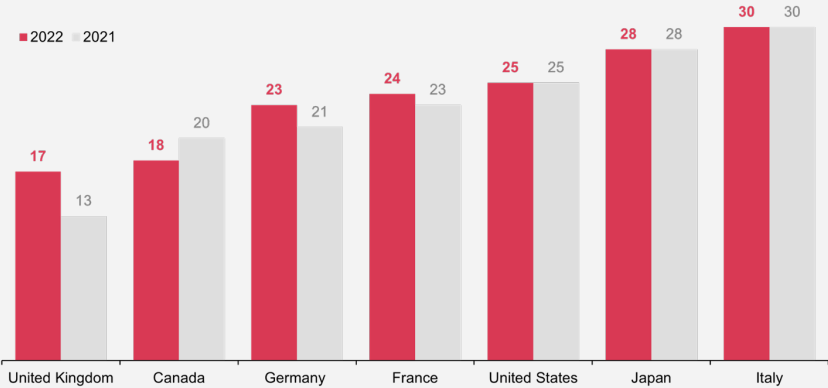
	Indicator value			Rank		
	2021		2022	2021		2022
Female labour force participation rate	74.7%	↑	74.8%	12th	↑	14th
Participation rate gap	7.2%	↓	7.1%	14th	↓	13th
Female unemployment rate	4.3%	↓	3.5%	10th	↓	9th
Female full time employment rate	66.9%	↑	68.4%	28th	=	28th
Gender pay gap	14.3%	↑	14.5%	20th	↓	19th
Index score	69.0	↑	70.1	13th	↑	17th

Spotlight on the UK's performance vs. the G7

Despite its relatively poor performance from an OECD perspective, the UK continues to be the best-performing country out of the G7 economies, but the gap is closing with Canada who is a close second. The majority of the other G7 countries have either maintained their position on the Index between 2021 and 2022, or in the case of Canada, improved their rank.

Canada moved up the ranks on our Index from 20th place in 2021 to 18th place in 2022. Canada's Index score increased by 3 points from 66.5 to 69.5 over the period (compared to a 2 point increase for the UK).

Figure 1b: G7 Women in Work Index Ranks, 2022 vs. 2021



Sources: PwC analysis; OECD, ONS

Over the last decade, the UK has consistently lagged behind the OECD on the the gender pay gap. At the current rate of progress, it will take over 40 years to close the gap.

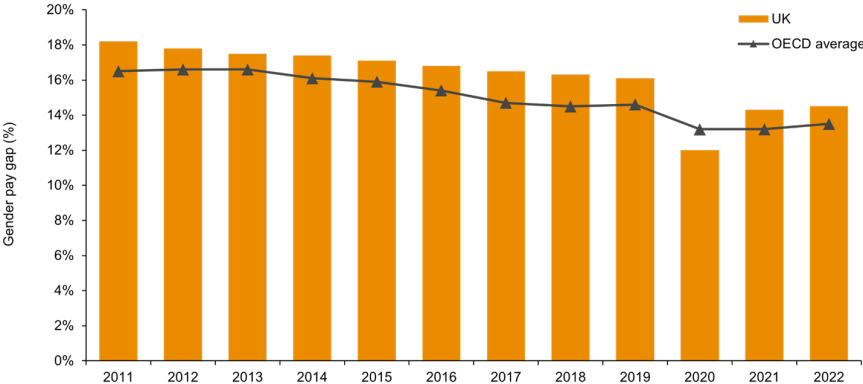
Since the inception of our Women in Work Index in 2011, the UK has consistently outperformed the OECD average score every year. However, on the indicator of the gender pay gap, the UK has consistently lagged behind the OECD average.

The average gender pay gap across the OECD has been lower than the UK in every year between 2011 and 2022, except 2020. The UK experienced a large drop in the gender pay gap between 2019 and 2020. However, as explained in the 2022 edition of the PwC Women in Work Index this was due to the temporary effects of the COVID-19 pandemic and job retention schemes². The gender pay gap widened consecutively post 2021 as these effects wore off, and the UK's gender pay gap returned to being larger than that of the OECD average. In 2022, the UK recorded a gender pay gap of 14.5%. Not only was this 0.2 percentage points (ppts) higher than 2021, it was also 1 ppt higher than the average gender pay gap across the OECD in 2022.

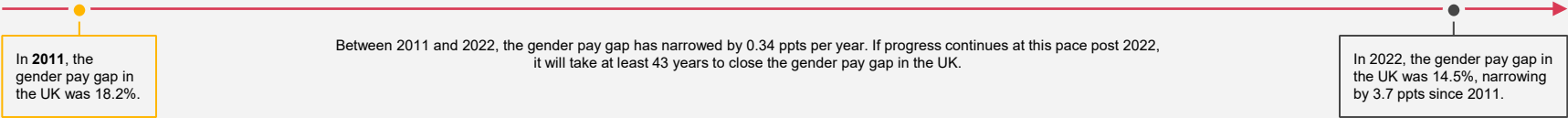
The UK is making progress towards closing the gender pay gap, but it is too slow, meaning it still hasn't caught up to the OECD average. In terms of pace of progress, the UK recorded a faster narrowing of the gender pay gap than the OECD, albeit from a higher starting point. Between 2011 and 2022, the gender pay gap in the UK narrowed by 3.7 percentage points, from 18.2% in 2011 to 14.5% in 2022. The average gender pay gap across the OECD narrowed by only 3 percentage points over this period, from 16.5% to 13.5%. However, since the pace of progress in the UK hasn't been fast enough, the country continues to see a larger gender pay gap than the OECD overall.

The slow pace of progress also means if continued at this pace, the gender pay gap in the UK won't close for the next four decades. At the historical rate of progress observed, it would take 43 years for the gender pay gap to close in the UK.

Figure 1c: The UK and the OECD's gender pay gap, 2011-2022



It would take at least 43 years* to close the gender pay gap in the UK, based on the historical rate of progress.



* The constant average per annum percentage points change between 2011 and 2022 is applied linearly to estimate the number of years to reach 'parity'.

Scotland was the top performer while the East Midlands dropped six places on our UK Regional Index.

Our Women in Work Regional Index compares the progress made towards gender equality at work across the UK's nations and regions.

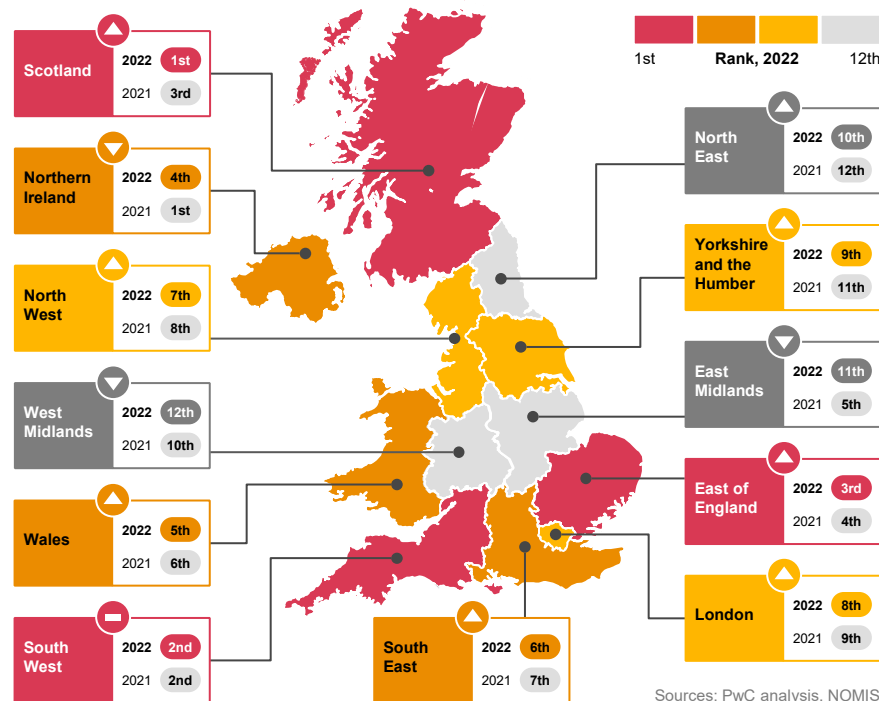
Scotland rose amongst the ranks to take the top spot on the Index. After consistently ranking in either second or third place on our Index over the last three years, the nation finally secured the top position this year. Scotland's Index score increased by 3.1 points between 2021 and 2022 and this improvement was largely driven by an increase in the female labour force participation rate from 73.2% in 2021 to 74.9% in 2022. This also led to Scotland recording the lowest gap in participation rates between men and women across the UK as of 2022 at 4.4%. The female unemployment rate in Scotland also fell over this period from 3.4% in 2021 to 2.9% in 2022.

