

Working Patterns in Wales:

Gender, Occupations and Pay

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ABBREVIATIONS

APS	Annual Population Survey
APT	Associate Professional and Technical
ASHE	Annual Survey of Hours and Earnings
CEC	Commission of the European Communities
EHRC	Equality and Human Rights Commission
EOC	Equal Opportunities Commission
FT	Full Time
LFS	Labour Force Survey
PPM	Process Plant and Machinery
PT	Part Time
Prof	Professional
NCO	Non Commissioned Officer
n.e.c.	Not elsewhere classified
ONS	Office for National Statistics
SMO	Senior Manager and Official
Sec	Secretarial
SIC	Standard Industrial Classification
SOC	Standard Occupational Classification
ST	Skilled Trades
WAVE	Women Adding Value to the Economy, ESF project.
WLLFS	Welsh Local Labour Force Survey

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EXECUTIVE SUMMARY

Women Adding Value to the Economy (WAVE) is a partnership of activity involving Cardiff University, the University of South Wales, and The Women's Workshop Project @BAWSO. The project is part funded by the European Social Fund (ESF) through the Welsh Government.

The aim of WAVE is to understand and recommend how to 'interrupt' the ways in which gender pay inequalities are persistently reproduced through occupational segregation in employment and self-employment, the ways in which 'women's work' is contracted and the operation of pay systems.

The WAVE project provides a raft of interventions based upon the expertise of each sponsoring organisation in relation to occupational segregation - in employment (Cardiff University), self-employment (University of South Wales), and training (The Women's Workshop Project @ BAWSO).

This report from Cardiff University provides for the first time a detailed gender 'occupational mapping' as a context for the partners' work, by setting out how men and women in employment and self employment work in Wales by occupation, working pattern or contract type (full time and part time), and sector. The report also shows how much employees (not the self employed) are paid for their work.

The uneven distribution of jobs and working hours among men and women is significant in the maintenance of gender pay disparities, more so than gender pay discrimination (EFLWC, 2008). Measures to address direct discrimination in pay systems can be rendered ineffective when so few men and women work in the same occupations, jobs, grades or sectors. Comparators can be hard to find. Hence the emphasis needs to shift our understanding to a focus on the **value** of the work undertaken, and how the gender of people doing it can have an impact on how jobs are valued.

This analysis is based on ‘pooled’ Annual Population Survey data¹. The ‘pooled’ yearly data was then averaged to provide sufficient sample sizes to produce reliable data in a small population area such as Wales. Averaging ‘pooled’ yearly data also flattens out any single year data anomalies.

This report is intended to serve several audiences. It is a resource document for our partners within WAVE, providing baseline data and analysis that may inform their work. It is also a resource for employers, stakeholders and policy makers, and our engagement with them. This is the first of our reviews of occupational segregation and pay disparities, and throughout the report, we indicate where further research, including decompositions, will build upon this initial analysis.

Employees and employers will also be able to use the data to compare their wages and salaries against median averages via the *Equal Pay Barometer*. Available as an online resource via the WAVE website, this tool provides all workers in Wales with the facility to compare median hourly, weekly and annual pay for their occupation, and others that might pay more, by gender and full and part time working in Wales. The Equal Pay Barometer can be accessed at: <http://www.wavewales.co.uk>

¹ Source: ONS, Annual Population Survey, ‘Special License’. Occupation, gender, working pattern and pay data was pooled, weighted and averaged for the years 2004 – 2010, and for the years 2004-2008 for gender and occupation within different industry sectors. Unadjusted pay gaps are reported.

SUMMARY OF FINDINGS

Working Patterns

Men hold nearly two thirds (64%) of all the available full-time jobs in employment and self-employment in Wales, while women hold around 80% of all the available part-time jobs².

90% of men work full-time while just 10% work in part-time roles.

57% of women work full-time and 43% work part-time. Average gross median part time annual earnings for women are £7,874, and £6,466 for men. The high proportion of women who work on a part time basis has changed little since the 1970s (Manning 2010).

The analysis shows that part time work is associated with working patterns in feminised occupations and with low pay. Three quarters (75%) of all women's part time work takes place in administration, personal service, sales and elementary occupations.

Within Elementary occupations, 73% of women work part time hours, while 75% of men work on a full time basis. Elementary occupations account for one third of all men's part-time work.

Personal Service, Sales and Elementary occupations are comprised of 42%, 60%, and 48% part-time job roles respectively. Women entering typically female occupations will find that at least 40% of work on offer is contracted on a part time basis, which means we should question whether part-time working is always straightforwardly a 'choice'.

Full time working patterns are the norm for those in higher grades throughout the occupational strata. However, 23% of women's part time work takes place in top three occupations (management, professional, and assistant professional or technical occupations), compared with 6% of men's perhaps indicating a break with the over concentration of part time work in low value occupations such as Sales and Personal Services. This finding will be considered further in the next phase of research.

² Working pattern and occupational data includes people in employment and self employment in Wales. Pay data relates to employees only, as pay reported pay for self employment is considered unreliable.

The gendering of occupations

The accepted convention for gender balance in jobs, occupations, on a company board or within decision-making bodies is to aim for a gender distribution of 60/40. Of the nine major occupational groupings in Wales only three show a gender balance overall, these are the professions, associate professional and technical roles and elementary jobs (SOC 1- Digit)³. Senior Managers and Officials, Skilled Trades, and Process Plant and Machinery occupations are male dominated (comprised of 64%, 91%, and 86% men respectively), and Administration, Personal Services and Sales are female dominated (comprised 78%, 83% and 69% of women respectively).

At a finer level of detail, 86 of the 353 jobs in our dataset show gender balance (SOC 4 Digit)⁴. Working in gender-segregated jobs is the norm for three quarters of employed and self-employed people in Wales. One fifth of employed and self employed workers in Wales work in gender balanced occupations.

As an example, the data shows gender balance in professions (SOC 1 –digit), but when we consider the jobs men and women do in the professions at (SOC 4 digit), we observe gender segregation in all but 15 of the 46 professions. Men are 90%+ of all chemists, physicists, geologists, civil engineers, mechanical engineers (100%), electrical engineers, design and development engineers, IT strategy and planning professionals, software professionals, quantity surveyors, chartered surveyors, and building inspectors.

There are no professional occupations where women comprise 90% or more of the total, they are however, between 80% and 90% of all primary and nursery education teachers, special needs education teachers, social workers, and librarians.

Of the 73 Associate Professional and Technical jobs listed in our dataset, just 26 are gender balanced (SOC 4 digit). These include laboratory technicians, medical and dental technicians, artists, actors and entertainers, product clothing and related designers, journalists etc.

³ Standard Occupational Classification (SOC) 1- digit level of data abstraction.

⁴ SOC 4- digits

APT is the largest of the 9 major occupational groupings (SOC 1), representing 14% of all jobs in Wales. Within this gender balanced overall occupational grouping, women are 90%+ of dental nurses, nursery nurses, child-minders and related occupations, playgroup leaders and assistants, educational assistants, veterinary nurses and assistants, hairdressers/barbers, beauticians and related occupations, housekeepers and related occupations. Men are 90%+ of pest control officers

Nursing is by far the single largest Associated Professional and Technical occupation, constituting 15% of all APT jobs and accounting for 28% of all women's work in APT. Without nursing, this occupational grouping would be dominated by men. Without nursing, women's access to higher earning full time jobs in Wales would be severely limited.

This analysis shows that jobs remain significantly gender coded as masculine or feminine. Appendix 1 provides a detailed list of all jobs in the nine major occupational groups, detailing those that are gender balanced or gender segregated.

Sectors

A fifth of men (21%) in employment and self employment work in Manufacturing industries, and nearly 15% in Construction. Nearly a quarter (24.9%) of all women work in the Health and Social Care sector. Sixteen percent of women work in Wholesale Retail and Motor Trade, compared to 14% of men. This would indicate gender balance, except that as the discussion above demonstrates (and See [Appendix 1](#)), women will be found more in retail jobs and men in the motor trade.

Considering the sectors and business areas where professionals work, we see that 75% of all women professionals work in the education, health and social care sectors. When those working in public administration and defence are added, 84% of all women professionals in Wales are accounted for. Men in the professions are more evenly distributed across sectors within professional roles.

Gender, occupation and sector combine to create masculinised and feminised working environments, and vertical segregation is also apparent. In the Financial sectors, which is

gender balanced overall, men's work is more likely to be in the TOP 3 occupations (managers, professionals, associate professionals) than women's.

Earnings

Our analysis of gender pay gaps shows that men's gross hourly and annual median full time earnings are higher than women's in all of the nine major occupational groups – regardless of whether the group as a whole is gender balanced or gender segregated.

The difference in gross hourly median pay for all employees in Wales (whether working full time or part time) is 18% - or £11.02 for men compared with £9.02 for women (unadjusted pay gap, and excluding overtime and bonus payments). In the UK as a whole, the gap is wider at 19.6%.

For all full-time workers in Wales, the gender gap is 12% with men earning £11.55 per hour compared with £10.18 for women. The largest pay gaps between men and women are in the male dominated occupational groups, with median gross hourly pay gaps for all employees of 32% and 23% in Skilled Trades and Process Plant and Machinery respectively. However a tiny proportion of women's work takes place in these occupational groups. Pay gaps between feminised and masculined occupations are more significant.

For full time work, men earn on average 9% per hour more than women in Administration, 10% more than women in Personal Services, 8% more than women in Sales, all of which are female dominated occupations. The lowest full time pay per hour for men is in Elementary occupations, with a median hourly gross of £7.92 (FT). Women FT earnings are also lowest in Elementary Occupations at £6.77.

Women earn more on a part time basis than men in all occupational groups apart from Skilled Trades and Elementary work (the comparison here is between around 58,000 men and 215,000 women). For men and women working part-time, the gap stands at -9% or £6.91vs £7.57 (shown as minus as gender pay gaps are expressed as the difference between men's hourly earnings and women's hourly earnings).

The largest *part time* pay gap is in Associate Professional and Technical occupations. In this occupational group 32% of women work part time compared to 8% of men. These part time roles for women are especially available in well paid, higher grade, specialist health and social work roles where a degree or higher qualification is required. Women working part time in APT earn 33% more per hour than men, and indeed more on average per hour than men and women working full time. This interesting finding will be further investigated. In Phase 2 of this mapping of occupations, working patterns and pay, we will decompose the relationship between these three parameters of gender pay disparities.

If we compare men's full-time hourly earnings with women's part-time hourly earnings we can identify a gap of 34%. Between full and part-time women, the gap stands at 26%. So we can see that the pay penalty for women who work part-time is one of quality of jobs and the association of low hours with low pay.

