CLOSE THE GAP WORKING PAPER **5**

Statistics

This paper is an updated version of Statistics Working Paper 4 published in 2011. It provides the latest gender pay gap statistics for Scotland and revisits the complexities of measuring and reporting on the pay gap.

Introduction

This paper will provide information on how to calculate and report on the gender pay gap. In doing so it will aim to explore some of the complexities surrounding different methods of calculation and why it is important to understand what is behind the information reported in the media. It is hoped this will be useful for businesses and organisations that are looking to generate and report on their pay gaps. It will also be useful for those interested in gender disaggregated statistics and those who support organisations and businesses to challenge gender inequality in the workplace.

What is the gender pay gap?

The gender pay gap is an important indictor within the wider socio-economic context as it enables industries, regions or countries to benchmark how well they are challenging gender inequality. This is partly due to the fact that the gender pay gap i.e. the difference between women and men's earnings, is a global phenomenon and the reasons why the pay gap exists are symptomatic of wider issues related to the undervaluing of women's contribution to the economy.

The pay gap varies between countries, due to differences in data collection and analysis and due to the nature of women's participation in local formal labour markets. Notwithstanding the methodological problems and complexities of comparing international datasets, the global gender pay gap is calculated at 15.6 per cent[1].

The UK Office of National Statistics has been producing information on the hourly earnings of women and men over a number of years. The methodology and quality of data collection has improved and in 2004 the Annual Survey of Hours and Earnings (ASHE) replaced the National Earnings Survey. Data is on employees' earnings is drawn from payslip information and reported every year in a number of tables accessible to the public.

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[1] TUC (2008) *The Global Gender Pay Gap* [online] Accessed in December 2010 **http://www.ituc-csi.org/IMG/pdf/gap-1.pdf**

The ASHE tables provide information about the levels, distribution and make-up of earnings and hours paid for employees within industries, occupations and regions. It also provides data on earnings for employees by sex and full-time and part-time workers. Further breakdowns include by region, occupation, industry, region by occupation and age-groups.

From the tables it is possible to calculate the gender pay gap for the whole of Scotland and for different occupational groups and age groups. Requests can be made to statisticians working at the Scottish Government to find out the pay gap for local geographical areas e.g. Highland and Islands region or for specific economic sectors e.g. energy.

Calculating the gender pay gap

The gender pay gap is a complex issue and there is no definitive way in which to report a single figure which fully captures those complexities (see ONS, 2009). There are a number of factors to consider when reporting on the pay gap and it is important to understand what the different statistics indicate.

The Government Equality Office (GEO), now part of the Home Office, uses the median hourly earnings (excluding overtime) to report on the pay gap, whereas, for example, the Equality and Human Rights Commission (EHRC) uses the mean average. The Office of National Statistics (ONS) now report the Annual Survey of Hours and Earnings (ASHE) with both the mean and the median measurements, but their statistical bulletin will 'give prominence to the median' (ONS, 2009). ASHE does not include the self-employed or those earning below the 'pay as you earn' (PAYE) income tax level, but it is possible to consider additional groups of people by integrating the Labour Force Survey results.

The headline gender pay gaps reported in the media may differ according to the region, the average measurement used and whether the headline figure combines the full-time and part-time earnings. Table 1 illustrates the different pay gap calculations in Scotland.

Table 1: Pay gap measurements: comparing mean and median averages

Pay gap in Scotland 2011	Mean	Median
Comparing women and men's full-time hourly rates of pay	10.7 %	5.8%
Comparing women's part-time and men's full-time hourly rates of pay	32.1%	33.4%
Combined figure (all women/all men)	14.7%	15.8%

In general the *median* is a measurement used to calculate the average, by finding the midpoint in all employees' hourly rates of pay and discarding the lowest and highest rates of pay or 'outliers.' Therefore, half of the employees will earn a rate above the midpoint and half will earn a rate below the midpoint. The median, from a robust statistical perspective, is a more accurate measure as it is not skewed by very low hourly rates of pay or very high hourly rates of pay. However, as the very high paid people tend to be men, and the very low paid people tend to be women, its use can obscure some gendered differences.

