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Something in the Way She Moves: A Fresh Look at an Old Gap

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Abstract

Most studies of the gender pay gap use cross-section earnings functions to apply a Oaxaca decomposition into the contributions of differences in characteristics and coefficients. But the accounts that these studies provide of the gender pay gap are often hard to relate to more informal stories told about the sources of women's disadvantage in the labour market. In this paper we show how one can use a minimal amount of panel data to decompose average earnings into the contribution of the average starting wage for workers entering paid work from non-employment, average wage growth for those in continuous employment and the fraction of workers entering employment. We use this decomposition to try to identify the source of the pay gap between men and women and the gap between full-time and part-time women using data drawn from the British Household Panel Survey. Comparing men and women we find no significant differences in wage growth whilst in continuous employment so that the source of the gender pay gap comes from the entrant pay gap and the share of entrants. Looking at longer-run changes suggests that we would expect to see a further narrowing of the gap. Comparing full- and part-time women there is no difference in entry pay shares and little difference in wage growth so that the bulk of the differential can be explained in terms of the fact that part-time women are much more likely to be entrants.

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Something in the Way She Moves: A Fresh Look at an Old Gap

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Introduction

There is an enormous literature estimating the size of the gender pay gap, the proportions of the gap that can be ascribed to various 'explanations' (see Wright and Ermisch, 1991 for the UK, Blau and Kahn, 1997 for the US, inter alia) and documenting changes over time (see Harkness, 1996a for the UK and Blau and Kahn, 1997) for the US, inter alia). But what passes as an 'explanation' for economists often seems less than satisfactory to non-economists. For example, consider the following possible 'explanations' for the gender pay gap:

> *women are less likely to be promoted than men so their wage growth is lower and so they tend to get stuck in the lower-paying jobs*
>
> *from the time they enter the labour market women are in the low-paying jobs*
>
> *the interruption to labour market careers of women caused predominantly by care responsibilities leads to lower earnings for women*

Of course, economists are fully aware of these competing possible explanations for the gender pay gap but it is simply very hard if not impossible to assess the relative importance of them with the data sets and approaches that are commonly used. For example, with simple cross-sections of earnings and characteristics (which are the most commonly used) one can do little more than regress earnings on characteristics and then decompose the pay gap into a part which is the result of differences in characteristics and a part which is the result of differences in coefficients. One can then speculate on the causes of the results found. Of course, the results from these studies can be interpreted as shedding light on the 'explanations' proposed above e.g. finding significantly different effects of children on the earnings of men and women is plausibly interpreted as the consequences of interrupted labour market careers (see, for example, Waldfogel, 1995) and there is a large literature on whether 'better' measures of labour market experience can help in explaining the gender pay gap (e.g. Mincer and Ofek, 1982, Groot and van Ours, 1993, Albrecht, Edin, Sundstrom and Vroman, 1996, Swaffield, 1997, Blau and Kahn, 1997). We do not want to criticise these studies as, given the data available, it is unclear what more can be done.

But once one has panel data many other possibilities open up. One could obviously pursue the grand project of attempting to model the evolution of earnings over the whole life-cycle (for studies of the evolution of male earnings see Abowd and Card, 1989, Gottschalk and Moffitt, 1994, for the US and Dickens, 1996 for the UK). Our aims are more modest here (in part because we have a very short panel). We show how one can use just two observations on earnings and employment to provide a decomposition of the gender pay gap which we believe can be helpful in shedding some light on the sources of the disadvantage of women in the labour market.

The decomposition can be described very straightforwardly. One can divide the workers observed in a cross-section today into two groups: those with continuous employment and those who have had some period of non-employment in the past year (whom we shall call entrants

following the terminology of Gregg and Wadsworth, 1996[1]). The current average wage can be thought of as being a weighted average of the average wages of these two groups with the weight being determined by the proportion of entrants to employment. For those who have been continuously employed the current wage can be written as the previous wage plus their wage growth. Having written the average wage in this way, we can decompose the pay gap between men and women into differences in these different components and this is what this paper does.

It should be emphasized that this decomposition is not the only one that might be done but we think that its usefulness should be judged by the insights into the explanation of the gender pay gap it produces. For example, if it was found that the gender pay gap could be ascribed largely to the fact that there were differences in wage growth this might suggest that discrimination in promotion decisions was important. On the other hand, the finding that differences in entrant shares are the most important would suggest examining differences in labour market transitions.

Our main data comes from the British Household Panel Study (BHPS) and relates to the period 1991-95. We find that two-thirds of the gender pay gap can be explained by the pay gap among labour market entrants and one-third by differences in the entrant shares. Differences in wage growth for those in continuous employment are very small. We also use the decomposition to try to explain the differences in the earnings of full- and part-time women (see Blank, 1990a,b for the US and Harkness, 1996b for the UK for other analyses of this issue): here we find that differences in the entrant share are the most important sources of the gap.

We also find that the current gender pay gap is above the steady-state level implied by the factors we consider. This is an indication that the recent decline in the gender pay gap in the UK should be expected to continue. It also suggests that the elements we discuss have not been constant over time. By using information from other sources it seems that the entrant pay gap has declined at much the same rate as the average pay gap, that there has also been a decline in gender differences in the entrant shares but that the gender gap in wage growth is less favourable to women than it has been in the past.

The plan of the paper is as follows. In the next section we describe the basic decomposition that we use and we follow that with its application to the British Household Panel Study for 1991-5. We then look at the longer-run evolution of the gender pay gap and the FT-PT gap using data from other sources. Finally we try to examine differences in the different components of the pay gaps using the familiar Oaxaca decomposition. Our conclusion is that the gender pay gap is largely due to differences in pay on entry into employment and differences in the shares of entrants into employment. In contrast the differences in pay between FT and PT women are overwhelmingly due to the fact that part-time women are much more likely to be entrants into employment.

1. Note that our use of the term 'entrants' refers to all those entering paid employment after a period of non-employment and not just those entering from full-time education.

1. The Basic Decomposition

a. The Gender Pay Gap

Suppose that there were N_0 workers in employment last year each of whom had a log wage w_{oi}. For each of these workers define an indicator variable $?_i$ which takes the value 1 if the worker has been in continuous employment since last year and 0 otherwise. For those workers who have been in continuous employment let us define g_i to be the change in their log wage (so is approximately the rate of growth of their wage). Suppose there are E_1 entrants to employment who each have a wage w_j^e. Then the following relationship must be definitionally true[2]:

$$\bar{w}_1 = \frac{\sum_{i=1}^{N_0} ?_i(w_{0i}+g_i) + \sum_{j=1}^{E_1} w_j^e}{\sum_{i=1}^{N_0} ?_i + E_1} \qquad \textbf{(1)}$$

Simple re-arrangement of (1) leads to:

$$\bar{w}_1 = \frac{N_0\bar{?}\bar{g} + \sum_{i=1}^{N_0} ?_i w_{0i} + E_1\bar{w}^e}{N_0\bar{?} + E_1} \qquad \textbf{(2)}$$

where a bar over a variable denotes a mean and the mean of g is only taken over those who remain in continuous employment. In turn (2) can be written as:

$$\bar{w}_1 = \frac{N_0\bar{?}\left(\bar{g} + \bar{w}_0 + \frac{Cov(w_0,?)}{\bar{?}}\right) + E_1\bar{w}^e}{N_0\bar{?} + E_1} \qquad \textbf{(3)}$$

which, in turn can be written as:

2. For those with ? = 0 we obviously cannot define g but in what follows how we specify g for these people is irrelevant.

$$\bar{w}_1 = (1-a)\left(\bar{g} + \bar{w}_0 + \frac{Cov(w_0,?)}{\bar{?}}\right) + a\bar{w}^e \quad \textbf{(4)}$$

$$\text{where} \quad a = \frac{E_1}{\bar{?}N_0 + E_1}$$

a can be interpreted as the share of entrants in current employment. (4) has a very natural interpretation. It says that the current average wage is a weighted average of the average wage of new entrants and the average wage of continuing workers whose current average wage is the average previous wage plus average wage growth plus a covariance term which is essentially the correlation of job loss with the previous wage. If this covariance term is positive (which it generally is) then high wage workers are less likely to leave employment so that the average wage among continuing workers is higher than the previous period's average wage.