Nine out of the 12 regions and nations recorded an improvement in their Index score between 2021 and 2022 with Wales experiencing the largest improvement. The gender pay gap in Wales narrowed from 11.6% in 2021 to 10.9% in 2022. The nation also made improvements on the female unemployment rate. Scotland, Yorkshire and the Humber and the North East recorded the largest increase in rankings, moving up by two places each since last year. Conversely, East Midlands, the West Midlands and Northern Ireland all record a deterioration in their Index score and rank from last year.

The East Midlands experienced the largest drop in rankings between 2021 and 2022, falling by six places from 5th place to 11th place. This was driven by deteriorating performance across all indicators between 2021 and 2022 with the exception of the female unemployment rate. In particular, the gender pay gap widened from 16.3% to 17.1% – the largest pay gap across regions in 2022. The East Midlands also recorded one of the largest participation gaps at 8.2%.

Overall, the gap between the worst performing region and best performing nation narrowed in 2022 compared to 2021. This suggests that although the pace at which regions and nations are progressing towards gender equal workplaces varies, the worst performing regions are getting better at catching up. A narrower regional gap also indicates lower geographical inequalities in employment outcomes for women across the UK.

Figure 1d: UK Regional Index rankings, 2022 vs. 2021



Sources: PwC analysis, NOMIS

02

Delving deeper: The drivers of the UK's gender pay gap



Setting the scene for our gender pay penalty analysis

The previous section set out our latest view of the progress made towards gender equality at work in OECD countries, as measured by our Women in Work Index. For readers who are familiar with PwC's Women in Work Index reports from previous years, this year's results are unlikely to come as a surprise. The latest data only bolsters our view that progress towards gender parity at work is too slow. Last year, we estimated that at the current pace of progress, an 18-year old woman entering the workforce in the OECD would not see pay parity in her working lifetime. To add to this, the latest data shows that the gender pay gap in the UK widened between 2021 and 2022. Not only are we facing stagnating progress, but without immediate action, we risk facing an even more unequal workplace in the future.

This comes at a time where there is increased scrutiny on gender pay gap reporting by policymakers and legislators across the globe. The EU's Pay Transparency Directive requires member states to bring in local requirements from employers to adhere to a range of gender pay reporting, equity and transparency provisions from June 2026. This may include an annual Joint Pay Assessment that will "identify, remedy and prevent differences in pay between female and male workers which are not justified on the basis of objective, gender-neutral criteria", for employers with 250 employees and more.³ Closer to home, the UK Labour Party's New Deal for Working People commits to closing gender, ethnicity and disability pay gaps. It extends existing equal pay protections to Ethnic Minority workers and disabled people.

Our previous work in this area – both in terms of our economic publications⁴ and the work carried out by our Diversity, Equity & Inclusion team⁵ – has shown that there is no easy fix. The drivers of the gender disparities in pay are multifold, with different groups in society experiencing different challenges. We believe that a crucial step in solving this issue is to firstly acknowledge its complexity and secondly develop an evidence base which analyses the interplay between gender and pay, when accounting for other pay determining characteristics (such as working arrangements and regional locations etc). This will enable us to understand:

- How does the pay disparity vary throughout a woman's lifetime?
- How does gender compound inequalities in workplace outcomes for other populations such as Ethnic Minorities?
- Is the pay disparity smaller in industries with a large share of women?

In the rest of this section, we carry out pay disparity analysis and estimate the level of disparity between women and men across these factors. This includes presenting evidence regarding key drivers of these differences. We commence this analysis by explaining what we mean by 'pay penalties' on the following slide.



The gender pay penalty highlights the role of gender biases and structural inequalities in driving gender disparities in pay

Although a useful measure, the gender pay gap does not account for differences between women and men with respect to other pay-determining factors, such as qualification levels, industry and occupational grade. Our analysis explores whether gender disparities in pay remain when holding constant common drivers of pay and other factors that may impact pay. We call the remaining pay differentials 'pay penalties'. We take national hourly earnings data from the Annual Population Survey (2021 & 2022) and statistically control for individual and occupational characteristics that influence pay (as shown in Figure 2a). This means we get closer to a 'like-for-like' comparison in terms of personal and professional background. While we compare people at the same occupational grade, we cannot account for the exact level of experience/time spent within roles. Outstanding pay penalties therefore highlight gender-related impacts including motherhood. Further detail on the methodology is provided in the Technical Appendix.

In the rest of this section, we present the findings of our gender pay penalty analysis in the UK. We investigate the magnitude of the gender pay penalty in the UK and how it varies across income levels and various stages of a woman's career.

We also explore how the effects of other drivers of pay (such as ethnicity) interact with gender to determine pay. In particular, we look at the intersectionality between gender and the following characteristics:

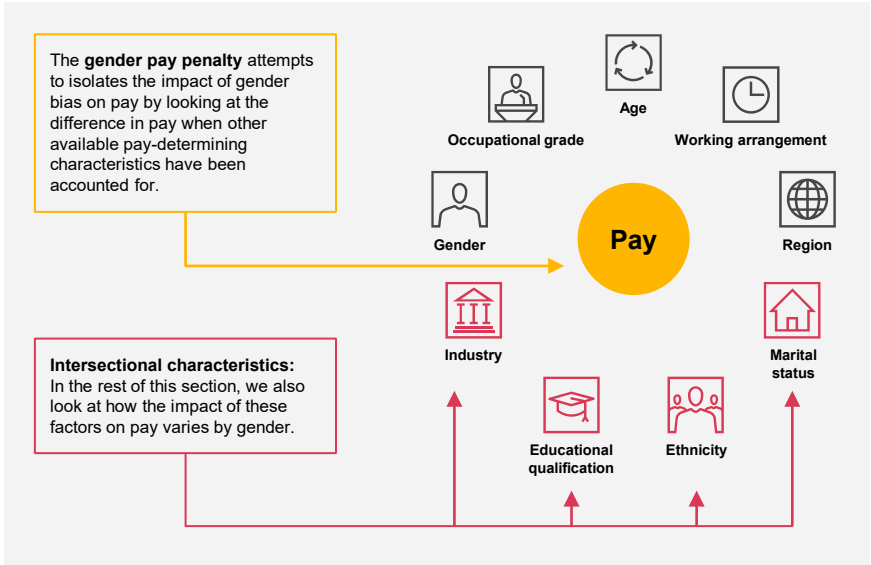
- Educational qualification
- Ethnicity
- Industry of employment
- Marital status

We focus on these four drivers based on extensive evidence (referenced in the Technical Appendix) which highlights these factors play a pivotal role in how they interact with gender to influence pay.

Gender pay gaps vs. gender pay penalties ⁶	
Gender pay gap	Gender pay penalty
The difference in mean or median earnings between women and men.	The difference in earnings between women and men once differences in other pay-determining characteristics (for which data is available) such as qualification or occupational grade have been accounted for. In theory, this is the part of the gender pay gap that captures the impact of gender biases and structural inequalities.