The *mean* is calculated by adding all employees' rates of pay together and dividing by the total number of employees. The mean includes the lowest and highest rates of pay. This will include a number of low paid employees, who are more likely to be women. International measures also use the *mean* when calculating the pay gap, which enables comparisons to be made with other countries, for example the global gender pay gap.

In some cases the pay gap is reported as one headline figure combining full and part-time earnings. Statisticians at the Scottish Government recognise that the headline figure is influenced by compositional differences in working patterns. For example, more women work in lower paid, part-time work, which in statistical reporting is referred to as the 'part-time effect' (Scottish Government, 2010, pg 82). The 10.7% illustrates the size of the gender pay gap when the part-time effect has been controlled for, although it is important to note that the 'part-time effect' is itself gendered.

Women are more likely to work part-time than men. Currently 43.0 per cent of the total female workforce work part-time compared to 12.5 per cent of the total male workforce.[2] A much lower percentage of men work part-time in Scotland and they are less likely to be in part-time positions over a long period of time.[3] In addition, wages are more likely to be lower in female-dominated workplaces than male-dominated workplaces or workplaces which are more diverse. This is also true for the UK as whole.

Table 2 and 3 illustrate the gender pay gap for different occupational groups in relation to hourly and weekly pay.

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[2] The source is from the Annual Population Survey reported at the ONS under the Labour Market Statistics Monthly Regional Data. The split between full-time and part-time is based on self-classification and excludes temporary workers. Regional Tables 1-11 Scotland **http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-226770** This information was accessed on January 2012

[3] Grant, L., Yeandle, S., and Buckner, L., (2005) *Working below potential: women and part-time work* EOC Working Paper Series no. 40. Manchester: Equal Opportunities Commission

Table 2: Mean average hourly Pay-excluding overtime (£) for male and female employees in Scotland by occupational group 2011*

Occupation	Full-time Male	Full-time Female	Difference	Part-time Female	Difference (PT female compared to FT male)
All Scotland	£15.43	£13.78	10.7%	£10.47	32.1%
Managers and senior officials	£23.54	£18.54	21.2%	£17.64	25.1%
Professional occupations	£22.56	£20.53	9%	£21.12	6.4%
Associate professional and technical	£16.50	£14.49	12.2%	£14.44	12.5%
Administrative and secretarial	£11.74	£10.64	9.4%	£9.46	19.4%
Skilled trades	£11.65	£9.86	15.4%	£7.90	32.2%
Personal service	£9.87	£9.28	6%	£9.19	6.9%
Sales and customer services	£8.63	£8.25	4.4%	£7.05	18.3%
Process, plant and machine operatives	£10.34	£8.41	18.7%	£7.61	26.4%
Elementary occupations	£8.60	£7.47	13.1%	£6.92	19.5%

*Source: ONS Provisional Results Annual Survey of Hours and Earnings 2011 **http://www.ons.gov.uk/ons/publications/re-referencet ables.html?edition=tcm%3A77-235202**
Accessed 24 November 2011

Table 3 details the differences in weekly pay, excluding overtime, between women and men. Compared to Table 2 the differences are greater in some cases than hourly rates of pay. Women are more likely to work fewer paid hours per week than men, due the disproportionate burden of care, and at the same time may not be categorised as part-time workers.

Table 3 also details comparisons between men's average full-time weekly earnings and women's average part-time earnings. This varies according to occupation from weekly pay gap of 59.5 per cent for 'managers and senior officials' to a pay gap of 52.4 per cent for 'personal service.'