If we are in a steady-state then we can further simplify the above formula. Suppose we are in a static steady state with constant wages and employment (though one could compute similar formulae for more dynamic steady states). Then, as employment is constant it must be the case that:

$$a = 1 - \bar{?} \quad \textbf{(5)}$$

so that the share of new entrants is the risk of job loss for existing workers. Then using the formula in (4) the steady state average wage can be written as:

$$\bar{w} = \bar{w}^e + \frac{1-a}{a}\left(\bar{g} + \frac{Cov(w_0,?)}{1-a}\right) \quad \textbf{(6)}$$

This has a natural interpretation. The average wage is the average entrant wage plus the average growth of real wages for continuing workers times the average job tenure which is given by (1-a)/a. In what follows we will refer to the different elements on the right-hand side of (6) as the 'fundamentals' as they can be thought of as accounting for the long-run gender pay gap. However, our use of the term 'fundamental' should not be interpreted too literally. It should be stressed that everything we have done so far is simply manipulation of identities and the 'fundamentals' may themselves be influenced by other factors. But it is clear that if we want to understand the difference in wages across groups (say men and women) one can think about this difference as being made up of different components of (6). These different components can all be given natural interpretations in terms of the three explanations of the gender pay gap discussed in the introduction. Wage growth for workers in continuous employment is connected with promotion and job mobility etc, entrant wages are concerned with gender pay gaps from the moment of entry, and the entrant share is concerned with interruptions to employment careers.

It should be emphasized that the split of current employees into the two groups of entrants and continuous workers are not the only ones that might be done and are themselves heterogeneous groups which one might think of breaking down further. For example our entrants can be thought

of as consisting of two types of workers: those first entering the labour market after full-time education and those re-entering employment after a period of unemployment, sickness or domestic responsibilities. In fact, only 3% of our entrants are new entrants who have just completed full-time education so that sample sizes prevent us from splitting our entrants in this way. Similarly those in continuous employment could be divided into those in the same job, those who have changed job but remained with the same employer and those who have changed employer. We do include controls for whether an individual has changed jobs below but it is sample sizes again that prevent us from doing a more thorough disaggregation along these lines.

b. The Full-Time-Part-Time Gap

One can apply a similar decomposition to the earnings of FT and PT women to try to discover the origin in the differences in their wages. However there is an additional complication here as individuals can move between FT and PT states. Given this it is natural to think of those who have been in continuous employment as being divided into two groups: those who were previously employed FT and those who were previously employed PT. The average current wage will then be a suitably weighted average of the earnings of these two groups of workers and the entrants. Let us introduce some notation. Suppose there are N_{tk} workers at date t (t=0,1) in state k (k=FT, PT) and E_{tk} entrants. Define the variable $?_{kl}$ to take the value one if an individual was in state k in period 0, has remained in continuous employment and is in state l this period (k,l=FT,PT). Also denote by $g2_{kl}$ the change in the log wage for those in continuous employment and in state k at date 0 and state l at date 1. Then we have the following expression for the average full-time wage:

$$\bar{w}_{1f} = \frac{\bar{?}_{ff}N_{0f}}{\bar{?}_{ff}N_{0f}+\bar{?}_{pf}N_{0p}+E_f}\left(\bar{w}_{0f}+\frac{Cov(w_{0f},?_{ff})}{\bar{?}_{ff}}+\bar{g}_{ff}\right)$$

$$+ \frac{\bar{?}_{pf}N_{0p}}{\bar{?}_{ff}N_{0f}+\bar{?}_{pf}N_{0p}+E_f}\left(\bar{w}_{0p}+\frac{Cov(w_{0p},?_{pf})}{\bar{?}_{pf}}+\bar{g}_{pf}\right) \qquad \textbf{(7)}$$

$$+ \frac{E_f}{\bar{?}_{ff}N_{0f}+\bar{?}_{pf}N_{0p}+E_f}\bar{w}_f^e$$

This has a natural interpretation. The first term is the share of current full-time workers who have been in continuous employment and were previously full-time multiplied by their average wage today which can be written as their current wage yesterday plus a covariance term plus their average wage growth[3]. The term on the second line is then the share of workers who are currently FT but who were part-time multiplied by their average current wage and the term on the final line is the share of entrants multiplied by their average wage. There is obviously an equivalent formula for PT workers:

3. One could write the growth term as the average growth for all workers who were previously FT plus a covariance term for the correlation of wage growth with those who remain in FT status. For reasons that will become apparent, we prefer to use the formulation as written here.

$$\bar{w}_{1p} \equiv \frac{\bar{\pi}_{pp} N_{0p}}{\bar{\pi}_{pp} N_{0p} + \bar{\pi}_{fp} N_{0f} + E_p} \left(\bar{w}_{0p} + \frac{Cov(w_{0p}, \pi_{pp})}{\bar{\pi}_{pp}} + \bar{g}_{pp} \right)$$

$$+ \frac{\bar{\pi}_{fp} N_{0f}}{\bar{\pi}_{pp} N_{0p} + \bar{\pi}_{fp} N_{0f} + E_p} \left(\bar{w}_{0f} + \frac{Cov(w_{0f}, \pi_{fp})}{\bar{\pi}_{fp}} + \bar{g}_{fp} \right) \qquad \textbf{(8)}$$

$$+ \frac{E_p}{\bar{\pi}_{pp} N_{0p} + \bar{\pi}_{fp} N_{0f} + E_p} \bar{w}_p^e$$

Now let us turn to the data to see how these decompositions work in practice.

2. The Data

The data we use in this study is from the first five waves of the British Household Panel Survey (BHPS) covering the years 1991-5, a period of recession in which unemployment peaked in 1993 followed by a period of recovery. The BHPS is a household-based panel survey consisting initially of some 5,500 households and 10,300 individuals drawn from 250 different areas of Great Britain who are interviewed every Autumn. This interview contains a lot of information on their current situation but the respondents are also required to fill in a job history record detailing their labour market activity over the previous year. The continuing representativeness of the survey is ensured (and loss of panel members minimised) by following panel members wherever they move in the UK and including in the panel the new members of households formed by original panel members.

We restrict our attention to employees and use average hourly wages including overtime as our wage measure. These hourly wages were deflated using the average weekly earnings and weekly hours indices for the economy as a whole so that the average wage on our measure should be constant over time (if we regress the adjusted wage on a time trend, the trend is not significant). To be part of the computation of wages in (4) one must obviously have been in employment either now or previously but the decomposition of average wages in (4) also requires the availability of other information which further restricts our sample. One can identify the following groups of people in our sample:

a. Those in employment at the previous interview but no longer in employment;
b. Those not in employment at the previous interview but in employment now;
c. Those in employment at both interviews and with no intervening period of non-employment;
d. Those in employment at both interviews but with some intervening period of non-employment.

