

'HOW TO' | November 2021

Getting to Grips with the Gender Pay Gap Local analysis and earnings gap data

Our national briefing on the Gender Pay Gap has been produced as part of the Local Data Project.

Here we want to show you how to tailor the key information in the briefing to your local area. NOTE: this explainer will work with data for all four nations of the UK.

You can find the national briefing and the template for your own local analysis on the Local Data Project website by clicking here.

What to expect

The gender pay gap is already calculated for us. The calculation is based on full-time hourly pay (excluding overtime). Here we will show you how to find it. We will also show you how to calculate it for the different local areas of Northern Ireland.

To calculate the **earnings** gap, we will compare the weekly earnings of men and women. We do this because women tend to work in different jobs to men, so the gap between weekly vs hourly pay can be quite different. This time, we'll start in Northern Ireland and then move on to the other areas of the UK.

Let's work through the different parts together.

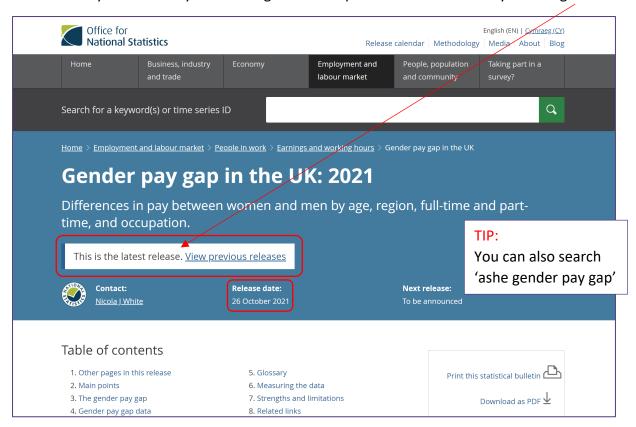


How to find the data on the gender pay gap

There are different ways in to the Office for National Statistics to get the data on the gender pay gap. <u>Here</u> is one option.

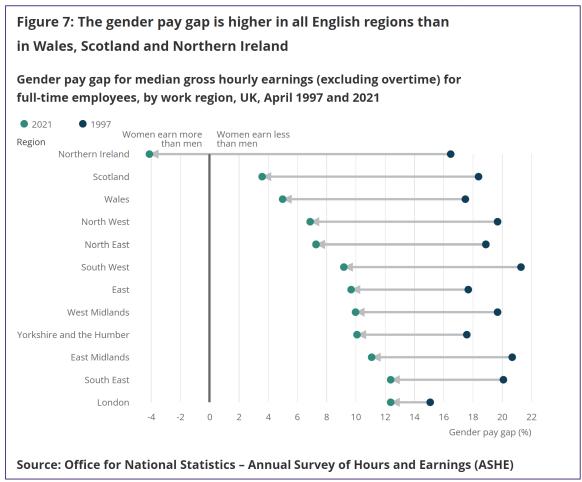
On this page, you will find a lot of useful information about the gender pay gap in general. This includes how the gap has changed over time, the difference in what the gap is at different ages, and what the difference is for different occupations, for example.

You can always check that you are using the most up-to-date information by checking here.



Down the page, there is some information on what the gap is in different regions of the UK.





It is clear from this, looking at the green dots, that each of the devolved nations has a smaller gender pay gap than the English regions. In fact, the pay gap in Northern Ireland is reversed to be in favour of women. There may be a number of reasons for this, including the relatively low number of women in the workforce overall in Northern Ireland.

Further down the page, we can then find the link to download the data.

4. Gender pay gap data

Gender pay gap

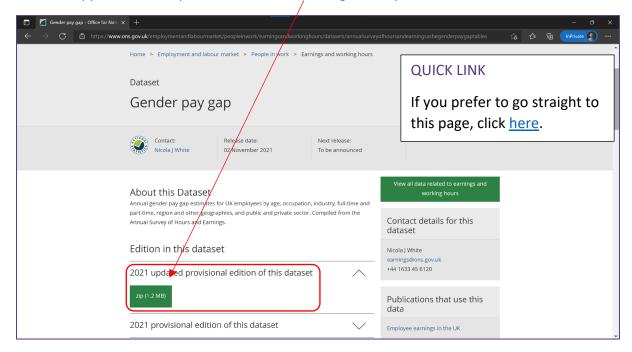
Dataset | Released 26 October 2021

Annual gender pay gap estimates for UK employees by age, occupation, industry, full-time and part-time, region and other geographies, and public and private sector. Compiled from the Annual Survey of Hours and Earnings.

