



People! Not Percentages!

Ethnicity Pay Gap Summit, 9th February 2024

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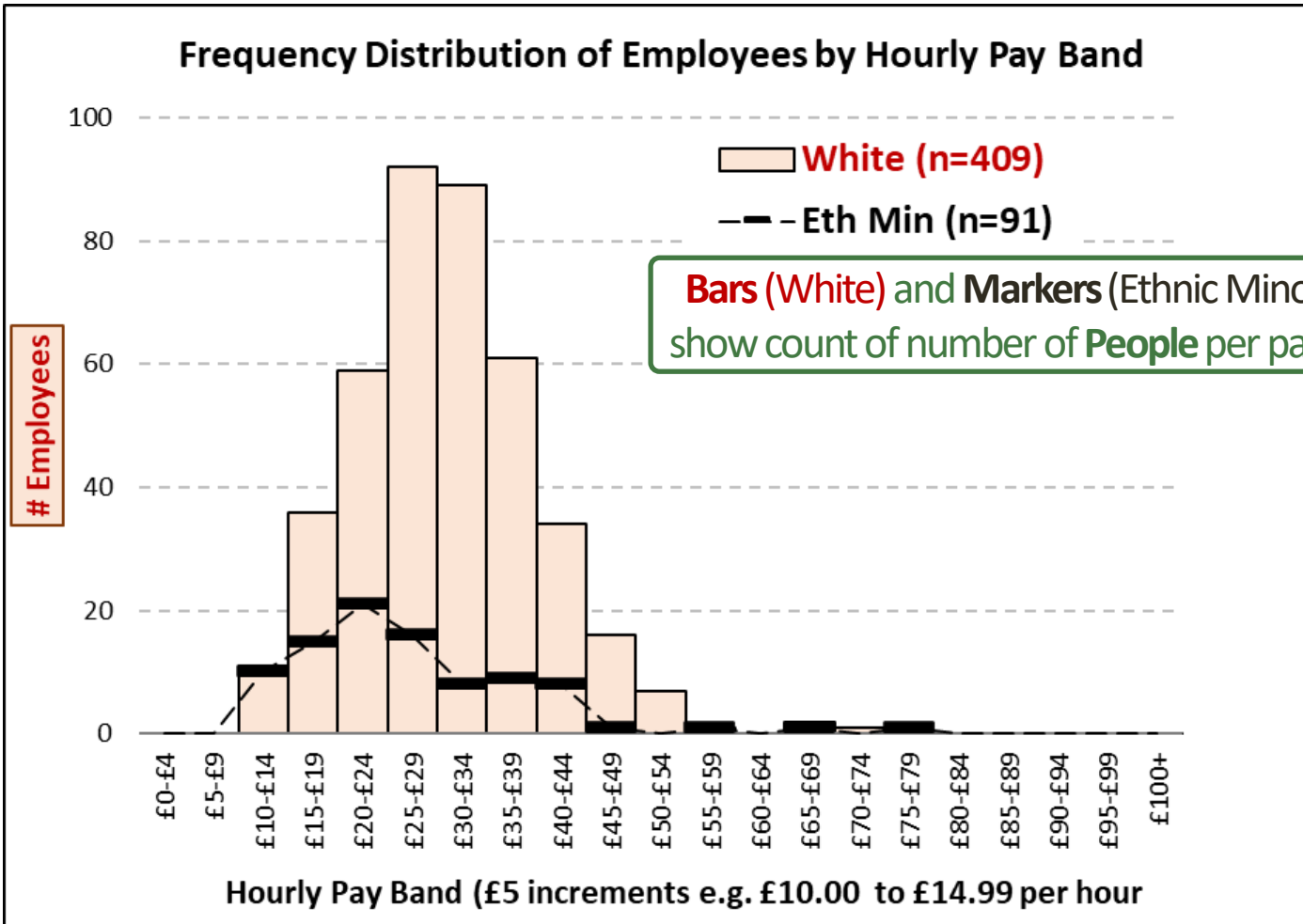




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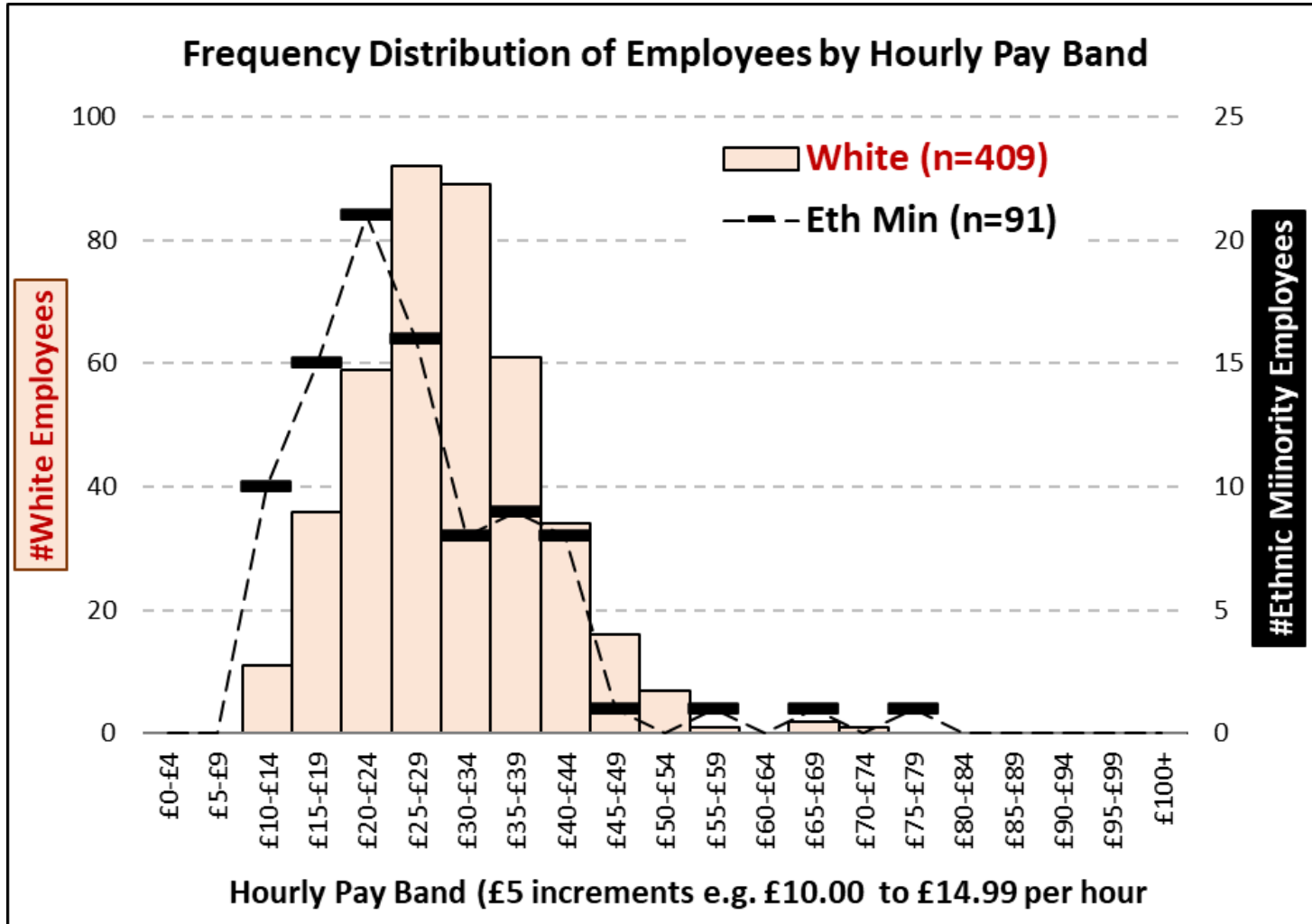
Get Ready To Vote!