Those in employment at any date require information on the wage to be available and, in addition, those in employment at both periods require information on the intervening period (from the job history records) to be available to check whether they have had any intervening period of non-

employment. To try to ensure that this restriction did not lead to under-representation of those in continuous employment we restricted our sample to those for whom the job history information was available even if this information was not strictly necessary to allocate the individual to a particular group. Table 1 provides information on the loss in sample size from these restrictions.

Among those currently in employment, groups (b) and (d) are those classed as entrants and we will only use information on their current average wages in the decomposition. This means throwing away information for group (d) for whom we also have information on their wage growth. From Table 1 we can see that there are relatively small numbers of people in group (d) (the tenth row is the relevant one) so we cannot have a separate group for these people. In terms of their average wages these individuals are, as we might expect, between groups (b) and (c) but they are much closer to group (b) than (c). For this reason we choose to put them in with the employment entrants.

Now let us consider how the decomposition works out in practice.

3. Results of the Decomposition

a. The Gender Pay Gap

Table 2 presents our basic decomposition of the average wage. The raw wage gap is 35 log points in 1992 falling to 32 log points by 1995. This is basically consistent with the trends observed in the gender wage gap in other data sets. Table 2 also breaks down the log wage into the different components of (4).

Looking at the decomposition in (4) and Table 2 it is apparent that the bulk of the gender pay gap this year is 'explained' by the gender pay gap in the previous year. But, as (6) shows, it is the other components which are more fundamental in the sense of explaining the gender pay gap in the long-run, so it is on these components that our discussion will focus. It should be apparent that there is quite considerable variation in these components from year to year so that our discussion will focus on the average, paying particular attention to the variables where the differences do seem to be systematic. This year-to-year variation could be the product of the relatively small sample sizes in the BHPS or because there is considerable cyclical variation in the factors we will study. It is a pity that we only have five waves of data with which to work as certain conclusions must inevitably be somewhat speculative although below we do look at information from other data sets to try to get some idea of longer-run trends.

Taking the four years together, wage growth for those in continuous employment seems very similar for both men and women, with it actually being higher for women than men in 1993 and 1995 though the pattern is reversed in 1994. This might be thought somewhat surprising given that we might expect that promotions and the like are important sources of wage growth and that women's access to higher-paid positions within firms is restricted: the so-called 'glass ceiling' (see Gregg and Machin, 1994). However one should remember that wage growth and promotions are likely to be somewhat easier to obtain at lower rungs on the job ladder so that the fact that women only have the same wage growth as men when they are concentrated on the lower rungs of the ladder could be taken as indication that, given their position, they do worse in terms of wage growth. The covariance term is always positive indicating (as is well-known from other studies) that high-wage workers are much less likely to leave employment. But the covariance term also does not seem to show any very systematic differences between men and women. The implication of these results is that the wage gap does not widen through the years between men and women

who remain in continuous employment and that any pay gap between these men and women must have occurred on entry into employment.

Table 2 also shows that there is such a systematic difference in the entry wages of men and women. But what it is noticeable is that the gender pay gap on entry is less than the gender gap in average wages, with an average across the years of about 18 log points or something like half the overall gender pay gap. The fact that the gender gap in entry wages is less than the average gap is consistent with evidence from other studies. For example, Manning, 1996 finds that there is no gender pay gap for those workers entering the labour market immediately after leaving full-time education and Graddy and Pistaferri, 1997 find that the gender pay gap for newly-graduated MBAs is about 8 log points. It is also important to note that labour market entrants earn significantly less than the average. The traditional interpretation of this is that entrants have less human capital but Manning, 1996 argues that a search model of the labour market is a viable alternative explanation.

Finally, there is the difference between men and women in the proportion of entrants to employment. As we would expect, the entrant share is higher for women (about 14%) than men (about 11%). As labour market entrants earn less than the average this will also tend to produce a gender pay gap. However, while these differences are systematic, one might also argue that they seem to be quite small so that one might question how much of the gender pay gap can be ascribed to differences in the entrant shares. But, from (6), we can see that the steady-state gap depends on one minus the entrant share divided by the entrant share. For women this is 6.1 while for men it is 8.1, a difference that 'looks' much bigger. To put it in some sort of perspective if we take the sum of the wage growth and the covariance term to be 0.05 then the differences in the entrants share between men and women is something like 10 log points, a substantial fraction of the total wage gap. So, on this basis it would seem that something like two-thirds of the overall gender pay gap can be ascribed to differences in pay among labour market entrants and one-third to differences in the proportion of entrants. It is this difference in the entrant share which can account for the fact why women are disproportionately concentrated among the low-paid menial jobs in the economy and also explains why their earnings-experience profile is flatter (Manning, 1996) even though wage growth for those in continuous employment is approximately the same.

b. The Full-Time-Part-Time Gap

Table 3 presents the results of applying the decompositions in (7) and (8) to the pay gap between full- and part-time women where we have used 30 hours as the cut-off between part-time and full-time work. The average pay gap seems quite stable over this period at around 21 log points. There are several points worth noting about the results reported in Table 3. First, there are very few transitions between full- and part-time status. Only something like 6% of current part-time workers have been in continuous employment and were previously employed full-time with a similar proportion of full-time workers being previously part-time. For reasons that will become apparent it is quite likely that a substantial fraction of these apparent transitions are in fact some form of error. This means that in understanding the pay gap between FT and PT women one can treat them as approximately separate groups with little in the way of transitions between them.

Looking first at the average entrant wage, one can see that the pay gap here is very small averaging about 4 log points or only about 20% of the overall gap. So, the pay gap between full- and part-time women does not emerge at the point of entry into paid employment. Looking at wage growth for those in continuous employment the picture is rather confusing. In 1992 and 1993 the average wage growth for those in continuous FT employment is not very different from that for those workers in continuous PT employment. But in 1994 and 1995 there is a substantial gap with

average wage growth being over 4% higher for those in continuous full-time employment. This difference is then magnified by the covariance term which is quite large and positive for full-time workers and close to zero for part-time workers, the implication being that while high-wage FT workers are less likely to leave employment the same is not true of high-wage PT workers.

The other big difference between FT and PT workers is in the entrant share. While 10% of FT women are labour market entrants (a figure that is actually slightly lower than the overall figure for men) the entrant share for PT women is closer to 20% so that one in five PT women have had a period of non-employment in the past year. If we think of PT and FT status as having no transitions between them then, from (6), we can see that the steady-state gap depends on one minus the entrant share divided by the entrant share. This is 9 for FT women compared with 4 for PT women implying, given an average sum of the wage growth and covariance terms of 4% per annum a contribution of the difference in entrant shares to the overall pay gap of 16 log points, about 75% of the actual gap. So it is clear that the main source of the gap between FT and PT women is because of differences in the entrant share.

This discussion has ignored those workers who move between FT and PT status while remaining in continuous employment. While those who do move are a small group one should pay some attention to them. What one notices when one looks at Table 3 is that those workers moving from FT to PT status have apparently very positive wage growth while those going in the opposite direction have very negative wage growth. The most likely explanation for these results is measurement error. Because our hourly wage measure is computed by dividing weekly earnings by weekly hours it is very vulnerable to problems caused by division bias. Given that very few people seem to move between FT and PT status a high percentage of those who are classed as having moved are probably the result of mistakes in coding hours in one of the years. The consequence is that the hourly wage is then likely to be seriously wrong in one of the years being either too high when the worker is reported as being PT or too low when they are reported as being FT. This can then account for the patterns of wage growth seen among those making the transitions.