We account for as many pay-determining factors as possible. However, we acknowledge that the ability to compare 'like-for-like' depends on data availability and granularity. For example, we have not controlled for the impact of caring responsibilities on pay due to data constraints. We have also not accounted for unfair treatment experienced by individuals at work. While we acknowledge that biases exist in the workplace along several of the characteristics we examine (e.g. gender, age, ethnicity) and contribute to workplace experiences and outcomes, we do not explore this in our analysis due to limited data availability. While we expect some of these impacts to be reflected in our analysis, for example when we examine the intersection between gender and marital status, age and ethnicity we note this as a limitation. Similarly, the occupational grade data covers broad differences between occupations but does not completely capture occupational segregation. Therefore, when we compare two individuals at the same occupational grade, there may still be occupational differences within this group that impact pay. For example, employees working in junior managerial positions may be in the same occupational grade as more senior managers and directors. Finally, the majority of factors captured are observable factors and as such we recognise that our analysis does not capture personal lifestyle choices that impact pay. Some of these choices may be correlated with other observable factors (e.g. health-related lifestyle choices are likely to be associated with age) while others may not. We acknowledge the limitations to our analysis here and further on in this section when relevant for completeness and transparency. Despite these limitations, we believe our analysis adds value by going one step further than the reported gender pay gaps and investigating the role of observable gender biases and structural inequalities in driving gender pay disparities in the UK.

Figure 2a: Pay determining characteristics accounted for in our gender pay penalty analysis

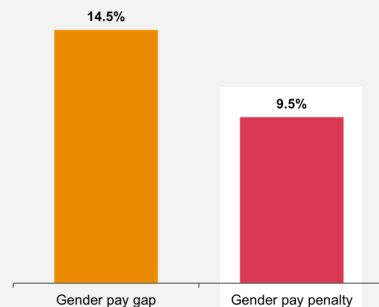


For every £1 earned by a man in the UK, an equally-qualified woman with a similar personal and professional background earns 90p on average

Comparing the pay of a 50-year old man who leads an asset management firm in London with the pay of a 22-year old woman employed as a teacher in the West Midlands does not reveal much about the impact of gender on pay. This is because there are several other factors at play other than gender that could explain the difference in pay, such as qualification levels, industry and occupational grade. However, as mentioned on the previous page, by estimating the gender pay penalty, our analysis isolates for the impact of gender alone as much as possible.

As a starting point, we begin by considering the average gender pay penalty for women across the UK.

We find that women in the UK face a 9.5% pay penalty on average.



This means that a 9.5% difference in pay persists between women and men even after accounting for other pay-determining characteristics. This equates to around two-thirds of the gender pay gap figure.

Sources: PwC analysis; OECD, ONS

We find that women in the UK face a 9.5% pay penalty compared to men, based on data from 2021 and 2022. This means that for every £1 earned by men in the UK, a woman earns only 90p, despite...

- having similar personal characteristics (age, ethnicity, marital status);
- living in the same region of the UK;
- having similar qualifications;
- working in the same industry;
- working at a similar occupational grade and
- working under similar working arrangements (i.e. full-time or part-time)

This gender pay penalty figure (9.5%) compares to the gender pay gap figure of 14.5% for the UK in 2022. A smaller pay penalty figure is expected because it accounts for differences in a range of characteristics between women and men, other than gender, that could impact pay. While our analysis does not account for each and every pay-determining factor other than gender, it does bring us closer to identifying the impact of gender alone on the pay disparity between women and men.

By comparing these two figures, our analysis finds that even after accounting for a range of pay-determining factors, the majority of the pay differential between men and women persists. The presence of this pay penalty suggests that biases and structural inequalities in the workplace play a significant role in driving gender pay disparities.

A number of studies have similarly found evidence of gender bias in UK workplaces. A 2023 survey⁷ of 18-30 year-old women in the UK found that nearly one in four respondents had been paid less than men who did similar work. Over a third of HR representatives also stated that they were aware of women being discriminated against in their organisation over the past year.

In this section, we delve deeper to understand the drivers of this pay penalty figure and how it differs depending on income level and age group.

Note: In the rest of this section, we refer to the six characteristics listed above collectively as 'personal and work-related characteristics'. All of the findings we present are based on analysis that controls for these characteristics' effects on pay.

Income: The gender pay penalty faced by women in the UK worsens as their earnings increase

Women from higher income groups face larger gender pay penalties in the UK.

Our analysis finds that women in the top 25% income bracket (earning approximately £40,541 per year on average*) earn 88p for every £1 made by a man at the same income band, with similar personal and work-related characteristics. Women in the bottom 25% income bracket (earning approximately £19,511 per year on average*) still face a gender pay penalty, albeit the disparity is slightly smaller, as shown in Figure 2b.

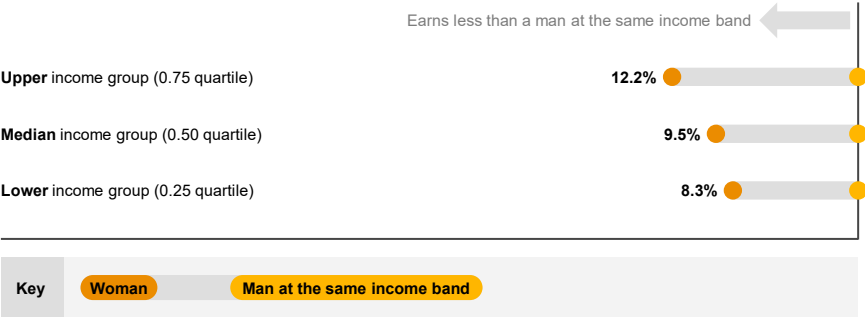
To estimate this impact, we build on the analysis undertaken across the whole of the survey population by segregating our dataset by income band. Our results are in line with gender pay gap data released by the Office for National Statistics (ONS) in November 2023⁸ which found that 'compared with lower-paid employees, the gender pay gap among higher earners is much larger'. Although the ONS reports on pay gaps and not pay penalties, it corroborates the trend seen in our pay penalty analysis. Studies^{9,10} in the US that also controls for other factors that influence pay similarly finds the pay penalty widens higher up the corporate ladder.

A review of research and data relating to the gender pay gap, indicates that this could be driven by two key factors:

1. The 'greedy jobs' phenomenon: Economics Nobel Prize winner Claudia Goldin^{11,12} refers to jobs that require working longer and unpredictable hours as 'greedy jobs'. Employees who put in these extra hours tend to develop closer working relationships with their superiors. This likely results in more favourable allocation of career opportunities and/or pay. Goldwin argues that men have more time available and/or flexibility to meet the demanding needs of such jobs than women because women face a disproportionately higher unpaid care load. Given that jobs likely get more 'greedy' at higher pay bands, this phenomenon could be driving a larger pay penalty at higher income levels. The negative impact on women's pay is also accentuated by the motherhood penalty that we explored in detail in our 2023 PwC Women in Work report¹¹. We explore further the implications of the unpaid care load in the following pages when we look at the intersection of gender with age and marital status.

2. The gender gap in negotiation: Several survey-based studies^{13,14,15,16} have found that women are less willing to negotiate their salary offers than men. This is because of a higher 'social cost of negotiation' for women than men, i.e. greater risk of alienating their employers. The social cost is much lower when women are negotiating for others instead of themselves. With fewer women in senior positions than men, it is unsurprising that women in higher pay bands lack advocates and hence face larger pay penalties. This impact is further accentuated by the gender authority gap, where unconscious biases could lead to women in senior positions being perceived with less authority than men.

Figure 2b: The gender pay penalty by income quartile



Sources: PwC analysis; ONS

What does this mean for policymakers and business leaders?

Policymakers and businesses, particularly in workplaces with a low proportion of women in leadership positions, should seek to proactively recognise and mitigate gender biases when making decisions on pay and allocation of work. In addition, provision of more affordable childcare and progressive parental leave policies can facilitate a more even distribution of caring responsibilities between women and men. Finally, policies that promote greater transparency around pay may help to address the gender gap in negotiation.

* We estimate average annual earnings by using hourly pay data and assuming a full time working week of 36.5 hours in our analysis.

Age: Women also face larger pay penalties as they age, likely driven by the unequal distribution of unpaid care work and the workplace implications of women's health issues

Women between the ages of 46 and 65 years in the UK face more than twice the gender pay penalty faced by women between the ages of 16 and 30 years.

We find that the pay penalty increases as women grow older such that a woman entering the workforce faces a pay penalty of approximately 5.2% on average, widening to nearly 13% at the end of her career.