Assume Employer has 500 Employees, All Disclosing Their Ethnicity, & Employee Ethnicity Breakdown = 2021 England & Wales Census



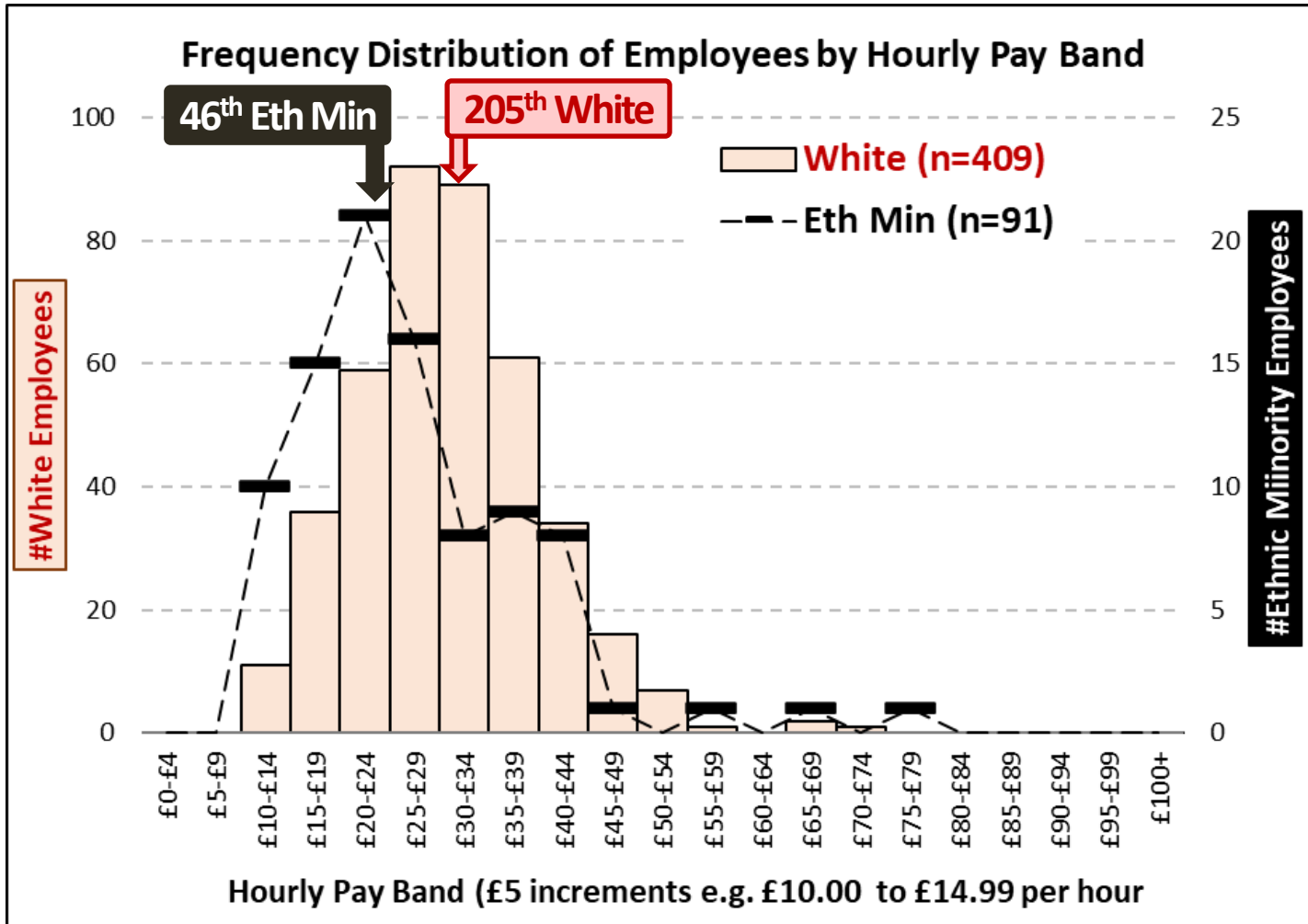
Does this Employer have an Ethnicity Pay Gap?
Let me make it easier for you to see the chart first...

Does this Employer have an Ethnicity Pay Gap? YES or NO?