Looking at weekly earnings, the data shows that women's gross median average weekly earnings for full time work are £364 compared to men's at £481. Besides the differences in pay by occupation, the number of full time hours that men and women work will vary. The gender disparity of £97 per week, or a 20% weekly pay gap, is a difference of £5,044 per year, or £151,320 over a 30 year working lifetime.

The difference in weekly earnings between women working part time and men working full time is £328 per week, or 68%. The difference in weekly earnings between women working part time and women working full time is £231 per week, a weekly pay gap of 60%.

Annual pay gaps for all occupational groups can be found in the body of the report, and linked tables provide access to annual full time and part time pay gaps.

CONCLUSION

Gendered patterns of participation in occupations, sector and working patterns matter to creating and reducing gender pay disparities. The legal framework alone will not encourage sufficient reduction in gender pay gaps when so few men and women work in the same

occupation. Employers and employees can begin to influence change in the way gender guides perceptions of job value, how jobs are associated with masculinity or femininity, how higher grades are associated with full time work and part time hours are constructed for feminised low skilled work.

Skills training is vital for the many women who can get stuck in low paid low skilled low hours jobs, and further research on 'choice' and part time work is needed.

In the next phase of our work on mapping working patterns, occupations and pay in Wales we will decompose 'objective' factors to estimate how much of the pay gaps discussed here can be directly and indirectly attributed to gender in each occupational groups.

INTRODUCTION

Gender pay disparities can be viewed as a monetized expression of gender inequality.

This report provides a detailed analysis of the jobs, sectors, and working patterns of men and women in Wales in employment and self-employment. It demonstrates where there is gender balance or gender segregation in occupations, and discusses the likely impact this has on gender pay disparities.

Such detailed information is vital if we are to tackle gender pay gaps. Whole economy figures mask considerable differences in pay within and between sectors, industries, occupations and working patterns. Cardiff University's activities within WAVE are focused on exploring this interaction between occupational segregation and pay disparities by guiding employer interventions, and making policy recommendations.

This is the first time such a detailed 'mapping' of where men and women work, their contract types and their pay has been provided for Wales. It will serve as a resource document for all who are interested in finding ways to tackle the persistent reproduction of gender pay disparities in each generation.

This analysis is based on Annual Population Survey data⁵. Data for several years was 'pooled' and averaged to provide sufficient sample sizes to produce reliable data. Averaging 'pooled' yearly data also flattens out any single year data anomalies.

The analysis of the data presented here does not yet allow reflection on recessionary effects. However, research on these issues, together with a focus on gaining data for casual workers in Wales, is part of our on-going work at Cardiff University within WAVE.

Nevertheless, the data presented here provide a new and rich source of analysis for considering where men and women work in Wales, under what conditions and how they are

⁵ Pooled for the years 2004 – 2010 for gender, occupation and pay, and for the years 2004-2008 for gender and occupation within sectors.

far in relation to securing the rewards and resources associated with participation in paid employment and self-employment in Wales.

A BRIEF BACKGROUND TO THE WAVE PROJECT

The aim of the 'Women Adding Value to the Economy' (WAVE) project is to understand and 'interrupt' the ways in which gender pay disparities are persistently reproduced.

The focus on the association between gender segregation (by industry, by occupation and by contract type) and tackling gender pay disparities is informed by commissioned reviews. Both the EOC investigation into occupational segregation (EOC 2005), and the Women and Work Commission (2006), conclude that regardless of other actions, gender pay gaps will not be closed unless occupational gender segregation is addressed.

The WAVE project, running since July 2012 (completes June 2015), provides a raft of interventions based upon the expertise of each sponsoring organisation in relation to occupational segregation - in employment, self-employment and training:

Cardiff University: is undertaking case studies on occupational segregation and pay with collaborating employers who may, on the basis of findings, proceed to testing recommended interventions. The learning and findings from these employer case studies will help us to develop a pay analysis model, which can be used by all employers. This work supports the aims of the Welsh 'Equal Pay Duty', and so, we are sharing this learning with Human Resource professionals from all business sectors through our *Gender Employment and Pay Network* (GEPN), and simultaneously learning from them about how the model might apply in practice.

CU is also providing labour market analysis of gender segregation in Wales and the impact on gender pay gaps (the subject of this report).

The University of South Wales is the Lead Sponsor for WAVE, and has a long established Women's Business and Entrepreneurship Hub. It is drawing on this knowledge and

experience to work with women entrepreneurs in the areas of business practice and entrepreneurship, and to encourage and support existing business women to gain the most value for their products and services. The work also involves supporting business development in non gender stereotypical business sectors.

Role modeling, networking, clustering and mentoring activities are underway. Graduate and postgraduate modules are running with the aim of raising awareness, aspirations and knowledge.

The Women's Workshop Project @BAWSO has 30 years experience of training and developing women's education and skills with a particular focus on encouraging women into manual trades, ICT and electronics. The Women's Workshop is working to address the barriers that impact upon women progressing within male dominated occupations to ensure that they are well placed to fill skill shortages and add value to 'new economy' sectors, for example, the emerging green technologies sector.

A particular focus is on the Business, Information and Communications Technology (ICT), and Construction/Built Environment Sectors. Within WAVE, the Women's Workshop is focusing on moving women into and up ICT careers ladders through educational qualifications, networking and mentoring.

'Let's talk about pay'.

Lastly, WAVE aims to engage a wider audience in debate through a campaign entitled 'Let's talk about pay'.

Current employees and those yet to enter the labour market, will be made aware of the levels of pay associated with working in many feminised occupations, the prevalence of low paid, part time jobs in these occupations and, conversely, the lack of part time working opportunities in higher skilled / paying occupations.

The campaign will be supported by an 'Equal Pay Barometer', which draws on the data produced for this report. Available as an online resource via the WAVE website, the barometer will allow the public to search pay averages in over 300 occupations in Wales.

For further information on the Equal Pay Barometer and all activities with the WAVE project partnership please visit the website: <http://www.wavewales.co.uk>

REPORT CONTENT AND STRUCTURE

This report is intended to serve several audiences. It is a resource document for our partners within WAVE, providing baseline data and analysis that may inform their work. It is also a resource for employers, stakeholders and policy makers, and our engagement with them.

The report begins by considering the concepts that underpin analysis of gender pay gaps and occupational segregation. We then describe gender balance and gender segregation in Wales, the different earnings available for working in each occupation, sector and contract type by gender, and the average pay on offer to men and women in each occupation. This review does not seek to decompose gender pay gaps or suggest that gender pay gaps are wholly attributable to occupational segregation.

The report specifically considers disparities between full and part time pay. We do this for two reasons. Firstly, men and women in the same job are legally required to earn the same hourly rate of pay whether working full or part time hours. However, as part time work is generally confined to low grades within feminised jobs, this legal right rarely applies in practice (Rubery and Grimshaw 2013). Direct male comparators are hard to find in such jobs.

Secondly, as the majority of part time workers are women (holding 80% of all part time jobs in Wales) these comparisons demonstrate the pay penalty for part time working arrangements. Higher graded work, and therefore higher hourly pay, is associated with work offered on a full time basis.

The analysis also serves to demonstrate the considerable pay gaps between women. It is acknowledged that eliminating pay gaps *between* social groups such as men and women will

not be sufficient to address the growth in wealth, income and earnings inequalities *within* disadvantaged groups, or within UK society and the labour market as a whole (Hills *et.al* 2010, Davies *et.al* 2011).

There are growing earnings gaps between professional women, whose employment contracts are often only available on a full time basis, and women looking for lower skilled work where employment contracts are more often structured as part time and/or casual.

Finally, when considering gender pay disparities it is helpful to keep in mind that gender does not refer to given, fixed or biological attributes but is rather used to describe how society is stratified by social and economic divisions; gender, class, age, disability and ethnicity. Hence data is reported here for men and women, which signifies gender, and not male and female, which signifies biological sex.

The divisions we are considering are not, therefore, effects of personal characteristics themselves. Rather, they are outcomes of how institutional systems and practices produce advantage and disadvantage along the lines of gendered social divisions.

GENDER PAY GAPS: CONTRIBUTORY FACTORS AND MEASUREMENTS

Gender pay disparities result from a combination of differences in the ways men and women participate in labour markets:

These factors include employment segregation (by sector, occupation, workplace hierarchy, contract type (permanent/casual, full or part time or fixed hours), the undervaluing of 'women's work', access to training and routes to progression, the unequal division of labour between paid and unpaid work, labour market structuring on the assumption of gender roles regarding childcare and adult dependent care in the working age years, and pay discrimination (Parken, Rees, and Baumgardt 2009).

This combination of interacting factors, each varying in relevance by occupation and over an individual's working lifetime, makes reducing gender pay gaps extremely complex.

The convention for presenting information on gender pay gaps is to provide the 'unadjusted pay gap'. The 'unadjusted' measure does not control for sector, or occupation, or compare like for like jobs. It therefore, captures the ways in which gender can define labour market participation and, in turn, labour market organisation. It demonstrates structural inequalities. The preferred measure of the 'unadjusted pay gap' is, *'the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees'* (CEC 2007: 15)⁶.

Overtime, bonus payments and shift working enhancements are excluded from the unadjusted measure, which is problematic as such payments mainly accrue to full time work (dominated by men) and occupations associated with men's employment (ELWC 2008: 5).

'Adjusted' pay gap measurements account for differences in employment characteristics, such as education. These measures can be useful to highlight factors affecting pay gaps.

⁶ This measure is the convention used by the International Labour Organisation (ILO) and Eurostat, the European Commission statistical agency.

However, adjusted measures should not be considered more accurate than unadjusted measures (Metcalf 2009). Studies vary in the factors they choose account for (e.g. education, occupation, industry), and pay structures in industry or occupation may, ‘... incorporate discriminatory values (e.g. gendered values, such as caring is rewarded less highly than plumbing; class values, such as ‘academic’ qualifications are rated more highly than ‘vocational’ ones) (Metcalf, p3-4, 2009), but may not feature in ‘adjusted’ analyses.

A median average is preferred, providing a mid point in the earnings distribution for men and for women. A mean average could have been used but this may have skewed the findings because of the high earnings for some men at one end of the scale and the low earnings of a large number of women at the other end of the scale.

Provisional data for 2011 shows an unadjusted gender pay gap of 16.4% for the Eurozone Area, and 16.2% for the EU 27 (Eurostat 2013)⁷. The gender pay gap varies widely across the EU 27 by country, from 2.5% in Slovenia to 30% in Estonia in 2012. However, comparing such aggregates across the EU 27 should be treated with caution, as countries with very low economic activity and employment rates for women can produce very low gender pay gaps when compared to men’s much higher participation rates. The pay gap in the UK for all employees is reported as 19.1% in this data (Eurostat 2013), almost 3% above the EU 27 average.

