The Gender Pay Gap in the UK: 1995 to 2007

Abstract
This project uses British Household Panel Survey (BHPS) data to examine the gender pay gap in two periods: 1994-97 and 2004-07. It finds that the pay gap has fallen between the two periods. Work history continues to have a clear link to current earnings. The different sectors that men and women work in influence the pay gap. Occupational segregation is also a factor. Further analysis demonstrates that some factors have an indirect as well as a direct link to the pay gap. For example, those with higher levels of education are less likely to spend long periods in unpaid domestic work, which in turn means that they are likely to have higher hourly wages.

Key findings
The pay gap in 2004-07:
- The overall gender pay gap, measuring the difference between all working men and all working women's hourly earnings, was 19 per cent.
- The gap comparing full-time men and full-time women was 15 per cent.
- The gap comparing full-time men and part-time women was 31 per cent.
- The pay gap was insignificant at school leaving age, became positive at age 27, and then rose to a peak at age 45.

Explaining the pay gap in 2004-07
- 10 per cent of the overall pay gap can be attributed to occupational sex segregation. Having 10 percentage point greater share of men in an occupation is associated with 2 per cent higher average hourly wages.
- 12 per cent of the gap is due to the industries in which men and women work.
- 21 per cent of the gap is due to differences in years of experience of full-time work.
- 16 per cent of the gap is due to the negative effect on wages of having previously worked part-time or of having taken time out of the labour market to look after family.
- 36 per cent of the pay gap cannot be explained by any of the characteristics that have been controlled for in this study.
- Only 5 per cent of the pay gap is due to formal education levels.

Factors that have a positive effect on women's relative pay
- Training was more common among women than men, and training either on the job or at the employer's cost was associated with six per cent higher wages.
- Working in the public sector and being a member of a trade union are both factors that reduce the size of the pay gap

Changes in the pay gap and its explanation
- Between 1995-97 and 2004-07 the overall pay gap fell from 24 per cent to 19 per cent.
- Less of the pay gap is explained by education in 2007 than in 1997.
Background
Although the gap is shrinking, women are still paid significantly less per hour than men. The Government Equalities Office commissioned this project to evaluate the gender pay gap and its causes using the latest statistical techniques.

Research findings
The overall gender pay gap is the percentage difference between all women’s earnings and all men’s earnings per hour. The overall pay gap, as measured in this study using the BHPS, fell from 24 per cent to 19 per cent during the period 1994-7 to 2004-7.

The full-time women’s pay gap in 2004-2007 was 15 per cent (i.e. full-time women had 15 per cent lower rates of hourly pay than full-time men). The pay gap for part-time women workers compared to full-time men fell between 1997 and 2007 from 36 per cent to 31 percent.

Bonuses paid as performance-related pay are included in the hourly figures. Unpaid overtime is not allowed for, but overtime pay is. Overtime pay did not contribute significantly to the pay gap.

Statistical tests suggested that the pay gap is insignificant at school-leaving age, becomes significantly positive at age 27, and then rises to a peak at age 45. While the pay gap is on average 28 per cent of men’s wages at age 45 it declines after that.

Regional differences
Scotland
- The overall pay gap widened by three per cent, and there was no improvement for Scottish women part-time workers whose pay gap was 36 per cent in 2004-7, compared to full-time men.

Wales
- Welsh women working part-time earn 28 per cent less than full-time men though the pay gap is much higher than for full-time women workers, who earn 17 per cent less than men.

Northern Ireland
- The full-time pay gap is just over half the UK average, at 10 per cent in 2004-07. The province’s part-time women earn 31 per cent less than its full-time men.

English regions
- The Greater Manchester region has one of the smallest pay gaps; East Anglia has large gender pay gaps.

Main reasons for the gender pay gap
The main reasons for the gender pay gap are differences in men’s and women’s work experience and education; institutional causes of wage differentials, e.g. firm size or union membership; cultural expectations about women’s pay; and underlying structural factors. All these factors were taken into account in this report. When work histories, education, institutional factors, sector of employment and occupational segregation are controlled for, 36 per cent of the gender pay gap remains unexplained. I.e. even a woman with the same work history and education, and working in the same type of organisation and occupation as the average man, would still be likely to be paid significantly less.

Occupational and sectoral segregation
10 per cent of the UK’s overall pay gap is explained by occupational sex segregation.

Women tend to cluster in a few occupations. While the typical male works in an occupation where 69 per cent of workers are male, the typical female works in an occupation where 33 per cent of workers are male. An occupation employing 10 percentage points more males will receive on average 2 per cent higher hourly wages.
Employment in the public sector works in the opposite direction, protecting women’s pay in the 2000s. Additionally, trade union membership also decreases the gender pay gap and the effect has grown in importance between the 1990s and now. These factors help explain Northern Ireland’s low pay gap.

