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# Part-time employment and the gender gap in low pay for UK employees: what changed over the period 1996–2016?

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## ABSTRACT

This article assesses the contribution of part-time employment to the gender gap in low pay for UK employees 1996–2016. Over this period, there has been a sustained decline in the importance of part-time employment as a contributing factor to the gender gap in low pay. This is largely due to the fact that the link between part-time employment and low pay has become weaker over time (shifts in the gender composition of the part-time workforce are found to be less important). However, part-time work continues to play a crucial role in shaping persistent gender inequality in low pay for UK employees.

## RÉSUMÉ

Cet article étudie en quoi, entre 1996 et 2016, l'emploi à temps partiel a contribué aux inégalités salariales entre hommes et femmes dans le cas des employés britanniques à faibles revenus. Au cours de cette période, l'importance de l'emploi à temps partiel en tant que facteur d'inégalités salariales entre hommes et femmes à faibles revenus n'a cessé de diminuer. Cela est dû, en grande partie, au fait que la corrélation entre emploi à temps partiel et bas salaire s'est affaiblie au fil du temps (alors même que les changements dans la composition par sexe de la main-d'œuvre travaillant à temps partiel se sont avérés moins importants). Cependant, l'emploi à temps partiel continue de contribuer de manière significative à la production d'inégalités de genre parmi les employés britanniques à faibles revenus.

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## MOTS-CLÉS

Faibles revenus salariaux; rémunération; inégalités salariales entre hommes et femmes; emploi à temps partiel; heures de travail; décomposition

## Introduction

This article examines change over a 20-year period (1996–2016) in the size and determinants of the gender gap in low pay for UK employees. Building on recent evidence highlighting the importance of working hours for gender inequality in labour market outcomes (Cha & Weeden, 2014; Dias, Joyce, & Parodi, 2018), the analysis focuses on part-time employment. In the UK, part-time employment is a widespread and gendered phenomenon, undertaken primarily, although by no means exclusively, by women (Dias et al., 2018). Although this form of employment may offer certain advantages in terms of

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flexibility, it is well established that part-time jobs tend to be clustered in low-paying sectors and occupations (Fagan & Rubery, 1996; Petrongolo & Manning, 2008; Warren, 2010; Warren & Lyonette, 2015, 2018). In the UK, part-time workers are more likely to be low paid (Nightingale, 2019a) and less likely to progress onto higher pay (Nightingale, 2019b) than their full-time counterparts. The results in this article show that gendered patterns of full-time and part-time employment are of central importance in understanding the gender gap in low pay for UK employees. However, there has been a sustained decline in the contribution of part-time employment to the gender gap in low pay over the period 1996–2016. Rather than a case of part-time employment becoming less female-dominated over time, this appears to be more a case of improvements in the earnings of part-time workers relative to full-time workers, a trend that may be related to factors such as the introduction of the national minimum wage and equal treatment legislation.

### **Background: gender inequality and low pay**

Expansive literature examines inequality in labour market outcomes between men and women (for an overview: Gregory, 2012). Despite efforts to promote gender equality such as equal treatment legislation, the expansion of childcare support and greater wage regulation, gender inequality persists. In addition to average differences between men and women in the labour market, it is important to understand the extent to which women are under-represented at the highest levels of management ('glass ceilings') and over-represented in low-paid and low status jobs ('sticky floors'). This article focuses on gender differences in the risk of low pay on the grounds that this differential is likely to have particularly severe consequences. Despite the introduction of the national minimum wage in 1999, the UK has a high share of low-paid employment in comparative perspective (Lucifora, McK, & Salverda, 2005) and low-paid workers often struggle to progress onto higher wages (D'Arcy et al., 2014; D'Arcy & Finch, 2017). It is well established that women are over-represented at the lower end of the wage distribution. The Low Pay Commission estimate that three out of five UK employees paid the statutory minimum wage are women (Low Pay Commission, 2017). Less well understood is *why* women are over-represented among low-wage earners. This article aims to advance the literature by examining the determinants of the gender gap in low pay for UK employees. In doing so, it focuses on one aspect in particular: gender differences in full-time and part-time employment.

Part-time employment matters, not just because part-time workers will receive lower monthly or annual earnings than full-time workers due to shorter working hours, but because all things being equal part-time workers earn less per hour than full-time workers (Bardasi & Gornick, 2008; Matteazzi, Pailhé, & Solaz, 2014; McGinnity & McManus, 2007; O'Dorchai, Plasman, & Rycx, 2007; Petrongolo & Manning, 2008; Warren & Lyonette, 2015) and are more likely to be low paid (Nightingale, 2019a). These wage differentials persist despite efforts to promote equal treatment for full-time and part-time workers (Fagan, Norman, Smith, & Menéndez, 2013). Part-time wage penalties are particularly pronounced for men (Nightingale, 2019a); there has been talk of a reverse gender pay gap in part-time employment (BBC, 2016). However, due to the large number of women working part time, these factors are known to contribute to female disadvantage in the labour market. Across OECD countries, the gender pay gap is

considerably larger, in some cases doubling or tripling, if all workers are considered, compared to focusing on full-time workers (OECD, 2012). The IFS estimate that differences in working hours account for up to two-thirds of the gender pay gap for UK employees (Dias, Joyce, & Parodi, 2018). Contributing to this literature, this article estimates the contribution of part-time employment to the gender gap in low pay. This focus is motivated by an awareness that part-time employment is a classed as well as gendered phenomenon, disproportionately undertaken by women from lower socioeconomic groups (Warren, 2003; Warren & Lyonette, 2018). Differences in full-time and part-time employment may, therefore, be particularly important in accounting for gender inequality at the lower end of the earnings distribution.

