The Value of Diversity

An INvolve report prepared by Cebr

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the inclusion people

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Authorship and acknowledgements

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The report does not necessarily reflect the views of INvolve.

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Contents

Executive Summary

- This report analyses the relationship between workplace diversity and the financial performance of UK firms, as well as the cost of discrimination to the UK economy. While there are many types of diversity that could be analysed, throughout the report we focus on the following; ethnic, gender, and LGB+ diversity.
- The UK's most gender diverse workplaces are 11% more likely to financially outperform their industry average than the least gender diverse workplaces.
- Similarly, the UK's most ethnically diverse workplaces are 35% more likely to financially outperform their industry average than the least ethnically diverse workplaces.
- We also found that workplaces that rank highest for LGB+ diversity 22% more likely to have financial returns above their national industry mean than those workplaces which are least diverse in terms of sexual orientation.
- In addition, once all these factors are considered simultaneously, we find that those most diverse workplaces 45% more likely to outperform their industry average than the least diverse workplaces. **These results make it clear that those workplaces that achieve greater workforce diversity are more likely to be financially successful.**
- Moreover, we find that those firms with the most developed diversity policy are 54% more likely to financially outperform their national industry mean than those with the weakest diversity policies in place.
- These results suggest that workplaces which are able to harness the power of diversity through strong diversity policies are more likely to achieve financial success than those that do not.
- We have further analysed over 100 wage differentials to examine the economic cost of discrimination to the UK economy.
- Our analysis found large and statistically significant wage gaps between men and women, in line with the range of results published by other researchers. Even after accounting for full time and part time work as well as for educational attainments, **men's average earnings were over 20% higher than women's.**
- Ethnic minorities often earn less than white people. However, there are exceptions to this. For full time employees, the picture is mixed with Pakistanis and Black/African/Caribbean/Black British earning less than white people, while Indians and those of mixed ethnic background earn more. For part time

employees, we found **significant wage gaps in favour of white people for almost all ethnicities.**

- The only statistically significant differences for white, full time working women are with Pakistani and Chinese women, both of which earn on average more than white women.
- These wage gaps largely persist when controlling for educational achievements. **White people earn on average between £67 and £209 more per week compared to similar qualified individuals of a different ethnic background.** Those with mixed or multiple ethnicities are an exception to this, as the data show their average earnings to be **£152 above those of white individuals.**
- We further analysed wage differentials across sexual orientations for young individuals aged 16-21. **Our results did not show a significant wage gap between heterosexuals and gays and lesbians.** However, heterosexuals earn on average significantly more than bisexuals, individuals who did not want to disclose their sexual orientation and those elsewhere on the sexual orientation spectrum.
- Multiplying the wage differentials with the number of individuals in the comparison group and scaling this figure up to represent an annual amount, we can estimate the loss in labour income due to discrimination.
- The **unadjusted gender wage gap multiplied by the number of female employees yields an estimate of £136 billion of lost labour income.**
- Accounting for full time and part time work patterns, **reduces the amount of lost labour income to £50 billion.**
- Dividing the loss in labour income by the labour share of GDP gives us an approximation for total economic output lost due to discrimination.
- Controlling for work patterns and educational levels, we estimate that **the gender wage gap costs the UK economy up to £123 billion.**
- Our estimates place **the cost of discrimination against ethnic minorities at £2.6 billion** based on a weighted average of unadjusted wage gaps.
- The pay gap by sexual orientation results in **lost output worth up to £2 billion.**

1 Introduction

The challenge of diversity management

Effectively managing human resources is key to a firm's success. This process includes finding the individuals with the required skillsets as well as making sure that these individuals work well together to achieve the firm's aims. To gain an advantage in today's competitive markets, firms increasingly look for a wide variety of talents as well as for individuals from diverse backgrounds.

Over recent years, both researchers as well as employers have paid more attention to the potential benefits for firms who hire recruits from more diverse backgrounds. For example, it has been found that start-ups with a female founder outperform those with all male founding teams.[1] A mix of skills and backgrounds can benefit firm performance in several ways, for example by fostering innovation and creativity. In his book, The Flat White Economy, Cebr founder Douglas McWilliams has argued that the highly diverse London workforce – a result of years of internal and international immigration – has been one of the key factors for the rise of the tech scene in East London.[2] Being open to a more diverse workforce also means that employers can hire from a larger pool of applicants, which improves the choice of talent available to firms.

The research presented in the paper is an empirical analysis of the micro and macroeconomic level impacts of ethnic, gender, and sexual orientation diversity in the UK. In Section 2 we present an analysis of the current relationship seen in UK firms between diversity, diversity management and firm performance. This part of the report alludes to the competitive advantage available to those firms that astutely leverage the advantages of diversity in the workforce. Section 3 then approaches diversity from a different angle and quantifies the cost to the UK economy of discrimination based on ethnicity, gender, and sexual orientation.

Understanding the scale of the opportunity

Diversity plays an important role in the cultural and economic fabric of the UK. The nation has historical ties with countries across the globe and since World War II has seen its cultural and ethnic diversity increased significantly by successive waves of immigration, which continue to this day.[3] A global study found that the UK ranked in the top third of developed nations in terms of ethnic and cultural diversity, placing it ahead of France, Sweden, Australia, and Germany amongst

1 http://10years.firstround.com/

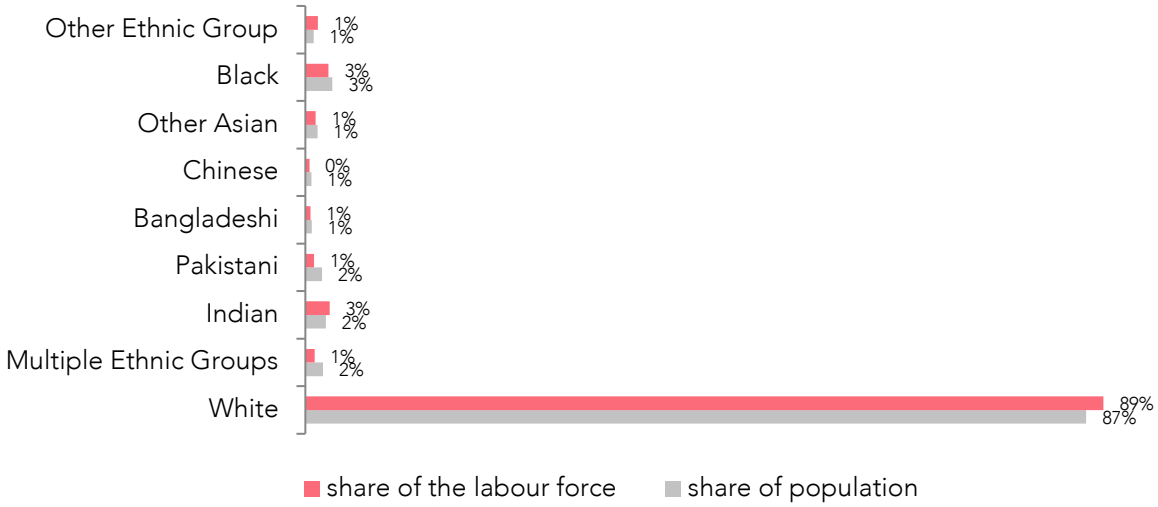
2 https://cebr.com/reports/cebr-special-report-economic-consequences-of-limiting-migration/

3 See https://www.migrationwatchuk.org/briefing-paper/48 for a brief summary.

others.[4] This not only puts the UK's position in to a global context, but illustrates the relative importance of diversity to the UK's economic and social landscape.

Although a large majority of the UK's population and labour force is from a white background, there is considerable ethnic variation present. This is illustrated in Figure 1.

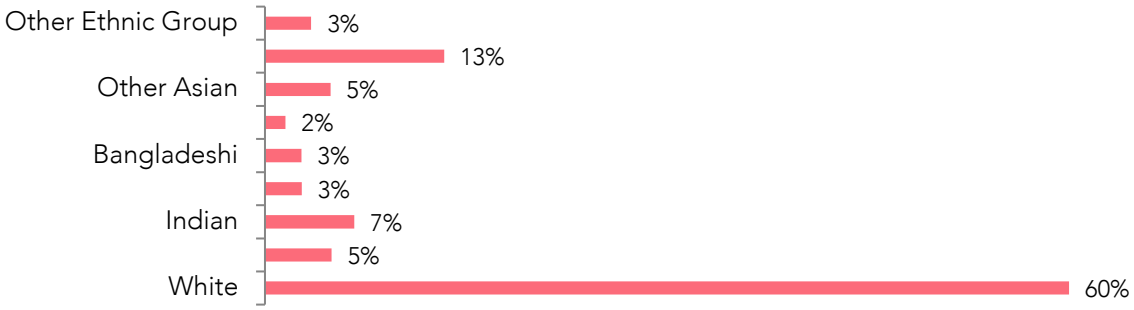
Figure 1 Ethnic breakdown of UK population and labour force, %



Source: Office for National Statistics, 2011 Census & Labour Force Survey 2017

There is substantial regional variation in ethnic diversity. Indeed, despite making up just 13% of the UK's population, ethnic minorities make up 40% of London's population. This is illustrated in Figure 2.

Figure 2 Population of London by ethnicity, %



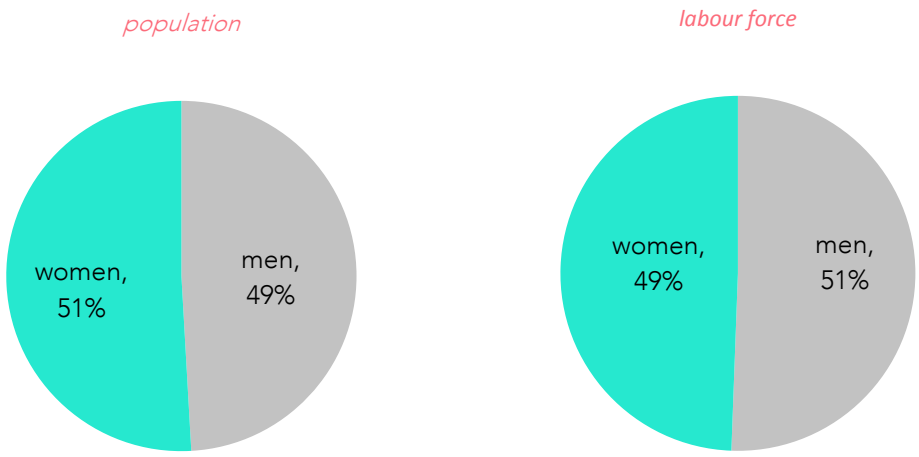
4 Source: Fearon, James D. "Ethnic and Cultural Diversity by Country." Journal of Economic Growth, vol. 8, no. 2, 2003, pp. 195–222. JSTOR, JSTOR, www.jstor.org/stable/40215943.

Source: Office for National Statistics, 2011 Census

London is not alone in being more diverse than the nation as a whole. In fact, cities – which account for over 80% of GDP globally[5] – are often more diverse than the nations which they form part of. Interestingly, a recent study of 100 cities found that more inclusive cities are more likely to be competitive[6], suggesting that this diversity is an important determinant of economic success.