These findings align with analysis conducted by the Trades Union Congress (TUC)¹⁷ in 2023 on pay gaps in which they found that the gender pay gap is widest for older women in the UK, with women aged 50 to 59 facing a pay gap of 20.8% and women aged 60 and over facing a pay gap of 18.4%. This result is also unsurprising given our finding on gender pay penalty by income level earlier in this section, given that older women are more likely to be in higher paying jobs.

Our review of evidence relating to the gender pay gap and pay penalty identifies the following contributory factors underpinning this trend:

1. The motherhood penalty: According to Census data¹⁸ from 2021, the average age at which women give birth to their first child was 30.9 years across England and Wales. In addition, evidence from six OECD¹⁹ countries found that women's earnings were up to 61% lower than men's in the 10 years after the birth of their first child. A UK-based study²⁰ also found that by the age of 42, mothers working full-time earned 7% less than women with similar backgrounds without children. Meanwhile, full-time employed fathers earned 21% more than men with similar backgrounds without children. Therefore, the increase

in the pay penalty for women between the 16-30 years group and the 31-45 years group, could be driven by the motherhood penalty. As discussed on page 13, we are unable to control for having caring responsibilities. However the gendered impacts of caring responsibilities on pay is likely be a contributory factor driving the gender pay penalty.*

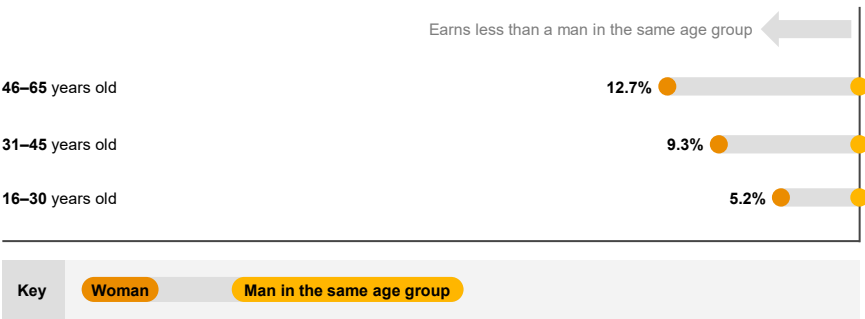
2. Health-related issues: The additional pay penalty for women in the 46 to 65 years group is likely to be associated with health conditions including the menopause as well as the continued impact of the unequal gender distribution of caring responsibilities. Menopause typically begins between the ages of 45 and 55 years for women²² in the UK.

A study by the Fawcett Society²³ in 2022 found that nearly 50% of women's ability to work is affected by menopause symptoms. Meanwhile, 80% of women said their employer has not shared information, trained staff or set a menopause absence policy. Women experiencing menopause symptoms may also require more leave or a reduction in working hours which could impact the career progression opportunities they are given and/or able to access at work. This could impact their compensation and/or chances of promotion. For example, in a recent survey of over 2000 women aged 40 to 60 in the UK, 1 in 4 women reported that menopause has had a negative impact on their career progression²⁴.

Furthermore, women in the 46 to 65 years age group may also be in a 'sandwich generation'²⁵ in which they face caring duties for both younger and older family members while also facing health challenges of their own.

We recognise that women in the 31-45 years and 46-65 years old age bracket may not have caring responsibilities or experience health conditions such as the menopause, but still face larger pay penalties than younger women. The factors listed above are two out of a range of factors likely contributing to this trend.

Figure 2c: The gender pay penalty by age group



Sources: PwC analysis; ONS

What does this mean for policymakers and business leaders?

The unequal gender distribution of unpaid care work remains a detriment to women's labour market outcomes throughout their career lifecycle. Redistributing this load is key to narrowing the gender pay gap. This could be achieved through more flexible work policies, more affordable childcare provision and progressive parental leave policies. Employers should also promote a proactive dialogue and provide health and wellbeing support in the workplace in response to health issues typically faced by women (including the menopause).

* The motherhood penalty is not considered in further detail in this report given data limitations and as it was the focus of our report²¹ last year.

Marital status: A married woman in the UK earns 86p on average for every £1 earned by an equivalent married man. Women who are divorced or separated also face large pay penalties

Next, we consider the intersection between the gender pay penalty and marital status, adding further detail to our analysis on pay penalties faced by women at various stages in their lifetime. Our analysis here is based on heterosexual relationships due to data availability. We acknowledge that there are many different types of couples and that this analysis may not be representative of all experiences.

Our analysis finds that a **married woman in the UK faces the largest pay penalty (14%) relative to a married man with a similar personal and professional background**. Women who are single, divorced, widowed or separated also face pay penalties compared to men with the same marital status and similar backgrounds, but the disparity is largest within the married group. This is most likely due to **different marriage wage premiums for men and women**. For example, a married man in the UK earns approximately 12% more than a single man with similar characteristics. Whereas, a married woman's earnings only rise by around 3% more than a single woman with similar characteristics.

Our review of evidence reveals that this trend can largely be attributed to the presence of a marriage wage premium which is unequally distributed between the genders. The persistence of the motherhood penalty and the economic cost of divorce also play a role, as follows:

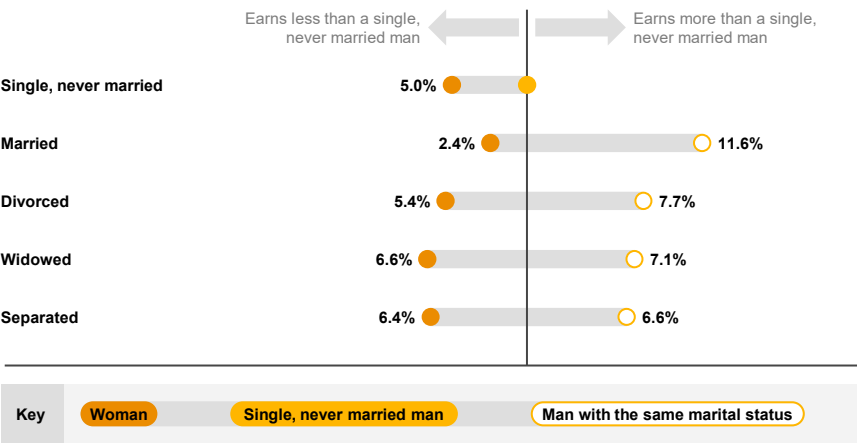
1. Marriage wage premium: A number of studies^{26, 27} have found evidence of a marriage wage premium for men. This is attributed to societal norms around men being better able to focus on their paid work as household tasks are shared with their partner. The studies also quote employers' perceptions that men will be more productive after marriage²⁸, driven by a need to provide for their family and pursue higher

paying jobs. There is evidence^{26, 27} that women may also experience this wage premium.

However, the unequal distribution of household chores and childcare between women and men means that it tends to be a much smaller premium for women. While not all parents are married, married couples account for the majority of families with dependent children in the UK (63%).²⁸ As we do not control for having childcare responsibilities separately in our model, the impacts of unpaid childcare responsibilities are likely to be captured by the intersection between gender and marital status. A study²⁹ published by the Federal Reserve found that having children negatively impacts married women's wages, while they do not detract from a man's marriage wage premium. The study found that this was due to an unequal distribution of childcare responsibilities between women and men that could lead to loss of job experience for women if they take breaks to raise children.

2. Economic cost of divorce: We also find that, on average, **women who are divorced, widowed or separated earn less money than single women with similar pay determining characteristics. This is not the case for men**. Research³⁰ in the UK, the US and in Germany has also found larger economic costs of divorce for women than men. This could be because women face greater financial vulnerability after a separation as men are more likely to have been the primary wage earner in the couple. As a result, women's wellbeing and their productivity at work is likely to be impacted, and they may also be more likely to accept jobs they are overqualified for. Women are also often the primary custodians of children in the majority of divorce cases³¹, meaning that they are more likely to face single parenthood post a divorce or separation than men, resulting in a greater motherhood penalty.

Figure 2d: The gender pay penalty by marital status*



Sources: PwC analysis; ONS

What does this mean for policymakers and business leaders?