So far, we have concentrated on the pay gaps in the early 1990s. But we know that there have been substantial changes in the pay gaps over time with the gender pay gap falling and the FT-PT gap rising. So we might be interested in which of the 'fundamentals' have changed.

4. A Longer-Run View

It should be apparent from (4) that if there were permanent changes in the fundamentals, the observed gender pay gap would change only slowly in response to these changes. So, one way of getting some idea of likely future changes in the gender pay gap is to use (6) to compute what the steady-state gap would be if the fundamentals remained at their current levels. If the current wage gap is above the implied long-run level then we would expect the gender pay gap to decline further while if it is above it we would expect it to rise. The implied levels of long-run wages are presented in the final row of Table 2. The numbers jump around quite a lot (largely because of the variation in wage growth which is probably due to the cyclical sensitivity of this variable) but are always below the current pay gap and, taking the average across the three years, the steady-state gender pay gap is about 5 log points less than what we currently observe. This implies that if the current gender differences in wage growth, entry wages and entrants' shares stayed the same we would expect to see a gradual narrowing of the gender pay gap with it eventually ending up at about 27 log points.

One can also interpret the gap between the actual and steady-state pay gap in another way. If the current gender pay gap is above the implied steady-state level then it must be the case that the 'fundamentals' have been changing in such a way as to narrow the gender pay gap. So let us consider whether there is any evidence for this. This analysis must be somewhat more speculative as we cannot rely on the BHPS for this earlier data. There is no single data source which we can use for all the information that we require and the data that is available is not generally in an exactly equivalent form.

Our information on the longer-run evolution of the entrant shares comes from the annual Labour Force Survey (LFS) conducted in the spring of every year. The LFS asks a question about current labour market status and also a question about status one year ago. This can be used to compute the fraction of workers currently in employment who were not in employment a year ago. This will obviously lead to an under-estimate of the entrant share as we have measured it in the BHPS as there is no information on labour market status between the two points which we have used to classify those with interruptions to work as entrants to employment.

Figure 1 shows the share of entrants in each year from 1975 to 1995 from the LFS for men and women and for FT and PT women separately[4]. The figures from the LFS suggest that the gender gap in the entrant shares has narrowed over time although more because the entrant shares for men are higher than 20 years ago than because female entrant shares have fallen. So, there does seem good evidence that the gender gap in entrant shares is less now than it used to be. On its own this will tend to have caused some reduction in the gender pay gap and, even if the entrants' shares stabilised at their current levels, we would expect to see some further narrowing of the gap as implied by the steady-state computations reported above. There are important differences between FT and PT women in the entrant shares. The entrant share for PT women has always been above that for FT women but the gap has widened over time so that FT women show a marked fall in the entrant share to levels actually slightly below those for men but the entrant share for PT women does not show such a marked decline. This growing divergence in the entrant shares for FT and PT women is likely to be part of the cause of the widening pay gap between these two groups.

Our information on the evolution of the entry pay gap comes from the General Household

4. For the years 1991-95 one can compare the LFS estimate of the entrant share with that from the BHPS on an equivalent definition to the LFS. Even on a consistent definition the entrant share in the BHPS seems to be higher than in the LFS but because there may be important seasonal variation (the BHPS is conducted in the autumn, the LFS in the spring) it is difficult to know what the exact cause of the difference is.

Survey (GHS) for 1979-91. The GHS asks a question about labour market status a year ago which is similar to the question asked in the LFS and our definition of a labour market entrant is the same as in the LFS. The wage information in the LFS is not ideal as for our sample period what we have available is gross weekly earnings including overtime but the hours measure excludes overtime so our hourly wage measure has some measurement error induced by the absence of this information[5]. Figure 2 gives the average gender pay gap for entrants and, as a comparison, the average gender pay gap in the whole sample. The measure of the entry pay gap jumps around a bit more because the sample sizes are quite small but it can be seen that the gap for entrants has always been less than the average gap and that the entrant pay gap has declined over time as has the average pay gap. In fact the trend declines in the two pay gaps are very similar. The finding that the gap in the entrant shares has fallen means that one would expect the average gap to fall faster than the gender pay gap so these findings, on their own, are not entirely consistent with the previous information on the evolution of the entrant share.

Figure 2 also presents the average pay gap for FT and PT women and the entry pay gap. We can see the marked rise in the average pay gap but no marked trend in the entrant pay gap which has always been close to zero. So trends in the entrant pay gap do not seem capable of explaining the rising average pay gap.

Now consider differences in wage growth between men and women. Our longer-run information on this comes from the New Earnings Survey (NES) conducted in April each year. As this is a panel study we can compute wage growth for those individuals in employment in two adjacent years (i.e. this is consistent with the definition of entrants as used in the GHS and LFS). Figure 3 plots the difference in wage growth for women and men for full-time adult workers[6]. One notices the very large excess in female wage growth in the early 1970s which is almost certainly the result of implementation of the Equal Pay Act. But, with the exception of a few isolated years, female wage growth for those in continuous employment is always above that of men and the early 1990s actually seem to be a period in which the difference is rather small. One interpretation of this result is that as women have worked their way up the job ladder they have exploited the easy opportunities for advancement and so it is this that accounts for the declining gaps in wage growth. It is unfortunate that these figures only relate to full-time workers but it should perhaps be noted that in the BHPS part-time workers do not have very different rates of pay growth. But what this suggests is that women have never been at a disadvantage in terms of wage growth if they remain in employment.

So, in terms of longer-run trends it would seem that the gender pay gap has been declining because of a declining entry pay gap and convergence in the share of entrants, but that changes in wage growth would actually tended to have widened the pay gap. Comparing FT and PT women we lack the data on wage growth but it would seem that it is the growing divergence in the entrant shares which can account for the widening pay gap.

5. Decomposing the Decomposition

In this section we attempt to model the different components of the gender pay gap trying to evaluate the extent to which the differences between men and women can be ascribed to

5. It should be noted that for the period 1974-79 overtime hours is available and omitting overtime hours does not seem to make that much difference, the correlation between the two measures being over 95% after taking out time effects.

6. Unfortunately, we do not have data on PT women workers who are heavily under-sampled in the NES.

differences in their observable characteristics or to differences in the effect of those characteristics using the familiar Oaxaca decomposition. In modelling the fundamentals we use a common set of regressors namely, potential experience, race, marital status, number of children, education, employer size and region. We model wage growth for those in continuous employment, entry wages among labour market entrants and the probability of being an entrant among those in current employment. Descriptive statistics for these variables are summarized in Table 4a for men and women and in Table 4b for FT and PT women. Looking at Table 4a, the overall characteristics of men and women are very similar with the only substantial differences being in average job tenure (note that a change of job in the BHPS includes those without changes of employer), the household characteristics and the proportion working in small firms (this is consistent with the findings of Paci and Joshi, 1996, and Harkness, 1996b, on other data sets). But once we look at the distinction between continuing workers and entrants there are more marked differences with female entrants being much more likely to have children at all, and young children in particular, and little difference in job tenure for continuing workers (we do not report job tenure for entrants as they must have job tenure less than a year by definition).