The findings highlight that ethnic minorities play an important economic role. Other aspects of diversity are even more important to the UK economy. Women make up over half of the population and 49% of the labour force.

Figure 3 Gender breakdown of UK population and labour force



Source: Office for National Statistics, 2011 Census & 2017 Labour Force Survey[7]

There is also a considerable share of the population that identify as LGB+. Though labour market statistics are limited, population estimates suggest that anywhere between 2% - 7% of the adult population identifies as such[8].

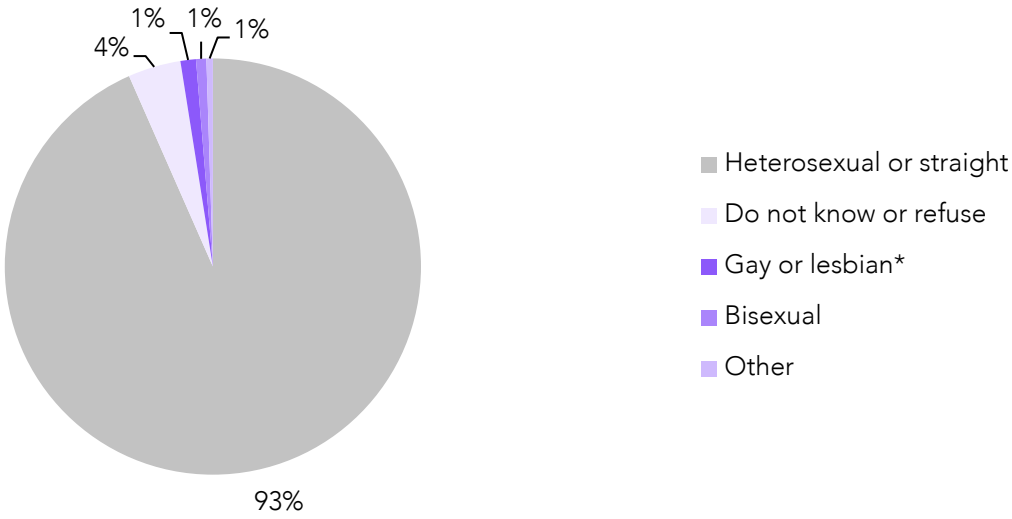
5 World Bank (2017), Urban Development, available at: http://www.worldbank.org/en/topic/urbandevelopment/overview

6 Open for Business (2018), available at https://www.open-for-business.org

7 Please note that people who identify as genders other than male or female are excluded, due to data availability.

8 Office for National Statistics, 2016 Integrated Household Survey (IHS)

Figure 4 Breakdown of UK population by sexual orientation



**Despite the differences between the two identities, ONS statistics are grouped at this level meaning a more detailed breakdown cannot be provided.*
Source: Office for National Statistics, 2016 Integrated Household Survey (IHS)

The statistics discussed here target just three of the most easily identifiable aspects of diversity. There are other quantifiable aspects of diversity such as age, disability, and work experience that we do not focus on in this report. Yet, even beyond this, there are many dimensions[9] of diversity that are less easily quantifiable.[10]

Despite this research's focus on a select group of characteristics, the underlying relationships revealed can be thought to be an indication of direction of the relationships that exist between economic performance and other diversity characteristics. In this way, the findings in this report can be regarded as indicative of the treatment that needs to be paid to all strands of diversity.

9 In fact, one piece of analysis lists 38 potentially important types of diversity. Source: Maier, C., 2002. Leading Diversity – A Conceptual Framework. St Gallen: Institute for Leadership and HR Management.

10 Existing literature has made the distinction with an iceberg analogy, where the portion of the ice above the water represents those characteristics which are easily quantifiable, while the larger, submerged portion stands for these vaguer, less quantifiable aspects. Source: Cultural Diversity in Organisational Theory and Practice (Mazur, 2010), http://www.joim.pl/pdf/MAZURv2n2.pdf.

2 Quantifying the effect of diversity and diversity policy on firm performance

Quantifying diversity

Diversity is by its very nature a multi-dimensional phenomenon, meaning it cannot be easily quantified. In this report we focus on three strands of diversity in the workplace, namely gender diversity, ethnic diversity, and LGB+ diversity. Even when focusing on specific aspects as done here, traditional metrics often do not suffice in capturing all the pertinent information. In the case of LGB+ diversity for example, the workforce share of non-heterosexual employees could be used to rank the diversity of the workplaces. However, this ignores the diversity within the non-heterosexual group itself.

To overcome this issue Cebr utilised a normalised Herfindahl–Hirschman Index (HHI). This approach is explained in full detail in the technical notes. The index, which is traditionally used to measure market concentration within an industry[11], outputs a diversity score between $(1/N)^2$[12] and 1 for each firm, where $(1/N)^2$ represents an even split of the workforce amongst all groups considered, while 1 indicates complete homogeneity[13].

As an example of how this measure captures diversity in the workplace consider the following example. If one company has a workforce that is 80% heterosexual and 20% gay and lesbian, and another company had a workforce that was 80% heterosexual, 10% gay and lesbian, and 10% bisexual the HHI formula will allow us to credit the second company as having a more diverse workforce even though the share of non-heterosexual workers is the same for both:

$$HHI_1 = 0.68 = \left(\frac{8}{10}\right)^2 + \left(\frac{2}{10}\right)^2 \qquad HHI_2 = 0.66 = \left(\frac{8}{10}\right)^2 + \left(\frac{1}{10}\right)^2 + \left(\frac{1}{10}\right)^2$$

After calculating this HHI score, we then normalise it such that it outputs a score between 0 and 1. This, and the specific approach to ranking each type of diversity, is explained in more detail in the technical notes. These rankings are then compiled together with scores for financial performance for each workplace in order to analyse how the firm's relative performance varies with ethnic, gender, and LGB+ diversity.

11 The Herfindahl–Hirschman index is defined as the sum of the squares of the market shares of the largest firms within the industry, where the market shares are expressed as fractions.

12 Where N is the maximum number of different types of the aspect of diversity.

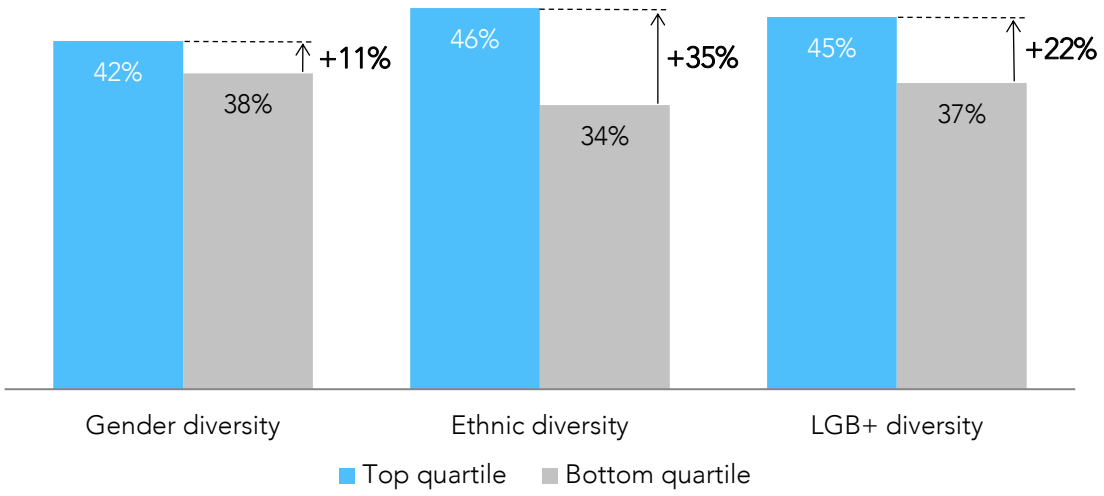
13 I.e. The workforce is made up entirely of employees from the same group.

Diversity and firm performance

An analysis of 517[14] UK firms shows a positive and statistically significant relationship between diversity and firm performance. Workplaces in the top quartile of gender diversity are 11% more likely to have financial returns above their national industry mean than those in the bottom quartile. The workplaces in the top quartile of ethnic diversity are 35% more likely to have financial returns above their national industry mean than those in the bottom quartile. Similarly, workplaces in the top quartile of sexual orientation diversity are 22% more likely to have financial returns above their national industry mean.

These results do not assert that there is a causal link between the two – i.e. that greater diversity results in higher profits. Instead, it reveals that those workplaces that achieve greater workforce diversity are more likely to be financially successful.

Figure 5 Likelihood of financial performance (turnover per capita) above the national industry mean, by diversity quartile %



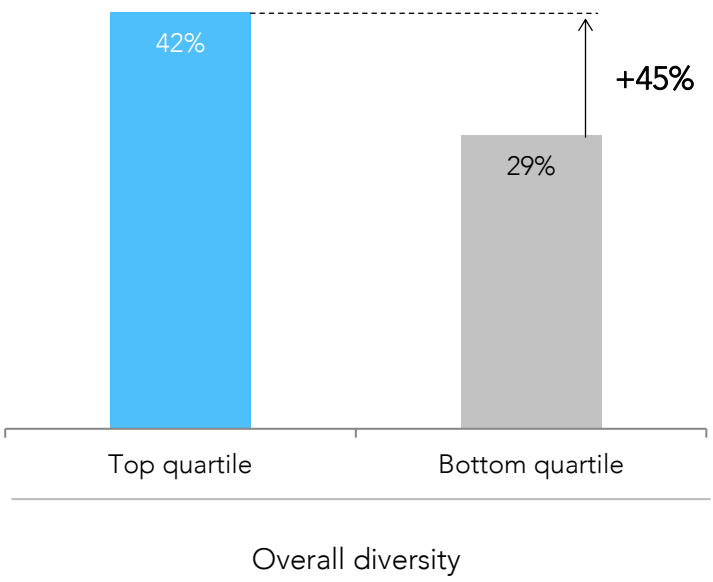
Source: Workplace Employment Relations Study (WERS) 2011, Annual Business Survey 2011, Cebr analysis

14 Note that though there were 517 firms analysed, sample sizes varied from 424 to 517 as rankings in all aspects of diversity was not available for the entire sample. The exact sample sizes used are specified in 'Results, workplace performance' section of the technical notes.

Figure 5 illustrates that 42% of firms in the top quartile in terms of gender diversity financially outperform[15] their industry average. Meanwhile, 38% of firms in the bottom quartile in terms of gender diversity outperform their industry average.

It is worthwhile mentioning that our analysis focuses on the national industry mean rather than the median[16].We expect the mean to be significantly higher than the median as the sample likely contains some firms with exceptionally strong financial performances, pushing up the mean relative to the median. This explains why even for firms in the top quartile in terms of diversity less than 50% outperform the industry mean[17].

Figure 6 Likelihood of financial performance (turnover per capita) above the national industry mean, by overall diversity quartile %



Source: Workplace Employment Relations Study (WERS) 2011, Annual Business Survey 2011, Cebr analysis

15 Financial performance is quantified as turnover per capita. Please see technical notes for more details.

16 The mean is arrived at by summing up the various values for each firm and then dividing by the number of firms. The median is the value that lies in the middle of the sample distribution, i.e. 50% of firms reported financial performance above the median and 50% of firms reported performance below the median.