As mentioned on previous slides, policies that redistribute the unpaid care load and household chores between women and men will help decrease the pay penalty faced by married, divorced or separated women. Workplace initiatives designed to counteract workplace biases related to the impacts of marriage or separation on a woman's performance at work will also help address this penalty.

* We do not include the civil partnerships category here due to lack of adequate observations in the dataset used.

Ethnicity: Gender and ethnicity play intersecting roles in driving pay disparities

Next, we consider the intersection between ethnicity and gender, and how these two characteristics influence pay. Evidence from past research and analysis, including our 2022 PwC Women in Work report³² and our 2021 Strategy& Ethnicity Pay Gap report³³ has shown that the pay penalties faced by individuals differs significantly based on their gender and ethnic background. We build on this analysis further, exploring the gender pay penalties faced by women both within each ethnic group and across different groups. This enables us to identify the pay penalty faced by women compared to both men of the same ethnic group, and women and men from other ethnic groups.

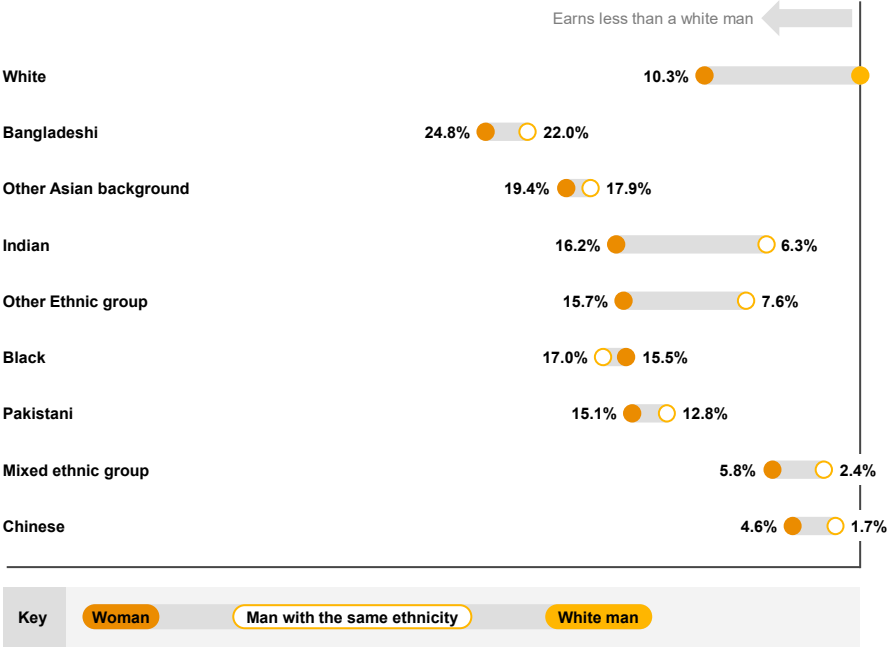
We find that Bangladeshi women face the largest pay penalty relative to White men. For every £1 earned by a White man, an equally-qualified Bangladeshi woman with similar personal and work-related characteristics earns 75p on average. This is followed by the pay penalty faced by women of other Asian backgrounds (i.e. other than Bangladeshi, Indian, Pakistani and Chinese) compared to White men.

Within ethnic groups, we find that women across all ethnic groups experience pay penalties compared to men from the same ethnic group with similar characteristics, with the exception of the Black ethnic group. White women face the largest pay penalty relative to men from the same ethnic group with similar personal and work-related characteristics (10.3%). Similarly, Indian women face a 10% pay penalty relative to Indian men. In contrast, Black women earn 1.5% more than Black men with similar characteristics on average.

Our analysis shows that **the size of the gender pay penalty varies considerably across ethnic groups.** For instance, the size of the gender pay penalty between White women and men with similar characteristics is around five times that between Black women and men or that between Bangladeshi women and men. However, as discussed above, **individuals from these Ethnic Minority groups face the largest pay penalties** (i.e. Bangladeshi women face the largest pay penalty compared to White men with the same personal and work-related characteristics).

This highlights the intersecting and often compounding roles that gender and ethnicity play in driving inequalities in the workplace. We provide further detail on what may be driving these results on the following page.

Figure 2e: The gender pay penalty by ethnicity



Sources: PwC analysis; ONS

Women from Ethnic Minority groups face larger pay penalties due to their overrepresentation in insecure jobs, a lack of mentorship and accentuated impacts of unpaid care work

The intersection of gender and ethnicity in driving inequalities in the workplace could be driven by the following factors:



Insecure employment:

Data^{34,35} shows that even before the COVID-19 pandemic, one in eight Ethnic Minority women in the UK were insecurely employed, compared to one in sixteen White women. Overrepresentation of Ethnic Minority women in insecure jobs implies close to little or no control over work hours, creating financial anxiety and uncertainty. In some cases, this can also mean limited access to workplace benefits like sick pay, maternity pay and pensions. While our analysis accounts for occupational grade and working arrangement (i.e. full-time or part-time), we are unable to account for the contract type and rights available to workers. Analysis from the UK government's Race in the workplace: The McGregor Smith Review³⁶ confirms that the type of jobs that people from Ethnic Minority backgrounds tend to work in impacts wider income inequality.



Lack of Ethnic Minority role models and mentors:

The UK government's Race in the workplace analysis also highlights that lack of role models and mentors from Ethnic Minority backgrounds not only limits support and advice for career progression to those already in the workforce but also limits motivation to those outside. This likely impacts access to opportunities at work as well as pay. Interestingly, the only ethnic group that recorded a larger absolute number of women in employment in 2022 than men was the Black ethnic group. However, the proportion of Black women in employment was still smaller than the proportion of Black men in employment.



Accentuated impact of unpaid care work:

Many challenges hinder equitable career progression of women from Ethnic Minority groups. Research³⁷ from the Trade Union Congress (TUC) finds that Ethnic Minority women are 12 times more likely to be out of the labour market due to caring responsibilities compared to their men counterparts, especially those in their 30s. In another study³⁸, as many as 50% of carers from an Ethnic Minority background reported that their caring responsibilities held them back from applying for promotions compared to 39% of White carers. One in ten carers were 'sandwich carers' (having caring responsibilities for both children and adults, as discussed previously in this section) that made their circumstances even more challenging. Lack of career mobility often implies that these women constitute a very small minority in C-suites. These highlight that the negative impacts on career progression are compounded for individuals with multiple 'identities' (for e.g. ethnicity, gender and occupation).

What does this mean for policymakers and business leaders?

Policymakers and employers must recognise the complexities and nuances inherent within pay disparities. Workplace experiences are likely to differ significantly from individual to individual, with the intersection of gender and ethnicity playing a pivotal role in how this translates into pay inequality. Recognising the complexity and nuance of these dynamics by collecting data on both ethnicity and gender (as well as other characteristics which impact workplace experiences and outcomes) and reporting pay gaps based on a range of characteristics (for example, gender pay gaps, ethnicity pay gaps and disability pay gaps) is a crucial step to driving accountability and addressing this issue.

Industry: The gender pay penalty varies between industries, with women working in manufacturing and public services experiencing the largest pay penalties

Just as the gender pay penalty differs based on income level, age, marital status and ethnic group, we find that it also varies by industry. Overall, across all industries, we find that **women in the UK experience a pay penalty of at least 7% on average, relative to equally qualified men with similar characteristics.**

We find the gender pay penalties to be the largest in the manufacturing, education and health sectors.

Manufacturing: The manufacturing sector has traditionally been viewed as an industry employing a larger share of men than women, and with women generally in junior roles. Women's underrepresentation in STEM fields, the lack of flexible working arrangements and anti-social working hours in the sector have played a part in this. More recently, increased automation has disproportionately impacted women in the manufacturing industry as evidenced in our 2021 PwC Women in Work report and other studies⁴¹. Furthermore, limited representation of women in senior roles could mean less gender-inclusive policies and fewer senior women role models. This likely impacts career growth opportunities and compensation within the sector. Recent ONS analysis⁴² found a larger pay disparity in the sector within senior roles.