Back to table of contents



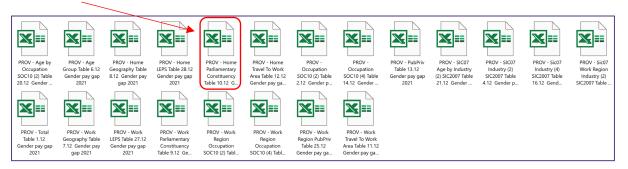
When you click this link, you will be taken to another part of the ONS website. The latest data will appear at the top of the list. Click on the green 'zip' button.



Open the zip file from your downloads folder. You should find about twenty different tables in the folder. (Depending on your settings, you may need to expand the view to see the details of the file names.)

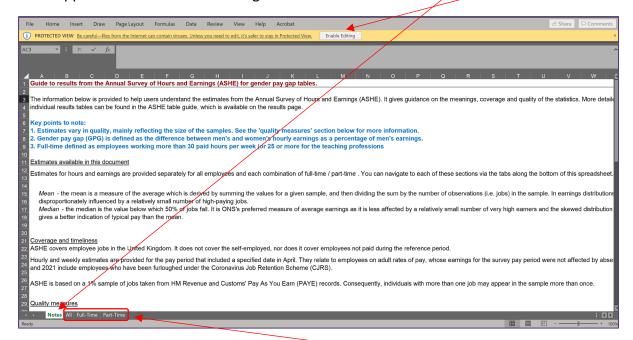


I am going to use information from parliamentary constituency as where you live. This is table 10.12.



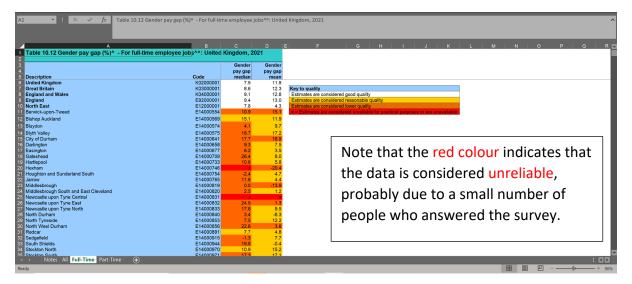


As with all ONS datasets, the first page will be a contents or notes page. Click Enable Editing if this appears as it will make working with the data easier.



Then we can see the gender pay gap for each parliamentary constituency for all employees, full-time employees, and part-time employees by clicking on the different tabs at the bottom.

Here is the information on full-time employees, for example. We'll use full-time as that is what the ONS uses.



You can scroll down the table until you find your parliamentary constituency. Let's look at Norwich as an example.



	А		В	С	D
1 Table 10.12 G	ender pay gap (%)^	- For full-time employee job	s^^: United	l Kingdom,	2021
2					
3				Gender	Gender
4				pay gap	pay gap
5 Description			Code	median	mean
313 Norwich North			E14000863	-5.6	4.5
314 Norwich South			E14000864	21.6	21.5
315 Peterborough			E14000878	8.5	15.6
316 Rayleigh and Wic	kford		E14000888	8.4	17.5
317 Rochford and Soi	uthend Fast		F14000899	3.2	18 4

There are two constituencies, and the gaps are very different. We can see that the gap in Norwich North is -5.6%, which means that this is in favour of women. In contrast, the gap in Norwich South is 21.6%. This is much higher than the national average of 7.9%.

Task

Can you find the pay gap in your parliamentary constituency? How does it compare to the national average?

If you're not sure which parliamentary constituency you live in, you can check here.

Explainer

Median vs mean

Both of these are averages, but the way you work them out is different.

Mean is when you add up all the numbers, then divide by the number of numbers.

Median is when you line up all the numbers in a row and take the middle one as the average.