Gender pay disparities also vary between sectors, with the private sector consistently showing the largest gaps by occupation and within workplaces. The EHRC investigation into pay in the Financial Sector found a 37.7% median hourly pay gap between men and women (Metcalf and Rolphe, 2009). Although there were roughly equal numbers of men and women working in the sector, they were often working in different workplaces (more women in retail banking, more men in investment banking). Men were the majority of the very high earners (Metcalf and Rolphe, 2009).

⁷ Source of Data: Eurostat, ‘Gender pay gap in unadjusted form’ NACE Rev. 2 (structure of earnings survey methodology, 2013). Last update: 13.01.2014, Date of extraction: 14 Jan 2014, 08:54:27 MET. Hyperlink to the table:
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdsc340>

Pay gaps are also influenced by so called 'objective factors' such as education and work experience but these Human Capital (HC) indicators cannot be assumed to be objective. Making a 'choice' about education subjects, jobs or careers can of itself be a reflection of approaching an already gendered job market.

The HC explanation is also much less cogent given the increase in women's educational attainment and qualifications⁸. Rubery and Grimshaw (2013) describe 'the explanation' for gender pay gaps as constantly changing, having moved away from HC to 'productivity' factors. The public sector (where women dominate) is viewed as less productive although this is not subject to routine measurement (Rubery, and Grimshaw 2013).

The percentage of the pay gap that is due to direct discrimination in 'like for like' jobs, and indirect discrimination in the form of unequal pay in work of equal value, is likely to be unknowable at an aggregate level. Such analysis is achieved at the micro level of the workplace. Some of this work is being undertaken with WAVE at Cardiff University and will be reported separately.

Here, we provide a mezzo analysis; exceeding a whole economy view, and instead looking into pay gaps by occupation sector and contract type for Wales in detail, where data is available.

THE GENDERING OF OCCUPATIONS AND PAY DISPARITIES

Differences in the ways men and women are employed - uneven gender distribution by sector, occupation, grade in workplace hierarchies, contract type (permanent / temporary, fixed term/ casual) and full or part time hours, combine to create gender pay disparities. These gendered patterns of working are known collectively as occupational segregation.

⁸ For a discussion of Human Capital theory in relation to the gender pay gap, and a critique of its explanatory power see Parken (2011),

OCCUPATIONAL SEGREGATION DEFINED

The uneven distribution of jobs between men and women in the public, private and voluntary sectors of the economy, and in different business areas (energy, transport, finance, retail etc.) is known as 'horizontal segregation by gender'.

When men and women work in very different jobs and occupations, this is known as 'occupational segregation'. Where men and women work in the same occupations but at different levels of hierarchy, the term 'vertical segregation' is used.

Being employed on different employment contracts and working patterns - permanent/ temporary/ fixed term, casual, and full or part time- is known as 'contract segregation by gender'.

Gender disparities can also arise in access to training and routes to progression. Part time work is most often available in low skilled, low graded jobs with little opportunity for training or opportunity to up-skill (Beechy and Perkins 1987, Callendar 1997, Felstead *et. al*, 2012).

Occupations are categorised by the Standard Occupational Classification (SOC) index. SOC 1 digit being the most amalgamated categorisation. In SOC 1, the nine major occupational groups are listed – Managers and Senior Officials, Professionals, Skilled Trades, Sales etc. In SOC 3 and SOC 4 (the APS dataset does not contain SOC 2), more detail is given. For example, under the SOC 1 category 'Skilled Trades', jobs are listed at SOC 4-digit which includes maintenance fitters, precision instrument makers, motor mechanics, vehicle body builders, auto electricians, computer engineers, bricklayers etc.

This level of detail gives much more insight into the jobs that men and women do.

INTERSECTIONALITY

The secondary data reviews, *An Anatomy of Economic Inequality* in Wales (Davies *et.al* 2011) and *How Fair is Wales* (Bevan Foundation 2011), demonstrated that disabled people and people from some ethnic minorities can have high unemployment levels. Educational attainment, employment rates and earnings for disabled people and people from some South Asian heritages showed significant disadvantage, as well as variation by gender. Women were more disadvantaged than men in most, but not all, the measures (see Chapter 6, Davies *et. al* 2011).

Disabled people, particularly, were clustered in low skilled occupations, although many had qualifications that should have led to skilled work (Davies *et.al* 2011).

More generally, older people can suffer from performance stereotyping where their experience is no longer seen as relevant, while younger people can be viewed as lacking practical skills and so may find it difficult to enter employment to gain experience.

Rarely is the impact of social divisions experienced simply as one or other parameter. We are all always positioned at the intersections of age, gender, sexuality, ethnicity and class, with these social status markers operating together for or against our advantage in education, employment and earnings.

However, even by single equality 'strand', pay data by ethnicity and disability in combination with occupation and working pattern, at the 3-digit SOC level that we required for this analysis, was not available in the Annual Population Survey. This has sadly been the case for many years, and must be remedied in future. Hence we concentrate on gender in this analysis.

METHODOLOGY - DATA COLLECTION

The micro data used for this analysis has been obtained under 'Special License' from the Office for National Statistics (ONS) who produce the Annual Population Survey (APS). The APS for Wales combines the Labour Force Survey (LFS) and the Welsh Local Labour Force Survey (WLLFS), often termed the 'Welsh boost', as it increases the survey sample size for Wales.

The APS is a good source of information, especially when taking broad abstractions, for example, numbers in employment and self employment by industry and major occupational group. However, when we begin to integrate the data for gender with a finer level of occupational detail together and with full or part time working, sample sizes can often be too small to be confident of findings.

Therefore, Annual Population Survey data for the years 2004-2010 was pooled for the gender, occupation and pay analyses and, for the years 2004-2008 for gender and occupation within sectors. The 'pooled' yearly data was then weighted and averages derived to provide sufficient sample sizes to produce reliable data. Averaging 'pooled' yearly data also flattens out any single year data anomalies. This is the most robust method of gaining data for the fine level of combined occupational, pay and employment contract type analysis from a survey sample in a small population area.

The occupational data covers both employees and the self-employed. Pay data is reported for employees only (as self-reporting or proxy reporting on pay for self-employed workers is considered unreliable). Although the data is averaged over 7 years of surveys, the pay data averages have been updated to Consumer Price Index values for 2012.

Nevertheless, findings must be considered indicative. For example, at SOC 4-digits level the data says that men comprise 100% of Mechanical Engineers, Building Inspectors, Auto Electricians, and 90%+ of Chief Executives, Chemists, Civil Engineers etc., and that women are 100% of Typists, Dental Nurses, Dressmakers and 90%+ of Midwives and Speech and Language Therapists etc., but it would not be advisable to take these percentages as absolutes. It may just be that, in the 7 years of combined surveys, some exceptions to these 'rules' simply were not surveyed.

GENDER AND OCCUPATIONAL MAPPING FOR WALES: DATA REVIEW

GENDER DISTRIBUTION WITHIN OCCUPATIONAL GROUPS

The following table depicts the distribution of men and women within the 9 major occupational groups within employment and self employment, and the percentage of men and women who work on a full or part time basis in these occupational groups.

The data demonstrate that men hold nearly two thirds (64%) of all the available full time jobs in Wales, while women hold 4/5th (80%) of all the available part time jobs in Wales.

Table 1. The nine major occupational groups (SOC 1), by gender and contract type

SOC 1 digit	All	Men	Women	Gender					
				Men %			Women %		
				of occupation	FT	PT	of occupation	FT	PT
Managers and Senior Officials	135241	86009	49232	64	96	4	36	80	20
Professionals	124780	68683	56097	55	93	7	45	72	28
Associate Professional and Technical	145422	67661	77761	47	92	8	53	68	32
Administration and Secretarial	118935	26257	92678	22	88	12	78	60	40
Skilled Trades	130705	119338	11367	91	95	5	9	60	40
Personal Service	96799	16126	80673	17	78	22	83	54	46
Sales and Customer Service	85435	26418	59016	31	61	39	69	32	68
Process, Plant, Machinery	90485	77449	13036	86	94	6	14	76	24
Elementary	127646	67917	59728	53	75	25	47	27	73
All	1055446	555859	499587	53	90	10	47	57	43

Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights. Percentages rounded up.

Table 1 shows that Professional, Associate Professional and Technical (APT), and Elementary occupations are gender balanced (on a 60/40 basis). The occupational categories, Senior Management and Officials (SMO), Skilled Trades, and Process, Plant and Machinery (PPM), are comprised of 64%, 91% and 86% of men respectively. Administration, Personal Services and Sales remain the domain of women, who comprise 78%, 83% and 69% of these occupations respectively.

GENDER BALANCED OCCUPATIONAL GROUPS

The accepted convention for gender balance in an occupation, on a company board or within decision-making bodies is a gender distribution of 60/40. Table 1 shows gender balance in 3 of the 9 major occupational groups. Men and women work in roughly equal proportions in the Professions, Associate Professional and Technical roles, and in Elementary jobs.

The Professional category comprises such occupations as engineers, academics, doctors, lawyers, further and higher teachers, and accountants.

Associate Professionals and Technical (APT) occupations include jobs such as engineering technicians, nurses, pharmaceutical dispensers, radiographers, midwives, police officers, occupational therapists and IT support technicians. APT is the largest of the 9 major occupational groupings, representing 14% of all jobs in Wales.

Nursing is by far the single largest APT occupation. Nursing constitutes 15% of all occupations in this category and accounts for 28% of all women's APT occupations (SOC 4 – digits, see technical tables appended). Without nursing, the APT occupation grouping would be dominated by men. And without nursing, women's access to higher earning full time jobs in Wales would be severely limited.

In the Professions and APT, the effect of a 'qualification lever', sometimes called credentialism, is observed. Where there is a formal entry qualification, women are present in proportionate numbers, although they may be doing quite different professional or

associate professional jobs than men (see the section on a finer occupational breakdown below).

In Professional occupations, where there is also gender balance overall, 93% of men work full time compared to 72% of women; just over a quarter (28%) of women professionals work part time (Table 1). In the APT occupational grouping 32% of women work part time, (Table 1).

The Elementary occupational grouping also shows gender balance. These are jobs that require few formal qualifications or skills. Such work accounts for around 12% of all jobs in Wales. Elementary jobs include traffic wardens, school crossing patrol, shelf fillers, labourers, construction, postal workers, hospital porters, kitchen and catering assistants, cleaners/ domestics, fork lift truck drivers, sewing machinists. However, within this gender balanced occupational classification (SOC 1), 73% of women work on a part time basis compared to 25% of men.

