

Wage & Employment Dynamics

THE WED PROJECT



Low Pay, Ethnicity and Disability in England and Wales: Evidence from Payroll-Census Data in 2011

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Key findings

- Female employees are in general more likely to be low-paid than male employees. However, this pattern varies by ethnicity:
 - The shares of Bangladeshi and Black African male employees in low pay are higher than for female employees from these ethnic groups.
- Controlling for other employee characteristics, such as education and family status, Indian, Pakistani, Bangladeshi, Chinese, Black African and Black Caribbean men are all significantly more likely to be in low paid work than White men. This picture is more mixed among women.
- Male employees with a disability are significantly more likely to be low-paid than non-disabled male employees, but this is not the case for female employees.

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1. Shares of employees paid within two-third of median hourly wages:
Are there differences between ethnic-gender groups and by disability status in the likelihood of an employee being low-paid?

Share of employees in England and Wales, 2011, by ethnicity, gender and disability status, with an hourly wage less than two-thirds the median for all employees – Low Paid

	Male	Female	All
White	0.104	0.244	0.173
Indian	0.146	0.226	0.185
Pakistani	0.239	0.291	0.259
Bangladeshi	0.356	0.180	0.294
Chinese	0.161	0.169	0.165
Black African	0.265	0.241	0.252
Black Caribbean	0.103	0.125	0.116
Not disabled	0.110	0.239	0.173
Disabled	0.171	0.288	0.235

Source: author calculations using ASHE-Census and Low Pay Commission weights. See slide 9 for details on these datasets, and slide 10 for unweighted sample sizes. See slide 11 for equivalent estimates without using and weights.

2. Adjusted probabilities of being low-paid:

What are the differences in the likelihood of being low-paid associated with ethnicity-gender and disability for employees with the same levels of education, experience, occupation, and other characteristics?

Marginal effects of gender, ethnicity and disability status on the likelihood of being low-paid in England and Wales in 2011 – Probit model estimates

	<u>Unweighted</u>			<u>Weighted</u>		
	All	Male	Female	All	Male	Female
Male	-0.041*** (0.002)			-0.058*** (0.003)		
Indian	0.040*** (0.008)	0.030*** (0.009)	0.046*** (0.014)	0.053*** (0.012)	0.048*** (0.015)	0.048*** (0.017)
Pakistani	0.067*** (0.014)	0.068*** (0.015)	0.038 (0.024)	0.081*** (0.017)	0.083*** (0.019)	0.050 (0.030)
Bangladeshi	0.041* (0.023)	0.084*** (0.027)	-0.060** (0.027)	0.088*** (0.033)	0.158*** (0.040)	-0.067* (0.037)
Chinese	0.033 (0.020)	0.055** (0.027)	0.001 (0.030)	0.026 (0.024)	0.060* (0.031)	-0.022 (0.035)
Black African	0.098*** (0.016)	0.114*** (0.021)	0.064*** (0.023)	0.156*** (0.022)	0.194*** (0.030)	0.098*** (0.031)
Black Caribbean	0.011 (0.011)	0.020 (0.014)	0.001 (0.018)	-0.001 (0.013)	0.017 (0.017)	-0.017 (0.021)
Disabled	0.016*** (0.005)	0.021*** (0.006)	0.013 (0.008)	0.014** (0.006)	0.023*** (0.007)	0.006 (0.011)
Observations	77,434	38,486	38,948	74,964	37,487	37,477

Source: author calculations using ASHE-Census & Annual Population Survey. See slide 9 for details on these datasets, samples, definitions, and survey weights.

Notes: Other control variables are functions of age, education, marital status, work region, tenure, English, health, part-time, and family characteristics. See slides 12-13 for more details.

*, **, *** indicate statistical significance from zero at 10%, 5%, 1% levels, two-sided, robust standard errors in parentheses.

Interpretation: the characteristic shown is associated with an X smaller/greater likelihood (probability) of an employee being in low pay, conditional on other characteristics such as age and education.