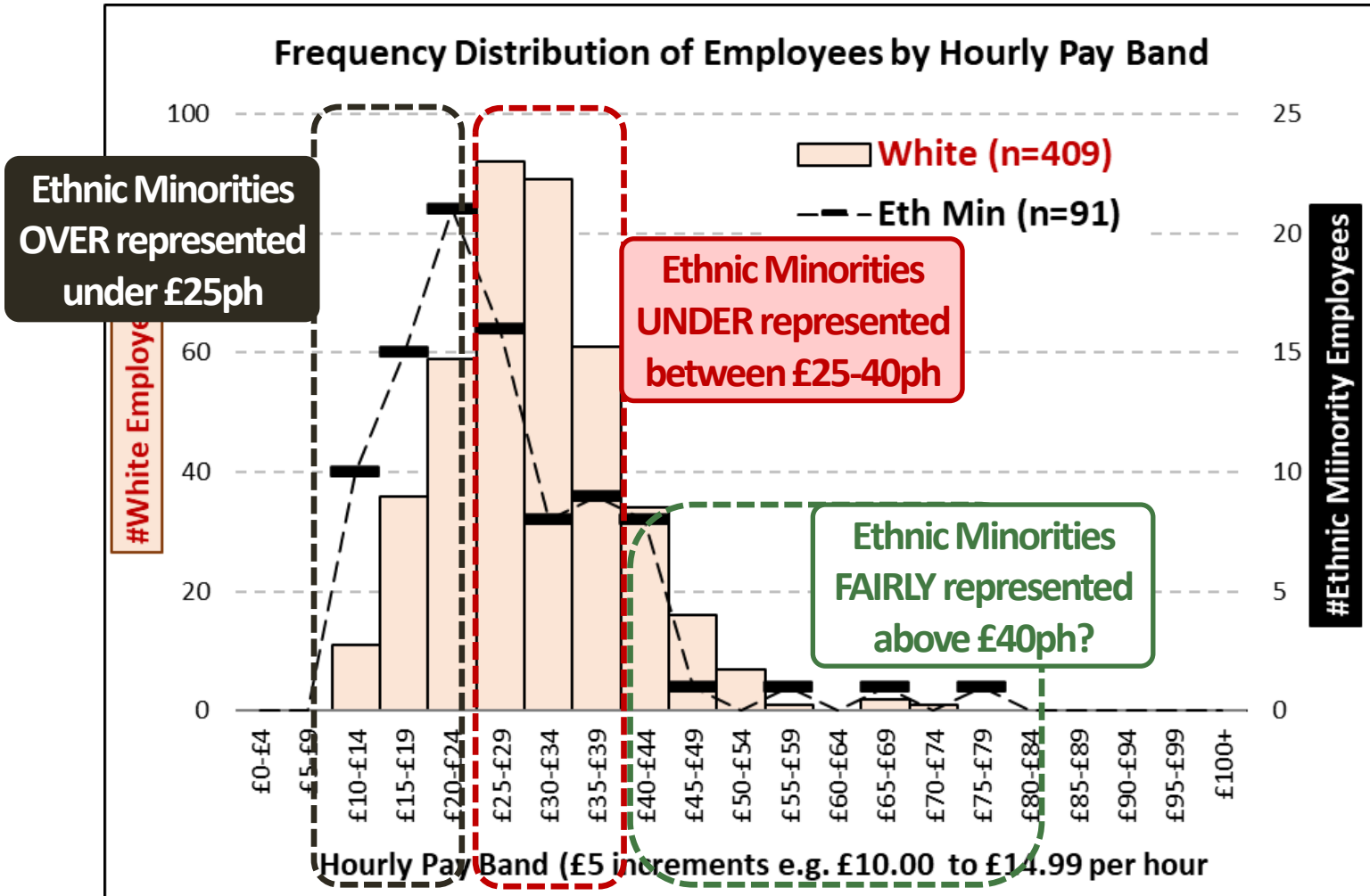
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Yes! 205th White & 46th Ethnic Minority employees are in different Hourly Pay Bands



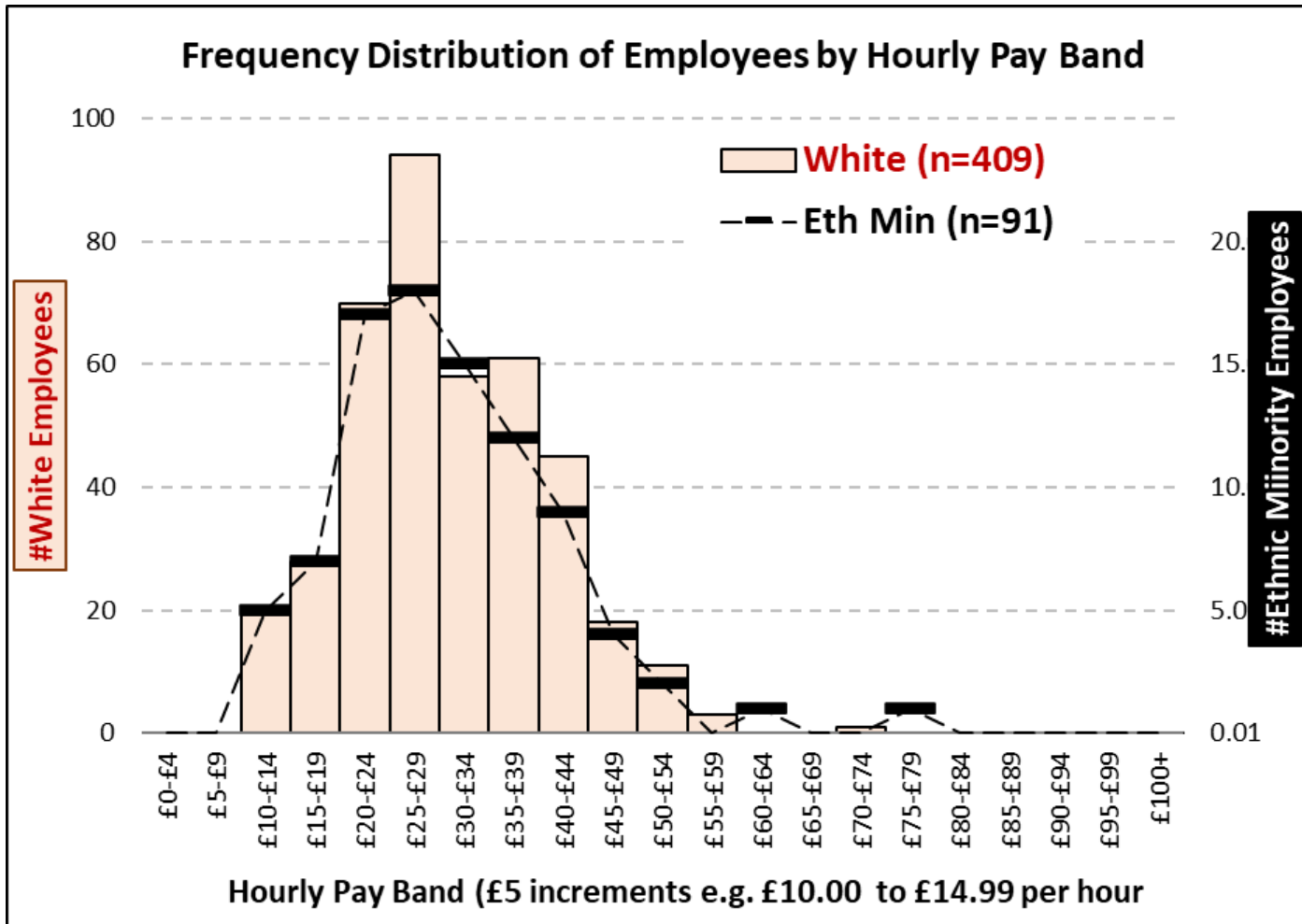
Does the pay of the median white employee & median ethnic minority employee tell you what to do next? YES or NO?

No! The Relative Representation of Ethnic Categories by Pay Band is your Narrative for Today and your Action Plan for Tomorrow



An employer with no Pay Representation Gap looks like ... ???