Why do we use the median rather than mean?

If you have some big numbers at the higher levels, your average can seem much higher if you use mean. The median tends to give a more accurate number.

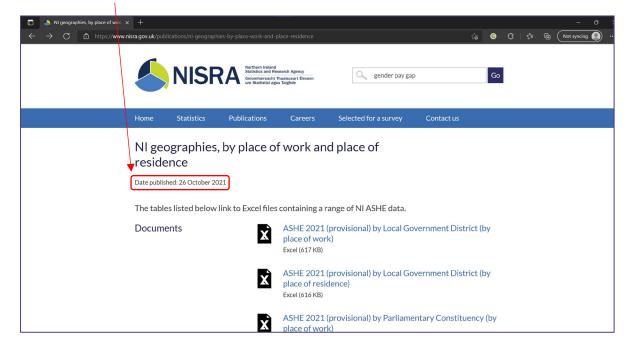
<u>Here</u> is a simple video explainer on this topic.



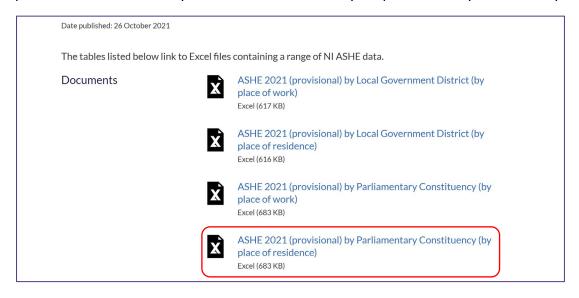
Gender Pay Gap - Northern Ireland

There is some useful information about the gender pay gap in Northern Ireland as a whole here, but it doesn't include information at the more local level. You have to do a bit more work to calculate the gender pay gap at the local level.

To get that information, first you'll need to go to the NISRA website by clicking here. This will take you directly to the page with the results of the Annual Survey of Hours and Earnings for Northern Ireland. Remember to check that you are looking at the most up-to-date information.



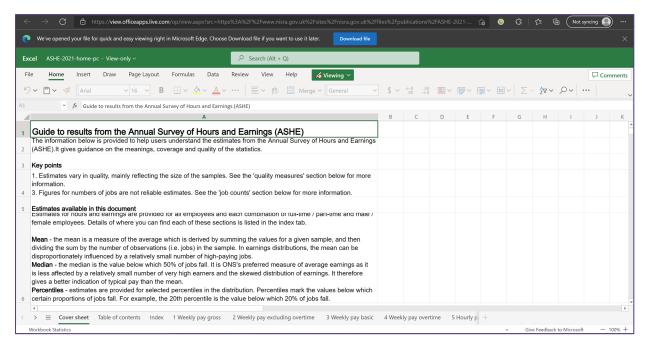
Again, you can choose whether you want to work with where you work or live, and if you prefer to look at data for your local elections or for your parliamentary constituency.



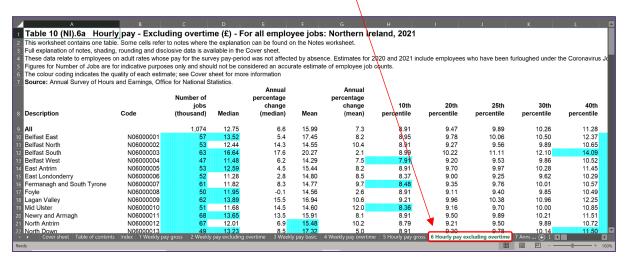
As before, we'll use the parliamentary constituency data for the place where you live.



If you click on the link on the page, the dataset may automatically open in your browser. If so, you can then download the file if you prefer.



We will use the information on **hourly pay excluding overtime** as this is what the ONS uses to calculate the gender pay gap. For this we need **tab 6**, which is (confusingly) called table 10.



To calculate the gender pay gap, we need two numbers: men's full-time pay and women's full-time pay. You'll need to scroll down to find these.