17 Looking at the entire sample we find that of the 515 firms studied in the gender diversity analysis, 36% financially outperformed their national industry mean. This figure stood at 35% and 36% for the samples used in ethnic diversity and sexual orientation diversity, respectively.

When all aspects are accounted for simultaneously and the firms are ranked accordingly, a strong and statistically significant difference is found between the top and bottom quartiles. The most diverse workplaces are 45% more likely to have financial returns above their national industry mean than those in the bottom quartile.

There are a number of arguments for why diversity at the workplace could be beneficial to firm performance. Diversity is thought to stimulate creativity in teams. A more diverse workforce is better able to understand consumer needs in a market made up by individuals from a variety of backgrounds. A team of individuals from diverse backgrounds might also benefit from the variety of viewpoints, experiences and backgrounds to help inform their decision making. However, to get the most out of a diverse team and avoid the pitfalls of communication barriers and cultural differences, a tolerant work environment needs to exist. The empirical evidence presented in this section suggests that the potential benefits of diversity tend to outweigh the drawbacks amongst UK firms. This is likely in part due to the success of diversity management practices in successful firms, a topic we will examine more closely the following chapter.

Diversity policy and firm performance

So far we have analysed the relationship between ethnic, gender and LGB+ diversity and workplace-level financial performance. In this section we analyse the difference between diversity policy and the financial performance of workplaces.

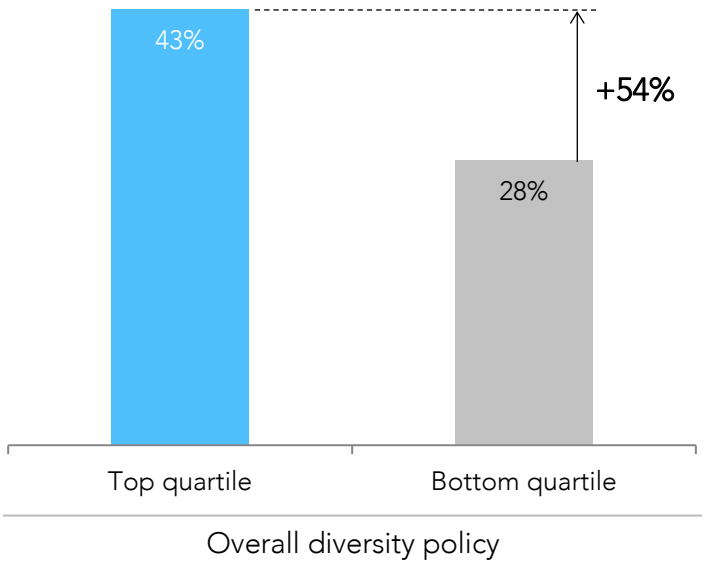
Diversity policy generally refers to a written set of rules and practices on how an organisation manages diversity. Examples of what these policies may encompass are guidelines specifying whether diversity is monitored and encouraged in promotion and recruitment decisions as well as the extent to which management fosters discussions around diversity issues. For example, firms can provide diversity related training such as that aimed at improving awareness of unconscious bias. Unconscious biases are part of human nature, and in the workplace, mean that people often exhibit micro behaviours towards a person in a certain way that is based on that bias. By implementing a training course, it's possible for employers to break the habit of bias.

The data set used for this report covers 27 questions relating to diversity policy.[18] We then created an index score for each firm based on the number and strength of the diversity policies that they have in place. The full details of the indexing exercise are included in the technical notes of the report.

18 A complete list can be found in the annex.

A positive correlation is found between firms' score on our diversity policy index and workplace performance. As Figure 7 illustrates, 43% of firms in the top quartile of the diversity policy index financially outperform their industry mean. This compares to only 28% of firms in the bottom quartile of the index who financially outperform their industry mean. Thus, the firms with the most comprehensive set of diversity policies in place are 54% more likely to outperform the national industry mean than the least pro-diversity firms.

Figure 7 Likelihood of financial performance (turnover per capita) above the national industry mean, by diversity policy quartile %



Source: Workplace Employment Relations Study (WERS) 2011, Annual Business Survey 2011, Cebr analysis

These results illustrate that those who encourage diversity in the workplace through managed policies, processes and guidelines are more likely to financially outperform their industry's mean financial performance. It is also interesting to note that the 'diversity policy gap' shown in Figure 7 exceeds the 12 percentage point difference found between the workplaces with the highest and lowest levels of measured diversity. This is particularly interesting given that the same sample has been used for the both analyses. This suggests that although diversity tends to be beneficial regardless of workplace policy, the greatest competitive advantage accrues to those firms which best manage diversity through actively managed policies, guidelines and processes.

3 The economic cost of discrimination to the UK economy

While the previous chapter examined the business case for diversity, we will now focus on the loss of economic output that results from discrimination.

There is a growing literature examining the economic cost of stigma and discrimination based on gender, ethnicity and sexual orientation. While the effects of discrimination in the workplace are varied, we will focus our analysis on the measurable differences in salaries between minorities and a reference group.

Assumptions and data

The basic concepts for the analysis of discrimination reach as far back as the 1950s when Nobel prize-winning economist Gary Becker first published his seminal book 'The economics of discrimination'. Based on Becker's ideas, the main economic problem resulting from discriminatory practices in the workplace is an underutilisation of human capital. This underutilisation can manifest itself in various ways, e.g. in higher unemployment rates, lower productivity and wages as well as through feedback loops leading to lower investments into education and training by affected groups.

Our main focus for this report lies on the examination of reduced productivity. The central assumption here is that workers are paid their marginal productivity, which means that their wages reflect their productivity in the workplace. Consequently, we can relate any observed wage gaps between groups to lower economic output via a reduction in output per hour. There are various potential explanations for the existing wage gaps between different demographic groups. Education, occupation, hours worked and tenure are some of the most important determinants of wages. While our analysis will account for some of these factors, it is worthwhile stressing that our estimates represent upper-bound estimates of the effects of discrimination on wages.

In a second step we can further estimate the total output loss to the economy resulting from discrimination. This follows from work done by the World Bank[19] which acknowledges that labour

[19] Badgett (2014) - The Economic Cost of Stigma and the Exclusion of LGBT People: A Case Study of India

typically combines with other input factors to produce output. For example a qualified mechanical engineer needs capital, i.e. machines, to produce the products sold by his employer. If a worker is denied the training or education necessary to operate this machine, the economic loss arises from the wage gap (as the worker is not trained or a qualified worker is not employed) as well as from the products not produced. By using the wage share of output we can therefore scale up the lost labour income due to discrimination to yield an estimate for overall total output lost.

As in the preceding chapter we will focus on diversity by gender, ethnicity and sexual orientation. The main data source for analysing effects of discrimination among the former two types is the ONS Labour Force Survey. Unfortunately, this data source does not contain any information about the sexual orientation of individuals. Only few available data sets cover both sexual orientation and earnings. For this report, we analyse data from the 7th Wave of the Understanding Society study, conducted by the Institute for Social and Economic Research (ISER), at the University of Essex. An important limitation of the data set to be kept in mind during the analysis is that data on incomes and sexual orientation are only available for 16 to 21 year olds.

Due to limited data availability, the analyses in this chapter do not consider the Trans identity.

The gender pay gap

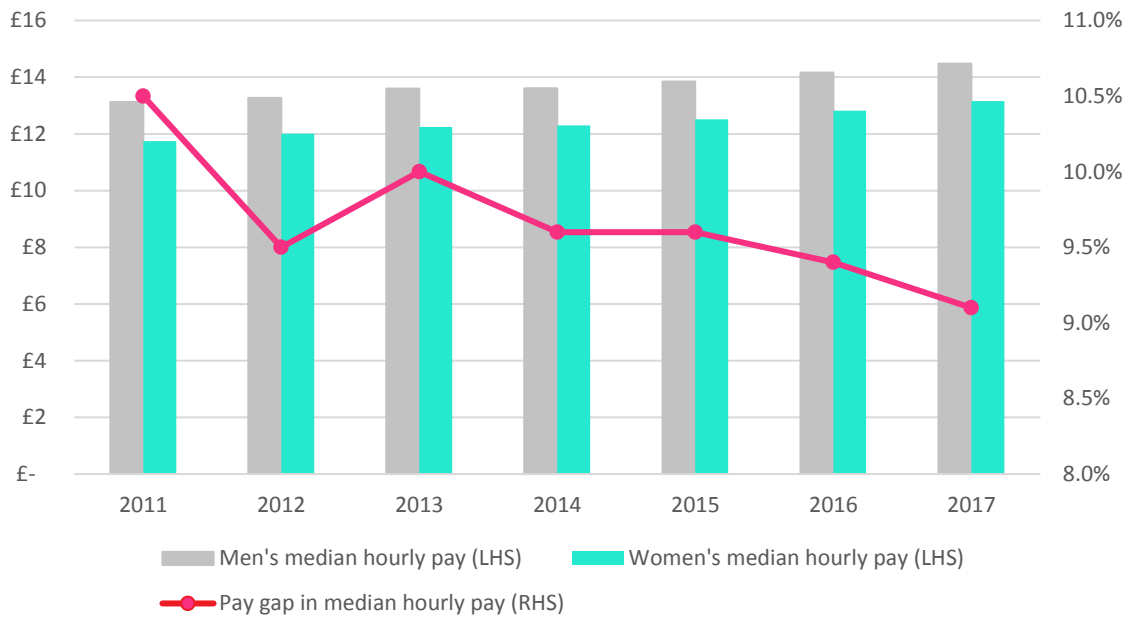
We start our analysis by examining the wage gap between male and female workers.[20] The topic has received wide-spread attention in the media and increasingly also from policymakers. For example, on 10 November 2017 campaigners proclaimed 'equal pay day', defined as the day in the year when women stop getting paid compared to their male counterparts.[21] According to the Office for National Statistics' (ONS) analysis of the Annual Survey of Hours and Earnings (ASHE) data, the gap in median gross hourly earnings for full-time employed women and men has narrowed slightly over the past years and stood at 9.1% in 2017, down from 10.5% in 2011[22], as shown in Figure 8.

[20]The Labour Force Survey did not include any questions specifically enquiring if respondents are Trans, and therefore this variable was not able to be included in the analysis.

[21] http://www.bbc.co.uk/news/uk-england-41805053

[22]https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/articles/understandingthegenderpaygapintheuk/2018-01-17

Figure 8 Median gross hourly earnings (excluding overtime) for full-time employees by sex, UK, 2011 to 2017



Source: ONS

The principal data source used in this report is the Labour Force Survey (LFS), as it covers more important characteristics we want to look at such as education and ethnicity. The Labour Force Survey collects information from almost 40,000 households on a quarterly basis. This means that all data, including wages, are based on self-reported information.

When comparing wages between groups we will report the average values, as information about the median is not available.

