Understanding the gender pay gap: A toolkit

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What is the gender pay gap?

In broad terms, **the gender pay gap is a metric that tells us about the difference in the earnings of males and females in the labour market** and **is one of the main mechanisms used to assess the extent of gender inequalities in the labour market.**

The gender pay gap is a concept that is **broader than the concept of 'equal pay for equal work or work of equal value'.**

You can have a gender pay gap without having gendered pay discrimination.

Gendered pay discrimination - paying women or men less because of their sex - is unlawful. It **may be a contributing factor** to the gender pay gap.

As well as capturing any differences in pay owing to discrimination **the gender pay gap also captures** the fact that:

(a) **different characteristics are rewarded differently in the labour market** such as for example, different levels of educational attainment; and

(b) **males and females have different personal/family/household characteristics and work/job characteristics.**

Principally, the **gender pay gap captures the differential economic returns from paid work rewarded to females as compared to males.**

Gendered pay discrimination - paying women or men less because of their sex - is unlawful

Calculating the gender pay gap

What statistical measure are we comparing on?

Different statistical measures can be used to measure the earnings of females compared to males including the mean and the median.

Different estimates of the gender pay gap used by different statistical bodies, international or national organisations use different statistical measures to estimate the gender pay gap.

It's worth taking some time to understand how each statistical measure is used to calculate the gender pay gap & the advantages and disadvantages of both.

Mean gender pay gap	The difference between the mean pay of males compared to the mean pay of females.
Median gender pay gap	The difference between the median pay of males compared to the median pay of females.

Mean gender pay gap

Mean earnings: The average figure calculated by adding up all the earnings and then dividing it by the number of people.

Calculate mean earnings for males:
Add together the pay of all relevant employees who are male.
Divide this figure by the number of relevant employees who are male.
This gives you the mean pay for males.

Calculate the mean earnings for females:
Add together the pay of all relevant employees who are female.
Divide this figure by the number of relevant employees who are female.
This gives you the mean pay for females.

Calculating the mean gender pay gap:
Take the mean pay for males & subtract the mean pay for females.
Divide the result by the mean pay for males.
Multiply the result by 100.
This gives you the mean gender pay gap in the pay of females compared to males.

A **positive** number indicates the percentage **above** which males earn more than females.

A **negative** number indicated the percentage **below** which males earn less than females.

Example:

Female earnings

£8	£11	£12	£15	£25
Female	Female	Female	Female	Female

Calculating female mean earnings

£8	+	£11	+	£12	+	£15	+	£25	=	$\frac{£71}{5}$ = £14.2
Female 1		**Female 2**		**Female 3**		**Female 4**		**Female 5**		

Male earnings

£9	£14	£16	£20
Male	Male	Male	Male

Calculating male mean earnings:

£9	+	£14	+	£16	+	£20	=	$\frac{£59}{4}$ = £14.75
Male 1		**Male 2**		**Male 3**		**Male 4**		

Calculating the mean gender pay gap:

$$\frac{£14.75 - £14.2}{£14.75} \times 100 = 3.73\%$$ i.e. Males earn 3.73% more than Females

Advantages & Disadvantages of using the mean to calculate the gender pay gap	
Advantages	Disadvantages
• Takes into consideration the fact that male and female earnings are skewed and so allow us to better capture the difference in men's and women's pay across the whole of the earnings distribution. • As those on very high earnings are predominantly male, and those on very low earnings are predominantly female, the mean is an important measure of women's experience of labour market disadvantage as compared to men.	• The mean is affected by extreme values and so a small number of very high or very low earners can have a large impact on the gender pay gap. • Sensitive to change at the tails of the earnings distribution.

Median gender pay gap

Median: The average figure calculated by finding the person at the middle of the distribution.

Calculating the median gender pay gap:

- Rank all males from highest paid to lowest paid. Find the pay rate/earnings of the middle male.
- Rank all females from highest paid to lowest paid. Find the pay rate/earnings of the middle female.
- Median gender pay gap = $\frac{\text{Male median earnings} - \text{Female median earnings}}{\text{Male median earnings}} \times 100$

Calculating the median gender pay gap

Example

Woman	Woman	Woman
£10	£15	£20

Man	Man	Man	Man	Man
£5	£10	£12	£13	£20

$$\frac{\pounds 15 - \pounds 12}{\pounds 12} \times 100 = 25\%$$ i.e. Females earn 25% more than Males.