Public admin, education and health: The high gender pay penalty within this sector is surprising, given that a large share of employees in this sector in the UK are women. However, most of the women in these sectors do not occupy senior roles. A 2018 report⁴³ by NHS Digital found that "despite women making up over three quarters of all NHS staff, they are still in the minority in senior roles." Similarly, a 2021 study⁴⁴ found that the gender pay gap amongst

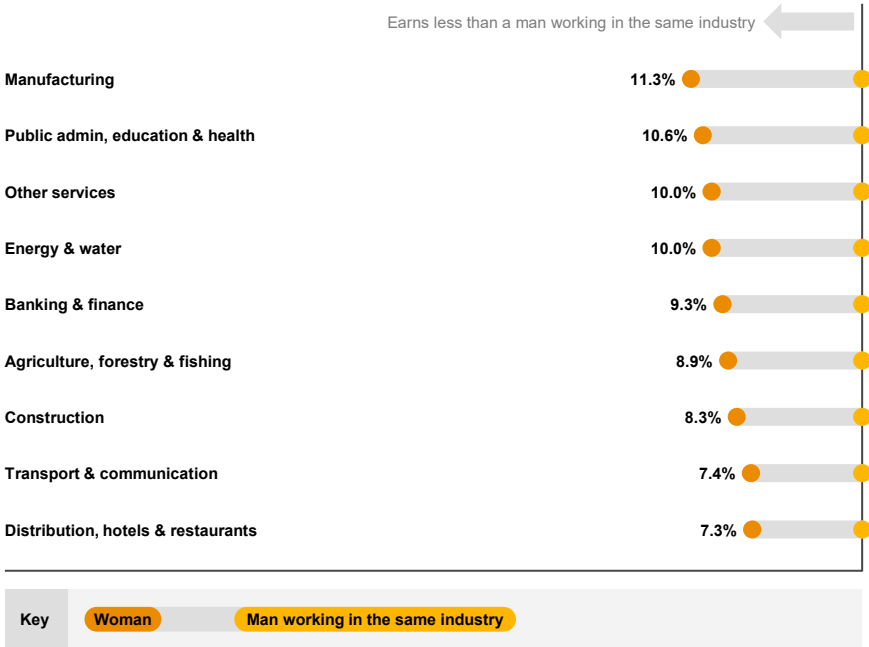
staff in schools worsened over the last decade, and is wider at more senior levels. Underrepresentation of women in senior roles in education and health could be impacting pay equality, as discussed with the manufacturing sector above.* Studies^{44, 45} also cited the motherhood penalty as a reason for the disparity in pay in the education and health sectors as there is limited potential for flexible working arrangements in these sectors (in terms of working hours and/or working location), thereby exacerbating the motherhood penalty. Jobs in these sectors are also arguably more 'greedy' in terms of the rigidity of working arrangements. Therefore, opportunities and pay rises could be determined on a discretionary basis that favours men who are more likely to have the time available to work longer, continuous hours.

What does this mean for policymakers and business leaders?

Policymakers should adopt a mix of sector-specific and economy-wide approaches to address gender pay disparities. Across all industries and particularly those where gender pay disparities are highest, policies should focus on improving the representation of women across all levels of seniority, not just in junior roles.

* Underrepresentation of women in senior roles could be a driver of the pay penalty in the public admin sector as well, however it has not been possible to find evidence to support this theory.

Figure 2f: The gender pay penalty by industry¹



Sources: PwC analysis; ONS

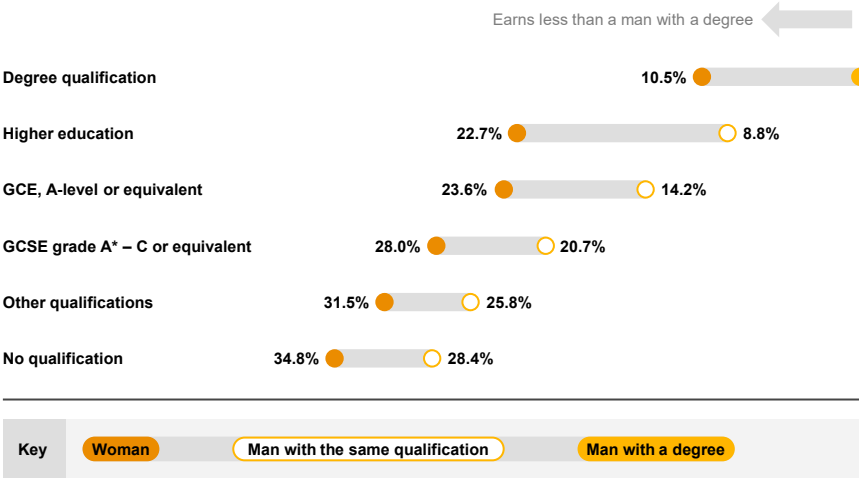
Qualification: The pay penalty is wide across all qualification levels, such that a woman who has passed her GCSEs earns the same as an equivalent man with no qualifications

Lastly, we explore the varying impacts of educational qualifications on pay by gender. Overall, we find that **women in the UK face a pay penalty of at least 6% on average relative to equally qualified men with similar personal and work-related characteristics** (such as age, ethnicity, occupational grade, industry, etc). **This indicates that returns on education are lower for women compared to equivalent men.**

Women with no qualifications face the lowest pay penalty compared to men with no qualifications (6.4%). The gender pay penalty widens at higher qualification levels. The **gender pay penalty is the largest for women who have completed some form of higher education** (but not a degree), with a penalty of nearly 14% compared to men at the same qualification level. Research⁴⁶ confirms that the largest income inequalities exist amongst workers who are more qualified. It also highlights that the economic returns to higher education are highly dependent on the field of study and a substantial majority of the overall gender pay penalty experienced by women is due to gender segregation in fields of study. Women disproportionately opt into lower-paying fields of study such as education, humanities and social sciences compared to men who disproportionately select into higher-paying degrees such as STEM, economics and finance. Despite this trend reversing in recent times amongst younger men and women, the systemic pay penalty persists particularly for women in their 30s and 40s. Research⁴⁷ shows that graduates in degree subjects like law and medicine see a large growth in median earnings between ages 35 and 40. However, due to the 'greedy' nature of these jobs men are more likely to be able to fulfill the demanding needs of such jobs which eventually feeds into the pay penalty.

Interestingly, a **woman in the UK who has passed her GCSEs (or equivalent) is paid nearly the same on average as a man with no qualifications** working in the same industry, at the same occupational grade, of the same ethnicity etc. The International Trade Union Confederation finds that due to gender stereotypes and discriminatory workplace practices, equally or even better-qualified women's skills aren't valued the same as men's.⁴⁸ This bias may also influence women's decisions to apply for jobs. Studies⁴⁹ have found that men apply for jobs when they meet only 60% of qualifications, while women only apply when they meet 100%. While at first glance this appears to be a gap in confidence, further research⁴⁹ has found that women's career failures are remembered longer than men's and men are often hired based on potential while women need to demonstrate past experience. These biases likely result in women facing pay penalties not only when compared to equally qualified men but also less qualified men.

Figure 2g: Pay penalties by gender and educational qualification



Sources: PwC analysis; ONS

What does this mean for policymakers and business leaders?

Employers should seek to review their hiring processes to ensure that gender biases do not play a role in their decision-making. Being aware of any unconscious biases will enable more equitable decision-making around hiring and promotion. Identifying barriers that women face in entering STEM fields and addressing these issues will help improve the representation of women in these professions. Finally, challenging assumptions around qualification requirements may also facilitate fairer hiring processes and more equitable workplace outcomes.