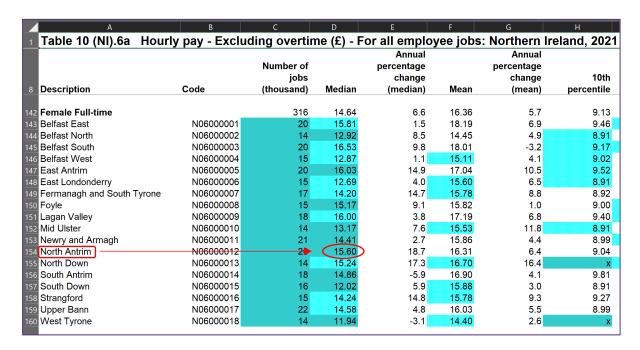
104 Male Full-time	N06000001	443 22	14.07 15.47	10.1 16.82 7.7 18.62	8.4 10.8	9.25 9.10
142 Female Full-time 143 Belfast Fast	N06000001	316 20	14.64 15.81	6.6 16.36 1.5 18.19	5.7 6.9	9.13 9.46



Let's use the figures from North Antrim as an example.

A	В	С	D	E	F	G	Н
Table 10 (NI).6a Hour	ly pay - Exclu	ding overtin	ne (£) - F	or all employ	ee jobs	: Northern	Ireland, 202
		Number of jobs	• ,	Annual percentage change		Annual percentage change	10th
Description	Code	(thousand)	Median	(median)	Mean	(mean)	percentile
4 Male Full-time		443	14.07	10.1	16.82	8.4	9.25
Belfast East	N06000001	22	15.47	7.7	18.62	10.8	9.10
Belfast North	N06000002	22	13.90	10.3	15.45	11.0	9.31
Belfast South	N06000003	26	18.36	22.6	22.53	4.4	9.97
Belfast West	N06000004	18	14.30	12.2	15.13	7.7	9.04
East Antrim	N06000005	20	12.60	7.5	14.69	5.3	9.49
East Londonderry	N06000006	21	11.84	2.9	15.22	10.7	8.91
Fermanagh and South Tyrone	N06000007	24	12.65	4.2	14.91	8.6	9.15
Foyle	N06000008	18	12.38	-4.9	14.58	2.0	8.91
Lagan Valley	N06000009	28	15.14	21.0	17.78	12.5	9.77
Mid Ulster	N06000010	22	12.50	13.6	15.02	13.1	9.57
Newry and Armagh	N06000011	25	14.35	21.3	16.77	10.9	9.36
North Antrim	N06000012	2 >	12.24	6.4	16.18	16.2	8.91
North Down	N06000013	19	16.28	19.2	19.80	3.7	9.07
South Antrim	N06000014	23	15.01	7.3	18.04	3.3	10.20
South Down	N06000015	24	13.05	6.0	17.08	18.3	8.91
Strangford	N06000016	22	14.35	6.0	16.84	0.2	9.06
Upper Bann	N06000017	36	14.03	17.2	16.01	11.1	9.00
West Tyrone	N06000018	20	13.01	6.1	14.53	3.7	9.18

Men's full-time hourly pay (excluding overtime) is £12.24.



Women's full-time hourly pay (excluding overtime) is £15.60.

Now we have the figures for men's pay [£12.24] and women's pay [£15.60], we can calculate the pay gap.



We use this equation to calculate the gender pay gap:

We can break this down into these steps:

- 1. male pay female pay
- 2. divide step 1 by male pay
- 3. multiply step 2 by 100 to get the number as a percentage

So, in North Antrim the maths is:

- 1. 12.24 15.60 = -3.36
- 2. $-3.36 \div 12.24 = -0.2745$
- 3. -0.27 x 100 = -27.45%

TIP Don't worry if you get a negative number; this just means that the pay gap will be in favour of women.

Here we can see that the gender pay gap in North Antrim is in favour of women. It is also much higher than the average for the nation, which is -4.1%

Task

Can you calculate the pay gap in your parliamentary constituency? How does it compare to the national average?