The significance of part time work, skill levels and low pay is discussed below.

GENDER SEGREGATED OCCUPATIONAL GROUPS

Table 1 shows that men hold nearly two thirds (64%) of Senior Manager and Officials posts, 91% of all Skilled Trades jobs and 86% of all jobs in Process and Plant work.

Women hold the majority of administration and secretarial, personal service, and sales and customer service jobs. They comprise over three quarters of all administrative workers (78% of the occupation), 83% of personal service and 69% of all sales and customers service workers.

In conclusion, six of the nine major occupational groupings show gender segregation.

CONTRACT SEGREGATION

Table 1 showed distinct employment contract types and therefore, working hours as distributed between men and women. Overall 10% of men work on a part time basis, and 90% work full time. Of women, 57% work full time, and 43% part time. The proportion of women working part time hours has changed little since the 1970s (Manning, 2010).

When working pattern or contract type is considered alongside occupation, we observe that men hold 55% of all jobs in the Top 3 occupations (SMO's, Prof, and APT) combined, and women 45%. Within this combined total, just over a quarter of women in the Top 3 occupational group (27%), work part time, compared to just 6% of men (see linked Technical Tables in [Appendix 2](#))

However, part time work overall remains strongly correlated with 'feminised' occupations. Looking at overall split of full and part time jobs in Personal Service, Sales and Elementary occupations, we find that 42%, 60%, and 48% respectively are arranged on a part time basis⁹. This means that women entering feminised occupations will find that at least 40%+ of all jobs are likely to be offered on a part time basis – restricting opportunities to access full time work.

In elementary occupations, gender balanced overall (SOC 1-digit), where no qualifications are required, 75% of men are working full time in comparison to 73% of women working part time. Part time work is much less available in the occupations that men dominate where full time working patterns are the established norm (Table 1).

Part time work for men is often temporary and used strategically at the beginning of working life or to provide flexible working for men toward the end of working life (ONS, 2013), whereas for women, part time work can become the long-term working pattern (see commentary on Doogan (2005), below).

⁹ These percentages have been rounded up to the nearest full percentage point.

As education qualification or skill requirements diminish in the occupational hierarchy, the incidence of part time work increases for women. An association between low hours low skilled part work and 'women's work' is observed.

The following table depicts how men and women's employment and self-employment is distributed between occupational groups and by working pattern within them.

Table 2 The distribution of men and women's work between occupational groups by working pattern

SOC 1 digit	Gender			
	Men %		Women %	
	Full Time	Part Time	Full time	Part Time
Managers and Senior Officials	16.63	5.57	13.97	4.45
Professionals	12.81	8.46	14.27	7.23
Associate Professional and Technical	12.52	9.20	18.65	11.51
Administration and Secretarial	4.63	5.52	19.47	17.35
Skilled Trades	22.78	10.19	2.40	2.11
Personal Service	2.54	5.99	15.39	17.15
Sales and Customer Service	3.21	17.96	6.68	18.55
Process, Plant, Machinery	14.65	7.78	3.50	1.44
Elementary	10.22	29.33	5.68	20.21

Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights. Percentages rounded up.

Table 2 shows that 47% of women's full time employment and self-employment in Wales takes place in the Top 3 occupations (SMO, Prof, APT), compared to 42% of men's¹⁰.

Forty two percent of women's full time work takes place in the 'feminised' occupational areas of Sales, Administration, and Personal Services. These occupations together account for 53% of all women's part time work, and so their feminisation overall is based in the higher number of women who work in them on a part time basis. Together, Sales, Administration, Personal Services and Elementary occupations account for 75% of all women's part time work.

¹⁰ Percentages in this section have been round up to the nearest percentage point.

Only 3.21%, 4.63% and 2.54% of men's full time employment or self-employment takes place within the feminised occupations of Sales, Administration, and Personal Services respectively.

Only 2.40% and 3.50% of women's full time work takes place in the masculinised occupations of Skilled Trades and Process Plant and Machinery, while these occupations account for nearly 40% of men's full time work. The other male dominated area of Senior Management is less extremely unbalanced, accounting for 16.63% of men's full time working and 13.97% of women's.

As noted, full time work is scarce for women in elementary occupations. Table 2 shows that approximately 6% of women's full time work takes place in elementary occupations but a fifth of all women's part time work is based in this category.

The proportion of men's part time work that takes place in Sales (17.96%) and Elementary occupations (29.33%) is striking. However, men's part time work in Administration and Personal Services is low, and this could be connected to men and women being concentrated in quite different jobs within these occupational groups. This is discussed in the section on gender balanced or gender segregated jobs below (see page 19). Part time work in male dominated occupations is hardly available at all.

However, the data also suggest a shift in the over association of part time work with low skill/ pay for women. Table 2 shows that nearly a quarter (23%) of the part time women do takes place in the Top 3 occupations (SMO, Prof, APT).

Although this contract segregation will reflect lower annual earnings, it does show the availability of part time working patterns in higher skilled work. This may signify a positive break with the over association of part time work with low hours, low value and low pay.

This observation provides us with a question to consider in the next phase of research, namely, *'Is the proportion of part time work at higher levels increasing, and in which particular job roles'?* And, *'Is it increasing just for women or for men as well'?*

We also need to know the proportion of women who are now working part time in jobs that they previously worked full time, and more about the growing number of highly skilled women who are downgrading to middle skill level to jobs in order to obtain part time working patterns (ONS, 2013). We also need to know whether it is possible to enter the Top 3 occupations on a part time basis (recruitment into part time jobs at this these levels), and subsequently achieve career progress.

We will also assess, in our next phase of research, whether any increase in part time work in higher skilled / graded jobs signifies greater flexibility in working patterns, or whether it could be one result of the increase in involuntary part time working since the recession: keeping posts by reducing hours.

However, any such changes do not undermine the correlation between gender, part time work, low pay and poverty in Wales (Kenway *et.al* 2013).

PART TIME WORK AND POVERTY

Part time jobs now account for a significant proportion of women's work in the Top 3 occupational groups. However, higher skills, grades and earnings remain overwhelming associated with a full time working pattern and, latterly, with long hours, particularly where the worker is 'present' through technology, far beyond any core hours.

Recent research from the ONS shows little difference in the employment rates of men and women without children over the working lifetime (ONS, 2013: 9). However, while men with children are more likely to work than those without, the opposite applies to women (ONS, 2013: 8). The 'ideal worker' (Pateman, 1988) remains one who is unconstrained by calls on their time outside of the workplace. Gender disparities arise between men and women partly because labour market systems and practices best reward full time working patterns.

Wales is the third highest user of low hours part time working contracts in the UK (Jones and Robinson in Davies *et.al* 2011), and there is a growing tendency for part time workers to remain on such contracts over many years (Doogan, 2005, Resolution Foundation 2013).

Women's part time work is a growing proportion of Europe's long service workforce (Doogan, 2005). To say that 'women choose part time work' to fit around caring responsibilities is too simplistic. Once in part time work, there is little training that might provide routes out, and as we have seen feminised occupations routinely offer a high proportion of part time work opportunities (Table 1).

Recent research shows that there are now more households in relative poverty in Wales whose members are in paid work than households in poverty who are in receipt of welfare transfers (Kenway *et.al* 2013)¹¹. Households with one main earner or a main earner and a part time worker comprise the majority of in-work households in poverty in Wales (Kenway *et.al* 2013).

Women hold nearly 80% of the stock of part time jobs in Wales (Source: APS 2004-2010). Their average earnings are under £8,000 per annum. The continuing unequal division of labour between paid and unpaid work does not assign economic value to the raising of children or caring for others. This 'women's work' informs women's labour market participation and is assigned a low economic rent when performed in the labour market in caring or servicing work (Rubery and Grimshaw, 2013).

OCCUPATIONS IN FINER DETAIL

Next we consider the jobs that men and women perform set within the larger occupational groupings described above. The full summary of jobs within each classification is discussed in [Appendix 1](#) and the data tables for each occupation can be found in [Appendix 2](#).

This detailed information is fully searchable on the *Equal Pay Barometer* (wavewales.co.uk). This tool shows gender balance or gender segregation by job for employed and self -

¹¹ Relative poverty here means below the low pay threshold, that is earning less than 60% of Annual Median Gross Earnings.

employed workers, and pay for employees¹². Comparison can be made within and between occupations. Pay data is sometimes absent or unreliable at SOC 4-digits and therefore the pay data reflects the functional group (SOC 3) to which an occupation belongs. For example, the distribution of men and women managers in finance, marketing, purchasing, PR, information and technology, and research and development is given in the tables at SOC 4 digits, but the aggregate pay data is given at SOC 3 digits as a grouping of all managers in this functional group.

Here we summarise gender balance and extreme gender segregation (where men or women comprise 90%+ of an occupation). There are 353 occupations listed at the SOC 4 digits level of abstraction. Of these, just 86, or a quarter, show gender balance on a 60/40 basis. Job segregation by gender is the norm for three quarters of workers in Wales. This means that just a fifth of all employed and self employed workers are in gender balanced jobs.

Managers and Senior Officials

There is gender balance in 15 of the 45 categories listed at SOC level 4, these include: pharmacy, hotel, public house, property, customer care, advertising and PR, retail and wholesale managers.

Men are 90%+ of Chief Executives of major organisations in Wales, e.g. production works, storage and transport, construction, energy, and garage managers.

There are no management categories with more than 90% women.

Professionals

Although the overall occupational category, Professionals, is gender balanced at SOC 1 digit (see Table 1), only 15 of the 46 occupations within this larger classification are gender balanced. These are: bio-scientists, medical practitioners, pharmacists, opticians, dentists, veterinarians, further education teachers, school inspectors, secondary education teachers,

¹² SOC 4 digits level for jobs/ occupations for employed and self-employed, and pay for employees only at the SOC 3 digits level. Source: APS, 2004-2010

social science researchers, researchers not elsewhere classified (n.e.c), solicitors lawyers judges and coroners, legal professionals (n.e.c), public service administration professionals, archivists and curators.

Men are 90%+ of all chemists, physicists, geologists, civil engineers, mechanical engineers (100%), electrical engineers, design and development engineers, IT strategy and planning professionals, software professionals, quantity surveyors, chartered surveyors, building inspectors.

There are no professional occupations where women comprise 90% or more of all workers.

Associate Professional and Technical

This category of occupations is also gender balanced at the SOC 1 level. Of the 73 APT categories in the APS dataset, 26 are gender balanced. These include: laboratory technicians, medical and dental technicians, artists, actors and entertainers, product clothing and related designers, journalists, broadcasting associate professionals, fitness instructors, legal associate professionals, insurance underwriters, sales representatives and estate agents.