Turning to Table 4b the most important differences in the characteristics of FT and PT women are in education (FT women are more educated), the number of children (PT women have more, younger children) and job tenure. Perhaps surprisingly given that PT women are more likely to be entrants, they have longer job tenures than FT women: the explanation lies in the proportions of women in continuous employment who are changing jobs where FT women are much more likely to do so than PT women. This is consistent with the view that PT women may be stuck in jobs with little prospect of advancement.

We start our analysis by doing the familiar decomposition of the overall wage gap.

a. The Overall Wage Gap

Table 5 presents the results of the estimation of standard earnings functions. The first column presents the results for all workers, the next two columns present the results of estimating separate equations for men and women, and the fourth and fifth the results for FT and PT women. If one looks at the coefficients for men and women the most striking differences are to be found in the effect of children and in the experience profile (which is perhaps hard to interpret as it is a quartic). The number of children has no effect on male wages but a very powerful downward effect on the wages of women (the so-called family penalty - see Waldfogel, 1995). Perhaps surprisingly the detrimental effect on female wages of very young children is smaller than the effect of older children: this is almost certainly a sample selection effect as only high-wage women can afford the high childcare costs of very young children[7]. The experience profiles for men and women are similar for something like 10 years but then decline for women earlier and faster for men leading to a gap of about 20 log points after 40 years.

Looking at the differences between FT and PT women the most marked differences are in the experience profiles with that for part-time women being much flatter though this is partially off-set by higher returns to job tenure.

In what follows we will attempt to understand how the source of these differences can be found in the individual elements of our decomposition. Table 9 presents the results of a Chow test

7. This raises the issue of whether we should be doing sample selection corrections to these equations. In the absence of any good instruments to identify sample selection effects we think little is added by doing this but one should retain an awareness of the possibility that some results may be driven by sample selection effects.

of the hypothesis of equality of coefficients and the results of the standard Oaxaca decomposition. As can be seen the hypothesis of equality of coefficients is overwhelmingly rejected as we would expect. The Oaxaca decomposition suggests that virtually all of the gender pay gap can be ascribed to differences in coefficients, a result that is hardly surprising given that the differences in characteristics are small but that slightly over half of the FT-PT gap can be ascribed to differences in characteristics.

Let us now consider how robust are these results are to looking at the decomposition of our 'fundamentals'.

b. Wage Growth for those in Continuous Employment

Table 6 presents the results of a similar exercise to that in Table 5 but where the sample is restricted to workers in continuous employment and the dependent variable is the change in the log wage. What is remarkable about these regressions is that the fit is extremely poor. Virtually the only significant variable is the job change dummy which suggests that changing jobs leads, on average to an extra 2% in wage growth. As this is the average level of wage growth in the sample this suggests that the only way in which individuals can achieve wage gains beyond the rise in average earnings in the economy as a whole is by changing jobs.

What is remarkable about the wage growth equations is that the differences between the male and female equations are very small e.g. having kids seems, if anything, to raise wage growth for women more than they do for men so that the child penalty is not the consequence of lower wage growth for those in continuous employment. In fact, one can accept the hypothesis of equality of coefficients (see Table 9). This is consistent with our earlier conclusions that gender differences in wage growth are very small. This is also reflected in the results of the Oaxaca decomposition where the contribution of both elements is very small.

Turning to the differences between FT and PT women the differences are also not very marked and though one can reject the hypothesis of equality of coefficients at any conventional significance levels the strength of the rejection is less marked than in the case of the overall pay gap. The Oaxaca decomposition suggests that, on the basis of characteristics alone, full-time women should do better in terms of wage growth (largely because they are younger) but that the coefficients are more favourable to part-time women, perhaps another indication that groups of workers who are concentrated on the lower rungs of the job ladder have greater opportunities for wage growth.

c. Entry Wage Equations

Table 7 presents the results of a similar exercise but with the sample now restricted to entrants and the dependent variable their entry wage. Comparing men and women the effects of children seem very similar so, again, this cannot be the source of the family penalty. The experience profiles are different and largely reflect the differences in the experience profile across all workers suggesting that it is differences in entry wages that may explain differences in the experience profile (Manning, 1996, reached a different conclusion). It should be noted that the gender pay gap on entry to the labour market after completing full-time education is essentially zero so that all of the entry pay gap is among those individuals re-entering paid employment after a period of non-employment.

Turning to the differences between PT and FT women we also find that the experience

profiles are much flatter for PT workers suggesting that it is the difference in entry wages that can explain the differences in the profiles for the two groups of workers. However the value of the Chow test statistic suggests that the gaps in entry pay between FT and PT women are quite small though again one can reject the hypothesis of equality of coefficients at conventional significance levels.

d. Entrant Equations

Table 8 presents the result of an 'entrant' equation. The dependent variable is now a binary variable taking the value one if the individual is an entrant and zero otherwise. In order to facilitate the Oaxaca decomposition we estimate a linear probability model. Probit estimates were very similar and it should be remembered that the linear probability model does give consistent estimates of the average marginal effects[8]. It is here that we find the big differences in the effect of children for men and women. In particular having children in the household has, for obvious reasons, a dramatic effect on the entry probability for women and very modest and insignificant effects for men. So, it is in the fact that women with children are much more likely to be labour market entrants that the main explanation of the pay penalty associated with having children can be found. Again, the Oaxaca decomposition suggests that it is differences in coefficients rather than characteristics that can account for the gender differences in entrant shares.

Turning to the differences in FT and PT women the differences in the coefficients on the regressors are not very marked but the Oaxaca decomposition suggests that most of the difference in entrant shares is the result of differences in coefficients so that it is the difference in the intercept that accounts for almost all the differences. So it would seem that part-time jobs are simply more likely to be entrant jobs whatever the other characteristics of the worker or the job.

8. One of the problems with the linear probability model, namely that it may predict values outside the unit interval afflicts only 2%of our sample in spite of the fact that the average value of the dependent variable is 0.1.

6. Conclusions

In this paper we have presented a new decomposition of the gender pay gap which uses limited panel information on employment transitions and wage changes. While one must always be aware that the decomposition is essentially arbitrary, we believe that it does shed some interesting light on the causes of the gender pay gap and the pay gap between FT and PT women. What it suggests is something like the following story. On entry into the labour market after leaving full-time education the earnings of men and women are very similar. As earnings growth while in continuous employment shows no significant gender differences male and female earnings will follow each other closely as long as there are no breaks in paid employment. But, differences start to emerge once there are breaks in employment. When returning to the labour market after a break in employment both men and women do so at lower wages but the men do so at higher wages than women with the entry gender pay gap rising with age. This combined with the fact that women are more likely to have breaks in paid employment is the explanation of why the pay of women increasingly falls behind the pay of men. Part-time women are paid less than full-time women because they are much more likely to be entrants and because they have slightly lower wage growth when in paid employment.

As the bulk of the pay gap can be put down to the result of higher numbers of women having breaks in employment and the pay penalty associated with these breaks it suggests that it is labour market interruptions that are the main cause of women's labour market disadvantage. As the majority of the interruptions to the labour market careers of women are caused by having children which is a largely voluntary choice, some might be inclined to interpret our results as saying that a substantial part of the wage gap can be ascribed to the choices of women. We would prefer to interpret this another way. Women are still often forced to choose between career and children and given this choice, often choose children. But such a stark choice is not inevitable: maternity leave entitlements can give women some opportunity to have a family and retain their pre-childbirth job. Our sample sizes are small here (and our data less than perfect) but 10% of female entrants have some indication that they have had a period of maternity leave. The entry wages seem to be much higher for those who have (about 30 log points higher after including other controls). So maternity leave can seem to reduce both the entry pay gap and the share of entrants which is consistent with evidence from other sources (e.g. Paci and Joshi, 1996 for an analysis of this with more and better data) and is also consistent with the view that it can reduce or even eliminate the fall in wages generally experienced when returning to the labour market after childbirth. Improving the rights and opportunities of women returning to the labour market after childbirth may be the most practical and effective way to further reduce the gender pay gap.