The number of part-time workers is high in the UK compared to most other European countries (the Netherlands represents a notable exception) (Fagan et al., 2013), accounting for around a quarter of all employees. Part-time work in the UK has historically been, and continues to be, a gendered phenomenon. Positioned as a means of drawing inactive women into the labour market (OECD, 2010), the number of women working part time far exceeds the number of men working part time. Reflecting their greater involvement in unpaid care and domestic work, women's part-time work often represents a means of reconciling paid work and family life (Fagan & Norman, 2012; Fagan & Walthery, 2014; Warren, Pascall, & Fox, 2010). Historically, the share of part-time employment for men has remained small, dominated by involuntary part-time employment (OECD, 2010). The proportion of British men who work part time rather than full time has grown in recent years (Gardiner & Gregg, 2017; Warren & Lyonette, 2015), partly in response to the 2008/2009 economic crisis (Grimshaw & Rafferty, 2011). However, it is unclear whether this increase reflects convergence in the working patterns of men and women, since the way in which men and women use part-time employment, and the degree to which this is identified as involuntary continues to differ markedly. It remains rare for men to work part time in the middle of working life, as is common for women (Fagan & Walthery, 2014), or for this to be associated with the transition to parenthood (Dias et al., 2018) or other caring responsibilities. Discounting modest fluctuations in the share of part-time employment for women, female part-time employment has remained high since the phenomenon first became commonplace in the 1960s and 1970s (Warren & Lyonette, 2018).

There are a number of reasons for exploring over-time change in the contribution of part-time employment to the gender gap in low wages. As discussed, the number of male part-time workers in the UK has risen in recent years, with a particular rise in the number of low-paid part-time jobs for men (Belfield, Blundell, Cribb, Hood, & Joyce, 2017). In short, the part-time workforce in the UK may have become less female-dominated over time. Changes to the national policy may also have shaped the relationship between part-time employment and low wages. Following the EU Directive on Part-Time Work (97/81/EC), the UK government introduced new legislation in July 2001 mandating equal treatment for employees working full time and part time. Further legislation was introduced in April 2003 to promote flexible working opportunities, including part-time work. Initially restricted to parents, the right to request a change in working hours was expanded in 2014 to apply to all employees with 26 weeks continuous service. These interventions may have helped to widen access to good quality part-time jobs (Fagan et al., 2013), reducing the number of part-time workers who are low paid. In

light of these developments, this article examines whether there is evidence that part-time employment is becoming less important as a determinant of the gender gap in low pay.

The first aim of this article is to describe the evolution of the gender gap in low pay over the last twenty years. The first research question asks: how did the gender gap in low pay for UK employees change over the period 1996–2016? The second research question concerns the contribution of part-time employment to this differential: how has the contribution of the part-time employment to the gender gap in low pay for UK employees changed over the period 1996–2016? If the contribution of part-time employment to the gender gap in low pay has shifted over time, there are two possible explanations. The first is that the gender composition of the part-time workforce has shifted over time, becoming more or less female-dominated. The second is that the effect of working part time relative to full time on the risk of low pay has changed over time. The third research question seeks to explore these factors, asking: how far is this change attributable to (a) shifts in the gender composition of the part-time workforce and (b) change in the effect of working part time relative to full time on the risk of low pay?

## Data and variables

Data come from the Labour Force Survey (LFS),<sup>1</sup> the largest household panel survey in the UK. The LFS interviews around 41,000 randomly sampled UK households each quarter, with demographic and employment information collected for all individuals in the household. The survey has a rotating panel design, and each household stays in the survey for five consecutive quarters. Earnings questions are asked only at the first and final interviews for each household. Quarterly data are pooled to create a data set for each calendar year, but only observations relating to the final interview for each household are analysed to avoid double counting. The analysis is conducted using 21 years of data, covering the period 1996–2016.<sup>2</sup> The sample is comprised of employees aged 16 and over and data are weighted to obtain population estimates. Self-employed workers are not included in the analysis due to difficulties estimating earnings from self-employment with precision. A small proportion of employees hold more than one job (~4 per cent), but in these instances the analysis relates to the main job only.

In order to distinguish low remuneration from low work intensity, the focus is on hourly pay (also referred to as wages) rather than annual or monthly earnings. Low pay is based on gross hourly wages and includes paid overtime on the basis that this may have a substantial impact on take-home pay. Low pay is defined in relative terms, as a distributional measure tied to the average hourly wage. The relative approach is preferred to focusing on a fixed proportion of the wage distribution since the implications of being located in the bottom segment of the wage distribution will vary according to the overall degree of dispersion (Lucifora & Salverda, 2012). In setting a relative threshold, the median is selected over the mean because it is less sensitive to the presence of outliers in the distribution. Whilst somewhat arbitrary, setting the threshold at two-thirds of the median hourly wage aligns with the majority of previous studies in this area, including official statistics produced by Eurostat and the OECD. The low pay threshold is constructed based on a pooled sample of wages for both men and women.<sup>3</sup> The dependent variable, low pay, is therefore defined as earning below two-thirds of the median hourly wage for employees each year. To avoid bias from non-random missing data on earnings, missing data are

imputed (Rubin, 2004). Sensitivity checks show that similar results are produced with and without data imputation (see Appendix).