Men are 90%+ of all electrical and electronic engineers, engineering technicians, building inspectors, NCOs and other ranks, fire service officers (leading officer and below), air traffic controllers, aircraft pilots and flight engineers, train drivers.

Women are 90%+ of all midwives, pharmaceutical dispensers, occupational therapists, speech and language therapists.

Administration

Of the 24 occupations falling with this female dominated occupational grouping, just 4 are gender balanced. These are: civil service executive officers, stock control clerks, database assistants and clerks, communication operators

Women are 90%+ of medical secretaries, legal secretaries, school secretaries, personal assistants and other secretaries, typists and receptionists.

Skilled Trades

Of the 54 occupations within this category, 7 are gender balanced. These are: horticultural trades, bookbinders, bakers, chefs/cooks, goldsmiths, upholsterers and garment trades n.e.c.

Men are 90%+ of all smith and forge workers, moulders and die casters, metal plate workers, pipe fitters, welding trades, sheet metal workers, agriculture and fishing trades, machine setters, tool makers, maintenance fitters, precision instrument makers, motor mechanics, vehicle body builders, auto electricians, electricians, telecommunications engineers, TV Video engineers, computer engineers, bricklayers, roofers, plumbers, carpenters, glaziers, construction trades, plasters, floorers, painters and decorators, printers, butchers, fishmongers, pattern makers.

Women are 90% of Tailors, dressmakers and floral arrangers.

Personal Services

Of the 23 Personal Service Occupations in the dataset, 3 show a gender balance on a 60/40 basis. These are sports and leisure assistants, travel and tour guides, leisure and travel service occupations.

Women are 90%+ of Dental nurses, nursery nurses, child-minders and related occupations, playgroup leaders and assistants, educational assistants, veterinary nurses and assistants, hairdressers/ barbers, beauticians and related occupations, housekeepers and related occupations.

Men are 90%+ of pest control officers

Sales and Customer Services

Of the 11 sales and customer service occupations listed in this female dominated occupational category, 5 show a gender balance. These are: call centre operators, telephone sales, collectors and credit agents, debt and rent collectors and sales related occupations.

Men are 90%+ of rounds (wo)men and van salespersons.

Process, Plant and Machinery Operatives

Of the 42 jobs listed within this occupational group, 4 show a gender balance. These are: textile process operators, food drink and tobacco process operators, assemblers (electrical products) and routine laboratory testers.

Women only feature as 30% or more of workers in 5 jobs, with the exception of sewing machinists where they comprise 93% of workers.

Men are 90%+ of glass and ceramics processors, metal makers, electroplaters, paper and wood machine operatives, coal miners, quarry workers, energy plant operatives, metal working machine operatives, water and sewerage plant operatives, tyre, exhaust and windscreen fitters, scaffolders, road construction operatives, rail construction operatives, construction operatives not elsewhere classified (n.e.c.), heavy good vehicle drivers, van drivers, bus and coach drivers, taxi drivers, rail transport operatives, seafarers, air transport operatives, transport operatives not elsewhere classified (n.e.c.), crane drivers, fork lift truck drivers, agricultural machinery drivers.

Elementary Occupations

This occupational group is gender balanced overall (SOC 1 level) but of the 35 elementary occupations listed at SOC 4 digits, only 7 show gender balance. These are: packers and bottlers, elementary office workers not elsewhere classified (n.e.c), elementary personal service occupations n.e.c., shelf fillers, bar staff, traffic wardens, and elementary sales occupations n.e.c.

Men are 90% of mobile machine drivers, forestry workers, labourers, building and woodworking trades, stevadores, other goods handling and storage occupations, hospital porters, hotel porters, road sweepers, refuse and salvage workers, window cleaners,

Women are 90%+ of school crossing patrol attendants and school midday assistants.

CONCLUSION

Equal Pay law in the UK, requires a comparator of the opposite sex in the same job and grade, or proof that different work is of equal value. This may have little meaning for those working in the three quarters of occupations in Wales that are gender segregated. Implications for gender pay disparities will be discussed in the following sections.

In the following section of this review, horizontal segregation is considered. The data show in which industries and business areas men and women work in the nine major occupational groups discussed in Tables 1 and 2.

In some instances the uneven distribution of gender between sectors, industries or business areas can lead to them becoming and, crucially, remaining gendered.

GENDER DISTRIBUTION BY SECTOR AND BUSINESS AREA

In this section, the distribution of men and women in their occupational groups is considered within the industries and business areas where they work. Data has been pooled, as described above in relation to occupations, to increase sample size, and subsequently averaged over 5 years.

Table 3. Men by Occupation and Industry, Full & Part Time, employees and self-employed in Wales 2004 – 2008

SOC 1 Digit	Gender - MALE - Row Percentage											
	Industry SECTION (main job) - 1 digit SIC 2003											
	Agriculture, Fishing & Forestry	Manufacturing	Electricity, Water, Waste	Construction	Wholesale and Retail trade	Hotels and Restaurants	Transport, storage & communication	Financial intermediation, Real estate	Public administration & defence	Education	Health & Social Work	Other community & Social/personal activities
Managers and Senior Officials	2.34	19.99	1.38	9.48	20.72	6.28	5.74	15.55	7.68	1.66	4.52	4.66
Professionals	0.50	15.45	1.89	7.59	2.63	*	2.41	20.35	8.52	25.97	10.27	4.29
Associate Professional and Technical	0.50	14.29	1.47	3.21	5.03	0.48	3.28	20.25	23.87	4.71	11.91	10.99
Administration and Secretarial	*	11.43	0.78	2.87	9.30	1.26	6.94	19.76	33.04	3.40	6.10	4.85
Skilled Trades	8.48	25.59	1.33	38.62	10.82	4.13	3.09	2.72	1.33	0.60	1.06	2.22
Personal Service	*	*		*	*	1.07	6.69	3.47	3.90	14.77	50.27	17.40
Sales and Customer Service	*	3.24	3.13	0.92	69.15	2.49	7.21	9.48	1.95	*	*	1.60
Process, Plant, Machinery	2.12	43.30	1.04	12.15	8.84	0.80	22.54	2.41	1.38	1.60	1.03	2.79
Elementary	4.52	15.98	0.31	13.27	16.63	13.11	11.30	9.75	3.13	0.93	3.24	7.83
Average	3.23	21.19	1.28	14.72	13.55	3.90	7.77	10.85	7.63	4.95	5.76	5.16

Source: APS, 2004-2008, Occupation –SOC 2000 1 digit, industry SIC 2003.

Note 1: Table represents Employees & self-employed; Population data marked with red are based on a small unweighted sample size (10-29).

* Population based on unweighted sample sizes smaller 10. Such a small sample size poses the risk of disclosure of individuals and is therefore not presented.

Note 2: Industry section P, Q and NA were excluded. Note 3: Cells which are empty have no samples at all.

Note 4: The last row - 'average by industry' shows the percentage of men in each industry for all occupations, as opposed to the rows in the remainder of the table which show the spread.

The count by industry figures behind the percentage distribution of occupation by sector presented here, show that a fifth of men (21%) in employment and self employment work in Manufacturing industries, and nearly 15% in Construction. The next most populous industry area for men's work is in Wholesale Retail and Motor Trades accounting for 13.5%. Together these sectors account for half (49.46%) of the industries and businesses in which men work.

Women's employment and self-employment is concentrated in health and social work (24.89%), wholesale retail and motor (16.29%) and Education (13.74%)¹³. Together these sectors account for over half (55.1%) of all women in employment and self employment.

There is gender balance overall in financial, real estate and business activities (56,972 men, 43,823 women) but whereas half of men in this sector work in the Top 3 occupations (managers, professional and associate professionals/technical), only a third of women's employment takes place in the Top 3 occupations. There is vertical segregation within the sector.

Nearly two thirds (64.21%) of men's skilled trades work takes place in manufacturing and construction. Over 40% of men's work as process, plant and machine operatives takes place in Manufacturing, and over 20% in Transport and Communications. Clearly, skilled trades and process and plant occupations are associated with men's work in 3 distinct industry areas. Sample sizes are too low to estimate women's presence in manufacturing or construction by occupation.

Men working as senior managers or officials are most likely to be working in manufacturing, wholesale/retail/ motor trade (WRM), and finance, real estate and business activities which together account for over half (56.26%) of all their management activities.

Just over a quarter of men's work in the professions is in education, 20% in real estate and business activities, and 15% in manufacturing.

¹³ See Table 3a below. Averaged from count data but the overall total is not given in table due to possible disclosure indicated by *

Almost quarter of men in APT occupations work in public administration and defence (PAD), with their armed services roles accounting for much of this, 20% in finance, real estate and business activities and 14% in manufacturing. Together these business areas account for 58.41% of men's work in Associate Professional and Technical roles.

Recalling that the actual number of men working in administrative occupations is low, accounting for just 5% of all their employment and self-employment (see Table 1), one third of these men are clustered in PAD.

The employee count figures behind the distribution, given here as a percentage of occupation and sector combined, show that although men are a much lower proportion of public administration and defence employees, there are twice as many male managers in this sector as women, and in education men are half of all senior managers, demonstrating vertical segregation.

Table 3a. Women by Occupation and Industry Full & Part Time, employees and self-employed in Wales 2004 – 2008

SOC 1 Digit	Gender - FEMALE - Row Percentage											
	Industry SECTION (main job) - 1 digit SIC 2003											
	Agriculture, Fishing & Forestry	Manufacturing	Electricity, Water, Waste	Construction	Wholesale and Retail trade	Hotels and Restaurants	Transport, storage & communication	Financial intermediation, Real estate	Public administration & defence	Education	Health & Social Work	Other community & Social/personal activities
Managers and Senior Officials	0.90	7.56	0.38	2.93	22.69	10.45	3.98	14.23	8.32	2.82	18.89	6.84
Professionals	*	2.06	*	0.76	1.99	*	0.37	7.40	8.75	58.30	16.94	3.11
Associate Professional and Technical	*	6.07	0.72	0.76	4.45	0.28	0.99	11.79	15.97	5.12	46.20	7.58
Administration and Secretarial	0.58	7.57	0.67	3.94	9.01	1.47	3.78	20.99	22.78	7.04	16.96	5.22
Skilled Trades	12.27	15.13	*	3.09	14.70	23.81	0.86	1.58	3.54	13.20	8.94	2.75
Personal Service	0.75	*			0.28	1.07	2.69	1.16	3.50	20.62	58.92	10.88
Sales and Customer Service	*	2.05	1.34	0.56	77.60	2.75	3.48	7.70	2.46	*	0.55	1.31
Process, Plant, Machinery	*	73.40	*	*	9.01	1.79	6.35	1.54	*	2.59	2.03	*
Elementary	1.93	7.62	*	0.34	10.93	32.20	2.51	1.26	5.62	18.46	11.25	7.84
Average	0.84	7.00	0.47	1.45	16.29	6.02	2.66	9.50	10.29	14.56	24.90	6.01

Source: APS, 2004-2008, Occupation -SOC2000 1 digit, industry SIC2003.