Figure 9 Average gross weekly pay in main job by sex

Source: Labour Force Survey, Q3 2017, Cebr analysis

Figure 9 shows our first estimates of the gender wage gap using the LFS data. The data for all employees show that men earned on average £593 per week compared to £398 for women. The resulting wage gap stands at £195 or more than 30% of men's pay. As stated above, we analyse average wages, which means the data might be disproportionally influenced by individuals with very high incomes. The large difference between the wage gap in ONS' analysis of ASHE data in Figure 8 and the wage gap observed in the LFS suggest that the majority of very high paying jobs are held by men. This is in line with reports suggesting that senior business roles are still predominantly staffed by men.[23]

However, it quickly becomes apparent, that also the working pattern (i.e. full time and part time work) has a significant impact on the relative average wages and the resulting earnings gap. The middle and right-hand-side bars in Figure 9 show average earnings for women and men split by full time and part time employees. For male full time employees, the average weekly wage rises by 9% to £644, reflecting the relatively small share of men who are in part time employment. For women, the average wage rises by 29% when only looking at full time employees to £513. The resulting wage gap is therefore smaller at £132 or 20% of male earnings. This result is in line with

23 https://www.ft.com/content/0713fe70-18f8-11e6-bb7d-ee563a5a1cc1
http://www.cityam.com/260427/number-uk-senior-business-roles-held-women-has-fallen-says

findings from the Institute for Fiscal Studies, who focussed on the analysis of hourly earnings gap in a recent report.24

Interestingly, the wage gap turns negative when only looking at part time workers. Female part time employees earn on average £229 per week, around £17 more than their male counter parts. This can likely be explained by sorting effects. As women are more likely to be part time workers, they have an incentive to look for better paid part time jobs. Also, women often take part time positions in their old place of employment to balance family responsibilities alongside their job. In contrast, men are increasingly likely to be underemployed, working part time because they cannot find a full time job.[25] At the same time, there has been a large increase in part time working among lower paid men.[26] While the wage gap in favour of women among part time workers is an interesting finding in itself, we will mostly focus on the gaps for full time employees going forward.

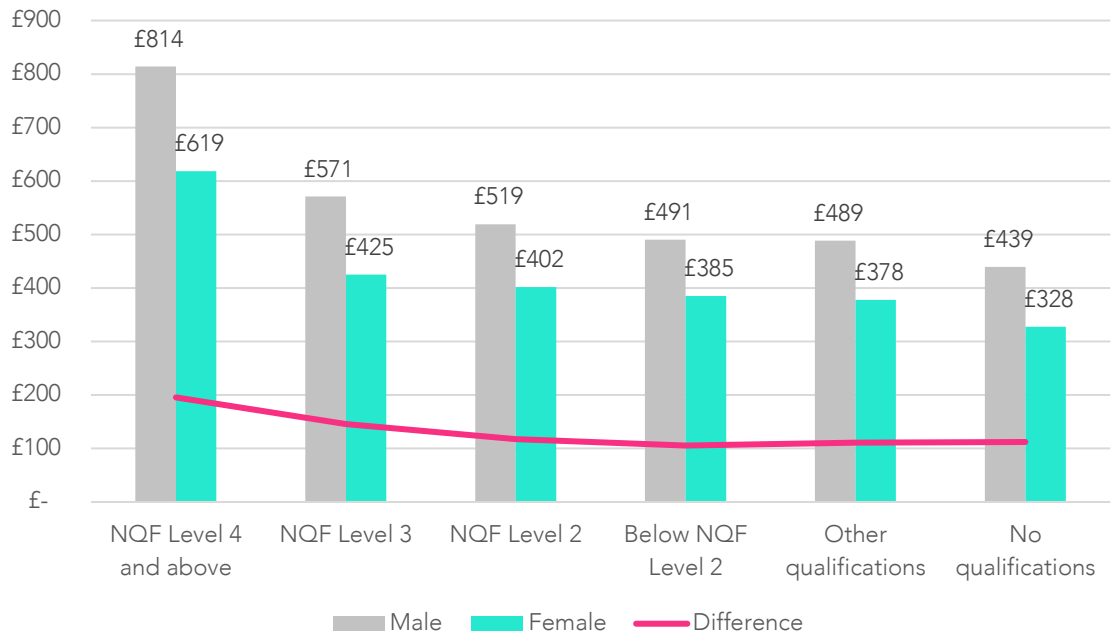
In Figure 10 we see the gender pay gap for various educational levels among full time employees. The National Qualifications Framework (NQF) in the UK has nine levels in total. Holders of an NQF Level 4 and above have enjoyed at least some university education or other training from an institution of higher education. NQF Level 3 is equivalent to education to A-level standards in the UK, while NQF Level 2 indicates completion of GCSEs with grades from A* to C. Other qualifications include other work-related or professional qualifications as well as school leaver certificates.

24 IFS (2018) - Wage progression and the gender wage gap: the causal impact of hours of work

25 Resolution Foundation - Counting the hours: two decades of changes in earnings and hours worked (2018)

26 Resolution Foundation (2018)

Figure 10 Gross weekly pay in main job by highest qualification, full time employees



Source: LFS, Cebr analysis

The data show that average wages rise in line with educational attainment, as would be expected. Individuals with NQF Level 4 or higher qualifications earn the most with a gross weekly average pay of £814 for men and £619 for women. For both men and women the gap to the next lower level of qualifications is relatively large. This is likely due to the large range of higher education degrees covered by the NQF 4 and above category as well as by the fact that individuals with especially high pay will likely fall into this category, hence pushing up the average. Men with NQF Level 3 qualifications earn on average £571 per week while women's average pay stands at £425. Average pay gradually declines with lower educational levels: males in full time employment without qualifications have an average income of £439 per week while women earn £328 on average.

The difference between pay for men and women is statistically significant[27] for all educational levels shown in Figure 10. The pay gap ranges from £196[28] per week for those with the highest

27 Differences in wage means have been tested for statistical significance using t-tests. This test evaluates whether a difference in means stemming from a sample can reliably point towards a difference in population means given the sample size. All test values can be found in the appendix.

28 Wage differences might differ from figures in the graphs due to rounding.

qualifications to £106 for those with Below NQF Level 2 qualifications. The gap for individuals with 'other qualifications' and no qualifications stands at £111 and £112, respectively.

Despite this seemingly large variation in absolute terms, the wage gap expressed as a share of male earnings remains relatively stable across the qualification categories, ranging between 22% (below NQF2) to 26% (NQF3).

Our analysis shows the existence of a substantial gender wage gap. While some of this gap can plausibly explained by differences in part time and full time working patterns and other characteristics, including education, there remains a significant gap in the average gross weekly pay for men and women. Looking only at full time employees, the wage gap still stands at 20% of men's earnings. Further drilling down into the data and comparing male and female earnings across educational levels does little to remove this gap. In fact, expressed as a share of male earnings the gender pay gap rises to between 22% and 26%.

Wage differentials by ethnicity

Ethnicity is a further source of potential discrimination in the workplace. The labour force survey includes a breakdown of 9 ethnicities: white, mixed/multiple ethnic groups, Indian, Pakistani, Bangladeshi, Chinese, any other Asian background, Black/African/Caribbean, other ethnicity. The aim of our analysis in this chapter is to see whether there are signs of wage discrimination of other ethnicities compared to white people.

We choose white people as the reference group as it is by far the largest ethnic group in Britain. According to data from the labour force survey, 89% of the 27 million employees in Britain identify as white, followed by 3% identifying each as Indian or Black/African/Caribbean/Black British. 1% each identify as being of mixed ethnicity, Pakistani, Bangladeshi, from any other Asian background and of other ethnicity. 0.5% of employees are of Chinese ethnicity. It is important to note here that our analysis does not cover the self-employed.

As with the gender pay gap analysis, we will control for full time/ part time work and qualification in an attempt to compare individuals with different ethnicities but otherwise similar characteristics.

Looking at simple averages across ethnic groups, we see that in fact employees of Chinese ethnicity earn the highest average wages with £627 per week, followed by Indians (£557) and those of other ethnic groups (£500). At the other end of the pay scale we see that Bangladeshis earn by far the least with £315 per week, followed by Pakistani employees (£421) and Black/African/Caribbean (£447). Those of mixed ethnicity earn on average £488 per week,

slightly below the average for white people (£499). The overall national average, depicted by the blue line, stands at £497 per week.

Figure 11 Average weekly earnings by ethnicity

Source: LFS, Cebr analysis

** Difference to white people not statistically significant at 5% level*

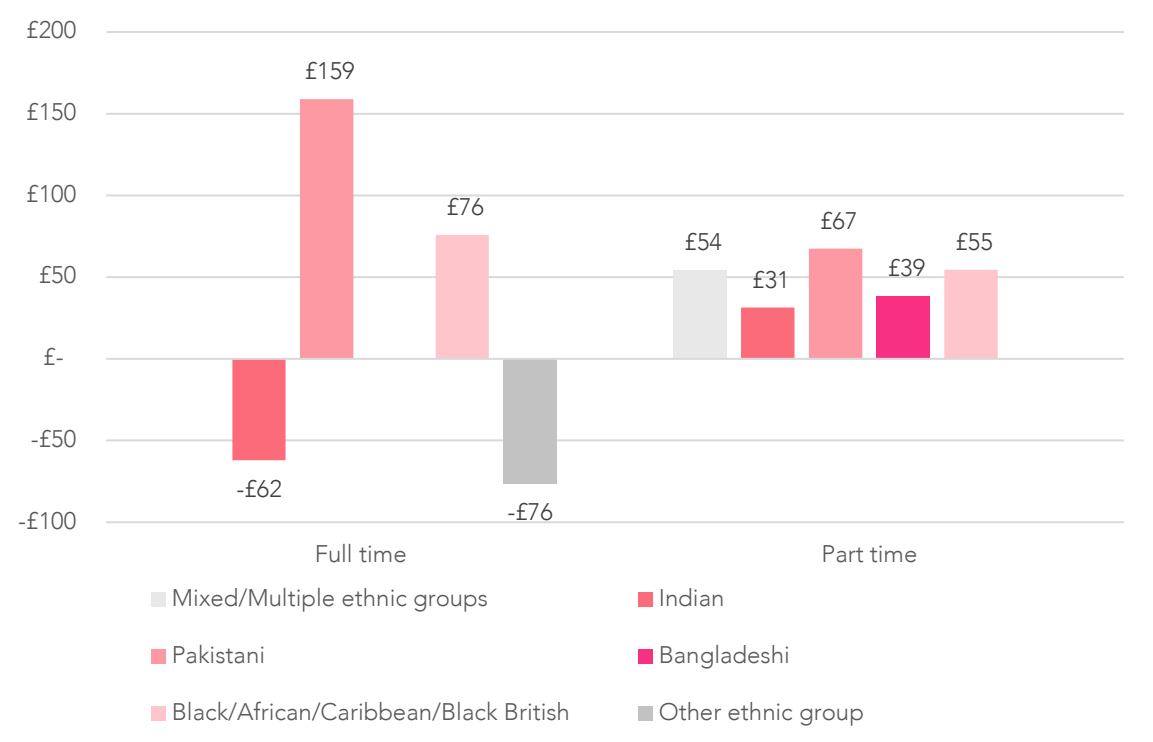
These differences may result from a number of different factors, including varying rates of female labour force participation, varying shares of full time to part time workers and different average educational achievements. Immigrants from non-EU countries also have to comply with minimum earnings requirements in order to obtain a visa, which could have an effect on the average earnings of certain ethnicities.