Male and female employees are identified according to how the respondent describes their gender.<sup>4</sup> To work part time rather than full time is a subjective concept, and the precise number of hours considered to constitute part-time work varies across sectors, occupations and individuals. Eurostat statistics are compiled based on whether the individual describes their own employment situation as part time rather than full time (Eurostat, 2016). This is the approach used here, on the basis that relative difference, rather than distance from an arbitrary cut-off, is likely to have the strongest implications for the individual's position in the prevailing earnings distribution. Sensitivity checks show that similar results are produced using an hours-based definition of working fewer than 30 h a week (see Appendix), an alternative measure recommended by the OECD (van Bastelaer, Lemaître, & Marianna, 1997). In short, the conclusions in this article appear to be robust regarding how part-time employment is defined and measured.

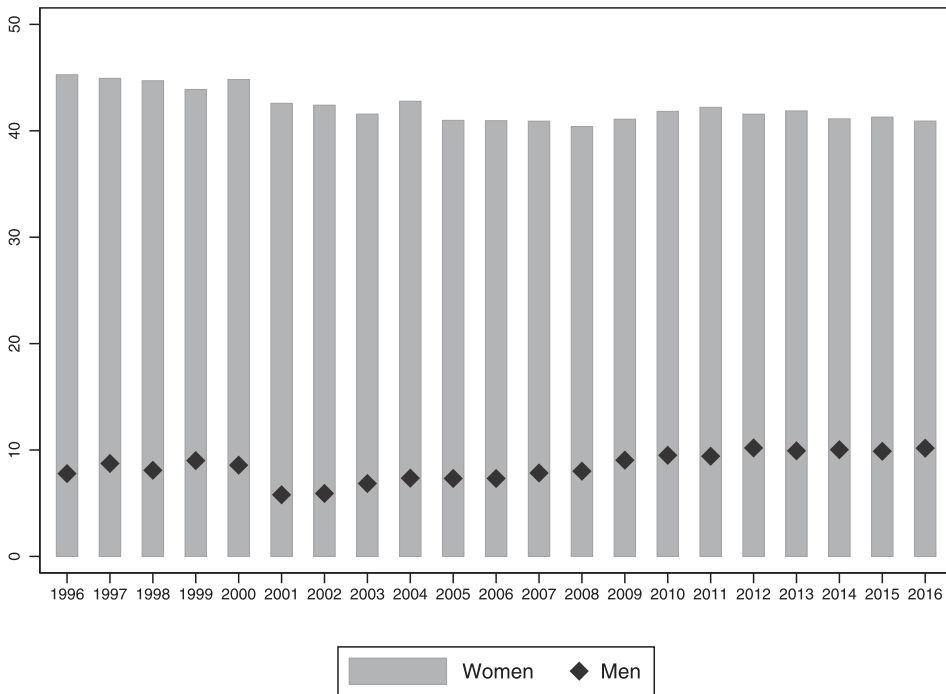
Table 1 shows descriptive statistics relating to working hours and part-time employment for male and female employees in the UK pooled across all calendar years 1996–2016. The mean number of hours worked per week is 30.17 for women, compared to 40.52 for men. The standard deviation of hours worked per week is slightly higher for women (11.46) than for men (10.34). A far higher proportion of women (42.45) than men (8.31) identify as part time rather than full time. Comparing the proportion of men and women working part time rather than full time in each calendar year (Figure 1), there has been an increase in the proportion of men working part time over this period, whereas for women there has been a slight decline. Previous research draws attention to an increase in part-time employment for men associated with the economic crisis (Grimshaw & Rafferty, 2011), but this trend appears to have pre-dated the crisis years. Change is modest, however, and women remain far more likely than men to work part time. The analysis that follows seeks to understand how these patterns contribute to the gender gap in low pay.

## Methodology

Research question one asks: how did the gender gap in low pay for UK employees change over the period 1996–2016? To answer this question, a separate logistic regression is fitted for each calendar year, estimating the effect of being female relative to male on the probability of being low paid. This effect is first calculated without controlling for other variables, showing the total difference in low pay for men and women (referred to as the

**Table 1.** Descriptive statistics on working hours for male and female employees based on a pooled sample of all calendar years (1996–2016).

	Women	Men
Mean weekly working hours (standard deviation)	30.17 (11.46)	40.52 (10.34)
25th percentile, weekly working hours	21.00	37.00
50th percentile (median), weekly working hours	35.00	40.00
75th percentile, weekly working hours	38.00	45.00
Identify as part time rather than full time (%)	42.45	8.31
Observations	349,648	337,852



**Figure 1.** Proportion of male and female employees who identify as part time rather than full time in each year 1996–2016.

unadjusted effect). The effect is then estimated holding constant other individual, household and job characteristics known to be predictive of low pay (the adjusted effect) (Lucifora & Salverda, 2012; Simon, Nolan, Meixide, & Fernández, 2004; Ward & Ozdemir, 2015) to account for the fact that on average women and men may differ in ways that predispose them to a higher or lower risk of low pay. Plotting relative odds (odds ratio) of low pay for female and male employees over the reference period (1996–2016) shows the evolution of the gender gap in low pay over time.

Control variables are age, education (highest qualification), job tenure (in years), marital status, a dummy variable for being a single parent, work status (full time or part time), social class, contract type (temporary or permanent), sector (public or private)<sup>5</sup>, industry and employer size. Occupation is measured in terms of social class to capture its importance in structuring opportunities and life chances (Harrison, Pevalin, & Rose, 2009). Grounding measures of social class in occupational groups have been criticised for downplaying other sources of stratification such as gender, race and wealth (Crompton, 2010). None the less, there is broad consensus that occupational position is important as a source of social stratification (including gender inequality), and for the purposes here it is likely to be closely linked to low pay. Social class is here measured according to the UK National Statistics Socioeconomic Classification (NS-SEC) (ONS, 2005). Following Goldthorpe and colleagues (see Erikson, Goldthorpe, & Portocarero, 1979; Goldthorpe, 2007), NS-SEC distinguishes social class groups based on occupational skill level and skill-specialisation, and the type of employment relations engendered by variation therein. From a social class perspective, low pay is expected to be primarily associated with employment

conditions governed by 'the labour contract', a basic exchange of money for time, characteristic of occupations in which skill requirements are rudimentary and generic, and output easily monitored (routine and manual occupations). Low pay is expected to be rare in situations where the 'service relationship' prevails (managerial and professional occupations), in which employers have incentives to build long-term relationships with employees.