A **positive** number indicates the percentage **above** which males earn more than females.

A **negative** number indicated the percentage **below** which males earn less than females.

Advantages & Disadvantages of using the median to calculate the gender pay gap	
Advantages	Disadvantages
• Median measures of central tendency provide a more stable measure of the average than the mean.	• Ignores the fact that the distribution of earnings is not only skewed, but that this skew tends to be gendered.
• Less affected by extreme values and so the impact of a small number of very high or very low earners on the estimate of the gender pay gap is minimised.	• Those on very high earnings are predominantly male, and those on very low earnings predominantly female.

Quartile pay gender distribution

Quartiles are formed by dividing all employees in an organisation into four equal groups, ranked from lowest to highest pay.

Pay quartiles are calculated by splitting all employees into four even groups according to their level of pay.

The proportion of male and female employees within each pay quartile.

Rank all employees from highest paid to lowest paid

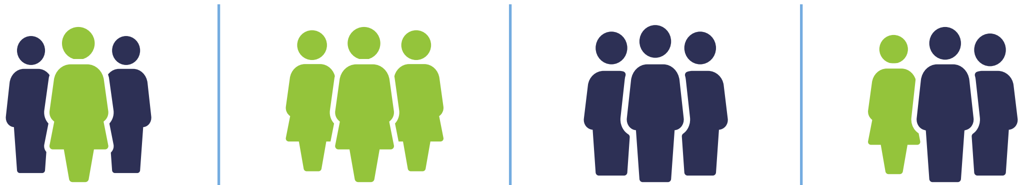
Divide into four equal parts:

- upper quartile
- upper middle quartile
- lower middle quartile
- lower quartile

Calculate the percentage of male employees and percentage of female employees in each quartile.

Looking at the proportion of men and women in each quartile gives an indication of the gender representation at different levels of the organisation.

Example



Quartile 1			Quartile 2			Quartile 3			Quartile 4		
Male	Female	Male	Female	Female	Female	Male	Male	Male	Female	Male	Male
£7	£7	£8	£9	£12	£12	£15	£15	£18	£19	£21	£22
25% male 75% female			100% female			100% male			75% male 25% female		

What time period: Hourly, weekly, monthly or annual pay?

When seeking to estimate the gender pay gap the **earnings period (hourly, weekly, annual earnings) matters - a lot.**

To ensure that differences in hours worked by males and females do not distort estimates of the gender pay gap it is common to have estimates of the gender pay gap based on hourly earnings, as opposed to weekly, monthly or annual earnings.