The Freq Distribution of Pay for Ethnic Minority Employees is the same SHAPE & LOCATION as for White Employees



OR wherever you look (by pay band, site, function, department), you see the same Ethnicity Profile (or Ethnicity Ratios)



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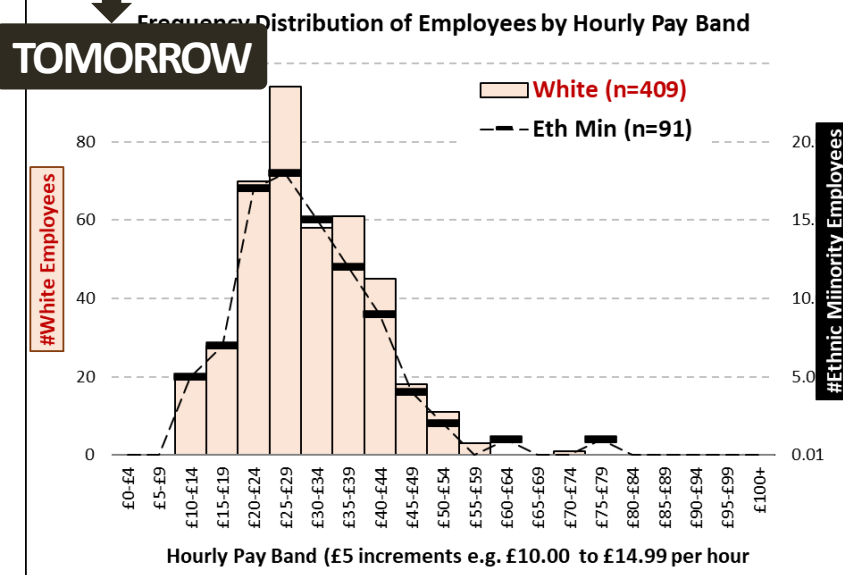
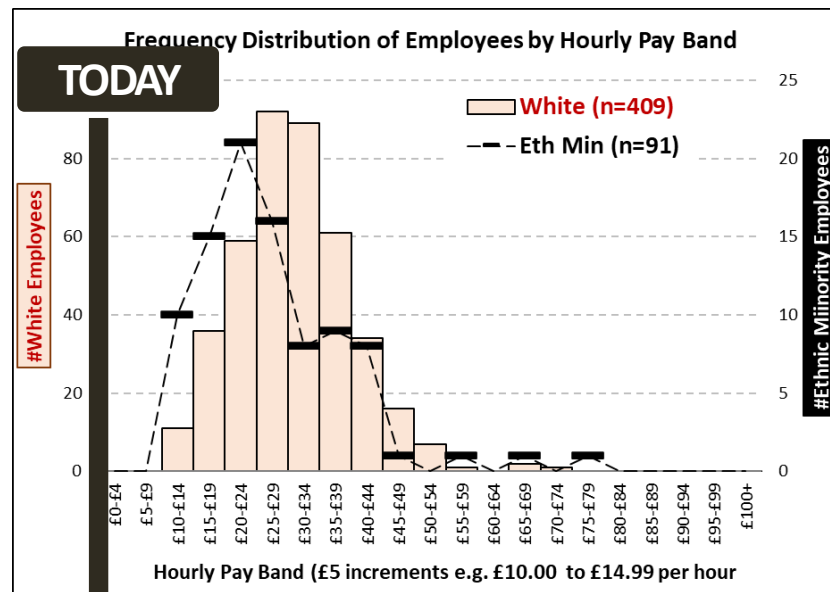
How many years will it take to get from Today To Tomorrow? 5 years or 25 years? VOTE NOW!



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With these Assumptions

1. Total Number of Employees remains at 500
2. Overall Ethnicity Profile remains same as 2021 census
3. Average annual employee turnover is 10% for both white & ethnic minority employees
4. With Positive Action only, not Positive Discrimination!





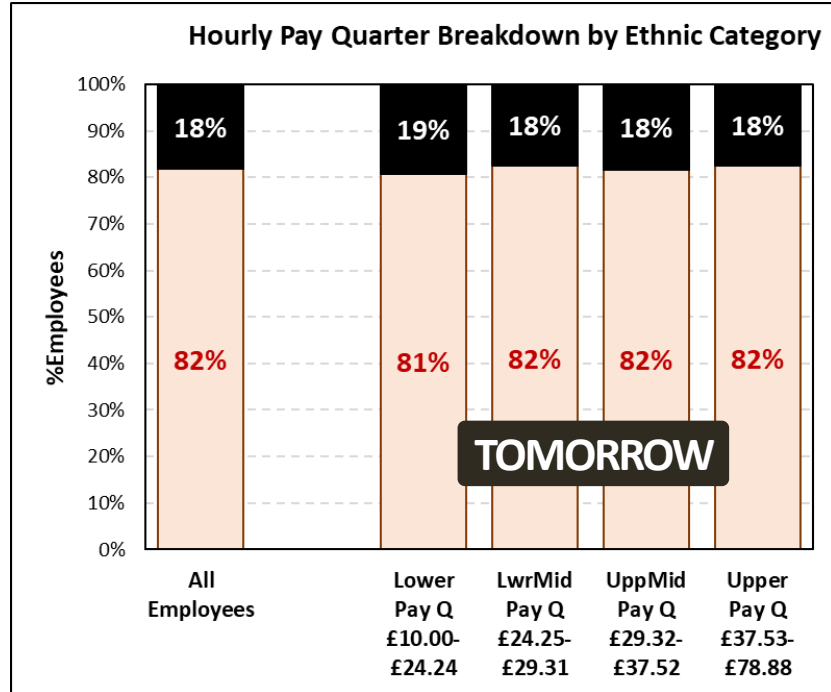
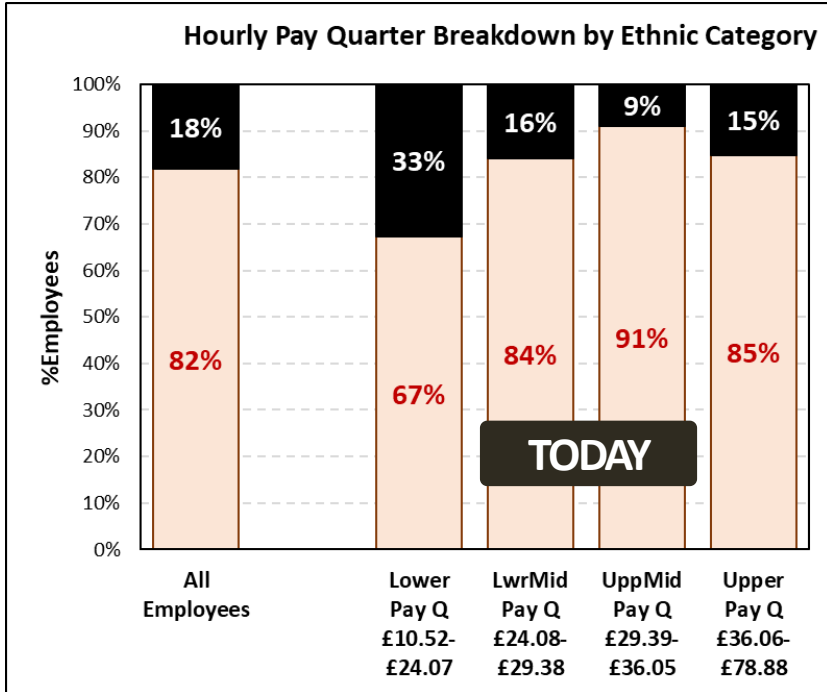
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Hold that thought!
You can change your mind later