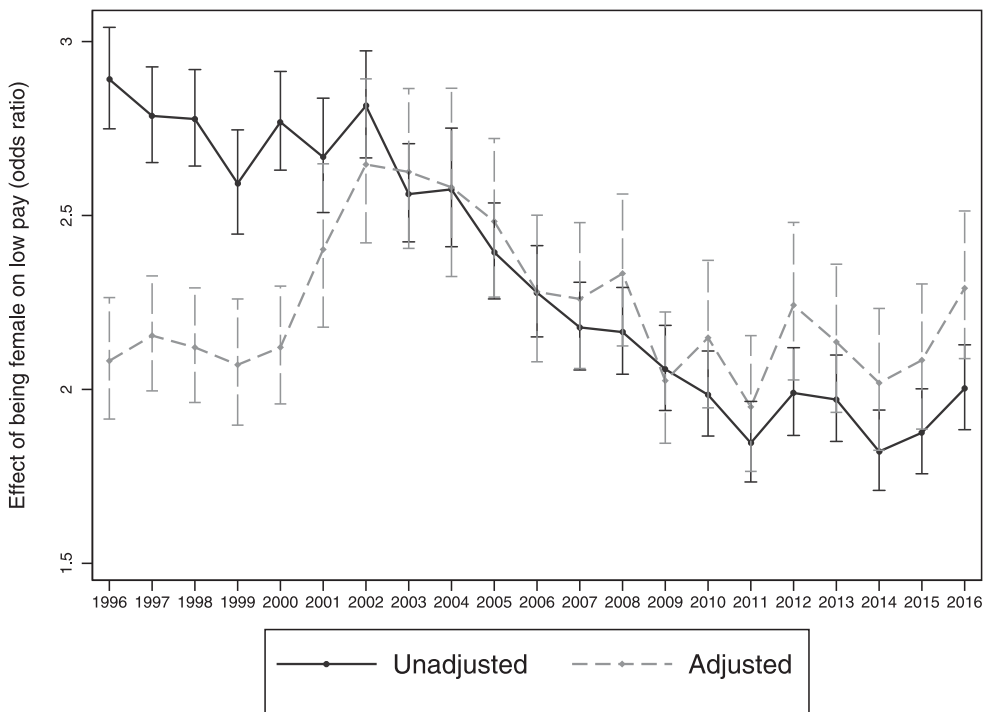
The second research question hones in on the focal explanatory variable, asking: how has the contribution of the part-time employment to the gender gap in low pay for UK employees changed over the period 1996–2016? This is assessed by conducting a Blinder–Oaxaca decomposition of the regression results for each year, estimating the effect on which differences in characteristics contribute to the gender gap in low pay. This method, originally designed for linear models (Blinder, 1973; Oaxaca, 1973), decomposes wage gaps into a portion 'explained' by differences in characteristics and an 'unexplained' component and has been adapted for non-linear models (Fairlie, 2006; Yun, 2004). The non-linear approach was extended by Yun (2004) to allow for a detailed decomposition that identifies the separate contribution of each variable. The traditional Blinder–Oaxaca approach selects one group as the comparison group and one group as the reference group, but switching the reference group may alter the results. One solution is to weight the estimates from a pooled sample of the two groups (Neumark, 1988; Oaxaca & Ransom, 1994). This is the approach followed here, with the addition of a group indicator as recommended by Jann (2008). Decomposition results are sensitive to the choice of reference category when non-linear predictors are included in the model. Following a method developed by Yun (2005), estimates for non-linear predictors reflect an average calculated by switching the reference group.

The third research question asks: how far is change attributable to (a) shifts in the gender composition of the part-time workforce and (b) change in the effect of working part time relative to full time on the risk of low pay? This is evaluated using a simple 'shift-share' decomposition adapted from the poverty literature (de Beer, 2007; Horemans, Marx, & Nolan, 2015). Change in the low pay rate for men and women over the reference period (1996–2016) is decomposed into three components: (1) change in the risk of low pay associated with working part time (2) change in the risk of low pay associated with working full time and (3) change in the share of part-time employment (see Appendix for more information on this aspect of the methodology). A number of caveats are required in interpreting the results from the shift-share decomposition. The decomposition model rests on simplistic assumptions, it does not control for possible confounders and does not address the possibility of reverse causality (de Beer, 2007). The decomposition analysis is run separately for men and women and does not address the gender gap directly. Although the model considers change over time in the risk of low pay associated with working part time or full time for men and women respectively, it does not estimate gender differences in the returns to full time and part-time work. Differences between men and women in the returns to part-time work may too contribute to change over time in the gender gap in low pay, something not addressed here. Despite these limitations, the decomposition model is helpful in giving an indication of how far these factors have contributed to a change in the relative risk of low pay for men and women.