Note 1: Table represents Employees & self-employed; Population data marked with red are based on a small unweighted sample size (10-29).

* Population based on unweighted sample sizes smaller 10. Such a small sample size poses the risk of disclosure of individuals and is therefore not presented.

Note 2: Industry section P, Q and NA were excluded.

Note 3: Cells which are empty have no samples at all.

Note 4: The last row - 'average by industry' shows the percentage of women in each industry for all occupations, as opposed to the rows in the remainder of the table which show the spread.

Women senior managers are concentrated in wholesale, retail and motor trade (22.69%), mainly in retail (see occupational breakdown above). The next highest concentration of women in senior management is in the health and social work (HSW) sectors (18.89%).

Fifty eight percent of women in professional occupations work in education but only 3% are senior managers in education.

Taken together, 75% of Wales' professional women are distributed between education and HSW, the majority of whom will be in the public sector. If we add the next highest concentration of women professionals by industry, those in public administration and defence, 84% of all women professionals in Wales are accounted for. This demonstrates horizontal segregation by gender. Women in professional roles are hardly present at all in 8 of the 12 industry classifications.

Nursing and social work jobs will account for most of the concentration of Associate Professional and Technical jobs in health and social work; 46% of women's APT jobs are worked in HSW. Almost two thirds (62%) of all women's APT occupations are accounted for when those working in public administration are added. Nearly 60% of women's personal service work takes place in HSW.

Forty per cent of women administrators work in HWS and PAD, with the rest being fairly evenly distributed throughout the sectors.

In conclusion, the data show a significant degree of gender concentration by industry sector or horizontal segregation. However with sectors that are not highly gender segregated, men and women still tend to be concentrated in distinct occupations, often demonstrating vertical segregation.

GENDER PAY GAPS BY OCCUPATION AND CONTRACT TYPE

HOURLY PAY

This analysis of pay by occupation begins by considering the difference in gross median average hourly earnings between men and women. Table 4 depicts hourly earnings for employees in Wales, in the nine major occupational groups (SOC 1-digit).

The hourly gross median gender pay gap for all employees is 18%. Median gross hourly earnings for *all* men are £11.02, which is not too dissimilar from their full time hourly rate of

£11.55. This dissimilarity reflects the 'norm' of full time working patterns for men (90% of men work full time hours).

In contrast, for women the gross hourly median for all employees is lower at £9.02 per hour than their full time median hourly earnings at £10.48. The median hourly earnings figure for *all* women is reduced by the prevalence of low paid part time work (47% of women in Wales work part time).

Table 4 Gross median hourly earnings for all, full time and part time employees 2004 - 2010, updated to CPI 2012

SOC 1 Digit	All. £'s		FT. £'s		PT. £'s	
	Men	Women	Men	Women	Men	Women
Managers and Senior Officials	16.52	13.66	16.57	13.73	13.09	13.27
Professionals	18.26	17.91	18.31	17.76	16.93	18.50
Associate Professional and Technical	13.76	13.18	13.92	13.13	10.04	13.34
Administration and Secretarial	10.04	9.11	10.15	9.25	8.65	8.81
Skilled Trades	10.36	7.07	10.48	7.53	6.71	6.71
Personal Service	8.28	7.69	8.59	7.75	7.53	7.63
Sales and Customer Service	7.11	6.66	8.13	7.46	6.28	6.43
Process, Plant, Machinery	9.26	7.15	9.40	7.23	6.54	6.97
Elementary	7.48	6.45	7.92	6.77	6.46	6.38
Median pay for all Occupation Groups	11.02	9.02	11.55	10.18	6.91	7.57

Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights.

Men earn more per hour for full time work in all occupations. Part time hourly pay is lower than full time pay in all occupations with the exception of professional occupations. Lowest paid of all are women working part time in Elementary jobs at £6.38 per hour, just 7p per hour more than the current Minimum Wage rate of £6.31 per hour for people aged over 21. Elementary occupations account for one fifth of all women's part time work.

Besides pay gaps within occupations, the data shows pay gaps between the occupations. On an hourly basis, professional men and women earn the most whether all, full time or part time employees are considered, followed by Senior Managers and Officials.

The lowest hourly pay for men working full time is in Elementary jobs (£7.92), Sales (£8.13), and Personal Services (£8.59), whilst women's lowest full time earnings are in Elementary (£6.77), Process plant and machinery and Sales (£7.46). A very small proportion of men's employment is in Sales or Personal Services, both highly feminised occupations. Very few women work in PPM, which is highly masculinised.

Sales, Administration, and Personal Services account for 42% of all women's full time work. Average full time hourly pay for women in these three occupations is £8.15. Nearly 40% (37.43%) of men work full time in Skilled Trades and Process Plant and Machinery combined where average hourly pay is £9.94.

In the feminised occupations of Sales, and Personal Services, median gross hourly full time pay is lower, for men as well as women, than pay in the masculinised occupations (SMO, ST, PPM). Administration is an exception to this rule. Here, FT hourly pay for men is higher than it is for men in PPM. However, this is not the case for women whose FT hourly pay in administration is lower than FT pay for men in PPM. For women, the observation that FT pay is higher in male dominated occupations than in feminised occupations holds constant.

That pay differences operate *between* occupational areas is significant. If more women worked in occupations dominated by men, and earned what men earn in those occupations, gender pay gaps would diminish. In the next phase of research we will estimate what increase in gender balance would be needed to influence overall pay gaps.

However, there is a qualification to this statement, as research has shown that women entering male dominated occupations in significant numbers can lead, over time, to a lowering of overall pay rates in those occupations (Grimshaw and Rubery, 2007).

Even *within* the feminised occupations, full time gender pay gaps persist. In the occupational areas dominated by women, men earn more on a full time working basis than women. The explanation will be, in part, due to men working in different sectors (see Tables 3), and occupying higher grades than women in these occupations.

Using administration as an example, the full time gross hourly median is £10.15 per hour for men and £9.25 for women (a pay gap of 9%). Although fewer in number overall, men are

much more likely to work in a full time basis in administration (87% of men full time) and therefore likely to be in higher grades as higher grades are correlated with full time working patterns. Only 60% of women working in administration work full time. The majority of men and women in administrative work are found in public administration and defence, but there is some divergence between industries as well (men predominate in Manufacturing and WRM), and so an industry effect may also contribute the earnings differentials (see Table 3 and 3a).

The following table depicts hourly gross median gender pay gaps by occupational group for all employees, for men and women working full time, and for men and women working part time. It also demonstrates the percentage pay gap in hourly pay between women working part time and men working full time in the same occupational group, and women who work full and part time in the same occupational group.

We provide this last calculation for two reasons. Firstly, men and women in the same job and grade should be paid the same hourly rate of pay whether working full or part time hours. Secondly, as the majority of part time workers are women (80%) these comparisons demonstrate the pay penalty for women in part time work. This disparity is visible and often significant between the men who hold 64% of all full time jobs in Wales, and the women who hold 80% of all the part time jobs, but is also visible between women who hold full time jobs and part time working women in the same occupations.

The following table provides the gender pay gap information for each of the nine major occupational groups.

**Table 4a Gender Pay Gaps for Gross Hourly Pay in Occupations SOC 2000 1 digit, Wales
2004-2010 by contract type**

SOC 1 Digit	All %	FT %	PT %	PT Women / FT Men %	PT Women / FT Women %
Managers and Senior Officials	17.00	17.00	-1.00	20.00	3.00
Professionals	2.00	3.00	-9.00	-1.00	-4.00
Associate Professional and Technical	4.00	6.00	-33.00	4.00	-2.00
Administration and Secretarial	9.00	9.00	-2.00	13.00	5.00
Skilled Trades	32.00	28.00	0.00	36.00	11.00
Personal Service	7.00	10.00	-1.00	11.00	1.50
Sales and Customer Service	6.00	8.00	-2.00	21.00	14.00
Process, Plant, Machinery	23.00	23.00	-6.60	26.00	3.50
Elementary	14.00	14.50	1.00	19.00	6.00
Average	18.00	12.00	-10.00	34.00	26.00

Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights. Percentages rounded up.

Note: Pay data relates to employees only. Pay was adjusted to CPI (2012=100) before percentages were calculated.

This analysis of APS data provides an overall gender pay gap for all employees of 18% for the period shown. Table 4a shows that hourly pay gaps are largest for *all* employees (those working full and part time) in the two occupational areas most dominated by men - Skilled Trades (32%) and Process and Plant and Machinery (23%). The *full time* pay gaps are similarly large at 28% (ST) and 23% (PPM). However, as discussed above very few women are impacted by the gender pay gap within these occupational groups as so few women work such jobs; more women are impacted by working in lower paid feminised occupations.

The other male dominated category is Senior Officials and Managers (men comprise 64% of these occupations). Men's gross median hourly earnings are £16.52 for all employees and £16.57 for full time working. Table 4a shows that the gender pay gap, for all and full time SMOs, is the same at 17% in each category. The dissimilarity between the two figures demonstrates the high proportion of all men who work full time in this occupational group.

Here the lower proportion of women working part time as senior managers produces less drag on women's overall earnings at the median. Men and women only work in gender balance in 15 of 45 occupational areas in management (see page 19 of this report). Dissimilarities in size of organisation, sector, gendered occupational specialisms, as well as grades, likely combine to influence gender pay gaps

In the gender-balanced occupational groups, (Professional, APT and Elementary) pay gaps are much smaller across the comparison for all employees, and for the full time workers (3% and 6% respectively). However, the full time pay gap at 14.5% for full time employees in elementary occupations is significant.

With regard to part time pay comparisons overall and across the occupational strata, the data shows a 34% pay gap between men's full time gross hourly median pay and women's part time gross median hourly pay, and 26% between full time women and part time women.

There is a 20% hourly pay gap between women who work part time as Senior Managers and Officials and men who work full time, again reflecting the association of part time work with lower grades, and uneven gender distribution between different sectors and business areas.

Only 13% of men who work as administrators work on a part time basis compared to 40% of women. The hourly pay gap between full time men and part time women is 13%.