TOP TIP You can also use a percentage calculator like this one. **Percentage Calculator** Percentage Calculator is a free online tool to calculate percentages. What is % of CALCULATE ? is what percent of CALCULATE Put male pay here Put female pay here And here is the % What is the percentage increase/decrease from 12.24 to 15.60 CALCULATE 27.4509803 % Tips: Use tab to move to the next field. Use shift-tab to move to the previous field. Press enter to calculate. © 2007 - 2020 Jari Jokinen Help Privacy



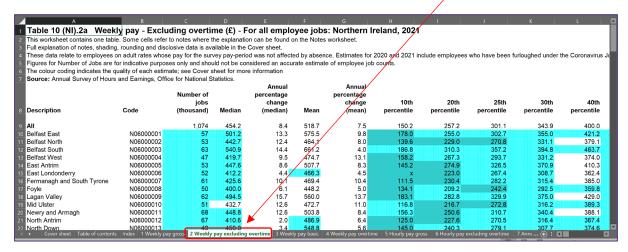
Gender Earnings Gap - Northern Ireland

The gender pay gap is only one way of measuring the difference between women and men in the economy. Another useful measure is the **gender earnings gap**, which compares the difference between the amount of money women and men take home at the end of the **week**.

Let's look at how to calculate the gender earnings gap.

Previously, we have been working with the figures for hourly pay. Now we need to find the figures for weekly pay. This time we'll start with **Northern Ireland**.

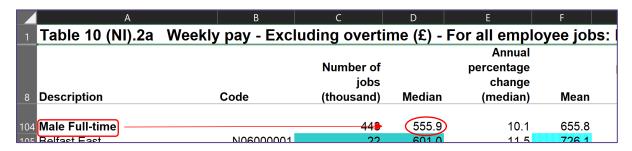
Using the same spreadsheet we downloaded previously, we can now use tab 2. This is the information on weekly pay excluding overtime. We've chosen this to compare like for like with the ONS' own calculations. Because they use hourly pay excluding overtime, we use weekly pay excluding overtime. We'll use the full-time pay figures for the same reason.



To calculate the gender earnings gap, we use the same calculation as before.

Let's work out what the gender earnings gap is for Northern Ireland as a whole.

Here are the figures for male full-time pay: £555.90





and female full-time pay: £549.50

	А	В	С	D	E	F
1	Table 10 (NI).2a	Weekly pay - Exclu	iding overtin	ne (£) - F	or all emplo	oyee jobs:
					Annual	
			Number of		percentage	
			jobs		change	
8	Description	Code	(thousand)	Median	(median)	Mean
142	Female Full-time —		316	549.5	6.4	608.4
4.0	D.K+ F+	NOCOOOOA	20	F00 7		274.0

To calculate the earnings gap:

- 1. 555.90 549.50 = 6.40
- 2. $6.40 \div 555.90 = 0.0115$
- 3. 0.0115 x 100 = 1.15%

So, while the gender **pay** gap is in favour of women, the gender **earnings** gap in Northern Ireland is actually 1.15%.

Task

Can you calculate the gender **earnings** gap in your parliamentary constituency of Northern Ireland? How does it compare to the gender pay gap?



Gender earnings gap - Great Britain

The process for calculating the gender earnings gap is the same for Great Britain, but we need to find the correct spreadsheets. Let's go back to the ONS website and the Annual Survey of Hours and Earnings. Because there is so much data in this survey here are the direct links to the different datasets you might need:

Local authority where you work. (ASHE table 7)

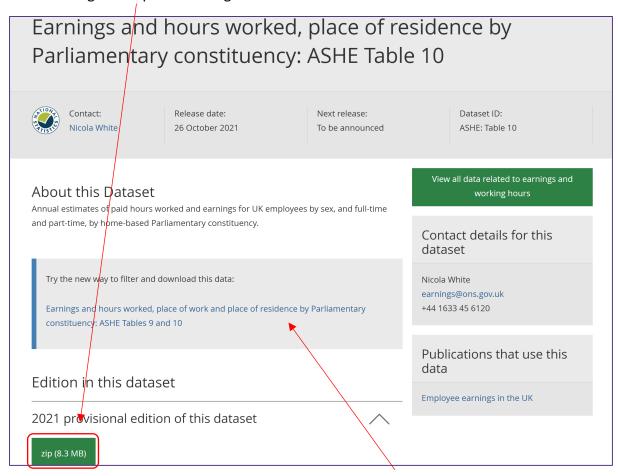
Local authority where you live. (ASHE table 8)

Parliamentary constituency where you work. (ASHE table 9)

<u>Parliamentary constituency where you live</u>. (ASHE table 10)

The process to find the relevant data is the same for each of these, and for any other tables you might want to use (by age (table 6), etc). We're going to use ASHE table 10, like before, to consider what the position is in the parliamentary constituency where you live.