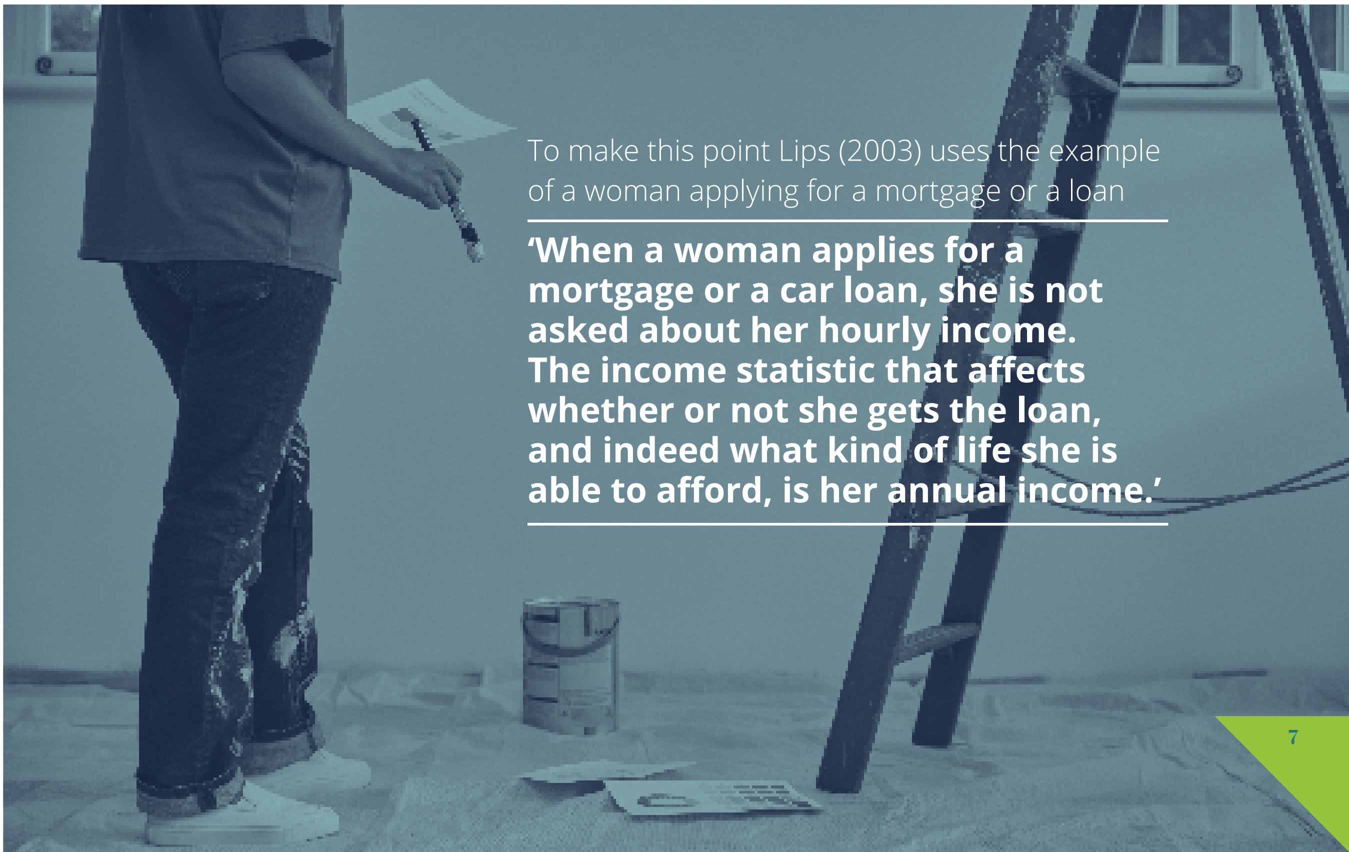
From this point of view, it is thought that hourly earnings provide a better like-for-like comparison of male and female earnings because it adjusts for the fact that there are significant differences in the working hours of males and females.

the reasons why females tend to work less hours than males are in themselves gendered

Others suggest that we should compared the earnings of males and females over a longer time period, such as by week, month or year.

Estimates of the gender pay gap **based on weekly, monthly or annual earnings is often much larger than estimates based on hourly earnings**.

The rationale here is that because the reasons why females tend to work less hours than males are in themselves gendered (such as due to the fact that females spend more of their time carrying out unpaid caring responsibilities than males) we do not get an accurate picture of the **true reality** of gendered differences in pay and how it ultimately affects living standards.



To make this point Lips (2003) uses the example of a woman applying for a mortgage or a loan

'When a woman applies for a mortgage or a car loan, she is not asked about her hourly income. The income statistic that affects whether or not she gets the loan, and indeed what kind of life she is able to afford, is her annual income.'

Who are we comparing? All workers? Full-time only? Part-time only?

In estimates of the gender pay gap decisions have to be made about which groups of workers we are comparing.