In Figure 12 we analyse the wage gap between white people and other ethnic groups split by whether individuals are full time or part time employees. On the left hand side, we see the comparison of wages to the average full time earnings of white people of £592 per week. The data confirms the mixed picture from Figure 10 which shows the average earnings of white people to be close to the national average. The negative wage gaps for Indians and other ethnic groups imply that these groups earn on average more than white people when full time employed. The gap is largest for other ethnic groups who earn nearly £669 on average, £76 more than white people. The wage gap compared to Pakistanis (£159) and Black/Caribbean/Black British (£76) is positive, suggesting that white full time employees earn more. Our data further shows a positive wage gap for Bangladeshis and a negative gap for

Chinese, though the differences are not statistically significant and hence not shown in the graph.

The picture for part time workers shows less variation. Most ethnic groups show a positive wage gap compared to white people who earn on average £218 per week. The gaps range from £31 for Indians to £67 for Pakistanis.

Figure 12 Wage gap by work pattern, white people compared to respective ethnicity



Source: LFS, Cebr analysis
Values not shown where difference to white people not statistically significant at 5% level

Overall, the wage data split by full time and part time employment seem to explain some of the variation seen in Figure 10, i.e. the negative wage gap of white people compared to Indians seems driven by higher average earnings of full-time employed Indians with a similar effect observed for the 'other ethnic' group. However, some of this wage gap is offset by generally higher earnings of white people in part time employment. Compared to Black/African/Caribbean/British Black and Pakistanis white people earn more both in full time and part time employment.

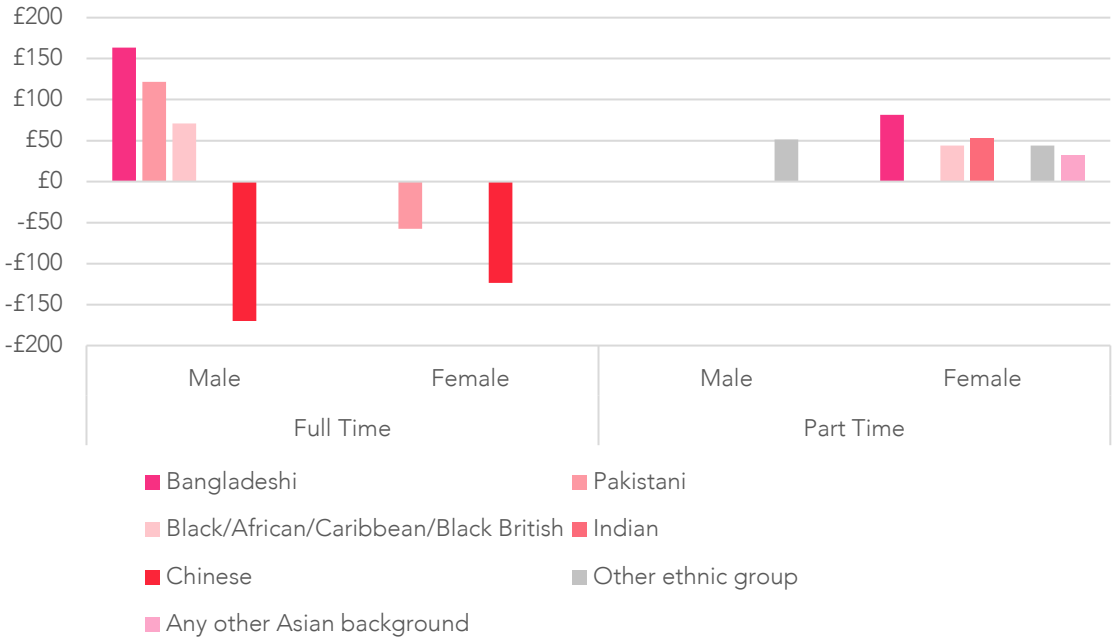
In Figure 13 we add another level to our analysis and look at the wage gap by ethnicity and gender. Due to limitations in the sample size, not all combinations of characteristics can be shown. White males working full time earn on average £645 per week, while white females earn

£509 per week. The respective figures for part time working white people are £218 for males and £232 for females.

The differences shown largely confirm our previous analysis. For full time working males, we observe large wage gaps in both directions. White people earn more than male employees of Bangladeshi, Pakistani or Black/African/Caribbean/British Black background, though Chinese males earn significantly more than white people. The only statistically significant differences for white full time working females are with Pakistani and Chinese women, with both groups earning on average more than white women.

Looking at part time working individuals, we see that all differences shown are in in favour of white people, confirming the picture of Figure 12 though only one comparison for males shows a statistically significant difference.

Figure 13 Wage gap by ethnicity and gender for full time employees

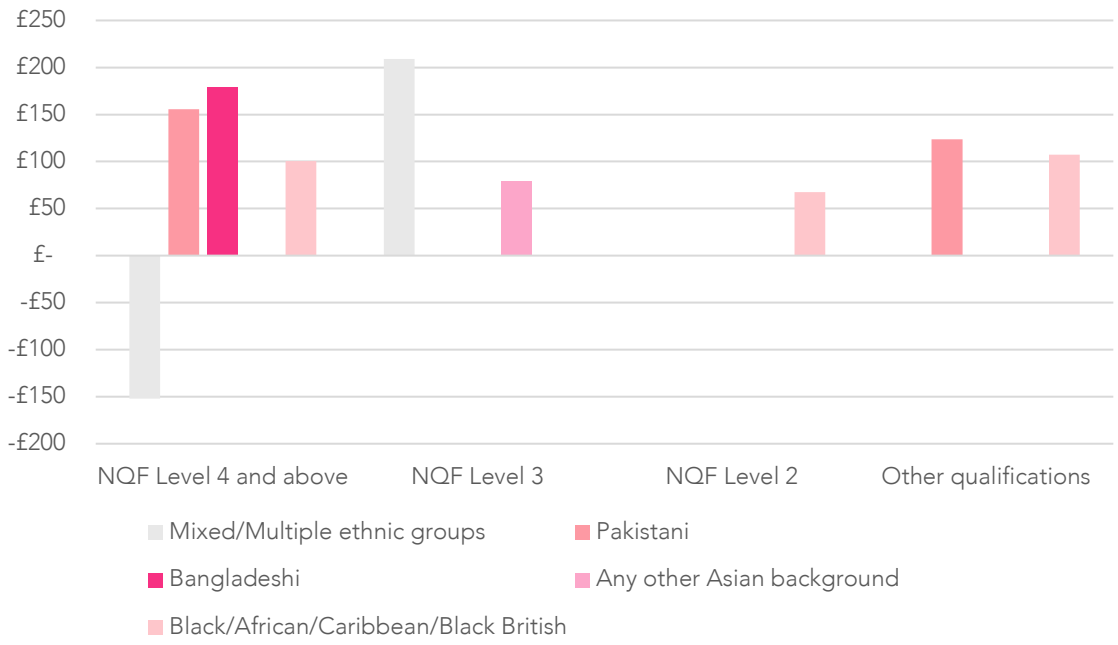


Source: LFS, Cebr analysis
Values not shown where difference to white people not statistically significant at 5% level

Lastly, we examine wage differentials between white people and other ethnicities across educational levels. Again, due to data restrictions some combinations had to be removed from the analysis. For those combinations where the sample size is sufficiently large and where the difference between white people and other ethnic groups is statistically significant, wage differentials are depicted in on average £209 more per week.

Figure 14. White people with NQF4 level qualifications or above earn on average £640 per week, significantly more than Pakistanis (£484), Bangladeshis (£461) or black people (£539). Those of mixed or multiple ethnicity earn on average £792 per week or £152 more than white people. For other qualification levels, sample sizes drop rapidly for minority ethnicities, complicating the analysis. Where comparisons can be made, wage gaps fall in favour of white people. This is the case for Pakistanis and black people with other qualifications who earn on average £124 and £107 respectively less than white people as well as for black people with NQF2 qualification (£67 less) and those of any other Asian background with NQF3 qualification (£79 less). Interestingly, the negative wage gap for those of mixed and multiple ethnicity observed for individuals with NQF4 qualification is reversed for those with NQF3 qualification; at this educational level white people earn on average £209 more per week.

Figure 14 Wage gap by ethnicity and education



Source: LFS, Cebr analysis
Values not shown where difference to white people not statistically significant at 5% level

Concluding it can be said that there is evidence for wage discrimination in the labour market based on ethnicity although there are exceptions to this. We observe higher average wages for individuals with a Chinese, Indian or mixed ethnic background in a number of situations. Small sample sizes unfortunately make it difficult to prove if these observations hold under all circumstances. We further observe significant and persistent wage gaps in favour of white people for part time workers as well as across educational backgrounds compared to most other ethnicities.

Wage differentials by sexual orientation

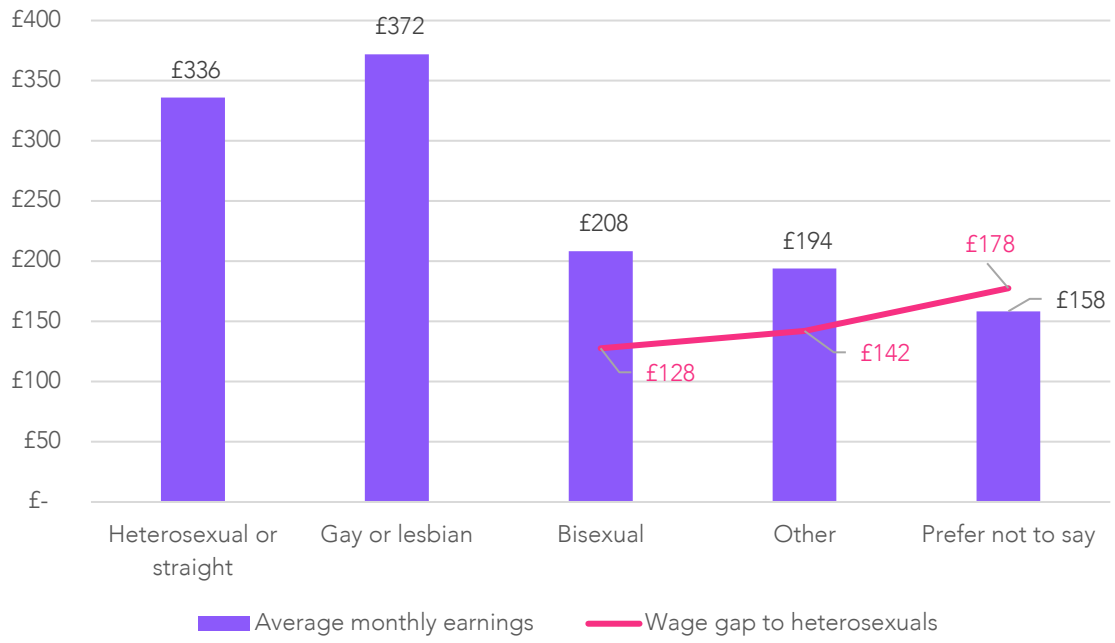
In this chapter our analysis focuses on wage gaps by sexual orientation. As mentioned earlier, this part of the analysis uses a different data source, the 7th Wave of the Understanding Society study, which contains information on earnings and sexual orientation for 16 to 21 year olds[29].