## Results

**Figure 2** plots the relative odds of being low paid for male and female employees in each year. In answer to the first research question (how did the gender gap in low pay for UK employees change over the period 1996–2016?), the unadjusted gender gap in low pay declined over the reference period. In 1996 the odds of being low paid are 2.9 times higher for women than men; in 2016 the corresponding figure is 2.0. The gap declines steadily until around 2010, after which it fluctuates. Contrary to the narrative of continuous, albeit slow, progress towards gender equality, we appear to be no closer to narrowing the gender gap in low pay than we were in 2010. This result chimes with previous studies on the gender gap in average wages which highlight slow or stalled progress in recent years (Blau & Kahn, 2007; Cha & Weeden, 2014; O'Reilly, Smith, Deakin, & Burchell, 2015). In relation to gender wage gaps it is important to understand, not only how progress has been achieved, but also why it has stalled and what the remaining barriers are. Until the early 2000s, the adjusted gender gap<sup>6</sup> in low pay is consistently lower than the unadjusted gap, whereas the reverse is true in later years. In other words, towards the end of the reference period the gender gap in low pay persists despite women being less likely than men to exhibit characteristics associated with an increased risk of low pay.

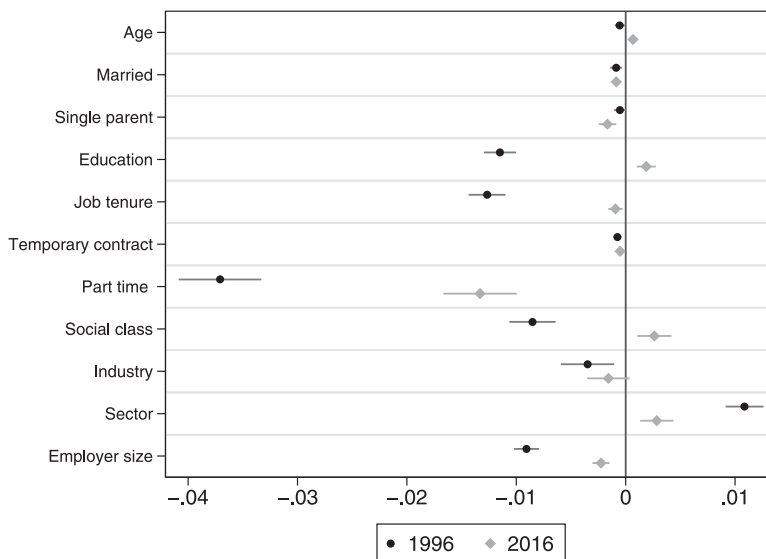


**Figure 2.** Relative odds (odds ratio) of being low paid for female relative to male employees in the UK for each year 1996–2016.

Note: unadjusted odds reflect the raw effect of being female relative to male on the probability of being low paid. The adjusted odds reflect this effect after controlling for age, education, job tenure, marital status, single parent status, part-time employment, social class, contact type, sector, industry and employer size. Upper and lower bars represent confidence intervals (95%) for the estimated odds.

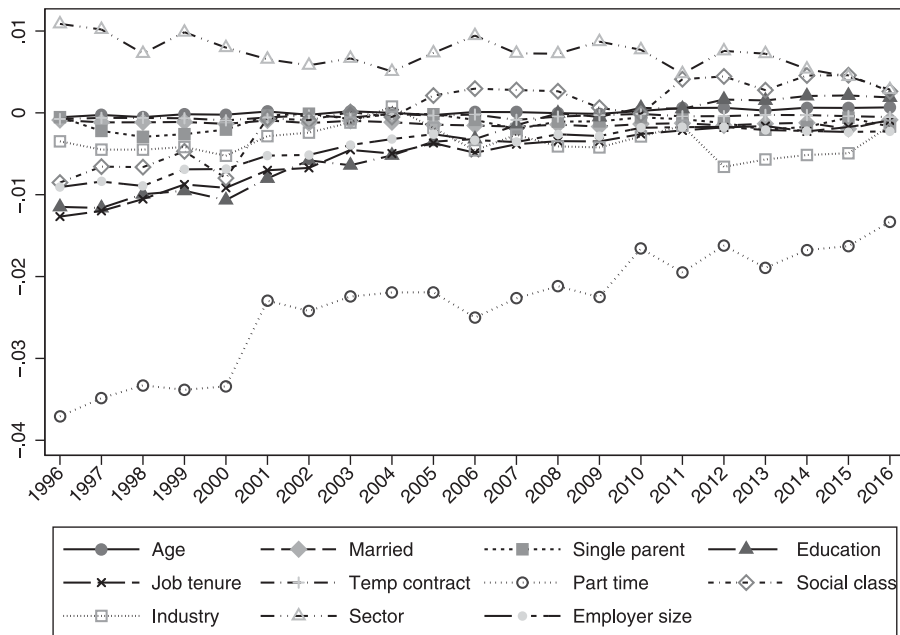
Trends in Figure 2 are based on aggregating the effect of all measured characteristics. The next stage of the analysis disaggregates this component to answer the second research question: how has the contribution of the part-time employment to the gender gap in low pay for UK employees changed over the period 1996–2016? For illustrative purposes, Figure 3 displays results from Blinder–Oaxaca decompositions of the gender gap in low pay for the first (1996) and final (2016) years of the reference period. In 1996, the gender gap is partly attributable to women’s weaker educational profile and social class position, as well as their shorter job tenure, and over-representation in small workplaces. The most important explanatory factor in 1996 is women’s greater propensity than men to work part time. The only characteristic where women are advantaged compared to men is their over-representation in the public sector. By 2016 the picture has changed markedly, and most characteristics have moved towards a neutral or reverse effect. Women are now in a slightly stronger position than men in terms of their educational and social class profile, and differences in job tenure are attenuated. Effects of industry and employer size lie in the same direction to 1996 but are more modest. Women are still relatively protected from low pay by their greater propensity to work in the public sector, although the effect is weaker than in 1996. In 2016, part-time work remains the most important explanatory factor in accounting for the gender gap in low pay.