Table 1
Sample Sizes

	1992		1993		1994		1995	
	men	women	men	women	men	women	men	women
1. Previously in Employment	2380	2376	2291	2383	2293	2346	2285	2326
2. (1) + Currently in Employment	1928	1940	1914	1939	1924	1941	1930	1915
3. (2) with job history information	1877	1921	1781	1855	1820	1886	1839	1855
4. (3) and continuous employment	1817	1838	1721	1807	1758	1826	1782	1790
5. (4) with current wage	1777	1804	1685	1773	1722	1799	1742	1764
6. (5) with previous wage	1753	1783	1645	1744	1660	1738	1686	1730
7. (6) with information on characteristics	1697	1713	1567	1662	1557	1629	1566	1616
8. (3) with break in employment	60	83	60	48	62	60	57	65
9. (8) with current wage	58	83	57	45	57	59	54	62
10. (9) with information on characteristics	50	79	48	37	43	49	41	49
11. (1) + not currently in employment	247	303	215	245	174	258	157	246
12. (11) with job history information	240	301	197	227	160	253	138	237
13. (12) with previous wage	225	280	181	220	138	224	120	218
14. (1) but no record of current status	293	264	255	194	194	185	207	185
15. not previously in employment but currently in employment	175	220	192	269	190	264	208	268
16. (15) with job history information	166	216	176	260	179	251	197	259
17. (16) with current wage	155	204	156	239	162	235	177	230
18. (17) with information on characteristics	123	165	99	186	114	180	116	175
19. currently in employment but no previous record	277	216	185	175	179	141	147	143

Table 2
The Decomposition of the Gender Pay Gap

	1992		1993		1994		1995	
	men	women	men	women	men	women	men	women
mean log initial wage	1.77 (0.54)	1.41 (0.51)	1.79 (0.53)	1.45 (0.51)	1.77 (0.54)	1.44 (0.52)	1.78 (0.54)	1.45 (0.52)
mean log wage change	0.029 (0.28)	0.029 (0.28)	0.009 (0.25)	0.015 (0.28)	0.029 (0.27)	0.024 (0.29)	0.018 (0.26)	0.029 (0.27)
Covariance/Proportion in Continuous Employment	0.040	0.043	0.027	0.021	0.029	0.030	0.031	0.023
Covariance between initial wage and current employment	0.034 (0.78)	0.036 (0.70)	0.024 (0.77)	0.018 (0.68)	0.026 (0.74)	0.026 (0.86)	0.028 (0.72)	0.020 (0.70)
Proportion in continuous employment	0.86 (0.34)	0.83 (0.37)	0.88 (0.33)	0.87 (0.34)	0.89 (0.31)	0.86 (0.35)	0.91 (0.29)	0.86 (0.34)
mean log entrant wage	1.40 (0.62)	1.19 (0.55)	1.35 (0.59)	1.19 (0.52)	1.39 (0.58)	1.21 (0.55)	1.35 (0.56)	1.19 (0.54)
proportion of entrants	0.11 (0.31)	0.14 (0.35)	0.11 (0.31)	0.14 (0.35)	0.12 (0.32)	0.14 (0.35)	0.12 (0.32)	0.14 (0.35)
mean log wage	1.79 (0.52)	1.44 (0.52)	1.77 (0.53)	1.44 (0.51)	1.78 (0.55)	1.45 (0.52)	1.77 (0.54)	1.45 (0.52)
implied steady-state log wage	1.96	1.63	1.63	1.41	1.84	1.53	1.72	1.50

Note: Figures in parentheses are standard errors

Table 3
The Decomposition of the Full-Time Part-Time Pay Gap

	1992		1993		1994		1995	
	full	part	full	part	full	part	full	part
mean log initial wage	1.50	1.28	1.54	1.33	1.54	1.32	1.54	1.33
	(0.51)	(0.48)	(0.48)	(0.53)	(0.50)	(0.51)	(0.51)	(0.51)
proportion now full-time	0.81	0.07	0.85	0.07	0.84	0.09	0.83	0.08
	(0.39)	(0.25)	(0.36)	(0.25)	(0.37)	(0.29)	(0.37)	(0.27)
mean log wage change for those now full-time	0.024	-0.089	0.012	-0.113	0.043	-0.129	0.044	-0.110
	(0.19)	(0.34)	(0.20)	(0.36)	(0.22)	(0.46)	(0.20)	(0.44)
Covariance between initial wage and current FT employment	0.022	0.022	0.031	0.016	0.022	0.001	0.024	0.016
	(0.74)	(0.44)	(0.71)	(0.42)	(0.72)	(0.36)	(0.74)	(0.45)
proportion now PT	0.05	0.73	0.04	0.78	0.05	0.73	0.04	0.76
	(0.21)	(0.44)	(0.20)	(0.42)	(0.21)	(0.44)	(0.20)	(0.43)
mean log wage change for those now PT	0.238	0.030	0.288	0.011	0.194	-0.000	0.234	0.008
	(0.50)	(0.32)	(0.51)	(0.33)	(0.41)	(0.33)	(0.46)	(0.30)
Covariance between initial wage and current PT employment	0.003	0.020	-0.011	-0.005	0.002	0.001	-0.007	0.002
	(0.35)	(0.69)	(0.28)	(0.71)	(0.36)	(0.71)	(0.31)	(0.71)
mean log entrant wage	1.22	1.16	1.22	1.17	1.20	1.21	1.21	1.18
	(0.54)	(0.56)	(0.60)	(0.48)	(0.55)	(0.56)	(0.45)	(0.58)
proportion of entrants	0.10	0.18	0.08	0.21	0.11	0.19	0.09	0.21
	(0.30)	(0.39)	(0.27)	(0.40)	(0.31)	(0.39)	(0.28)	(0.41)
proportion previously FT	0.84	0.06	0.86	0.05	0.82	0.07	0.85	0.06
	(0.36)	(0.24)	(0.34)	(0.22)	(0.38)	(0.25)	(0.36)	(0.24)
proportion previously PT	0.06	0.76	0.05	0.74	0.07	0.74	0.06	0.73
	(0.23)	(0.43)	(0.23)	(0.44)	(0.26)	(0.43)	(0.23)	(0.44)
mean log wage	1.52	1.34	1.54	1.31	1.55	1.33	1.56	1.32
	(0.50)	(0.53)	(0.49)	(0.51)	(0.51)	(0.51)	(0.50)	(0.52)