Our analysis of the survey data shows that the average heterosexual young person earned £336 per month, compared to £372 for gays and lesbians[30], £208 for Bisexuals, £194 for individuals with other sexual identities and £178 for those who preferred not to state their sexual orientation. Analysing the wage gaps between the groups shows that heterosexuals' earnings are well above those of the other groups with the exception of gays and lesbians. However, the difference between heterosexuals' and gays' and lesbians' earnings is not statistically significant. The size of the earnings gap is large for the other groups, ranging from 38% of heterosexuals' earnings compared with bisexuals to 53% compared with those who preferred not to state their sexual orientation. At this young age, earnings differentials can be the result of a number of circumstances. Some of the 16-21 year olds will be working part time alongside their studies, others are apprentices and some might have already started a full time position. Nevertheless, two results stand out: first, average earnings of heterosexuals and gays and lesbians are very similar with no statistically significant difference to be observed. Secondly, there is a relatively large pay gap with respect to the other three groups. Discrimination in the labour market may play a role though it is also likely that some of the gap can be explained by other, unobserved factors such as educational achievements and occupation. More research and better data are required to investigate the wage differentials among adolescents.

29 The use of this limited age range is driven by data availability but there is some evidence to suggest the use of a younger sample may result in more accurately identified sexual-orientation groups. For example, *LGBT: Retirement Preparations Amid Social Progress* (Aegon, 2017) states that the LGBT population is generally younger than the heterosexual population .Similarly, the BBC 2017 Generational Survey showed that generation Z (Specifically between 16-22) have lower odds to identify as exclusively straight. Assuming that actual sexual orientation has not changed between generations, this suggests that younger samples may be more accurately report their sexuality.

30 Despite the differences between the two identities, ONS statistics are grouped at this level meaning a more detailed breakdown cannot be provided.

Figure 15: Average monthly earnings by sexual orientation, 2016, 16 to 21 year-olds

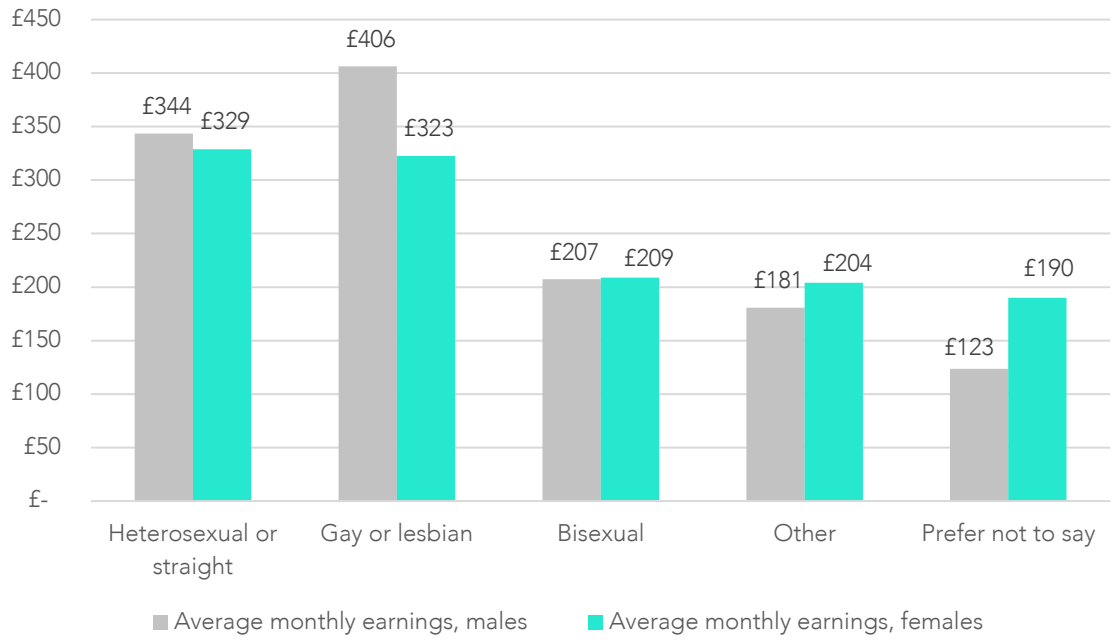


Source: Understanding Society, Wave 7, Cebr analysis

These results are confirmed when looking at the data split by males and females.[31] For both male and female groups, wage differences between heterosexuals and gays and lesbians are small while the earnings gaps to bisexuals, 'others' and those preferring not to disclose their sexual orientation are large and significant, as shown in Figure 16. The variation among females is somewhat smaller than for males. Indeed, the wage gap between female heterosexuals and those of 'other' sexual orientation is not statistically significant at conventional levels.

[31] As with the LFS, the Understanding Society Survey only includes two gender categories for males and females. We are therefore unable to comment on transgender people or other individuals who do not identify as male or female.

Figure 16 Average monthly earnings by sexual orientation and gender, 2016, 16 to 21 year-olds



The economic cost of discrimination

Finally, we conclude this chapter by estimating the potential damage to the economy arising from wage discrimination. To do so we follow a methodology outlined by the World Bank.[32] Wage discrimination directly leads to a loss of labour income for the groups discriminated against. Looking at the economy as a whole, this loss of labour income can also be seen as a reduction of labour as an input for production. In the production process, labour and capital (as well as land) are combined to produce output, which means that total lost output is greater than the loss of labour income. Consequently, it is possible to divide our estimate of lost labour income by the wage share to arrive at an estimate of total lost output. Data from the ONS show that labour as a share of GDP has been relatively stable, averaging 54% over the past four years.

Estimating lost labour income

We estimate lost labour income based on the wage differentials observed previously, multiplied with the number of individuals in each group.

The results are summarised in Table 1 below. The table shows income losses, calculated on the basis of the weekly earnings gaps shown earlier in this report. Results are scaled up to reflect

[32] Badgett (2014) - The Economic Cost of Stigma and the Exclusion of LGBT People: A Case Study of India

annual values. Again, it is worthwhile noting that our results are upper bound estimates, i.e. they show the labour income lost assuming the observed wage gap between groups is due to discrimination. There are likely other factors determining pay not included in this analysis.

For example, the average 'absolute gap' between male and female pay without accounting for full time/part time work and education was estimated at £195 per week. Multiplying this difference with the number of female employees (around 13.4 million) and scaling it up to get annual figures yields a total unadjusted sum of lost labour income of £136 billion. Accounting for full time and part time work, this amount decreases to around £50 billion. Using the wage gaps of full time employees adjusted for educational qualifications yields a total figure of £67 billion. The latter two estimates are likely to be better estimates of the true cost of discrimination as the unadjusted gap does not reflect the impact of varying working patterns and educational levels.

Table 1 Labour Income lost through discrimination

	Unadjusted gap	Accounting for full time / part time work	Accounting for education (full time employees only)
Gender Pay Gap (male earnings – women's earnings)	£135,867,000,000	£50,388,000,000	£66,857,000,000
Pay Gap by Ethnicity	£1,417,000,000		
Pay Gap by Sexual Orientation	£1,065,000,000		

The unadjusted lost labour income through discrimination based on ethnicity is calculated by using a weighted average of the losses for individual groups. The total stands at £1.4 billion. As mentioned previously, small sample sizes in the LFS prevent us from analysing a number of wage gaps when adjusting for full time/part time employment and educational levels. For this reason, the lost labour income based on these adjusted wage differentials cannot be calculated.

Estimating lost output

As described above, the wage share in the UK economy is 54%. Dividing the lost labour income estimated earlier by this share yields an estimate for total output lost.

Estimates for total output lost from the gender pay gap range from £249 billion when looking at the unadjusted difference between male and female wages and £92 billion when accounting for full time/part time patterns. Adding up the economic cost arising from pay discrimination across qualification levels for full time employees yields an estimate of £123 billion.

Output lost from pay discrimination across ethnicities is estimated to stand £2.6 billion based on unadjusted wage differentials.

Multiplying the lost labour income resulting from pay gaps for bisexuals and individuals with other sexual orientations with the labour share yields an estimate of lost output of just under £2 billion.

Table 2 Economic output lost through discrimination

	Unadjusted gap	Accounting for full time / part time work	Accounting for education (full time employees only)
Gender Pay Gap (male earnings – women's earnings)	£249,416,000,000	£92,499,000,000	£122,733,000,000
Pay Gap by Ethnicity	£2,602,000,000		
Pay Gap by Sexual Orientation	£1,956,000,000		

4 Conclusions

This report contributes to the growing literature concerning the value of diversity in the workplace and shows that it has tangible benefits for firms' bottom lines.

Cebr analysed over 500 firms and found a positive and statistically significant relationship between diversity and firm performance. We find that workplaces that are most diverse in terms of ethnicity, sexual orientation, and gender are 45% more likely to financially outperform their industry average than the least diverse workplaces. These results make it clear that those firms that achieve greater workforce diversity are more likely to be financially successful.

Moreover, we find that those workplaces that have the most developed diversity policies are 54% more likely to financially outperform their national industry mean than those which rank lowest. This finding is higher and more statistically significant that the 45% difference found in between the workplaces with the highest and lowest levels of observed diversity. Together, this suggests is that although diversity tends to be beneficial regardless of policy, the greatest competitive advantage accrues to those firms which best manage diversity through a dedicated set of guidelines.

Despite these encouraging findings and positive trends in terms of participation in the workforce for women, ethnic minorities and LGB+ individuals, discrimination in the workplace is still a widespread practice. Whether through active discriminatory practices or unconscious bias, many individuals see themselves confronted with difficult situation at work. As a proxy for discrimination in the workplace, we have examined over 100 wage differential permutations.

Comparing average wages taken from the Labour Force Survey, we found that women still earn significantly less than men even when controlling for working hours or education. Full time working women, with education beyond A-levels still earn a quarter less than their male counterparts. While there are likely further characteristics determining pay, our estimates based on the wage gap give a useful upper-bound estimate for the effects of workplace discrimination.

A similar analysis conducted for wage gaps between different ethnicities found mixed results. While white people earn above-average wages and more than a number of ethnic minorities, we found that Indian and Chinese (full time) employees earned on average more than white people. For part time working individuals, the wage gaps observed are in favour of white people. In terms of sexual orientation the available data limits us to analysing wage gap among adolescents aged 16 to 21. We found no significant difference in wages between heterosexuals and gays and lesbians, but large and significant gaps compared to bisexuals, individuals who did not want to disclose their sexual orientation and those of 'other' sexual orientation.

By multiplying the wage gap with the number of individuals of the comparison group we can estimate the labour income lost due to discrimination. Dividing this figure by the wage share of GDP gives us an estimate for total output lost from discrimination. Our calculations shows that discrimination in the workplace has significant costs to the economy. For example, the lost output arising from the gender wage gap (controlling for working patterns) stands at over £92 billion, or around 4.7% of GDP.