Figure 4 displays decomposition results for all years of the reference period (1996–2016). The overall picture that emerges is one of convergence; gender differences in relation to observed characteristics have eroded over time. As women participate in the labour force in ever-greater numbers, and catch up with men in terms of human capital, the gender gap in low pay has narrowed. Women are now in a stronger position



**Figure 3.** Results (coefficients) from a Blinder–Oaxaca decomposition of the gender gap in low pay for UK employees in 1996 and 2016.

Note: Negative coefficients indicate that women are disadvantaged relative to men in relation to each characteristic, with disadvantage here indicating a higher probability of low pay. Positive coefficients indicate that men are disadvantaged compared to women.



**Figure 4.** Results (coefficients) from a Blinder–Oaxaca decomposition of the gender gap in low pay for UK employees, 1996–2016.

Note: Negative coefficients indicate that women are disadvantaged relative to men in relation to each characteristic, with disadvantage here indicating a higher probability of low pay. Positive coefficients indicate that men are disadvantaged compared to women.

than men to escape low pay in terms of their educational and social class profile. In terms of measurable differences (unobserved factors such as discrimination are not addressed here), by the end of the reference period there are only two respects in which women are disadvantaged relative to men. Women are over-represented in low-paying industries (e.g. distribution, hotels and restaurants) around the period 2012–2015, but this appears to be a temporary effect. Of far greater importance is the fact that women are more likely than men to work part time. In seeking to explain the persistence of gender inequality in low pay, we must look to the gendered division of market and non-market work, of which the over-representation of women in part-time work is a key manifestation.

At the same time as highlighting continued inequality, [Figure 4](#) shows a sustained decline in the effect of working part time relative to full time in the decomposition analysis. Differences in part-time work have become demonstrably less important over the last two decades as a contributing factor to the gender gap in low pay. The third research question asks how far this change is attributable to (a) shifts in the gender composition of the part-time workforce and (b) change in the effect of working part time relative to full time on the risk of low pay?) To inform this discussion, [Table 2](#) displays results from a shift-share decomposition of the change in low pay risk for male and female employees. The results show that men face a higher risk of low pay in 2016 compared to 1996 partly because more of them are working part time. Conversely, lower rates of part-time employment for women contribute to a lower risk of low pay at the end of the reference period compared to the beginning. The overall effect of these compositional changes is modest,

**Table 2.** Shift-share decomposition of the change in low pay risk for male and female employees in the UK 1996–2016.

	Women	Men
Percentage change in low pay 1996–2016.	–5.02	1.37
Attributable to:		
Change in the risk of low pay associated with working part time	–3.56	–2.11
Change in the risk of low pay associated with working full time	–0.54	2.62
Change in the share of part-time employment	–0.91	0.86

however. Of greater importance is the steep decline in the risk of low pay associated with working part time for both men and women (for men, this offsets the growth in part-time employment). This is consistent with previous research identifying a decline in the size of the part-time wage gap (i.e. the gap in average hourly wages between full-time and part-time workers) in low- and medium-skilled occupations in the UK (Elsayed, de Grip, & Fouarge, 2017). For men, there has also been an increase in the risk of low pay associated with working full time over this period, a finding consistent with previous research drawing attention to slow wage growth for men working full time (Preston, 2003).

These results support the idea that change has been driven by improvements in the earnings position of part-time relative to full-time employees. This improvement occurred despite the effects of the economic crisis of 2008–2009. In the UK, the crisis was associated with growth in part-time employment, involuntary part-time employment (Fagan & Walthery, 2014; Grimshaw & Rafferty, 2011; Horemans et al., 2015) and underemployment (Warren, 2015). In contrast to previous recessions, men were equally as likely as women to reduce their hours or switch from full-time to part-time employment (Grimshaw & Rafferty, 2011). There may, therefore, have been an increase in the number of low-paid part-time jobs for men (Warren & Lyonette, 2015). Over the reference period as a whole, however, there was a steep decline in the risk of low pay associated with working part time for men (Table 2). An intensification of the relationship between part-time employment and low pay during the crisis years appears to have been insufficient to offset this general trend. The persistence of the overarching trend through the crisis years may relate to deterioration in the earnings position of full-time workers. For women, previous research shows that the crisis years saw a decline in job quality for workers in lower-skilled jobs regardless of full-time/part-time status (Warren & Lyonette, 2018). The declining importance of part-time employment as a risk factor for low pay may reflect widening inequalities within the part-time workforce rather than improvements for all part-time workers, reinforcing the need to examine the intersection between part-time employment and social class for both men and women.

Further research is needed to establish exactly why part-time employment becomes less closely linked to low pay over the period 1996–2016, but changes to national policy may offer some clues. The introduction of a national minimum wage in 1999 disproportionately benefited part-time workers, attenuating the negative effect of working part time relative to full time on pay progression (Phimister & Theodossiou, 2009). However, in compressing the bottom end of the wage distribution – i.e. the minimum wage as the ‘going rate’, minimum wage legislation may have contributed to the increased risk of low pay for men working full time over this period. Change in the relationship between part-time employment and low pay may also be related to interventions designed to improve the quality of part-time jobs (Fagan et al., 2013). The coefficient for working

part time declines sharply between 2000 and 2001 (Figure 4), around the time that equal treatment legislation was introduced in the UK. This suggests that prior to July 2000 part-time workers were treated less favourably in relation to pay, and that some degree of adjustment took place in response to the legislation. Although not explicitly formulated as a tool designed to promote gender equality, the 2001 legislation was partly intended to improve the position of female workers (Bleijenbergh, de Bruijn, & Bussemaker, 2004; Freedland & Kilpatrick, 2004). The right to request a change of working hours was designed to open up opportunities for part-time work across all sectors and occupations (Fagan et al., 2013), and may also have contributed to these trends. There may be other factors at play another than changes to national policy, however. Factors such as technological advancements have contributed to an erosion of the differences in job tasks performed by full-time and part-time workers, resulting in lower wage differentials between the two groups (Elsayed et al., 2017).