Note: Figures in parentheses are standard errors

Table 4a
Characteristics of the Sample: Men and Women

	whole sample		continuing workers		entrants	
	men	women	men	women	men	women
experience (years)	20.6 (12.4)	21.0 (12.4)	20.9 (12.2)	21.4 (12.4)	17.6 (13.4)	18.0 (12.2)
Job tenure (years)	5.52 (6.56)	4.65 (5.29)	5.98 (6.65)	5.08 (5.38)		
proportion changed jobs in past year	0.21	0.19	0.17	0.17		
proportion with degree	0.13	0.10	0.14	0.10	0.12	0.09
proportion with teaching/nursing	0.26	0.21	0.26	0.21	0.23	0.18
'A' level or equivalent	0.16	0.10	0.16	0.10	0.18	0.11
'O' level or equivalent	0.26	0.38	0.26	0.38	0.28	0.40
white	0.97	0.97	0.97	0.97	0.96	0.97
married	0.67	0.65	0.69	0.65	0.52	0.63
number of kids aged below 5 in household	0.19 (0.46)	0.12 (0.36)	0.19 (0.46)	0.09 (0.31)	0.18 (0.46)	0.34 (0.57)
number of kids aged 5-11 in household	0.29 (0.63)	0.29 (0.62)	0.29 (0.64)	0.27 (0.60)	0.29 (0.62)	0.45 (0.73)
number of kids aged 12-18 in household	0.19 (0.48)	0.22 (0.50)	0.19 (0.48)	0.22 (0.50)	0.20 (0.51)	0.22 (0.51)
workplace <25 employees	0.27	0.41	0.26	0.39	0.44	0.54
workplace 25-99 employees	0.26	0.25	0.26	0.26	0.24	0.22
workplace 99-499 employees	0.28	0.21	0.28	0.21	0.21	0.15
log wage	1.81 (0.52)	1.45 (0.52)	1.84 (0.50)	1.49 (0.50)	1.46 (0.578)	1.210 (0.54)
log wage change	-	-	0.019 (0.26)	0.023 (0.28)	-	-
proportion of entrants	0.09	0.12	0	0	1	1

Table 4b
Characteristics of the Sample: Full-Time and Part-Time Women

	whole sample		continuing workers		entrants	
	FT	PT	FT	PT	FT	PT
experience (years)	18.0 (11.8)	24.8 (11.9)	18.3 (11.8)	25.8 (11.7)	13.6 (11.2)	20.1 (12.0)
Job tenure (years)	4.37 (5.07)	5.00 (5.53)	4.62 (5.13)	5.73 (5.53)		
proportion changed jobs in past year	0.23	0.15	0.20	0.12		
proportion with degree	0.12	0.06	0.12	0.06	0.11	0.07
proportion with teaching/nursing	0.25	0.17	0.25	0.17	0.24	0.17
'A' level or equivalent	0.12	0.08	0.12	0.08	0.15	0.10
'O' level or equivalent	0.37	0.40	0.37	0.39	0.36	0.41
white	0.97	0.98	0.97	0.98	0.96	0.97
married	0.53	0.80	0.54	0.81	0.43	0.74
number of kids aged below 5 in household	0.07 (0.28)	0.18 (0.44)	0.06 (0.25)	0.13 (0.38)	0.24 (0.49)	0.39 (0.60)
number of kids aged 5-11 in household	0.14 (0.43)	0.48 (0.76)	0.13 (0.42)	0.46 (0.75)	0.23 (0.50)	0.56 (0.80)
number of kids aged 12-18 in household	0.15 (0.43)	0.29 (0.57)	0.15 (0.43)	0.31 (0.58)	0.20 (0.52)	0.23 (0.50)
workplace <25 employees	0.30	0.53	0.30	0.51	0.37	0.61
workplace 25-99 employees	0.27	0.23	0.27	0.24	0.24	0.21
workplace 99-499 employees	0.25	0.16	0.25	0.16	0.23	0.12
log wage	1.56 (0.49)	1.32 (0.52)	1.58 (0.48)	1.36 (0.51)	1.27 (0.54)	1.18 (0.53)
log wage change	-	-	-	-	-	-
proportion of entrants	0.07	0.18	0	0	1	1

Table 5
Traditional Wage Equations
Dependent Variable: Log Wage (Sample: All Workers)

sample	all	men	women	FT women	PT women
constant	0.77 (0.04)	0.82 (0.06)	0.78 (0.06)	0.73 (0.08)	1.16 (0.10)
experience (years/10)	0.87 (0.05)	0.88 (0.07)	0.88 (0.07)	0.97 (0.09)	0.48 (0.15)
experience squared $(years/10)^2$	-0.43 (0.04)	-0.42 (0.05)	-0.44 (0.05)	-0.47 (0.07)	-0.26 (0.09)
experience cubed $(years/10)^3$	0.086 (0.010)	0.091 (0.013)	0.083 (0.014)	0.093 (0.022)	0.055 (0.024)
experience quartic $(years/10)^4$	-0.007 (0.001)	-0.0076 (0.0011)	-0.006 (0.0013)	-0.007 (0.0022)	-0.004 (0.0020)
job tenure (years/10)	0.15 (0.017)	0.07 (0.022)	0.18 (0.026)	0.14 (0.034)	0.19 (0.040)
job tenure $(years/10)^2$	-0.025 (0.006)	-0.011 (0.007)	-0.053 (0.010)	-0.057 (0.010)	-0.039 (0.016)
job changer	0.040 (0.011)	-0.002 (0.014)	0.047 (0.014)	0.021 (0.017)	0.056 (0.024)
degree-holder	0.83 (0.015)	0.74 (0.019)	0.84 (0.020)	0.82 (0.026)	0.87 (0.035)
teaching/nursing qualification	0.47 (0.012)	0.41 (0.016)	0.46 (0.016)	0.44 (0.022)	0.45 (0.025)
'A' level or equivalent	0.35 (0.013)	0.28 (0.017)	0.28 (0.019)	0.28 (0.025)	0.26 (0.032)
'O' level or equivalent	0.17 (0.011)	0.20 (0.016)	0.17 (0.014)	0.18 (0.020)	0.14 (0.020)
white	0.11 (0.02)	0.12 (0.03)	0.11 (0.03)	0.15 (0.04)	0.04 (0.05)
married	0.07 (0.01)	0.11 (0.013)	0.03 (0.01)	0.036 (0.013)	0.062 (0.020)
number of kids aged below 5 in household	0.030 (0.009)	0.026 (0.012)	-0.039 (0.014)	-0.022 (0.022)	0.010 (0.021)
number of kids aged 5-11 in household	-0.044 (0.006)	-0.002 (0.008)	-0.102 (0.008)	-0.087 (0.014)	-0.051 (0.012)
number of kids aged 12-18 in household	-0.016 (0.008)	0.008 (0.011)	-0.040 (0.010)	-0.068 (0.014)	0.015 (0.015)
workplace <25 employees	-0.34 (0.011)	-0.27 (0.015)	-0.29 (0.015)	-0.26 (0.018)	-0.29 (0.028)
workplace 25-99 employees	-0.15 (0.011)	-0.11 (0.015)	-0.14 (0.016)	-0.13 (0.018)	-0.12 (0.031)
workplace 99-499 employees	-0.06 (0.011)	-0.06 (0.015)	-0.06 (0.016)	-0.06 (0.018)	-0.06 (0.032)
number of observations	14559	7020	7539	4180	3359
R^2	0.37	0.37	0.38	0.42	0.31

Notes: Regional dummies and wave dummies were also included but these results are not reported.