Understanding the complexities driving gender disparities in pay is a crucial step in addressing them

Our gender pay penalty analysis, and a review of the existing literature revealed the following key insights:

- Our analysis shows that **even after accounting for a range of pay-determining factors other than gender (such as qualification or occupation), a large part of the pay differential between men and women persists.** The presence of this pay penalty suggests that biases and structural inequalities in the workplace play a significant role in driving gender pay disparities.
- Based on a review of existing evidence the factors primarily contributing to the gender pay penalty are:
 - The **motherhood penalty and the impacts of unequal distribution of other caring responsibilities;**
 - The **‘greedy jobs’ phenomenon;**
 - **A lack of representation of women in senior roles.**
- Gender biases do not operate alone in driving pay disparities. **Gender often has intersectional impacts with other facets of our identity in driving pay and career progression.** For example, gender and ethnicity have intersectional impacts on pay inequalities. While we are unable to segregate these impacts into gender-driven and ethnicity-driven, our analysis shows that your gender and ethnic identity does impact your pay, all else being equal.

The complex nature of the challenge presented by the existence of gender pay penalties challenge makes it all the harder to isolate and resolve. However, it is clear that any form of unfair pay disparity will likely be driven by a multitude of factors. Shining a light on these complexities will enable us to get one step closer to addressing them. This not only gets us closer to a more equitable and equal workplace, it also has significant economic benefits. We discuss some of these benefits in the next section.



03

The economic gains of closing the gender pay penalty



Addressing the gender pay penalty has the potential to unlock significant gains for the UK economy

In the previous section, we investigated whether gender disparities in pay in the UK remain once accounting for other personal and professional factors that impact pay – i.e. identifying the gender pay penalty. We found evidence of pay penalties close to 10% in the UK on average. Firstly, addressing this pay penalty will boost incomes of women currently in employment. Secondly, greater labour market returns may also incentivise more women to join the labour market and/or stay for longer in the labour market. This will not only benefit these women but also contribute to increased economic output. In this section, we estimate the magnitude of economic gains from both the income boost and a GDP boost from increased female employment.

Addressing the gender pay penalty in the UK can...



Boost incomes overall for women currently employed in the UK

Based on our gender pay penalty analysis, **women in the UK earn 9.5% less than equally-qualified men** with similar personal and work-related characteristics.



Policies that tackle gender bias in the workplace can **address this penalty** faced by women.



Eradicating the gender pay penalty will **boost incomes earned by women** currently employed in the UK by up to 9.5%.



Boost UK GDP through increased female employment

A smaller gender pay penalty could have a signalling effect, **incentivising more women to join the workforce**. It could also **retain more women in the workforce** as higher incomes would mean women currently employed face a greater opportunity cost when leaving the workforce.

(For example, in our 2023 Women in Work Index, we found that women on low incomes are more likely to quit their job when they become a mother because the cost of childcare is equal to or higher than their income).



An **increase in female employment** will result in greater output, leading to an **increase in UK GDP** (assuming nothing else changes).

There are £55bn worth of gains to be made on earnings and over double that in terms of GDP gains from addressing the gender pay penalty in the UK



We estimate the potential gains for the UK from a boost to women's earnings from addressing the gender pay penalty.

By eliminating the gender pay penalty, **female earnings in the UK could increase by £55bn* per annum.**

- This represents an increase of 9.5% on the current value of women's total earnings in the UK, capturing the impact of boosting women's average incomes to match that of men with similar personal and work-related characteristics.
- This solely represents the income gains accruing to women currently in employment – we do not account for any impacts of increased female labour force participation or any change to men's participation and earnings.

£55bn *

Potential annual increase in women's earnings in the UK from addressing the gender pay penalty



We also estimate the potential GDP boost from an increase in female employment, driven by a smaller gender pay penalty.

We find that even a 5% increase in the total number of women in employment in the UK could boost GDP by £125bn* per annum.

A number of surveys have shown that addressing gender bias in the workplace has the potential to encourage more women to join and/or remain in the workplace. For example, a UK-based survey⁵⁰ found that 1 in 5 women quit their jobs as a result of discrimination faced due to being pregnant. Similarly, a survey⁵¹ in the US found that nearly half the respondents had switched jobs due to sexism in the workplace.

£125bn *

Potential GDP gains per annum for the UK with a 5% increase in female employment

* This refers to gross economic gains per annum, based on employment, earnings and GDP data as of 2022. All figures are reported in nominal terms in 2022 prices. More detail on the methodology is provided in the Technical Appendix.

Technical appendix



Definitions and terminology

OECD: For the purposes of this report, this refers to the 33 OECD countries included in the PwC Women in Work Index. This consists of all OECD members except for Colombia, Costa Rica, Latvia, Lithuania and Turkey.

OECD average: This refers to the average taken across all 33 OECD countries in the Women in Work Index and applies where we discuss labour market indicators in Section 1. It does not adjust for the population size of different OECD countries.

Gender and sex: The Authors would like to acknowledge the limitation of the report in its focus on binary gender identities ('men' and 'women'), which excludes analysis of the employment outcomes and experiences of those whose gender identity does not sit comfortably within these two categories. This is mainly due to a lack of available data for other gender identities. Furthermore, in cases where data sources have been disaggregated by 'sex' rather than 'gender', the assumption has been applied that a person's gender identity is aligned with their biological sex characteristics (e.g. we have used 'female' and 'women' interchangeably in some places), however we recognise that the two are not equivalent and that this is not always the case.

Race and ethnicity: Throughout the report we frequently use the terms White and Ethnic Minority (as well as referring to other ethnic groups such as Black and Mixed Ethnic Group) and report on findings for White and Ethnic Minority people as a whole. We acknowledge the limitations of this approach and recognise that the employment outcomes and experiences of people who fall within these groups will vary significantly and that there are many types of Ethnic Minority groups, including White Ethnic Minority groups. We also acknowledge that people may prefer to self-identify using other terms such as People of Colour.



Changes to PwC's Women in Work Index results for 2021

Due to retrospective changes to the OECD and Eurostat gender pay gap data used in the Index, the Index scores and rankings for 2021 have changed compared to those reported in the PwC Women in Work Index 2023 (last year's report).

At the time of publication of the 2023 report, actual data for the gender pay gap for 2021 was not available for the majority of countries in the Index. Therefore, we estimated the 2021 gender pay gap by linearly extrapolating historical data. At the time of publication of the Index this year, actual gender pay gap data for 2021 is now available for all OECD countries. We have revised and updated the 2021 estimated gender pay gap with actual data resulting in changes to the Index score and rank in 2021 for a number of countries in the Index.

Changes to the rankings of each country as a result of the update to the gender pay gap data can be seen in the adjacent table.

- Czechia's ranking changed the most, moving six places from 24th to 18th place. This was due to a decrease in the gender pay gap by 3.7 percentage points from 18.7% to 15% following the revision.
- Hungary's ranking also changed by 3 places, but unlike Czechia's, it's ranking was revised down, from 13th to 16th. This was due to the gender pay gap increasing by 1.5 percentage points from 15.8% to 17.3%.
- Estonia, Poland and Slovenia saw their ranking rise by two places whilst Canada, Israel, Norway and Switzerland's ranking saw a decline of two places following the revisions.
- Iceland and Netherlands saw their ranking rise by one place whilst Australia, Luxembourg, New Zealand and Sweden's ranking saw a decline of one place following the revisions.
- The UK's ranking improved by one place and its gender pay gap remained at 14.3%.

Figure A1: Changes to PwC's Women in Work Index results for 2021

Country	2021 (old)	2021 (updated)	Change in ranking
Australia	16	17	-1
Austria	26	26	0
Belgium	11	11	0
Canada	18	20	-2
Chile	31	31	0
Czechia	24	18	6
Denmark	9	9	0
Estonia	17	15	2
Finland	10	10	0
France	23	23	0
Germany	21	21	0
Greece	29	29	0
Hungary	13	16	-3
Iceland	5	4	1
Ireland	12	12	0
Israel	22	24	-2
Italy	30	30	0
Japan	28	28	0
Korea	32	32	0
Luxembourg	1	2	-1
Mexico	33	33	0
Netherlands	15	14	1
New Zealand	2	3	-1
Norway	6	8	-2
Poland	8	6	2
Portugal	7	7	0
Slovak Republic	19	19	0
Slovenia	3	1	2
Spain	27	27	0
Sweden	4	5	-1
Switzerland	20	22	-2
United Kingdom	14	13	1
United States	25	25	0

Index methodology – Variables included in scoring

Our Index includes all OECD member countries except for Colombia, Costa Rica, Latvia, Lithuania and Turkey. The OECD average refers to the average taken across these 33 countries and applies where we discuss 2020 data relating to the main Index results and potential economics grains. Population size for different countries is not adjusted for.