No Pay Representation Gap = Same Ethnicity Profile Everywhere i.e. Pay Quarters show similar percentages in all 4 Pay Quarters



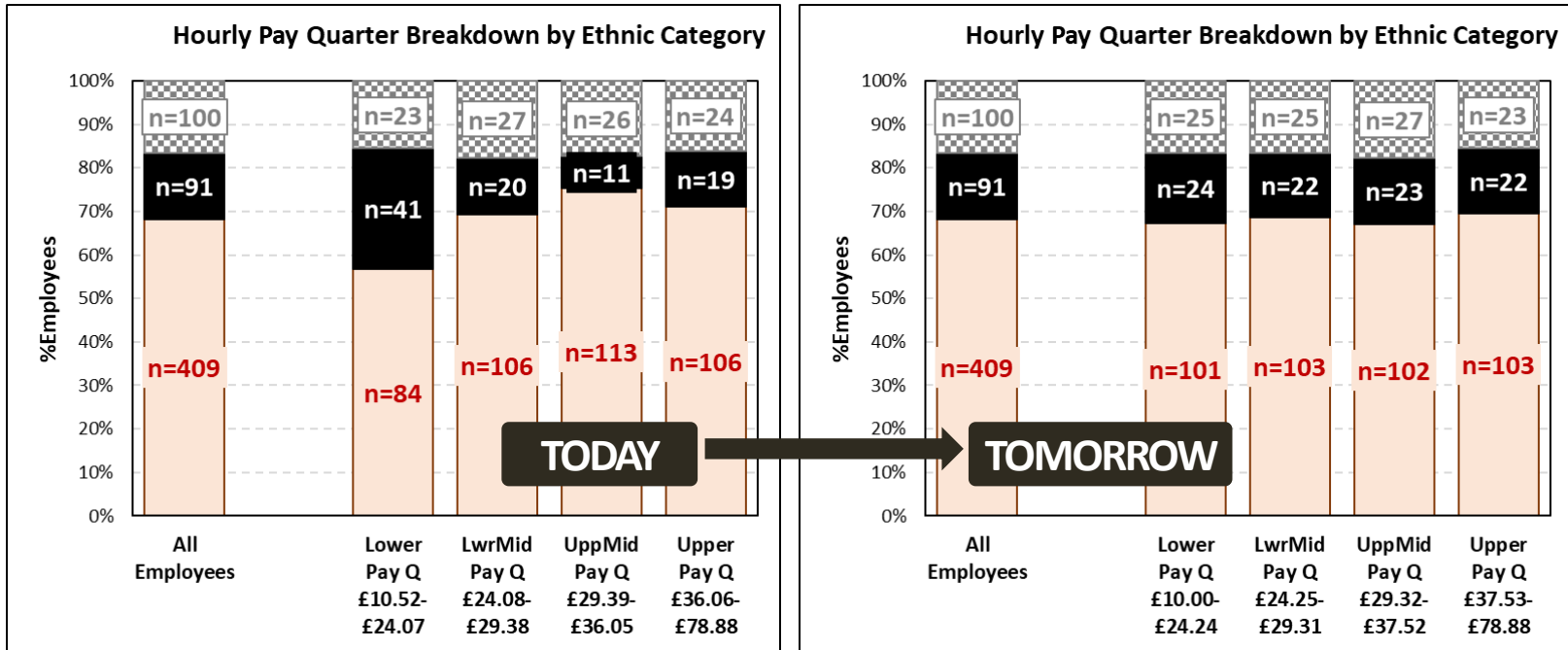
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BUT! People! Not Percentages!

How many White & Ethnic Minority employees need to change Pay Half Tomorrow to eliminate the Pay Representation Gap?



Pay Quarter Breakdowns can plot more than 2 Ethnic Categories Including UNKNOWN



By definition, if the Median White employee is paid the same as the Median Ethnic Minority employee, the Ethnicity Profiles of the Upper Pay Half and the Lower Pay Half must be the same.

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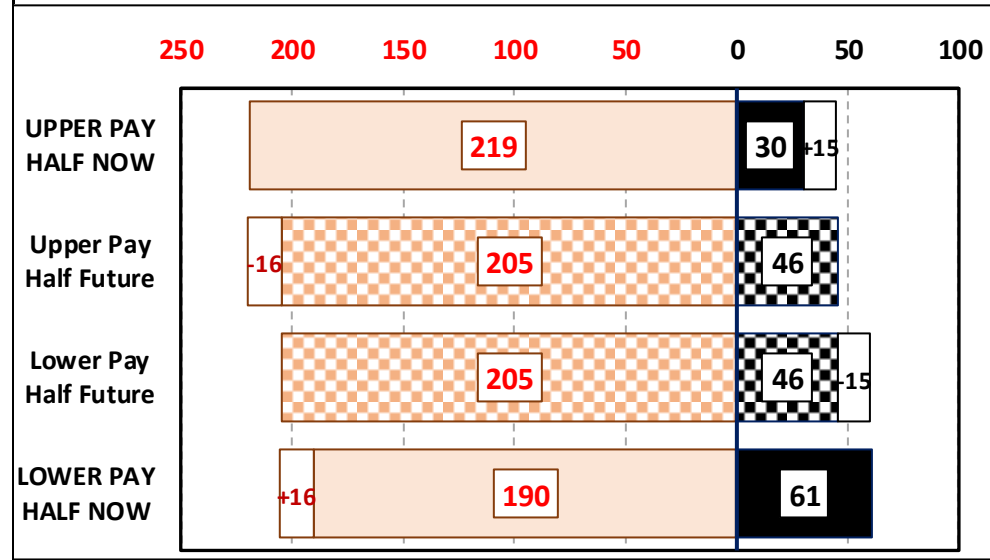
The Pay Representation Gap will disappear if 15.5 Ethnic Minority employees move from the Lower Pay Half to the Upper Pay Half and 15.5 White employees move the other way

With these Assumptions

1. Total Number of Employees remains at 500
2. Overall Ethnicity Profile remains same as 2021 census
3. Average annual employee turnover is 10%
4. With Positive Action only, not Positive Discrimination!