Click on the green 'zip' button to get the data.



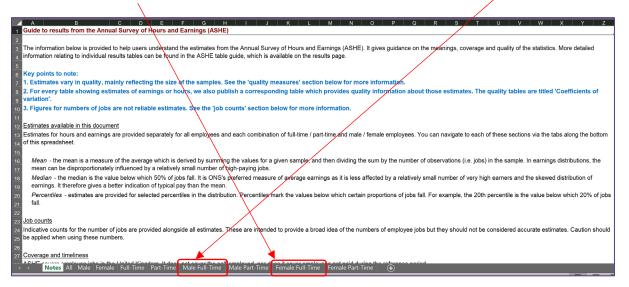
[Note: The ONS is trialling a new feature whereby you can filter the information to just get a small piece of data. At time of writing (November 2021), this feature was not always functioning correctly, so here we show you how to work with the full dataset.]



When you open the zip file, we want to find table 10.2a.

PROV - Home Parliamentary Constituency Table 10.1a Weekly pay - Gross 2021	Microsoft Excel 97-2003	462 KB No	1,320 KB 65%	12/10/2021 11:22
PROV - Home Parliamentary Constituency Table 10.1b Weekly pay - Gross 2021 CV	Microsoft Excel 97-2003	362 KB No	1,344 KB 74%	12/10/2021 11:30
PROV - Home Parliamentary Constituency Table 10.2a Weekly pay - Excluding overtime 2021	Microsoft Excel 97-2003	461 KB No	1,317 KB 66%	12/10/2021 11:32
PROV - Home Parliamentary Constituency Table 10.2b Weekly pay - Excluding overtime 2021 CV	Microsoft Excel 97-2003	362 KB No	1,333 KB 73%	12/10/2021 11:29
PROV - Home Parliamentary Constituency Table 10.3a Basic Pay - Including other pay 2021	Microsoft Excel 97-2003	464 KB No	1,419 KB 68%	12/10/2021 11:24
PROV - Home Parliamentary Constituency Table 10.3b Basic Pay - Including other pay 2021 CV	Microsoft Excel 97-2003	362 KB No	1,334 KB 73%	12/10/2021 11:3
PROV - Home Parliamentary Constituency Table 10.4a Overtime pay 2021	Microsoft Excel 97-2003	335 KB No	1,554 KB 79%	12/10/2021 11:2
PROV - Home Parliamentary Constituency Table 10.4b Overtime pay 2021 CV	Microsoft Excel 97-2003	362 KB No	1,539 KB 77%	12/10/2021 11:2
PROV - Home Parliamentary Constituency Table 10.5a Hourly pay - Gross 2021	Microsoft Excel 97-2003	433 KB No	1,305 KB 67%	12/10/2021 11:4
PROV - Home Parliamentary Constituency Table 10.5b Hourly pay - Gross 2021 CV	Microsoft Excel 97-2003	381 KB No	1,357 KB 72%	12/10/2021 11:3
PROV - Home Parliamentary Constituency Table 10.6a Hourly pay - Excluding overtime 2021	Microsoft Excel 97-2003	432 KB No	1,302 KB 67%	12/10/2021 11:3
PROV - Home Parliamentary Constituency Table 10.6b Hourly pay - Excluding overtime 2021 CV	Microsoft Excel 97-2003	381 KB No	1,355 KB 72%	12/10/2021 11:4
PROV - Home Parliamentary Constituency Table 10.7a Annual pay - Gross 2021	Microsoft Excel 97-2003	420 KB No	1,320 KB 69%	12/10/2021 10:
PROV - Home Parliamentary Constituency Table 10.7b Annual pay - Gross 2021 CV	Microsoft Excel 97-2003	366 KB No	1,378 KB 74%	07/10/2021 14:
PROV - Home Parliamentary Constituency Table 10.8a Annual pay - Incentive 2021	Microsoft Excel 97-2003	335 KB No	1,541 KB 79%	12/10/2021 10:
PROV - Home Parliamentary Constituency Table 10.8b Annual pay - Incentive 2021 CV	Microsoft Excel 97-2003	368 KB No	1,520 KB 76%	07/10/2021 15:
PROV - Home Parliamentary Constituency Table 10.9a Paid hours worked - Total 2021	Microsoft Excel 97-2003	387 KB No	1,339 KB 72%	12/10/2021 11:
PROV - Home Parliamentary Constituency Table 10.9b Paid hours worked - Total 2021 CV	Microsoft Excel 97-2003	372 KB No	1,360 KB 73%	12/10/2021 11:
PROV - Home Parliamentary Constituency Table 10.10a Paid hours worked - Basic 2021	Microsoft Excel 97-2003	381 KB No	1,327 KB 72%	12/10/2021 11:
PROV - Home Parliamentary Constituency Table 10.10b Paid hours worked - Basic 2021 CV	Microsoft Excel 97-2003	367 KB No	1,366 KB 74%	12/10/2021 11:
PROV - Home Parliamentary Constituency Table 10.11a Paid hours worked - Overtime 2021	Microsoft Excel 97-2003	336 KB No	1,544 KB 79%	12/10/2021 11:
PROV - Home Parliamentary Constituency Table 10.11b Paid hours worked - Overtime 2021 CV	Microsoft Excel 97-2003	362 KB No	1,541 KB 77%	12/10/2021 11:4
PROV - Home Parliamentary Constituency Table 10.12 Gender pay gap 2021	Microsoft Excel 97-2003	65 KB No	225 KB 72%	12/10/2021 11:5