Variable	Weight %	Factor	Rationale	Dataset(s) used
Gender pay gap	25	Constructed by subtracting median female income from median male income and expressing it relative to median male income. Wider pay gap penalised.	Earnings equality underpins the fundamental principle of equal pay for equal work.	Decile ratios of gross earnings, OECD Series: Gender wage gap Frequency: Annual Gender pay gap in unadjusted form by NACE Rev. 2 activity – structure of earnings survey methodology, Eurostat Frequency: Annual
Female labour force participation rate	25	Higher participation rates given higher score.	Female economic participation is one of the cornerstones of economic empowerment, which is a factor of the level of skills and education of women, conducive workplace conditions and broader cultural attitudes outside the workplace (e.g. towards shared childcare and distribution of labour at home).	Labour force statistics by sex and age – indicators, OECD Series: Labour force Frequency: Annual Age: 15 to 64
Gap between female and male labour force participation rates	20	Higher female participation rate relative to male participation rate given higher score.	Equality in participation rates reflect equal opportunities to seek and access employment opportunities in the workplace.	Labour force statistics by sex and age – indicators, OECD Series: Labour force Frequency: Annual Age: 15 to 64
Female unemployment rate	20	Higher unemployment penalised.	The female unemployment rate reflects the economic vulnerability of women. Being unemployed can have longer-term impacts in the form of skills erosion, declining pension contributions and increased reliance on benefits.	Labour force statistics by sex and age – indicators, OECD Series: Unemployment rate Frequency: Annual Age: 15 to 64
Share of female employees in full-time employment	10	Higher share of full-time employment given higher score.	The tendency for part-time employment may adversely affect earnings, pensions and job security. However, this factor is given a lower weight in the Index since some women may prefer part-time jobs to fit flexibly with caring roles. This variable only measures the share for women and does not compare with the share of male employees in full-time employment.	Incidence of FTPT employment – common definition, OECD Series: Full-time employment Frequency: Annual Age: 15 to 64 Household data, US Bureau of Labour Statistics Series: Employed and unemployed full- and part-time workers by age, sex, race, and Hispanic or Latino ethnicity Frequency: Annual Age: 16 years and over

Data sources – UK regional data

We have applied the same methodology as for the main Index to construct the UK regional Index. This includes using the same weights and factors.

Indicator	Country coverage	Year	Source	Adjustments and assumptions
Female labour force participation rate	UK	2021, 2022	Annual Population Survey, Office of National Statistics Labour Force Survey, Office of National Statistics	
Gap in male and female labour force participation rates	UK	2021, 2022	Annual Population Survey, Office of National Statistics Labour Force Survey, Office of National Statistics	
Female unemployment rate	UK	2021, 2022	Annual Population Survey, Office of National Statistics Labour Force Survey, Office of National Statistics	
Female full-time employment rate	UK	2021, 2022	Annual Population Survey, Office of National Statistics	
Gender pay gap	UK	2021, 2022	Annual Survey of Hours and Earnings, Office of National Statistics Dataset: Gender Pay Gap	Full-time employees only
Median Weekly Earnings	UK	2021, 2022	Annual Survey of Hours and Earnings, Office of National Statistics Dataset: Time series of selected estimates, Table 2	Full-time employees only, excluding overtime, by sex
Median Hourly Earnings	UK	2021, 2022	Annual Survey of Hours and Earnings, Office of National Statistics Dataset: Time series of selected estimates, Table 2	Full-time employees only, excluding overtime, by sex
Weekly Paid Hours	UK	2021, 2022	Annual Survey of Hours and Earnings, Office of National Statistics Dataset: Time series of selected estimates, Table 2	Full-time employees only, excluding overtime, by sex

Additional data sources

We use data from the ONS's Annual Population Survey in our pay penalty analysis in Section 2

Section	Dataset	Country coverage	Year	Source
Section 2: The drivers of the UK's gender pay gap	Annual Population Survey	UK	2021-2022	Office for National Statistics

Methodology for gender pay penalty analysis

Our approach

Our data is sourced from the Annual Population Survey (APS), using data from 2021 and 2022. We conduct a quantile regression analysis to estimate pay penalties. We define this as differences in pay when a selection of personal and work-related characteristics are held constant (see variables considered on the right). In other words, we try to compare 'like-for-like' as far as possible, given data availability.

When cleaning the data, we make a few adjustments to account for data limitations. First, we remove the top 1% and bottom 2% of pay distribution from our data, in order to account for outliers. Second, we apply an income weight to the APS, to account for the poor response rate of earnings questions within the APS. This approach is consistent with that taken by the ONS. Third, we limit our data to 16 to 65 year olds to be consistent with the labour market indicators in our Index, where participation rates are measured with this working age range.

Personal and work related characteristics held constant

For our quantile regression, we use the logarithm of hourly pay as our dependent variable, controlling for the following independent variables:

- Gender
- Age and Age_Squared
- Ethnicity
- Marital status
- Region
- Highest qualification obtained
- Industry of employment
- Occupation
- Working arrangement (full-time / part-time)

Since we use data from two waves of the APS (2021 and 2022), we treat it as a pooled cross-sectional dataset. We include a variable that captures the shift in time from 2021 to 2022 to control for any time effects.

We also include the following interaction terms to build on this analysis and identify intersectional impacts, as discussed in Section 2.

- Gender*Marital status
- Gender*Ethnicity
- Gender*Industry of employment
- Gender*Highest qualification obtained



Methodology for calculating potential gains to female earnings from addressing the gender pay penalty in the UK.

We break down annual total earnings in the following way

$$\begin{aligned} \text{Total earnings} &= \boxed{\begin{array}{l} \text{Average male earnings} \\ * \text{ Male workers} \end{array}} + \text{Average female earnings} \\ &\quad * \text{ Female workers} \\ &\quad \text{where} \\ \boxed{\begin{array}{l} \text{Average male earnings} \\ = \frac{\text{Average female earnings}}{1 - \text{gender pay penalty}} \end{array}} \end{aligned}$$

Simplifying assumptions:

In order to estimate the potential gains from closing the gender pay penalty, we made the following simplifying assumption:

- The median wages are equivalent to the mean wages.
- The gender pay penalty is closed by increasing female wages to match male wages.
- The elasticity of female employment to a change in wages is 0, meaning that a 1% increase in wages results in no change in female employment. This takes into account the counteracting effects of labour supply and demand elasticities: an increase in wages makes it more expensive for employers to hire more workers, however higher earnings also incentivise potential workers to seek employment. Our literature review suggests that:
 - Estimates of labour supply elasticity range from 0.5 to 0.962
 - Estimates of labour demand elasticity range from 0.5 to 0.363
- We take a conservative view that the counteracting effects cancel each other out with no resulting change in female employment.

Methodology for calculating potential GDP impacts from increasing female employment in the UK

$$\text{GDP boost} = \frac{\text{Output per unit FTE labour unit GDP}}{\text{FTE}} \times \left(\text{Increase in female FTE measured as increase in FT women} + \frac{\text{Increase in PT women}}{2} \right)$$

Simplifying assumptions:

In order to estimate the GDP impacts of increasing female employment, with the data available, we have made the following simplifying assumptions:

- A full-time (FT) worker produces twice as much output on average as a part-time (PT) worker each year.
- Total employment in the economy is equal to employment within the 15-64 age group.

Endnotes

¹ Our Index includes analysis of labour market results in 33 Organisation for Economic Cooperation and Development (OECD) countries. When we refer to the OECD in this report, we are referring to these 33 countries. Please refer to the Technical Appendix: Women in Work Index Methodology for a full list of countries included in our analysis.

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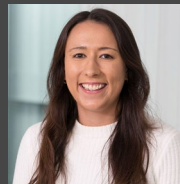
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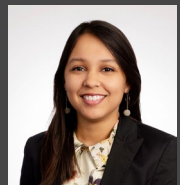
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