Table 3: Weekly pay-excluding overtime (£) for male and female employees in Scotland by occupational group 2010[4]

Occupation	Full-time Male	Full-time Female	Difference*	Part-time Female	Difference
All Scotland	£593.40	£503.60	15.1%	£189.10	68.1%
Managers and senior officials	£904.20	£688.20	23.9%	£366.50	59.5%
Professional occupations	£833.80	£732.70	12.1%	£348.40	58.2%
Associate professional occupations	£625.40	£534.60	14.5%	£275.10	56.0%
Administrative and technical	£437.70	£385.40	11.9%	£176.10	59.6%
Skilled trades	£455.50	£360.80	20.8%	£155.40	65.9%
Personal service	£369.00	£342.20	7.3%	£175.50	52.4%
Sales and customer services	£327.10	£298.50	8.7%	£125.80	61.5%
Process, plant and machine operatives	£471.10	£322.00	22.8%	£167.30	59.9%
Elementary occupations	£338.60	£276.30	18.4%	£107.00	68.4%

*Read as: for 'All Scotland' full-time women earn 15.2%per week less than full-time men. For 'All Scotland' part-time women earn 68.1% per week less than full-time men.
Source: ONS Provisional Results Annual Survey of Hours and Earnings 2011 Table 3 Regions By Occupation (2 digit SOC 2000) **http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-235202**
Accessed December 2011

[5] *ibid*

Discussion

Over time there has been a reduction in the gender pay gap from an estimated 29 per cent in 1970 to 10.7 pe rcent in 2011, but since the 1990s the decrease has slowed and remains around 11-14 per cent. The headline pay gap figure cannot illustrate the full complexities of the pay gap, but it does provide an evidence base for policy and practice to address the economic injustice women face in Scotland, in the UK and internationally.

Walby and Olsen researched how much of the gender pay gap is associated with different factors. These factors included working patterns over the course of a life-time; occupational segregation; size of an organisation and whether it is unionised or not and direct discrimination related to the choices women make in the labour market.[5] However, Walby and Olsen emphasised the systemic indirect discrimination experienced by women in education, training and the labour market and the importance of these experiences in shaping all the other factors mentioned.

Therefore it is possible to identify the three main causes of the pay gap as: occupational segregation; lack of flexible working opportunities and discrimination in pay and grading structures. This resonates with the experiences of women participating in the labour market who find it difficult to secure work which is flexible, to accommodate caring for family and relatives. This leads to women opting to look for part-time, flexible working options which are more likely to be found in lower valued and lower paid sectors of the economy i.e. social care, administration, catering and service industries. In addition, the nature of women's participation in the labour market has been characterised by the historic undervaluing of women's contribution to society and the economy. Despite 42 years of the Equal Pay Act, which aimed to correct the undervaluing of female employment and ensure equal pay for 'like work' or 'work of equal value', pay and grading structures continue to reward stereotypical male behaviour and characteristics.

The statistical evidence backs this up. A higher percentage of women work part-time compared to men in Scotland, a smaller percentage of women are in managerial and senior positions and women are concentrated in certain occupational groups and sectors e.g. health and social care, administration.

This economic injustice will extend over the period of a woman's working life. For example, from the ASHE tables, women earn on average in Scotland £89.80 less

[6] Walby, S. and Olsen, W., (2004) *Modelling Gender Pay Gaps.* Manchester: Equal Opportunities Commission

per week than men. The average UK household spends £639.60 per year on a package holiday.[6] The difference in weekly pay between women and men would be the equivalent to 7 package holidays per year, per household. Over the course of a woman's working life (full-time from age 16-64) she will earn £224,140 less than a man.[7]

Gender disaggregated statistics are necessary for policy makers, employers and organisations to challenge gender inequality. The cross-cutting and complex issues relating to the nature of women and men's access to education, training and participation in the labour market can only be understood if the information provided is disaggregated according to gender, otherwise new policies and practices will continue to perpetuate gender inequality.

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[6] ONS (2010) *Family Spending: A report on the living costs and food survey.* ONS, London

[7] Calculated using average full-time weekly earnings over 48 years (age 16-64). This is illustrative only as it will not take into account periods of absence from the labour market, inflation etc.