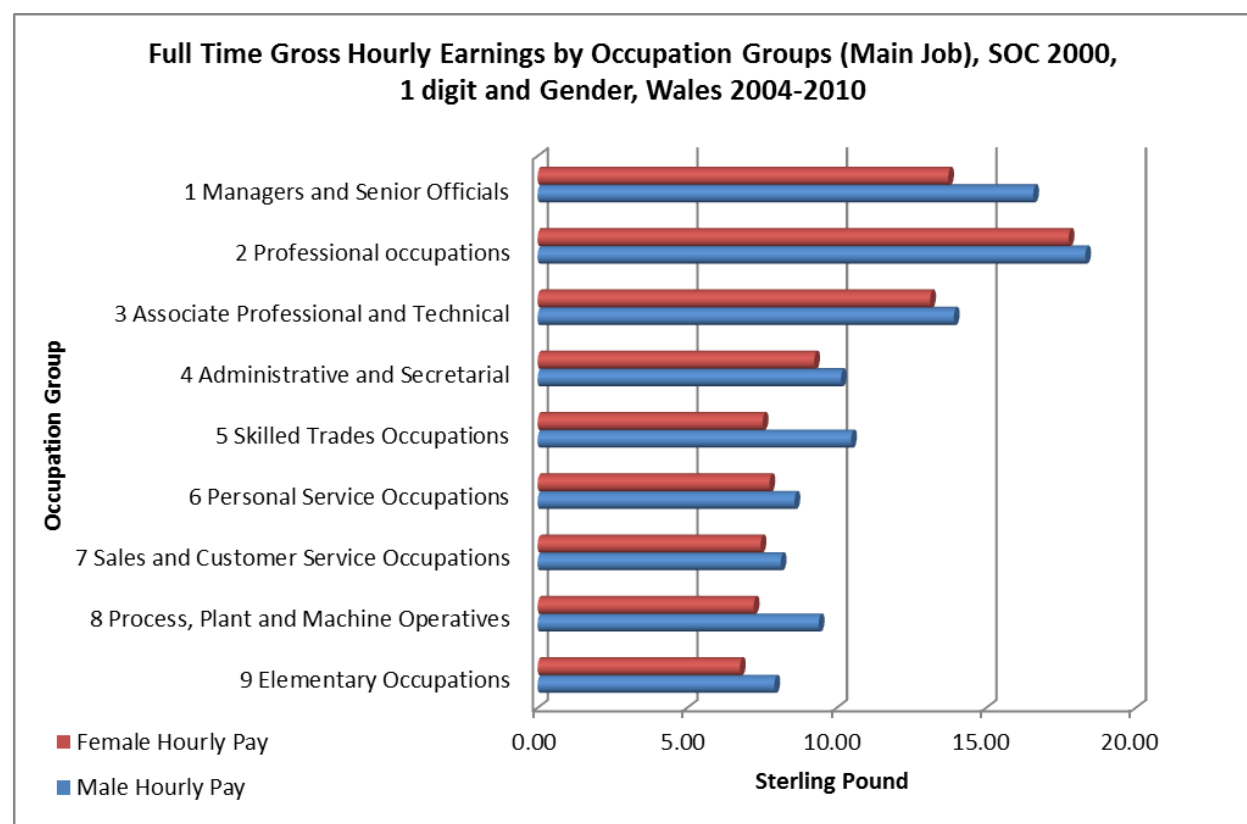
In elementary occupations the pay gap for full time workers is 14.5% but between full and part time men and women it is 19%, recalling that 73% of women in these occupations have part time hours compared to 25% of men.

The data also shows a pay premium for women's part time pay in comparison to men's part time pay across the occupational strata, with the exception of Elementary occupations. However, we must be mindful that only 10% of men work on a part time basis compared to 43% of women. The number of men working part time in any single occupational group is very small.

In APT occupations, the table shows a 33% pay premium for part time women's pay in comparison to men's part time pay. However, only around 7, 500 men work part time in APT occupations, compared to around 26,000 women, the majority of whom are highly qualified health and social care workers. Nevertheless, the part time pay premium for women in the Professions and APT is interesting and will be considered in greater detail in the next phase of analysis, as will the observation that women working part time in the Professions are earning more on an hourly basis than women *and* men working full time (Table 4).

The following chart provides a visual of the distribution of FT hourly earnings by occupation and gender discussed above.

Chart 1. The Distribution of Full Time Hourly Earnings by occupation.



Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights. Percentages rounded up. Earnings adjusted to CPI 2012

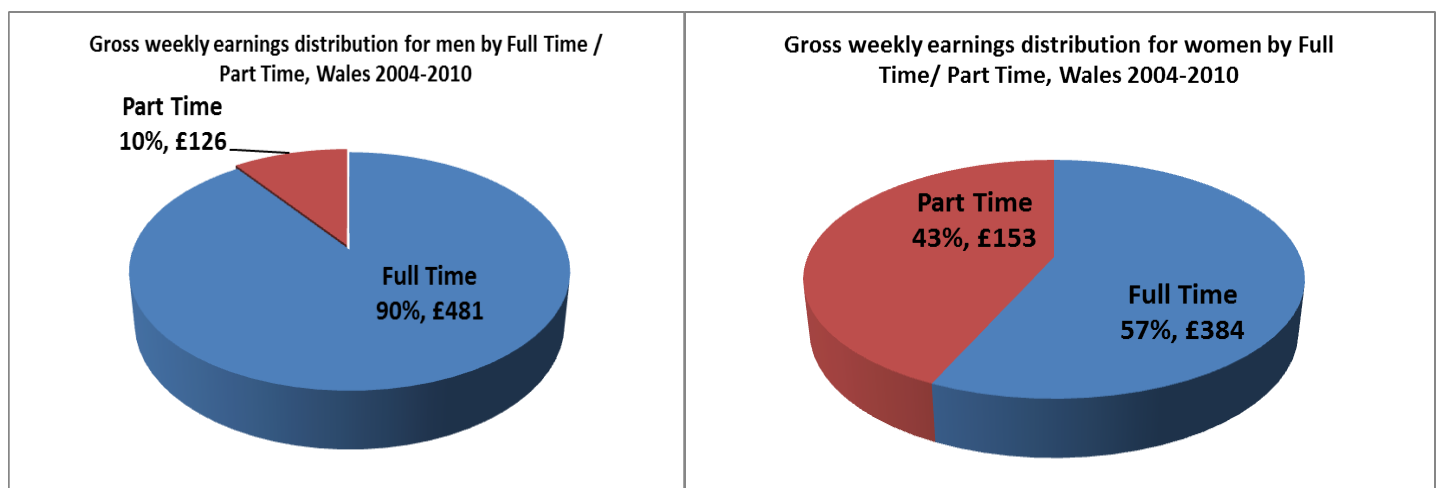
The highest earnings are available in first 3 occupations in the list. Men are earning more than women on an hourly basis for full time work in all occupational categories. Recall that FT work is unevenly shared $2/3^{\text{rds}}$ to a $1/3^{\text{rd}}$ between men and women respectively.

WEEKLY EARNINGS

The preceding discussion has explained how occupational segregation, gender segmentation into different work within occupations, contract segregation in relation to full and part time working hours and its association with higher/ lower graded work, combine to impact upon men and women's hourly earnings. Here we consider how these differences show up in weekly earnings disparities.

Chart 2 (below) shows that the weekly full time earnings gap between men and women is £97 per week, or 20%. This is a difference of £5,044 per year, or £151,320 over a 30 year working lifetime.

Chart 2. Weekly earnings, gender and working pattern.



Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights. Percentages rounded up. Earnings adjusted to CPI 2012

On average the 43% of women who work part time earn £153 per week or £7,874 per year, and the 10% of men who work part time, earn on average £6,466¹⁴.

Women earn £27 more per week than men as part time workers, a pay premium of 18% per week, and a difference of £1,404 per year in earnings (based on weekly pay and assuming 52 weeks worked).

The difference in weekly earnings between women working part time and men working full time is £328 per week, or 68%, and an annual gap of £17,056 per year (based on weekly pay and assuming 52 weeks worked).

The difference in weekly earnings between women working part time and women working full time is £231 per week, a weekly pay gap of 60%, and an annual earnings gap of £12,012 per year (based on weekly pay and assuming 52 weeks worked).

ANNUAL EARNINGS

The following table shows an annual comparison of earnings between men and women. All employees are included whether working full or part time.

The annual pay gap between all men and all women in employment is 28%. Recalling that the hourly pay gap for all employees is 18% (Table 4a), the pay penalty for the high prevalence of part time working for women is clear.

Men's annual earnings are higher in all occupations, including the 'feminised' occupational groupings of Administration, Sales and Personal Services.

¹⁴ Annual pay based on hourly pay for the usual hours worked multiplied by 52 working weeks per year. Hours worked weekly and annually vary by gender in full as well as part time work.

Table 4b. All employees gross annual pay by gender.

SOC 1 Digit	All inc. Full/Part-Time Annual Pay £'s			Annual Pay Gap by Gender (%)
	Gender			
	Men	Women	Total	
Managers and Senior Officials	38661	28419	33664	26.49
Professionals	37985	35385	37671	6.84
Associate Professional and Technical	28612	25366	26576	11.34
Administration and Secretarial	19847	16587	17813	16.42
Skilled Trades	21543	12493	20754	42.00
Personal Service	16366	12001	12931	26.67
Sales and Customer Service	13672	7620	8818	42.26
Process, Plant, Machinery	20224	14136	18456	30.00
Elementary	15176	6709	10970	55.79
Total	22921	16412	19589	28.00

Source: APS Special License, 2004-2010. Figures may vary due to rounding and the application of population weights. Percentages rounded up.

Note: Pay is gross value and adjusted to CPI (2012=100) represents Employee only.

Note: Annual Pay is based on the hourly pay taken by the hours worked each week and multiplied with 52 working weeks per year.

Recalling that men hold nearly two thirds of all full time jobs in Wales, it is clear that pay gaps are lowest where there is overall occupational gender balance and low levels of part time work for women, such as in the Professions and Associate Professional and Technical occupations.

The Elementary occupational grouping, although gender balanced overall, has the largest pay gap at 55.79%. Here there is no 'qualification lever', and 73% of women work on a part time basis compared to 25% of men.

Annual pay gaps in the male dominated occupational groups are high at 42% for those in Skilled Trades, 30.10% for Process Plant and Machinery Operative and 26.49% for Senior Managers and Officials. The first two of these groups account for a tiny proportion of women's full time work in the occupational distribution.

Interestingly, the same pay gap, 42%, is visible in Sales, an occupation dominated by women but where 68% of women work on a part time basis compared to 40% of men (Table 1).

Here we are reaching toward describing the combination of occupation, sector and contract type, which produces a 42% pay gap even in an extremely feminised occupational category. Decomposition, in the next phase of research will estimate the contribution of these factors and others (age, education), in generating such disparity.