Swap Number is +15 or 29 per 1,000 employees

i.e. what needs to change in the future in the upper & low pay halves to close the pay representation gap, assuming overall number of employees & overall ethnicity ratio today remain unchanged



How many years (5 or 25) to go from Today To Tomorrow?



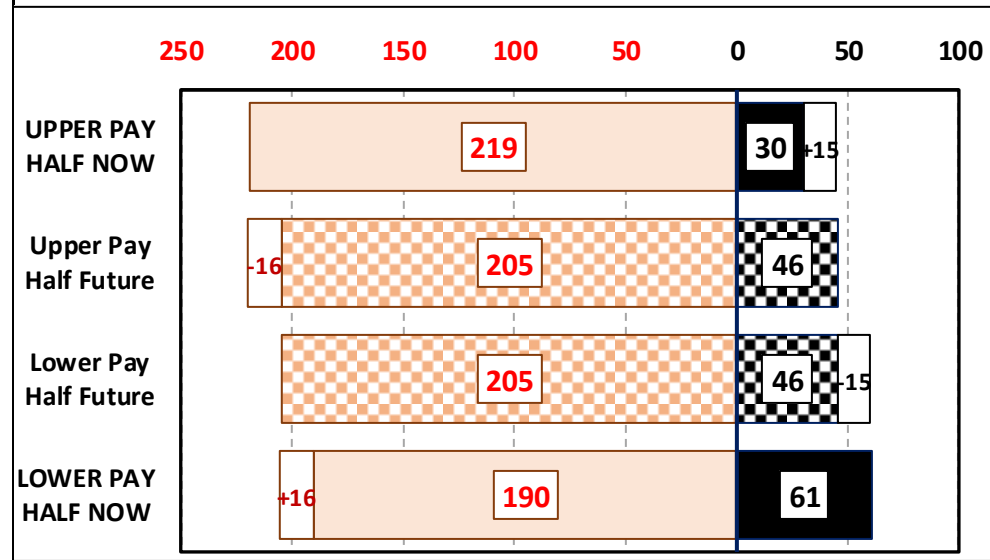
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i.e. what needs to change in the future in the upper & low pay halves to close the pay representation gap, assuming overall number of employees & overall ethnicity ratio today remain unchanged



Straightforward maths show, **ON AVERAGE**, it will take 25 years to achieve this change if these assumptions are correct

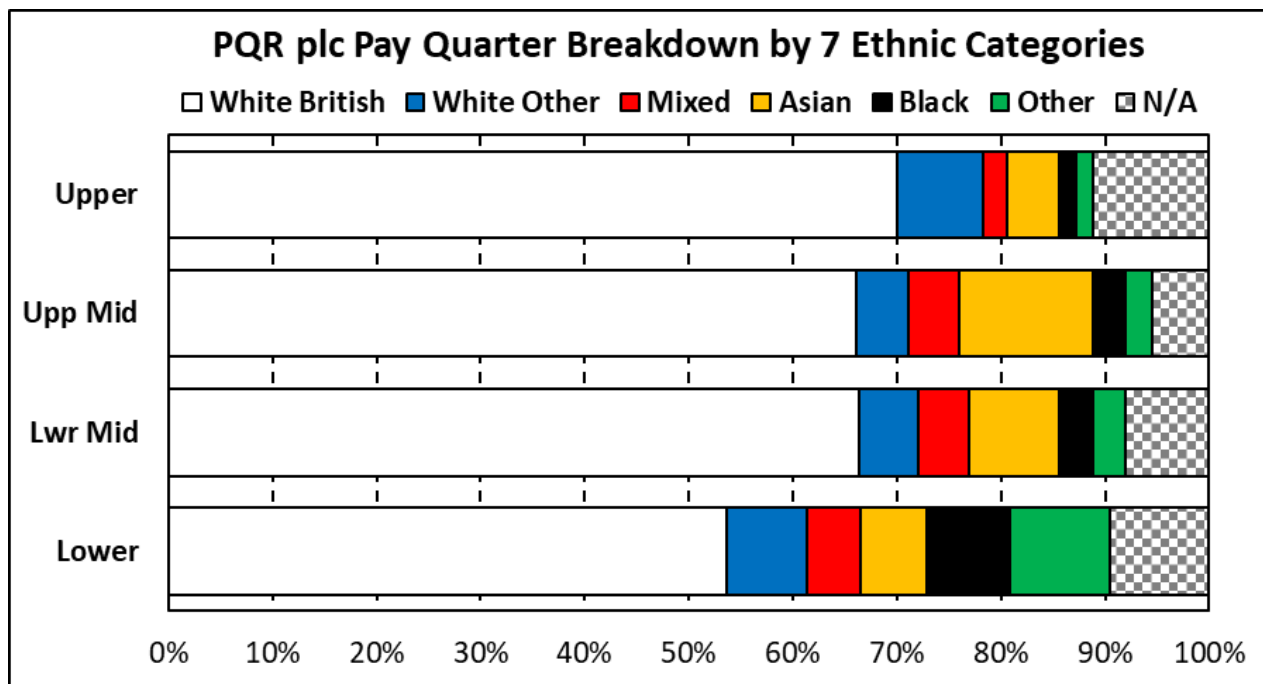
Draft Ethnicity Pay Gap Guidance - Worked Example – PQR plc



Pay Quarter Breakdown by Ethnic Category - PQR Plc

Number of Employees		White-B	White-O	Mixed	Asian	Black	Other	N/A	TOTAL
Pay Quarter	Upper	219	26	7	16	5	5	35	313
	Upper Middle	206	16	15	40	10	8	17	312
	Lower Middle	207	18	15	27	10	10	25	312
	Lower	168	24	16	20	25	30	30	313
ALL EMPLOYEES		800	84	53	103	50	53	107	1250

Does PQR plc have a Pay Representation Gap? YES or NO?