3. Appendix

Details on data sources, methods and additional results



The ASHE-Census dataset – A payroll-based earnings dataset with detailed employee and job characteristics

Dataset: ASHE-Census 2011, those in England and Wales

Can be accessed: Soon, via Office for National Statistics Secure Research Service – Contact WED project team for advice. ASHE itself can be accessed as: Office for National Statistics. (2021). Annual Survey of Hours and Earnings, 1997-2020: Secure Access. [data collection]. 18th Edition. UK Data Service. SN: 6689, <http://doi.org/10.5255/UKDA-SN-6689-17>

Sample: those in the age group 25-64, main jobs only

The measure of “Hourly Earnings” used in ASHE is ‘hrpayx’ – excludes overtime and incentive pay. The sample is trimmed for those in the bottom 0.5 percentile, and in the top 0.5 percentile before all analysis and statistics are computed. We used, where mentioned, LPC Weights to derive which observations in ASHE were “low paid” – i.e., within 2/3 of median hourly earnings.

The weights used, where mentioned, were designed to address the ASHE-Census linking patterns, through an adjustment of the standard LPC ASHE survey weights available in the ASHE dataset.

Unweighted samples sizes for the analysis

	<u>ASHE-Census</u>	
	Male	Female
White	38,132	37,974
Indian	1,189	1,178
Pakistani	514	314
Bangladeshi	171	98
Chinese	172	208
Black African	487	558
Black Caribbean	396	600
Total	41,061	40,930

Share of employees in England and Wales, 2011, by ethnicity, gender and disability status with a wage less than two-thirds the median for all employees – **Low Paid {UNWEIGHTED}**

	Male	Female	All
White	0.076	0.182	0.129
Indian	0.117	0.180	0.148
Pakistani	0.206	0.226	0.214
Bangladeshi	0.257	0.133	0.212
Chinese	0.145	0.139	0.142
Black African	0.203	0.179	0.190
Black Caribbean	0.086	0.100	0.094
Not disabled	0.082	0.179	0.130
Disabled	0.133	0.218	0.179

Source: author calculations using ASHE-Census. See slide 9 for details on these datasets, and slide 10 for unweighted sample sizes. See slide 5 for equivalent estimates weights Low Pay Commission weights.



Variables in the probit regression models

Variable	Categories	ASHE-Census
Hourly pay/earnings	Continuous variable	hrpayx
Male	Dummy variable	sex
Ethnics	Categorical variable (White, Indian, Pakistani, Bangladeshi, Chinese, Black Caribbean, Black Africa; observations in the Mixed and Other categories are omitted from all the results)	ethpuk11
Age	Categorical variable for APS, Continuous variable for ASHE-Census, and squared term for ASHE-Census	age
Education	Categorical variable (No qualification, GCSEs, apprenticeship, A-level, Degree, Other/vocational qualification for ASHE-Census) (NQF level 4 and above, NQF level 3, Trade apprenticeships, NQF level 2, below NQF level 2, Other qualification, No qualification for APS)	hlqpk11
Marital status	Dummy variable (1 for those married or in a registered same-sex civil partnership)	marstat
Disability	ASHE-Census: Long-term sick or disabled. APS: Dummy variable for those who report a disability that restricts or limits their work	disability
Work region	Categorical variable (NUTS1: North East, North West, Yorkshire, East Midlands, West Midlands, South West, East, London, South East, Wales)	wgor
English nationality	Dummy variable for English or non-English	lrespuk11
English language	Dummy variable (1: English is the main language)	mainlang
Health problem	Dummy variable whether the person has a long-standing health problem	ehlthm
Part-time job	Dummy variable. In ASHE-Census, it is derived from basic working hours (<30)	h_basic
Number of children	Continuous variable – number in family	dpcfamuk11
Age of the youngest child	Categorical variable. This is a derived variable from the number of children in each age group in the family	dpcfamuk11