While pay in banking, insurance and finance was on average 22 per cent higher than other sectors in 2004-2007, the banking sector’s higher pay compared to other sectors is felt more by men than women working in that sector (26 and 17 per cent higher pay respectively).

**Work history**

Women who had spent time in full-time employment had positive wage gains while time spent in part-time work had none. Women who had had career interruptions displayed considerably lower wages. Women who underwent a career interruption to carry out family caring work suffered a wage loss of 1 per cent per year off.

The work history of the average woman working part-time in 2007 included nine years of full-time paid work, seven years of part-time paid work, and four years of unpaid family care work. These four years of family care work caused a 4 per cent lower hourly wage. Women’s lower earnings continue over time, making the total effect of a career interruption much larger than the wages lost during the time spent in family care.

The wage scarring of domestic unpaid work (measured in years over a woman’s lifetime) is about -1 per cent per year on current wages of women workers. The work experience accrued in part-time jobs brings no obvious wage gains. In human capital terms, time out of the labour market can be seen as a reduction in the domestic worker’s workplace skills. However perceptions that relate to women returners may also affect their pay. The impact of work histories is summarised in the following table:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Scale of Impact compared to the base case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time work</td>
<td>+3 per cent higher hourly wages per year worked, tailing off at mid career.</td>
</tr>
<tr>
<td>Part-time work</td>
<td>The impact is nil.</td>
</tr>
<tr>
<td>Family care work years</td>
<td>-1 per cent lower hourly wages for every year spent on family care work.</td>
</tr>
<tr>
<td>Sickness leave and other disabled periods</td>
<td>-0.4 per cent lower hourly wages per month spent off sick from work.</td>
</tr>
<tr>
<td>Maternity leave</td>
<td>The term ‘maternity leave’ allows for the woman to stay employed, and is ambiguous; stints are generally short; impact on wages nil.</td>
</tr>
<tr>
<td>Unemployment months</td>
<td>Wage ‘scarring’ estimates vary.</td>
</tr>
</tbody>
</table>

Source: Report Part 1, Table 5.1, calculations based on BHPS data. Other periods such as retirement are left out of the table but included if within the ages 16-65.

**Changes between 1994-97 and 2004-07**

The causal factors associated with the gender pay gap have varied in importance over time. For example, over the longer term, the rising education levels achieved by girls have caused education to become a smaller cause of the gender pay gap.

Three particular factors have tended to move toward being protective of women in the period 2004-07 compared with 1994-97: working in the public sector, being in a trade union and working in a large firm.

The role played by particular industries’ institutional arrangements (e.g. pay norms, bonuses) has grown in importance. In the male-dominated industries construction and manufacturing, these factors caused 18 per cent of the pay gap in 2007. In 1997 they caused just 3 per cent of the pay gap.

**Policy Factors Affecting Women’s Low Pay**

For women, not only do higher levels of education directly relate to higher wages, but they also indirectly influence wages by
reducing the likelihood of long periods of domestic labour.

Training was more common among women than men. Training either on the job or at the employer’s cost was associated with 6% higher wages (per hour). The causal direction of this relationship is ambiguous.

Flexitime was used by 15 per cent of adults in 2004-6, rising to 16 per cent in 2007. But flexitime had no significant impact upon pay. Other institutional factors and work history are much more important.

A history of full-time work is the largest single factor affecting wages. Years worked full-time have a positive effect on wages compared to the base case, while years worked part-time do not cause the wage to rise over time. When we control for work-history, current part-time working hours do not have an impact on wages. So it is not hours currently worked that causes the pay gap, but the different work histories associated with part-time working.

**Conclusions**

The key factor affecting the gender pay gap continues to be men’s and women’s differing work histories. Sectoral employment patterns and occupational segregation also contribute. Even if a wide range of factors are accounted for, there is still a significant gender pay gap that cannot be explained.

**About the project**

This report uses the most recently available British Household Panel Survey (BHPS) data to examine the pay gap in 1995-1997 and 2004-2007 using panel regression techniques. It provides a decomposition of the gender pay gap over time.

A wage model for each time period, controlling for all variables associated with pay differentials including education, unemployment, tenure, a sex segregation scale (which measures the degree of male prevalence in each occupational group), firm size, industrial sector, region, trade union membership and gender, reveals the main causes of the pay gap. The authors simulated the effect on the pay gap of bringing women’s experience up to the level of men’s. The decomposed simulated effect of the wage regressors are then calculated as the main direct drivers of the pay gap.

**Further information**


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