Given the direction of change, it is pertinent to consider how far these trends will go i.e. whether part-time employment will eventually become irrelevant to the gender gap in low pay. Albeit speculative, the answer must surely be no. Firstly, changes to the gender composition of the part-time workforce have been modest at best. The uptake in part-time employment for men has been driven to a large extent by a lack of opportunities for full-time work. The main impetus behind women's part-time employment, namely caring for dependent children, continues to have no effect on working hours for men (Dias et al., 2018). There is, in short, no reason to expect part-time employment to be undertaken in equal numbers by men and women in the near future. Secondly, there are limits to how far legislation can be used to improve the quality of part-time jobs. Equal treatment relates to a comparable worker in a comparable job, whereas full-time and part-time workers are to a large extent located in different types of jobs (Fagan et al., 2013). The effect of anti-discrimination legislation also depends on how strictly it is enforced, and how willing workers are to raise complaints. The right to request part-time hours might be strengthened by making it available at the point of recruitment (House of Commons, 2016), and by placing greater restrictions on the circumstances under which employers can refuse (Anderson, 2003). Ultimately, however, there are limits to how far labour market regulation can be used to improve and equalise part-time jobs.

Beyond improving access to good quality part-time jobs, the results reinforce the need to critically assess the role of part-time employment in the UK economy i.e. to consider the role of broader cultural and institutional factors in shaping the gendered distribution of paid and unpaid work. Although reasons for working part time are numerous and complex, the widespread use of part-time employment for women in the UK is associated with parenthood (Dias et al., 2018). Using fuzzy set ideal-type analysis, Ciccia and Bleijenbergh assess how closely childcare policies in European countries adhere to different models of care (Ciccia & Bleijenbergh, 2014). More than any other country, the UK is found to embody the 'one and a half breadwinner' model, where there is limited investment in childcare provision and publicly funded care hours are limited. Limited childcare provision is just one way in which social policy in the UK has tacitly endorsed, if not actively promoted, a part-time role for some women (Daly, 2011). Effects are classed as well as gendered since women from lower socioeconomic groups are less well positioned to access private services (McDowell, Ray, Perrons, Fagan, & Ward, 2005). It is disproportionately

women from lower socioeconomic groups who work part time rather than full time (Warren, 2003; Warren & Lyonette, 2018), and this trend is crucial to understanding the differential risk of low pay faced by women and men in employment. The pertinent question is not only how does part-time employment contribute to gender inequality but also *for whom* does it do so, and it is difficult to overstate the importance of social class in this regard.

## Conclusion

This article assesses the contribution of part-time employment to the gender gap in low pay for UK employees, exploring over-time change across the period 1996–2016. The results show that part-time employment has declined in importance over the last 20 years as a contributing factor to the gender gap in low pay. This is large because the link between part-time employment and low pay has become weaker over time (shifts in the gender composition of the part-time workforce are found to be less important). Nevertheless, part-time employment remains the most important observable factor contributing to the gender gap in low pay. Women have caught up, or even exceeded, men in other respects, such as educational qualifications and social class. In terms of observable factors (unobserved processes such as discrimination are not addressed here), the gendered ‘one and a half’ earner model offsets advancements made by women elsewhere, stalling progress towards gender parity in low earnings.

The fact that women are on average more likely than men to work below standard full-time hours is one aspect of this issue; another is that women are less likely than men to work long hours (Kodz et al., 2003). In the US, growth in overwork (defined as working 50 or more hours a week) and increasing returns to overwork are major trends working against gender convergence in pay (Cha & Weeden, 2014). Given the disproportionate burden of care and domestic work on women, men are on average better placed than women to take advantage of labour market rewards attached to long working hours. Future research might explore whether this long hours effect also works against gender equality in the UK, the flip side to the part-time effect identified in this article. The two issues are closely related since women working part time in the UK often cite the long working hours of a partner as part of their rationale for doing so (Warren et al., 2010). If gender equality is to be realised, there is a clear need to address inequality in working time. The results in this article suggest that as long as women continue to disproportionately work part time rather than full time, they will continue to be over-represented at the lower end of the earnings distribution.

## Notes

1. Labour Force Survey (LFS) data are available from the UK Data Service (<https://discover.ukdataservice.ac.uk>)
2. Data are missing for three calendar quarters: Quarter 1 (January–March) 1999, 2001 and 2004. This is because data for key variables are not available (atypical earnings in Q1 1999, earnings and social class in Q1 2001, education in Q1 2004).
3. The alternative approach – using a separate threshold for men and women based on their respective wage distributions – is unsatisfactory because it partially obscures the phenomenon of interest. This approach would reveal the proportion of women who are low paid

compared to other women, when substantive interest here lies in comparing rates of low pay for men and women

4. There is no option in the Labour Force Survey to indicate non-binary gender identity.
5. In the UK, both part-time workers and women are over-represented in the public sector, where low pay may be less common than in the private sector.
6. The adjusted gender gap reflects the effect of being female after controlling for differences in the observed characteristics of men and women in employment. Although we would expect the two lines to converge over time as the unadjusted odds decrease, it is less clear why the adjusted line would (temporarily) increase. This 'residual' component is sometimes interpreted as gender discrimination, but the increase might also reflect unobserved changes to the composition of men and women in employment. This trend could also stem from an issue with the data, although there are no known continuity issues regarding LFS sampling or measurement over this period.