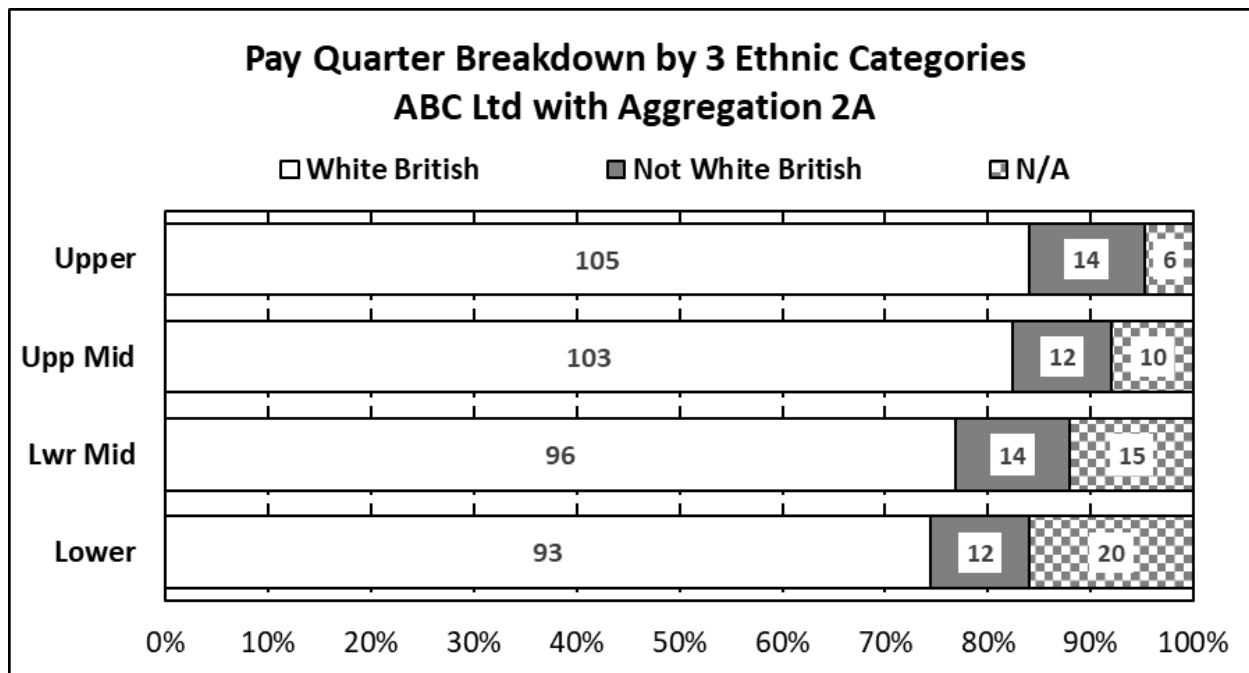


Draft Ethnicity Pay Gap Guidance - Worked Example – ABC Ltd

Pay Quarter Breakdown by Ethnic Category - ABC Ltd

Number of Employees		White-B	Not White-B	N/A	TOTAL
Pay Quarter	Upper	105	14	6	125
	Upper Middle	103	12	10	125
	Lower Middle	96	14	15	125
	Lower	93	12	20	125
ALL EMPLOYEES		397	52	51	500

Does ABC Ltd have a Pay Representation Gap? YES or NO?



The Median Reporting Employer in the UK has 600 Employees. Ethnicity Representation Gap guidance must be aimed at them.



The Median Reporting Employer Will Look Like This...

Median used	Population	%W-British	#W-British	All
Median Local Authority	Warrington	Tameside	Knowsley	ENGLAND & WALES
#Employees	600	600	600	600
White British	441	412	462	372
White Other	27	16	15	36
Asian	16	46	8	46
Black	4	11	4	20
Mixed	8	11	9	14
Other	4	4	3	11
Unknown	100	100	100	100
Not White	32	72	24	91
Not W-British	59	88	38	128

Government Ethnicity Pay Gap Guidance advises against reporting Ethnic Categories with <50 employees without statistical support

Is White-Other part of the Ethnic Majority or an Ethnic Minority?

...Or The Median Reporting Employer Will Look Like That

Median used	Dist from LON	%White	#White	All
Median Local Authority	Warwicks	Telford & Wrekin	Richmond on Thames	LONDON
#Employees	600	600	600	600
White British	411	415	315	184
White Other	35	26	87	85
Asian	31	27	45	103
Black	7	14	9	68
Mixed	11	13	27	29
Other	5	4	16	32
Unknown	100	100	100	100
Not White	55	59	98	231
Not W-British	89	85	185	316

Why not ask this question of your employees to engage them in your ethnicity representation gap efforts?



Beware of Simpsons Paradox with Ethnicity Analysis! This example is from the Draft Ethnicity Pay Gap Guidance

Derby	Hourly Pay by Employee					Pay Halves			
UQ	£25	£25	£25	£25	£25	Upper	10	9	1
UMQ	£20	£20	£20	£20	£20				
LMQ	£15	£15	£15	£15	£15	Lower	10	7	3
LQ	£10	£10	£10	£10	£10				

Staff in London receive a 40% premium over their Derby colleagues

London	Hourly Pay by Employee					Pay Halves			
UQ	£35	£35	£35	£35	£35	Upper	10	6	4
UMQ	£28	£28	£28	£28	£28				
LMQ	£21	£21	£21	£21	£21	Lower	10	4	6
LQ	£14	£14	£14	£14	£14				

Will you draw the same conclusions if you look at London + Derby combined as for London & Derby separately? YES or NO?



Yes you would! You would conclude this employer favours black employees for higher paid roles

Separately, in both Derby & London, White employees are more likely to be in the upper pay half & Black employees in the lower pay half

COMBO	Hourly Pay by Employee										Pay Halves			
UQ	£28	£28	£28	£28	£28	£35	£35	£35	£35	£35	Upper	20	12	8
UMQ	£21	£21	£21	£21	£21	£25	£25	£25	£25	£25				
LMQ	£15	£15	£15	£15	£15	£20	£20	£20	£20	£20	Lower	20	14	6
LQ	£10	£10	£10	£10	£10	£14	£14	£14	£14	£14				

When Derby & London are combined into one, Black employees are more likely to be in the Upper Pay Half. This is due to A) the London Premium and B) Black employees being 4 times more likely to live in London than White employees.

Simpson's Paradox occurs when your conclusions change depending on which layer of your onion you are looking at

People! Not Percentages! – Key Points

1. Your Pay Quarter Breakdown (PQB) by Ethnicity is your narrative today.
 - ❑ Counting people is easier than calculating percentages
 - ❑ Counts of people are easier to understand than percentages
2. By defining what you want your PQB to look like tomorrow, the starting point for your action plan is easier to identify.
 - ❑ The median ethnicity pay gap is actionless as it cannot do this.
3. The difference between your PQBs for Today and Tomorrow can be expressed in numbers of people.
 - ❑ A straightforward formula can estimate how many years it will take you to reach tomorrow.
 - ❑ **Warning!** Often, it will be longer than you think unless you intend to rely on luck or use positive discrimination, statistical shenanigans or high employee turnover.
4. Beware of Simpson's Paradox due to London Premium and demographic differences between London and rest of UK.
 - ❑ Which layer of your onion is the most relevant to report?





Back Up Slides

Turn your ethnicity pay gap data into insights & actions

How to analyse your payroll data by the ethnicity of your employees so as to identify issues and drive improvement

- In 2022, Nigel was asked by the Department of Business & Trade to write the draft guidance document for any employer in the UK who wishes to undertake ethnicity pay gap reporting.
- His Draft has 6 sections which lays out a process for doing this.
 - ❑ **0. Introduction to the Guidance**
 - ❑ **1. Engaging your employees**
 - ❑ **2. Collect your data**
 - ❑ **3A. Turn your data into insights (basic calculations)**
 - ❑ **3B. Turn your data into insights (advanced calculations) OPTIONAL**
 - ❑ **4. Turn your insights into actions**
- All contain Worked Examples, Case Studies & Further Reading links.