Our report shows that there is a double-dividend to increasing workplace diversity and decreasing discriminatory practices. More diverse firms are more likely to be financially successful, while the reduction of workplace discrimination would not only help raise the incomes of many groups but also benefit the economy substantially.

INvolve recommendations

It's clear that there are still a great many challenges faced by minority group in the workplace, and INvolve exists to help combat these, and to drive change. When looking to create diverse, inclusive workplaces where everyone has an equal opportunity to succeed, businesses need to consider the following:

- **Visibility of role models** – these can inspire and guide emerging talent, providing future leaders with aspirational role models who they can identify with.
- **Leadership and executive engagement** - e.g. appointment of exec sponsors and champions in the business for all diverse communities – to ensure that all minority groups have their voices heard at the most senior levels.
- **Allies and advocates** – to drive impactful change, minority communities need the backing of the backing of the majority – those who recognise the power and benefits of diversity.
- **Support and leadership development** – to foster emerging and diverse talent pipelines, businesses need to provide staff with appropriate professional development opportunities, specifically tailored to their needs.
- **Mentoring and reverse mentoring** – beneficial to all involved, these programmes provide impartial guidance and support for mentees, whilst helping senior leaders stay in touch with the challenges and concerns of younger generations and different diversity strands.
- **Intersectionality** – as this research has proven, different diversity strands face very different experiences in the workplace. And this changes further still when looking at people who fall into two or more diversity groups. Businesses need to recognise the challenges and opportunities afforded by intersectionality, and ensure all identities are represented.

- **Network engagement** – employee led networks or resource groups (sometimes known as ERGs) provide diverse communities invaluable support and peer group affinity. Business leaders need to engage these networks and harness their power for driving policy and cultural change within organisations.

It's also essential that HR departments have the relevant policies and systems in place to support a diverse workforce. Businesses need to collect relevant data, and be transparent with why they're collecting it and how they're using it to benefit their staff. This needs to be backed by robust policies around equality and discrimination, as well as training for all staff on inclusion matters, the equalities act and unconscious bias. Without these steps, we'll never be able to demonstrate the true value of diversity.

5 Technical notes

The Normalised Herfindahl–Hirschman Index (NHHI)

The HHI value for each firm is calculated by taking the sum of squares of diversity shares

$$HHI = \sum_{i=1}^{N} s_i^2$$

where s_i is the share of a diversity group in the workplace (e.g. the share of white people in the workplace in question). The HHI value will be higher the more asymmetric the distribution amongst the different groups of diversity.

The HHI is then normalised to give the NHHI:

$$NHHI = \frac{HHI - \left({}^{1}/_{N}\right)^2}{1 - \left({}^{1}/_{N}\right)^2}$$

where N is the number of different possible values that the measure of diversity could take.

Data, workplace performance

Section 2 of the report uses employee-employer data from the 2011 Workplace Employment Relations Survey (WERS) assembled by the Office for National Statistics (ONS). The 2011 WERS has the following components:

	Acronyms:
Survey of Managers (comprising the Employee Profile Questionnaire and the Management Questionnaire)	EPQ and MQ
Survey of Worker Representatives	WRQ
Survey of Employees	SEQ

Financial Performance Questionnaire (for workplaces in the trading sectors only)	FPQ

Section 2 of the report also uses data from the 2011 Annual Business Survey (ONS).

Ranking workplaces by gender diversity

The raw data used to quantify this aspect was question two of the EPQ, where managers provide the number of male and female employees working in the workplace by each occupation type[33].

To rank workplaces according to their gender diversity two sets of calculations were made. One was the creation of an NHHI measure based on the gender shares in the total workforce. The second calculation concerns the creation of multiple NHHI scores for each occupation type. The mean of these occupation-level NHHIs was then calculated in order to generate the average NHHI score for the company. The workplaces were then ranked by first sorting on the firm-wide NHHI and then the firm's occupation level average NHHI.

Ranking workplaces by ethnic diversity

To rank workplaces by ethnic diversity question six from the EPQ, rather than employee responses from the SEQ. This was used as managers were viewed as having a more accurate view of the workplace ethnicity splits than that calculated based on the ethnicity of SEQ survey respondents (a sample of the workplace's employees). Firms were sorted according to their NHHI score.

Ranking workplaces by sexual orientation diversity

To rank firms by sexual orientation diversity question E15 from SEQ was used. Note that there was no management level data available from the MQ on identity. Firms were ranked by first sorting according to their NHHI and by then sorting according to the share of the workforce that was non-heterosexual.

Classifying workplaces by industry

To classify the industry of each firm, management responses relating to which industry the firm belongs were used. Each workplace was classified by the SIC (2007) section.

[33] Managers, directors and senior officials, professional occupations, associate professional and technical occupations, administrative and secretarial occupations, skilled trades, caring, leisure and other service occupations, sales and customer service occupations, process, plant and machine operatives, elementary occupations.

Calculating national industry mean financial performance

To calculate the national industry mean in terms of financial performance, the 2011 Annual Business Survey (ONS) was used. The mean financial performance of each industry was used as a point of comparison in our research. The measure of financial performance used in the research was the average turnover per capita of the firm. To calculate the industry average, each SIC (2007) section's industry revenue was divided by the average number of employees working in the industry to give the mean industry turnover per capita.

Ranking workplaces by financial performance

Financial performance data for the workplaces analysed was taken from questions one, three, and four of the WERS 2011 FPQ. Question one provides information on the share of the total turnover listed derived from the reviewed workplace's activities. Question three provides data on the firm's turnover to the nearest £1,000. Question four provides data on the number of full-time and part-time employees in the workplace. To calculate each firm's turnover per capita the following calculation was made:

$$TpC_i = \frac{T_i}{FT_i + (0.5 \times PT_i)}$$

Where:

- TpC_i is the turnover per capita of the ith firm
- T_i is the turnover of the ith firm calculated by taking the product of responses to question one and question three
- FT_i is the number of full-time employees in the *ith* workplace
- PT_i is the number of part-time employees in the *ith* workplace

Once a turnover per capita value was calculated for each workplace, the workplace was classified as having above mean performance or below mean performance. This was done by comparing the turnover per capita value calculated here with the relevant national industry average turnover per capita (as described above).

Ranking workplaces by diversity policy

To assess and rank the diversity policy of firms, the WERS 2011 MQ was utilised. 29 separate questions were used in the assessment. For 27 of these questions firms were awarded the value 1 if they had the policy in place and 0 if they did not. The questions were as follows:

1. Does the firm's strategy cover employee diversity?

2. Does the workplace have procedures to encourage job applications from women returning to work after having children?
3. Does the firm have procedures to encourage job applications from women in general?
4. Does the firm have procedures to encourage job applications from members of minority ethnic groups?
5. Does the firm have procedures to encourage job applications from gay, lesbian and transgender communities?
6. Does firm training include equal opportunities and diversity?
7. Do meetings between senior management and workforce involve equal opportunities and diversity issues?
8. Do meetings between line managers and workforce involve equal opportunities and diversity issues?
9. Does workplace have a formal written policy on diversity or equal opportunities?
10. Does this diversity policy cover gender?
11. Does this diversity policy cover ethnicity?
12. Does this diversity policy cover sexual orientation?
13. Does the workplace monitor recruitment by gender?
14. Does the workplace monitor recruitment by ethnicity?
15. Does the workplace monitor recruitment by sexual orientation?
16. Does the workplace review recruitment procedures for indirect discrimination by gender?
17. Does the workplace review recruitment procedures for indirect discrimination by ethnicity?
18. Does the workplace review recruitment procedures for indirect discrimination by sexual orientation?
19. Does the workplace monitor promotions by gender?
20. Does the workplace monitor promotions by ethnicity?
21. Does the workplace monitor promotions by sexual orientation?
22. Does the workplace review promotion procedures for indirect discrimination by gender?
23. Does the workplace review promotion procedures for indirect discrimination by ethnicity?
24. Does the workplace review promotion procedures for indirect discrimination by sexual orientation?
25. Does the workplace review relative pay rates by gender?
26. Does the workplace review relative pay rates by ethnicity?
27. Does the workplace review relative pay rates by sexual orientation?

In the two remaining questions, on maternity and paternity leave pay, a scale between 0 and 1 was used based on how accommodating to employees the workplace's policy was.

After scoring each firm for each of these questions, the numerically classified responses were totalled and averaged. The workplaces were then ranked according to this value, where a score of 1 was the best possible and 0 was the worst.

Results, workplace performance

Ranking based on:	*Sample size*	*Likelihood of financial performance above the national industry mean*			*Percentage point difference in likelihood between top and bottom quartiles*	*Is the difference statistically significant at the 10% level?*	*Is the difference statistically significant at the 5% level?*
		Top quartile	*Bottom quartile*	*Entire sample*			
Ethnic diversity	481 workplaces	46%	34%	35%	12p.p.	Yes	No
Gender diversity	515 workplaces	42%	38%	36%	4p.p.	Yes	No
Sexual orientation diversity	456 workplaces	45%	37%	36%	8p.p.	No	No
Overall diversity	424 workplaces	42%	29%	35%	12p.p.*	Yes	No
Diversity policy	517 workplaces	43%	28%	36%	15p.p.	Yes	Yes

* This is not 13p.p. due to rounding of the underlying shares.

Test statistics for chapter 3

Gender Pay Gap

	Standard Error, SE	Test statistic	DF	Ha: diff < 0	Ha: diff !=0	Ha: diff > 0
Female	6.994	27.839	9059.723	1.000	0.000	0.000
Female (Full Time)	8.002	16.459	7654.096	1.000	0.000	0.000
Female (Part Time)	10.360	-1.583	748.338	0.057		0.943
Female (Full Time, White)	8.418	16.168	6934.224	1.000	0.000	0.000
Female (Full Time, Mixed/Multiple ethnic groups)	93.321	3.596	60.018	1.000	0.001	0.000
Female (Full Time, Indian)	50.876	2.034	207.619	0.978	0.043	0.022
Female (Full Time, Pakistani)	112.396	0.146	21.965	0.557	0.885	0.443
Female (Full Time, Bangladeshi)	89.043	-0.307	9.215	0.383		0.617
Female (Full Time, Chinese)	124.885	1.461	22.177	0.921	0.158	0.079
Female (Full Time, Any other Asian background)	96.489	0.396	69.947	0.653	0.693	0.347
Female (Full Time, Black/African/Caribbean/Black British)	35.905	1.181	152.764	0.880	0.239	0.120
Female (Full Time, Other ethnic group)	72.536	2.304	81.727	0.988	0.024	0.012
Female (Full Time, NQF4)	13.642	14.330	3388.715	1.000	0.000	0.000
Female (Full Time, NQF3)	14.992	9.718	1302.843	1.000	0.000	0.000
Female (Full Time, NQF2)	15.025	7.827	992.517	1.000	0.000	0.000
Female (Full Time, Below NQF Level 2)	14.906	7.078	660.129	1.000	0.000	0.000
Female (Full Time, Other qualifications)	23.490	4.730	311.530	1.000	0.000	0.000
Female (Full Time, No qualifications)	20.173	5.547	301.858	1.000	0.000	0.000
Female (Part Time, NQF4)	24.278	-1.178	206.917	0.120		0.880
Female (Part Time, NQF3)	15.816	-0.582	136.083	0.281		0.719
Female (Part Time, NQF2)	15.871	-1.342	249.900	0.090		0.910