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## Notes on contributor

*Madeline Nightingale* was a DPhil candidate in the Department of Social Policy and Intervention at the University of Oxford at this time this research was undertaken. Her research interests include wages, working hours and gender equality.

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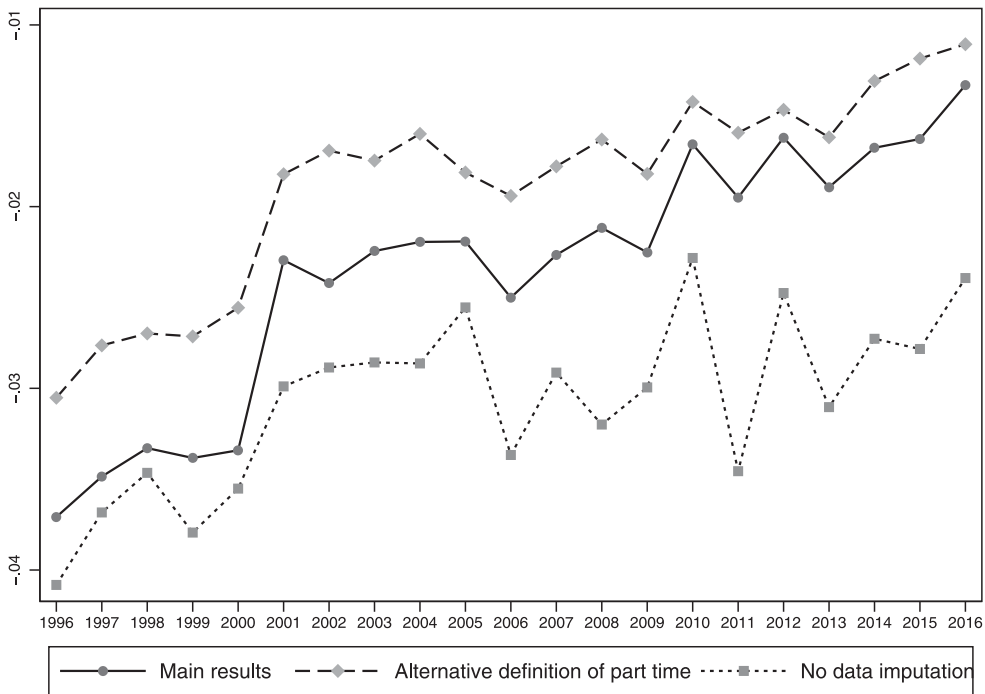


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## Appendix

### Further information on the shift-share decomposition methodology



**Figure A1.** Robustness checks: coefficient for part-time employment from three alternative Blinder–Oaxaca decompositions of the gender gap in low pay for UK employees 1996–2016.

Note: For comparison purposes, the first set of coefficients are the results reported in the main text. The second set of coefficients are calculated using an alternative definition of part-time employment (working fewer than 30 h a week in the main job). The third set of coefficients are calculated without imputing missing data on earnings. Negative coefficients indicate that women are disadvantaged relative to men in relation to each characteristic, with disadvantage here indicating a higher probability of low pay. Positive coefficients indicate that men are disadvantaged compared to women.

The shift-share decomposition used in the article is adapted from the poverty literature (de Beer, 2007; Horemans et al., 2015). Change in the low pay rate for men and women over the reference period (1996–2016) is decomposed into three components: (1) change in the risk of low pay associated with working part time (2) change in the risk of low pay associated with working full time and (3) change in the share of part-time employment. The decomposition model can be expressed as follows, where  $\Delta LP$  is the change in the rate of low pay for male/female employees in 2016 compared to 1996, disaggregated into the change in rate for part-time workers ( $\Delta LP_{pt}$ ) and full-time workers ( $\Delta LP_{ft}$ ), as well as the change in the part-time employment rate over this period ( $\Delta PT$ ). This analysis is conducted separately for men and women.

$$\Delta LP = \overline{PT} * \Delta LP_{pt} + \overline{FT} * \Delta LP_{ft} + (LP_{pt} - LP_{ft}) * \Delta PT.$$

**Table A1.** Variables in the analysis.

Name	Type	Values	Definition
Low pay	Binary	1 Low paid 0 Not low paid	Gross hourly earning below two-thirds of the mean for all employees in each calendar year
Age	Nominal	1 16–24 2 25–34 3 34–44 4 45–54 5 55+	
Marital status	Binary	1 Married 0 Not married	Married encompasses both legal marriage and cohabitation
Single parent	Binary	1 Yes 0 No	Not married (as above) with dependent children in the household
Education	Nominal	1 Degree 2 Higher education 3 A Level or equivalent 4 GCSE or equivalent 5 Other qualification 6 No qualification	
Job tenure	Continuous		In years
Working hours	Binary	1 Part time 0 Full time	Respondent self-identified
Contract type	Binary	1 Temporary 0 Permanent	
Social class	Nominal	1 Managerial and professional occupations 2 Intermediate occupations 3 Routine and manual occupations	NS-SEC coding
Sector	Binary	1 Private 0 Public	
Industry	Nominal	1 Agriculture, energy and water 2 Manufacturing and construction 3 Hotels and restaurants; distribution 4 Transport and communication 5 Banking and finance 6 Education and health; public administration	SIC coding
Employer size	Nominal	1 1–10 employees 2 11–49 employees 3 50+ employees	