Again pay gaps between the occupations are found to be significant. If we compare the strongly feminised Personal Services occupations with strongly masculinised Skilled Trades, we find a pay gap of 44% in annual earnings.

CONCLUSION

This review has demonstrated how occupational segregation is correlated with gender pay disparities in pay in Wales. It provides fine detail showing where men and women work and under what employment contract conditions.

Next in this series of publications, we will decompose the various types of occupational segregation, the impact of providing childcare or elder care, and employment characteristics as contributory factors to pay gaps.

The data presented here has shown that hourly pay gaps between the occupations where men and women are concentrated may be as significant for gender pay disparities as pay gaps between men and women within occupations.

Only a quarter of men and women in Wales work in gender balanced occupations in employment or self-employment. Nearly half (43%) of all women work on a part time basis. This proportion has changed little since the 1970s.

Even when men and women are in the same occupational groups their earnings diverge within 'gendered jobs', contract type, and levels of the hierarchy. Further it demonstrates how occupational and contract segregation combine to create not just gender pay disparities but very low earnings for women.

Seventy five percent of all women in professional jobs work in education and health. When those working in Public Administration are added, 84% of all women professionals in Wales are accounted for. Men in the professions are more evenly distributed across sectors within professional roles. Part time work is rarely on offer in those occupations dominated by men. Occupational groups dominated by women are those with the highest shares of part time work.

The 'feminised' occupations attract lower hourly pay rates, and have high concentrations of part time hours in lower graded work. This combination of contract segregation and vertical segregation is key to addressing gender pay disparities. With little training or progression opportunities, women get 'stuck' in this pattern of work throughout working life.

Although the percentage of women working part time in the top 3 occupations is significant, women in highly skilled work still trade down to lower skill levels to obtain part time working (ONS, 2013).

The proportion of women working part time in these Top 3 occupations may be a welcome indication that the connection between highly graded work and full time work may be loosening. More research is needed to ascertain the impact on pay and career progression for women working part time in higher grades. This and the other interesting observations from this occupational mapping of jobs, contract type and pay in Wales, will follow in Phase 2 of this research within WAVE at Cardiff University.

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APPENDIX 1

JOBS: GENDER BALANCE AND GENDER SEGREGATION

MANAGERS AND SENIOR OFFICIALS

There is gender balance in 15 of the 45 categories listed at SOC level 4, these include: pharmacy, hotel, public house, property, customer care, advertising and PR, retail, personnel, restaurant, financial, conference and wholesale managers.

Men are 90%+ of chief executives of major organisations in Wales, e.g. production works, storage and transport, construction, energy, and garage managers. There are no management categories with more than 90% women.

Men are between 80% and 90% of all information and communication, security, farm, and recycling managers, whereas women are 80%+ of healthcare practice, travel agency, hairdressing and beauty salon managers.

Men are between 70% and 80% of all senior officials in Local Government, marketing and sales, purchasing, quality assurance managers, whereas women are between 70% and 80% of all office managers, hospital and health managers.

PROFESSIONALS

Although the overall occupational category, Professionals, was gender balanced at SOC 1 level of data abstraction, only 15 of the 46 occupations within this larger classification are gender balanced. These are: bio-scientists, medical practitioners, pharmacist, opticians, dentists, veterinarians, further education teachers, school inspectors, secondary education teachers, social science researchers, researchers not elsewhere classified (n.e.c), solicitors lawyers judges and coroners, legal professionals (n.e.c) public service administration professionals, archivists and curators.

Men are 90%+ of all chemists, physicists, geologists, civil engineers, mechanical engineers (100%), electrical engineers, design and development engineers, IT strategy and planning

professionals, software professionals, quantity surveyors, chartered surveyors, building inspectors.

There are no professional occupations where women comprise 90% or more of all workers. Women are between 80% and 90% of all primary and nursery education teachers, special needs education teachers, social workers, and librarians.

ASSOCIATE PROFESSIONAL AND TECHNICAL

This category of occupations is also gender balanced at the SOC 1 level. Of the 73 APT categories in the APS dataset, 26 are gender balanced. These include: laboratory technicians, medical and dental technicians, artists, actors and entertainers, product clothing and related designers, journalists, broadcasting associate professionals, fitness instructors, legal associate professionals, insurance underwriters, sales representatives and estate agents.

Men are 90%+ of all electrical and electronic engineers, engineering technicians, building inspectors, NCOs and other ranks, fire service officers (leading officer and below), air traffic controllers, aircraft pilots and flight engineers, train drivers

Women are 90%+ of all midwives, pharmaceutical dispensers, occupational therapists, speech and language therapists,

Men are between 80% and 90% of all paramedics, building and civil engineering technicians, draughts persons, prison officers (below principal officer), musicians, and sports players.

Women are between 80 and 90% of all nurses, medical radiographers and physiotherapists.

Nursing is by far the single largest group of Associate Professional and Technical occupations. It constitutes 15% of all jobs in this category and 28% of all women's jobs in APT.

Men are between 70% and 80% of all brokers science and engineering technicians, IT operations technicians, police officers (sergeant and below), graphic designers, sports and fitness occupations, estimators valuers and assessors, finance and investment analysts and advisors, importers exporters, statutory examiners.

Women are between 70% and 80% of all careers advisors, chiropractors.

ADMINISTRATION

Of the 24 occupations falling within this female dominated occupational grouping, just 4 are gender balanced. These are: civil service executive officers, stock control clerks, database assistants and clerks, communication operators

Women are 90%+ of medical secretaries, legal secretaries, school secretaries, personal assistants and other secretaries, typists and receptionists.

Women are the majority at 80%+ or 70%+ of all other administrative occupations with the exception of transport and distribution clerks and market research interviewers.

SKILLED TRADES

Of the 54 occupations within this category, 7 are gender balanced (Horticultural trades, bookbinders, bakers, chefs/cooks, goldsmiths, upholsterers and garment trades n.e.c.

Men are 90%+ of all smith and forge workers, moulders and die casters, metal plate workers, pipe fitters, welding trades, sheet metal workers, agriculture and fishing trades, machine setters, tool makers, maintenance fitters, precision instrument makers, motor mechanics, vehicle body builders, auto electricians, electricians, telecommunications engineers, TV video engineers, computer engineers, bricklayers, roofers, plumbers, carpenters, glaziers, construction trades, plasterers, floorers, painters and decorators, printers, butchers, fishmongers, pattern makers.

Women are 90% of tailors, dressmakers and floral arrangers. Men dominate the remaining skilled trades, not elsewhere listed, at 70% or above of each occupation.

PERSONAL SERVICES

Of the 23 Personal Service Occupations in the dataset, 3 show a gender balance on a 60/40 basis. These are sports and leisure assistants, travel and tour guides, leisure and travel service occupations.

Women are 90%+ of dental nurses, nursery nurses, child-minders and related occupations, playgroup leaders and assistants, educational assistants, veterinary nurses and assistants,

hairdressers/ barbers, beauticians and related occupations, housekeepers and related occupations. Men are 90%+ of pest control officers.

Women are 80% to 90% of nursing auxiliaries and assistants, house parents and residential wardens, care assistants and home carers, animal care occupations, travel agents. Men – are between 80% and 90% of ambulance staff (excluding paramedics)

Women are between 70% and 80% of air travel assistants, and men hold this proportion of all rail travel assistants, undertakers and mortuary assistant jobs.

SALES AND CUSTOMER SERVICES

Of the 11 sales and customer service occupations listed in this female dominated occupational category, 5 show a gender balance. These include; call centre operators, telephone sales, collectors and credit agents, debt and rent collectors and sales related occupations.

This occupation shows less extreme segregation, where 90% or 80% of an occupation comprised of either men or women.

Men are 90% plus of rounds (wo)men and van salespersons. Women are 70% to 80% of sales and retail assistants, retail cashiers/ checkout operatives, merchandisers and window dressers.

Women are 65% to 70% of those in customer care occupations, while men hold a similar proportion of market and street trading jobs.

PROCESS, PLANT AND MACHINERY OPERATIVES

Of the 42 jobs listed within this occupational group, 4 show a gender balance. These are: textile process operators, food drink and tobacco process operators, assemblers (electrical products) and routine laboratory testers.

Women only feature as 30% or more of workers in 5 jobs, with the exception of sewing machinists where they comprise 93% of workers.

Men are 90%+ of glass and ceramics processors, metal making, electroplaters, paper and wood machine operatives, coal miners, quarry workers, energy plant operatives, metal working machine operatives, water and sewerage plant operatives, tyre, exhaust and windscreen fitters, scaffolders, road construction operatives, rail construction ops, construction ops not elsewhere classified, heavy good vehicle drivers, van drivers, bus and coach drivers, taxi drivers, rail transport ops, seafarers, air transport ops, transport operatives not elsewhere classified (n.e.c.), crane drivers, fork lift truck drivers, agricultural machinery drivers.

ELEMENTARY OCCUPATIONS

This occupational group is gender balanced overall (SOC 1 level) but of the 35 elementary occupations listed at SOC 4 digits, only 7 show gender balance. These jobs are; packers and bottlers, elementary office workers not elsewhere classified (n.e.c), elementary personal service occupations n.e.c., shelf fillers, bar staff, traffic wardens, and elementary sales occupations n.e.c.

Men are 90% of mobile machine drivers, forestry workers, labourers building and woodworking trades, stevadores, other goods handling and storage occupations, hospital porters, hotel porters, road sweepers, refuse and salvage workers, window cleaners,

Women are 90%+ school crossing patrol attendants, school mid day assistants.

Men are 80-90% of car park attendants, postal workers, security guards, fishing and agricultural labourers, industrial cleaning process operatives, labourers process and plant. Women are 80-90% of cleaners and domestics, dry cleaners.

Men are 70-80% of printing machine minders, farm workers, leisure and theme park attendants. Women are 70-80% of all kitchen and catering assistants, waiting staff.

APPENDIX 2

TECHNICAL DATA

This technical data is provided for readers who want to look behind percentages where given or focus an enquiry of the data in a way we haven't summarised. There is much more that could be analysed than we've been able to cover in this short report.

Data is provided where it cannot disclose individuals in accordance with our license from the ONS. Tables are locked and cannot be manipulated for the same reason.

SOC 1 DIGIT	SOC 3 DIGIT	SOC 4 DIGIT
<u>GENDER PAY GAP</u>	<u>GENDER PAY GAP</u>	<u>GENDER PAY GAP</u>
<u>POPULATION</u>	<u>POPULATION</u>	<u>POPULATION</u>
<u>PAY</u>	<u>PAY</u>	<u>PAY</u>