Female (Part Time, Below NQF Level 2)		24.531	-0.404	62.994	0.344		0.656
Female (Part Time, Other qualifications)		35.592	2.251	48.673	0.985	0.029	0.015
Female (Part Time, No qualifications)		14.340	-1.004	120.149	0.159		0.841

Ethnicity Pay Gap

		Standard Error	Test statistic	DF	Ha: diff < 0	Ha: diff !=0	Ha: diff > 0
Mixed/Multiple ethnic groups		46.410	0.237	96.283	0.593	0.813	0.407
Indian		24.817	-2.349	264.202	0.010		0.990
Pakistani		35.099	2.219	84.974	0.985	0.029	0.015
Bangladeshi		32.541	5.636	45.221	1.000	0.000	0.000
Chinese		56.978	-2.261	42.375	0.015		0.985
Any other Asian background		37.159	1.133	113.351	0.870	0.260	0.130
Black/African/Caribbean/Black British		17.573	2.959	240.925	0.998	0.003	0.002
Other ethnic group		33.398	-0.048	124.184	0.481		0.519
Mixed/Multiple ethnic groups	Full time	56.912	0.197	68.838	0.578	0.845	0.422
Indian	Full time	26.930	-2.306	220.878	0.011		0.989
Pakistani	Full time	42.868	3.707	59.269	1.000	0.000	0.000
Bangladeshi	Full time	45.075	0.699	19.375	0.753	0.493	0.247
Chinese	Full time	55.395	-0.336	35.456	0.370		0.630
Any other Asian background	Full time	47.956	0.083	77.324	0.533	0.934	0.467
Black/African/Caribbean/Black British	Full time	18.555	4.090	174.455	1.000	0.000	0.000
Other ethnic group	Full time	37.958	-2.007	92.523	0.024		0.976
Mixed/Multiple ethnic groups	Part Time	28.871	1.881	27.005	0.965	0.071	0.035
Indian	Part Time	17.384	1.806	46.716	0.961	0.077	0.039
Pakistani	Part Time	21.193	3.180	25.766	0.998	0.004	0.002
Bangladeshi	Part Time	17.163	2.243	26.771	0.983	0.034	0.017
Chinese	Part Time	92.686	0.087	6.022	0.533	0.933	0.467

Any other Asian background	Part Time	13.786	-0.160	39.191	0.437		0.563
Black/African/Caribbean/Black British	Part Time	13.900	3.921	74.593	1.000	0.000	0.000
Other ethnic group	Part Time	26.537	0.237	31.380	0.593	0.814	0.407
Mixed/Multiple ethnic groups	Full time, male	82.562	-1.522	41.483	0.068		0.932
Indian	Full time, male	38.448	-0.645	126.730	0.260		0.740
Pakistani	Full time, male	44.243	2.748	42.719	0.996	0.009	0.004
Bangladeshi	Full time, male	54.665	2.989	14.381	0.995	0.010	0.005
Chinese	Full time, male	80.320	-2.115	13.162	0.027		0.973
Any other Asian background	Full time, male	62.319	0.950	41.853	0.826	0.348	0.174
Black/African/Caribbean/Black British	Full time, male	26.781	2.644	82.946	0.995	0.010	0.005
Other ethnic group	Full time, male	59.527	-0.801	47.051	0.213		0.787
Mixed/Multiple ethnic groups	Full time, female	44.307	1.666	26.842	0.946	0.108	0.054
Indian	Full time, female	34.364	-1.670	92.815	0.049		0.951
Pakistani	Full time, female	103.664	0.018	16.093	0.507	0.986	0.493
Bangladeshi	Full time, female	70.790	0.000	4.050	0.500	1.000	0.500
Chinese	Full time, female	71.278	-1.733	21.259	0.049		0.951
Any other Asian background	Full time, female	74.144	-0.522	34.387	0.303		0.697
Black/African/Caribbean/Black British	Full time, female	25.353	-0.903	88.322	0.184		0.816
Other ethnic group	Full time, female	42.294	-0.395	44.533	0.347		0.653
Mixed/Multiple ethnic groups	Part time, male	27.998	4.086	4.258	0.992	0.015	0.008

Indian	Part time, male	44.116	-0.141	11.431	0.445		0.555
Pakistani	Part time, male	31.484	1.588	9.184	0.927	0.147	0.073
Bangladeshi	Part time, male	17.015	1.546	34.019	0.934	0.131	0.066
Chinese	Part time, male						
Any other Asian background	Part time, male	20.170	1.547	14.646	0.928	0.144	0.072
Black/African/Caribbean/Black British	Part time, male	26.426	-0.363	25.265	0.360		0.640
Other ethnic group	Part time, male	25.703	2.004	16.773	0.969	0.062	0.031
Mixed/Multiple ethnic groups	Part time, female	34.997	0.897	22.609	0.810	0.379	0.190
Indian	Part time, female	17.230	3.082	34.782	0.998	0.004	0.002
Pakistani	Part time, female	27.996	1.386	16.700	0.908	0.185	0.092
Bangladeshi	Part time, female	29.378	2.771	12.476	0.992	0.017	0.008
Chinese	Part time, female	109.119	-0.167	5.014	0.437		0.563
Any other Asian background	Part time, female	17.466	1.872	27.961	0.964	0.072	0.036
Black/African/Caribbean/Black British	Part time, female	16.266	2.705	51.226	0.995	0.009	0.005
Other ethnic group	Part time, female	42.066	0.238	18.343	0.593	0.815	0.407
Mixed/Multiple ethnic groups	NQF Level 4 and above	80.144	-1.897	42.625	0.032		0.968
Indian	NQF Level 4 and above	34.283	-1.400	166.082	0.082		0.918
Pakistani	NQF Level 4 and above	46.017	3.379	50.217	0.999	0.001	0.001
Bangladeshi	NQF Level 4 and above	50.868	3.513	19.714	0.999	0.002	0.001
Chinese	NQF Level 4 and above	63.875	-0.559	32.755	0.290		0.710

Any other Asian background	NQF Level 4 and above	62.674	1.321	50.201	0.904	0.192	0.096
Black/African/Caribbean/Black British	NQF Level 4 and above	25.619	3.927	131.202	1.000	0.000	0.000
Other ethnic group	NQF Level 4 and above	41.817	1.181	68.662	0.879	0.242	0.121
Mixed/Multiple ethnic groups	NQF Level 3	34.734	6.020	20.776	1.000	0.000	0.000
Indian	NQF Level 3	60.853	1.305	19.553	0.896	0.208	0.104
Pakistani	NQF Level 3	195.731	-0.623	6.017	0.278		0.722
Bangladeshi	NQF Level 3	38.014	5.785	5.386	0.999	0.002	0.001
Chinese	NQF Level 3	43.337	6.431	2.117	0.988	0.023	0.012
Any other Asian background	NQF Level 3	44.760	1.765	21.096	0.954	0.092	0.046
Black/African/Caribbean/Black British	NQF Level 3	39.417	0.751	31.073	0.771	0.458	0.229
Other ethnic group	NQF Level 3	116.602	0.022	12.094	0.509	0.983	0.491
Mixed/Multiple ethnic groups	NQF Level 2	72.272	1.234	15.270	0.882	0.236	0.118
Indian	NQF Level 2	65.933	-0.364	21.455	0.360		0.640
Pakistani	NQF Level 2	59.329	1.146	7.188	0.855	0.289	0.145
Bangladeshi	NQF Level 2	25.267	9.546	5.814	1.000	0.000	0.000
Chinese	NQF Level 2	225.096	-0.587	2.004	0.308		0.692
Any other Asian background	NQF Level 2	71.873	1.585	3.055	0.894	0.211	0.106
Black/African/Caribbean/Black British	NQF Level 2	37.358	1.804	26.747	0.959	0.083	0.041
Other ethnic group	NQF Level 2	185.281	-1.189	7.019	0.137		0.863
Mixed/Multiple ethnic groups	Below NQF Level 2	70.108	0.807	8.173	0.779	0.443	0.221
Indian	Below NQF Level 2	52.439	-1.098	7.274	0.154		0.846
Pakistani	Below NQF Level 2	40.950	6.010	1.066	0.948	0.105	0.052
Bangladeshi	Below NQF Level 2						
Chinese	Below NQF Level 2	219.570	-1.138	2.004	0.187		0.813

Any other Asian background	Below NQF Level 2	53.607	2.641	2.075	0.941	0.118	0.059
Black/African/Caribbean/Black British	Below NQF Level 2	65.688	-0.239	12.297	0.408		0.592
Other ethnic group	Below NQF Level 2						
Mixed/Multiple ethnic groups	Other qualifications	150.992	-0.221	4.044	0.418		0.582
Indian	Other qualifications	41.810	1.227	34.793	0.886	0.228	0.114
Pakistani	Other qualifications	46.298	2.668	11.278	0.989	0.022	0.011
Bangladeshi	Other qualifications	35.536	5.493	8.624	1.000	0.001	0.000
Chinese	Other qualifications						
Any other Asian background	Other qualifications	80.195	-0.582	28.082	0.283		0.717
Black/African/Caribbean/Black British	Other qualifications	34.788	3.087	33.563	0.998	0.004	0.002
Other ethnic group	Other qualifications	63.187	0.673	26.643	0.746	0.507	0.254
Mixed/Multiple ethnic groups	No qualifications	78.183	-1.809	2.067	0.106		0.894
Indian	No qualifications	39.105	-1.171	17.179	0.129		0.871
Pakistani	No qualifications	29.887	1.783	7.614	0.941	0.118	0.059
Bangladeshi	No qualifications	18.848	7.948	7.760	1.000	0.000	0.000
Chinese	No qualifications						
Any other Asian background	No qualifications	49.524	1.765	5.436	0.931	0.138	0.069
Black/African/Caribbean/Black British	No qualifications	33.295	1.454	4.836	0.890	0.220	0.110
Other ethnic group	No qualifications	88.180	0.686	4.105	0.735	0.530	0.265

Sexual Orientation Pay Gap	Ha: diff < 0	Ha: diff !=0	Ha: diff > 0
Gay or lesbian	0.2693	0.5387	0.7307

Bisexual		0.9999	0.0003	0.0001
Other		0.9844	0.0312	0.0156
Prefer not to say		1.0000	0.0000	0.0000
Gay or lesbian	male	0.2239	0.4479	0.7761
Bisexual	male	0.9818	0.0363	0.0182
Other	male	0.9724	0.0552	0.0276
Prefer not to say	male	0.9999	0.0002	0.0001
Gay or lesbian	female	0.5315	0.9371	0.4685
Bisexual	female	0.9977	0.0045	0.0023
Other	female	0.8962	0.2077	0.1038
Prefer not to say	female	0.9871	0.0258	0.0129

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