Some argue that to give an **accurate representation of the overall extent of gender inequalities in pay in the labour market** we need to **compare the earnings of all male earnings to all female earnings.**

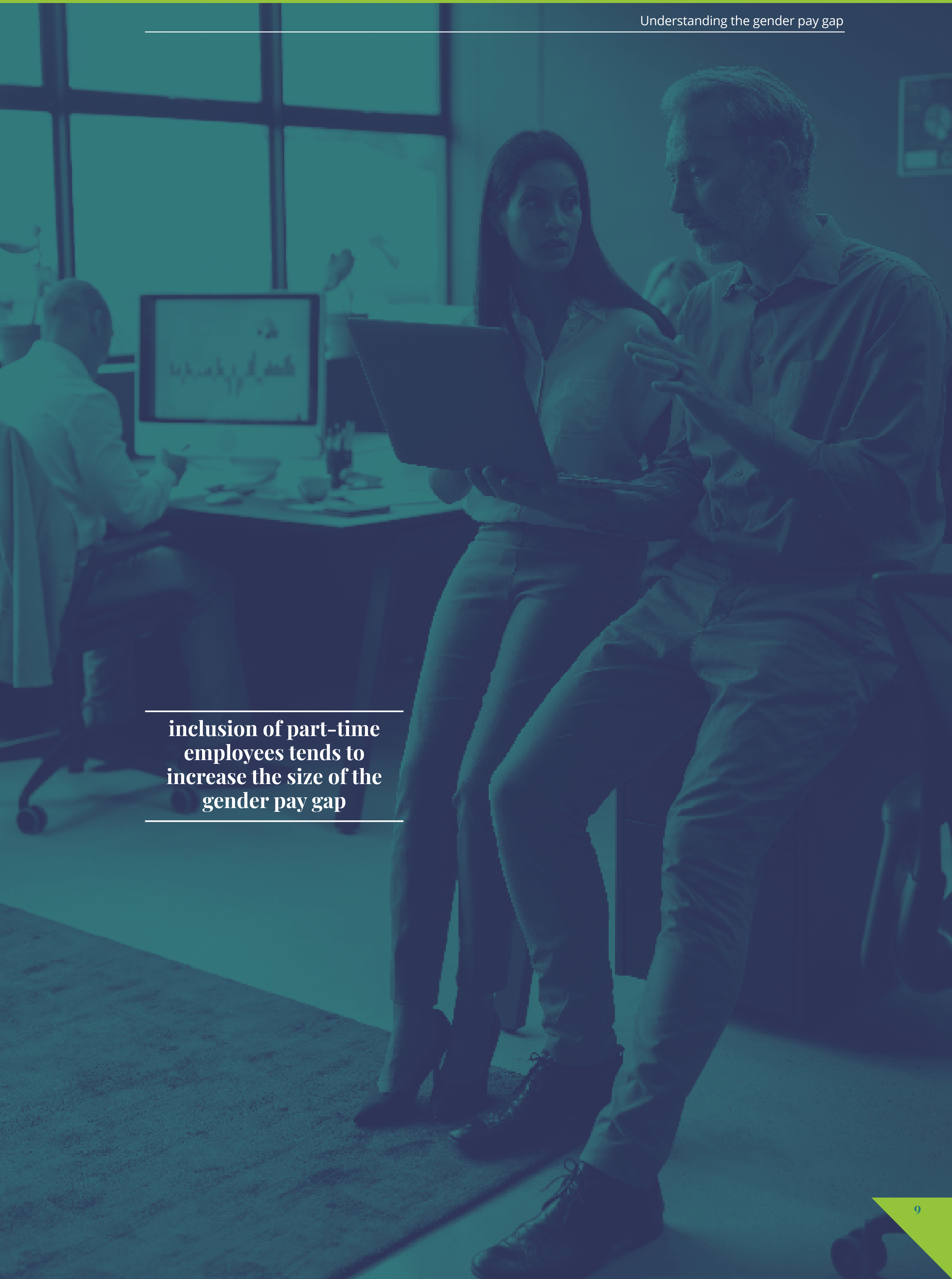
One disadvantage of using a measure that includes all employees is that the **combining of the full-time and part-time labour markets muddies the water.**

Irrespective of gender those who are employed **part-time earn significantly less**, even on an hourly basis, than those who are employed full-time.

Moreover, **females are more likely** than males **to be employed on a part-time basis**.

As such, the **inclusion of part-time employees tends to increase the size of the gender pay gap.**

To understand what may be driving gendered differences in pay, it can be useful to look at gender pay gaps for specific groups of people such as full-time workers only or part-time workers only.



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