[Click here to download a copy and for Nigel's comments on the final version published by the government in April 2023](#)



Time to Close Pay Gap - Hitachi Capital Demonstration

- Assume Hitachi are targeting 100 men & 100 women in each Pay Half

Start of Year			Leaving			Joining			End of Year		
Year 1	M	F	Year 1	M	F	Year 1	M	F	Year 1	M	F
Upper	127	73	Upper	12.7	7.3	Upper	10	10	Upper	124.3	75.7
Lower	73	127	Lower	7.3	12.7	Lower	10	10	Lower	75.7	124.3
Swap	-27.0	27.0	Swap Number Falls by 10% = %Turnover						Swap	-24.3	24.3

Start of Year			Leaving			Joining			End of Year		
Year 2	M	F	Year 1	M	F	Year 1	M	F	Year 2	M	F
Upper	124.3	75.7	Upper	12.4	7.6	Upper	10	10	Upper	121.9	78.1
Lower	75.7	124.3	Lower	7.57	12.4	Lower	10	10	Lower	78.1	121.9
Swap	-24.3	24.3	Swap Number Falls by 10% = %Turnover						Swap	-21.9	21.9

- How long will it take for the Swap Number of 27 to fall below 1?
 - Expected Number of Years = $[\text{LN}(1) - \text{LN}(\text{SN}[0])] / \text{LN}(1 - t)$
 - Where $\text{SN}[0]$ = initial swap number of 27 and t = annual turnover = 0.1
- Answer is 31.3 years on average.
- Closing gaps requires sustainable actions as leaders & strategies change!

See a real life case study of an organisation closed their gender & ethnicity pay gaps over 20 years



Simpson's Paradox has already happened with Gender here. Replace Men with White & Women with Ethnic Minority...

West London based HQ and R&D
n=810 employees



Manufacturing plant
n=355 employees

NOVARTIS PHARMACEUTICALS UK LIMITED
Hourly Pay by Gender in 2019

🏠 For every £1.00 the median man was paid in 2019, the median woman was paid £0.90

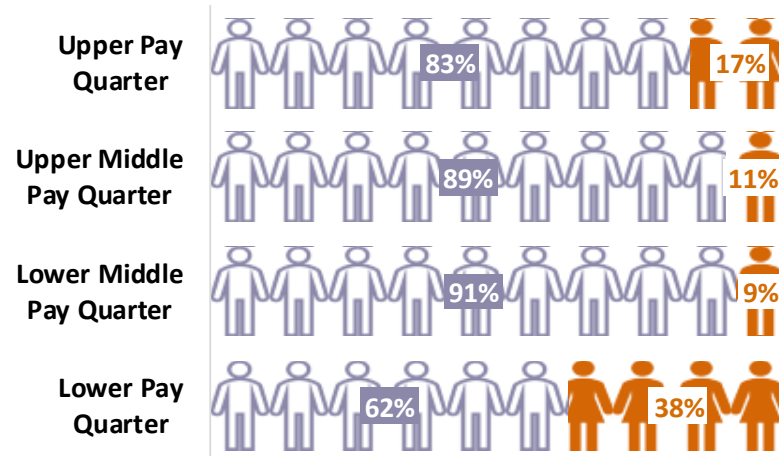
👤 61% of employees in 2019 were women



NOVARTIS GRIMSBY LIMITED
Hourly Pay by Gender in 2019

🏠 For every £1.00 the median man was paid in 2019, the median woman was paid £0.88

👤 19% of employees in 2019 were women



In their narrative, Novartis UK stated when all UK legal entities were combined, the median woman was paid **£1.11** for every £1 paid to the median man. This is due to the London Premium (estimated @30-40% (source ONS))

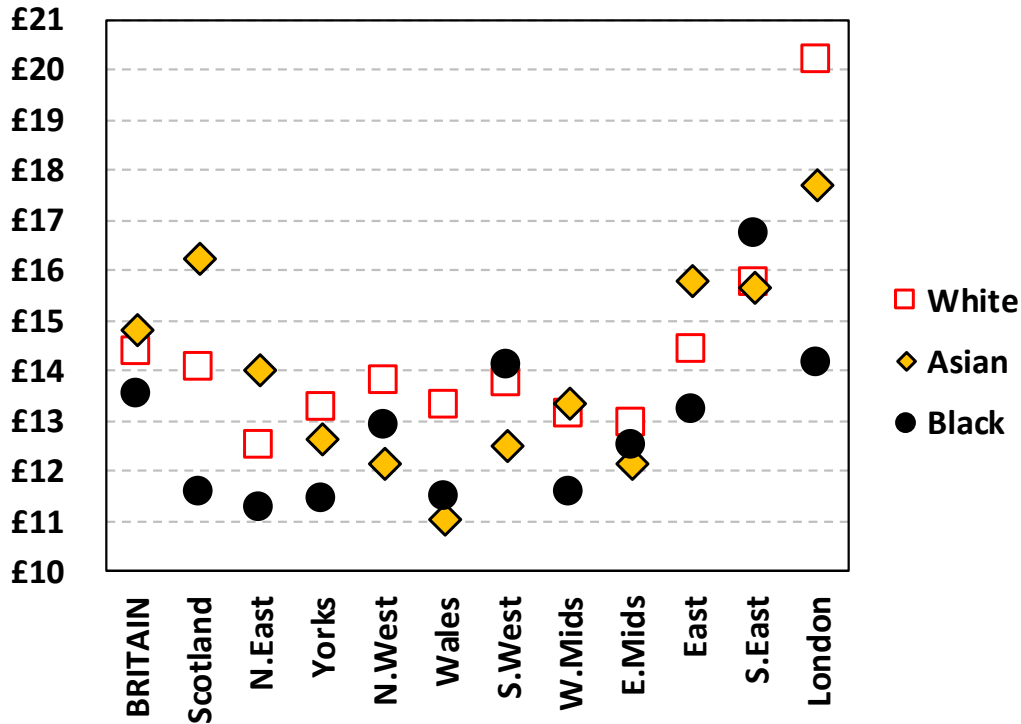


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The London Premium effect on Ethnicity



Median Hourly Pay by Ethnic Group & Region in 2022



Source - ONS Ethnicity Pay Gap Report 2012-2022

The national gaps between White, Asian and Black are small because of London because ethnic minorities are much more likely to be working in London whilst white people are more likely to be working outside of the Greater South East

% of ethnic group working in these regions (according to ONS APS)

	W	A	B	M	O
London	10%	37%	47%	34%	46%
E & SE	24%	21%	17%	25%	17%
rest of GB	66%	42%	36%	42%	36%