When you open the spreadsheet, you will need to find figures on two tabs: male full-time and female full-time.



Since the earnings gap for the UK overall has already been calculated for us in the briefing,

Median weekly earnings							
Full time All employees							
Men	Women	Men	Women				
£625	£550	£574	£412				
Gender earnings gap							
	12.1%		28.2%				

Source: Women's Budget Group calculations using the Annual Survey of Hours and Earnings (ASHE), tables 1.2a let's work with the figures from Norwich again.



First, the weekly pay for male full-time employees...

1 Table 10.2a	Weekly pay - Excluding ov	ertime (£) - Fo	or male fu	II-time emp	loyee job	os ^a : United
3		Number		Annual		Annual
4		of jobs ^b		percentage		percentage
5 Description	Code	(thousand)	Median	change	Mean	change
313 Norwich North	E14000863	17	530.9	5.5	629.9	2.5
314 Norwich South	E14000864	21	645.5	21.5	791.0	15.7
315 Deterborough	E1/1000878	22	530.4	_1.1	6// 9	1 0

...and then the pay for female full-time employees.

1 Table 10.2a	Weekly pay - Excluding ov	ertime (£) - F	or female 1	full-time en	nployee j	obs ^a : Unite
3		Number		Annual		Annual
4		of jobs ^b		percentage		percentage
5 Description	Code	(thousand)	Median	change	Mean	change
313 Norwich North	E14000863	10	493.5	-7.7	567.5	4.3
3 4 Norwich South	E14000864	10	512.0	1.1	613.6	6.5
315 Peterborough	F14000878	15	473.0	6.9	512.6	_2 2

We'll use the same calculation as before to get the earnings gap:

For Norwich North:

1.
$$530.9 - 493.5 = 37.4$$

2.
$$37.4 \div 530.9 = 0.70$$

3.
$$0.70 \times 100 = 7\%$$

This is **slightly lower** than the national gap of 12.1%.

For Norwich South:

2.
$$133.5 \div 645.5 = 0.207$$

This is **much higher** than the national gap of 12.1%.

Clearly the gender earnings gap is much higher in Norwich South compared to Norwich North. This is partly due to the higher median earnings for men in this parliamentary constituency. Knowledge of the local area will help you understand what else might be contributing to this difference.

Task

Can you calculate the gender **earnings** gap in your parliamentary constituency? How does it compare to neighbouring constituencies?