Table 6
Wage Growth Equations
Dependent Variable: Change in Log Wage (Sample: Workers in Continuous Employment)

sample	all	men	women	FT women	PT women
constant	0.10 (0.03)	0.13 (0.04)	0.06 (0.04)	0.06 (0.05)	0.15 (0.09)
experience (years/10)	-0.13 (0.04)	-0.19 (0.05)	-0.050 (0.005)	-0.006 (0.058)	-0.131 (0.139)
experience squared $(years/10)^2$	0.063 (0.025)	0.098 (0.034)	0.011 (0.04)	-0.051 (0.04)	0.057 (0.09)
experience cubed $(years/10)^3$	-0.013 (0.007)	-0.022 (0.009)	0.003 (0.011)	0.024 (0.014)	-0.012 (0.023)
experience quartic $(years/10)^4$	0.010 (0.006)	0.017 (0.008)	-0.003 (0.010)	-0.003 (0.0014)	-0.0009 (0.002)
job tenure (years/10)	-0.007 (0.011)	0.002 (0.001)	-0.017 (0.019)	-0.026 (0.021)	-0.016 (0.003)
job tenure $(years/10)^2$	0.001 (0.004)	-0.001 (0.004)	0.004 (0.007)	0.010 (0.008)	0.005 (0.014)
job changer	0.020 (0.007)	0.028 (0.010)	0.013 (0.011)	0.017 (0.011)	0.007 (0.023)
degree-holder	0.016 (0.010)	0.014 (0.013)	0.028 (0.015)	0.017 (0.016)	0.079 (0.030)
teaching/nursing qualification	0.008 (0.008)	0.010 (0.011)	0.013 (0.012)	0.017 (0.014)	0.017 (0.021)
'A' level or equivalent	0.011 (0.009)	0.013 (0.012)	0.019 (0.014)	0.022 (0.016)	0.030 (0.028)
'O' level or equivalent	0.013 (0.007)	0.021 (0.011)	0.0098 (0.010)	0.025 (0.012)	-0.000 (0.016)
white	0.004 (0.014)	0.004 (0.020)	0.011 (0.022)	0.031 (0.022)	-0.030 (0.045)
married	-0.006 (0.006)	-0.016 (0.0088)	0.002 (0.008)	-0.010 (0.008)	0.013 (0.017)
number of kids aged below 5 in household	0.0046 (0.006)	0.0075 (0.008)	0.0042 (0.011)	0.012 (0.015)	-0.018 (0.020)
number of kids aged 5-11 in household	-0.0041 (0.004)	-0.0012 (0.006)	-0.0048 (0.006)	-0.0035 (0.009)	-0.016 (0.011)
number of kids aged 12-18 in household	0.0073 (0.005)	0.0023 (0.007)	0.012 (0.007)	-0.003 (0.009)	0.017 (0.013)
workplace <25 employees	-0.005 (0.007)	-0.0063 (0.010)	-0.0049 (0.011)	-0.0086 (0.011)	-0.019 (0.024)
workplace 25-99 employees	-0.004 (0.007)	-0.0099 (0.010)	-0.0001 (0.011)	-0.0048 (0.011)	-0.0069 (0.026)
workplace 99-499 employees	-0.001 (0.007)	-0.013 (0.010)	0.014 (0.011)	0.012 (0.011)	0.007 (0.027)
number of observations	13005	6386	6619	3880	2739
R^2	0.01	0.02	0.01	0.02	0.02

Notes: Regional dummies and wave dummies were also included but these results are not reported

Table 7
Entrant Wage Equations
Dependent Variable: Log Wage (Sample: Entrant Workers)

sample	all	men	women	FT women	PT women
constant	1.17	0.96	0.84	0.57	1.01
	(0.13)	(0.20)	(0.19)	(0.27)	(0.25)
experience (years/10)	0.69	0.49	0.82	1.59	0.09
	(0.14)	(0.21)	(0.02)	(0.03)	(0.30)
experience squared $(years/10)^2$	-0.33	-0.14	-0.46	-1.10	-0.02
	(0.11)	(0.16)	(0.14)	(0.31)	(0.20)
experience cubed $(years/10)^3$	0.07	0.016	0.100	0.298	0.006
	(0.03)	(0.042)	(0.039)	(0.102)	(0.051)
experience quartic $(years/10)^4$	-0.0051	-0.0011	-0.007	-0.028	-0.000
	(0.0025)	(0.0037)	(0.003)	(0.011)	(0.004)
degree-holder	0.67	0.61	0.70	0.70	0.76
	(0.05)	(0.08)	(0.07)	(0.12)	(0.09)
teaching/nursing qualification	0.37	0.30	0.39	0.41	0.43
	(0.04)	(0.06)	(0.05)	(0.10)	(0.07)
'A' level or equivalent	0.31	0.27	0.32	0.47	0.24
	(0.04)	(0.07)	(0.06)	(0.11)	(0.08)
'O' level or equivalent	0.17	0.14	0.17	0.23	0.16
	(0.04)	(0.06)	(0.04)	(0.09)	(0.05)
white	0.052	0.16	-0.011	-0.099	0.009
	(0.069)	(0.11)	(0.090)	(0.151)	(0.116)
married	0.059	0.092	0.035	0.027	0.043
	(0.031)	(0.052)	(0.038)	(0.064)	(0.049)
number of kids aged below 5 in household	0.064	0.075	0.046	0.104	0.060
	(0.026)	(0.046)	(0.033)	(0.065)	(0.041)
number of kids aged 5-11 in household	-0.066	-0.062	-0.075	-0.093	-0.035
	(0.020)	(0.035)	(0.024)	(0.056)	(0.029)
number of kids aged 12-18 in household	-0.046	-0.072	-0.024	-0.018	-0.017
	(0.026)	(0.042)	(0.033)	(0.058)	(0.041)
workplace <25 employees	-0.33	-0.32	-0.30	-0.30	-0.25
	(0.04)	(0.07)	(0.05)	(0.08)	(0.08)
workplace 25-99 employees	-0.18	-0.21	-0.12	-0.12	-0.06
	(0.05)	(0.07)	(0.06)	(0.09)	(0.09)
workplace 99-499 employees	-0.07	-0.12	-0.01	-0.11	0.11
	(0.05)	(0.08)	(0.06)	(0.09)	(0.10)
number of obs	1554	634	920	300	620
R^2	0.30	0.29	0.28	0.42	0.27

Table 8
Entrant Equations
Dependent Variable: Entrant Dummy (Sample: All Workers)

sample	all	men	women	FT women	PT women
constant	0.31 (0.03)	0.32 (0.04)	0.26 (0.04)	0.28 (0.05)	0.40 (0.09)
experience (years/10)	-0.33 (0.04)	-0.38 (0.05)	-0.33 (0.05)	-0.45 (0.06)	-0.24 (0.12)
experience squared $(years/10)^2$	0.18 (0.02)	0.22 (0.03)	0.20 (0.04)	0.30 (0.05)	0.09 (0.08)
experience cubed $(years/10)^3$	-0.044 (0.007)	-0.05 (0.009)	-0.049 (0.010)	-0.081 (0.014)	-0.020 (0.020)
experience quartic $(years/10)^4$	-0.0036 (0.0006)	-0.004 (0.0008)	-0.004 (0.001)	-0.007 (0.001)	0.002 (0.002)
degree-holder	-0.060 (0.010)	-0.040 (0.013)	-0.069 (0.015)	-0.054 (0.017)	-0.071 (0.029)
teaching/nursing qualification	-0.043 (0.008)	-0.024 (0.011)	-0.054 (0.012)	-0.039 (0.015)	-0.049 (0.021)
'A' level or equivalent	-0.028 (0.009)	-0.009 (0.012)	-0.045 (0.015)	-0.027 (0.017)	-0.046 (0.027)
'O' level or equivalent	-0.030 (0.008)	-0.021 (0.011)	-0.042 (0.010)	-0.033 (0.013)	-0.041 (0.017)
white	-0.028 (0.015)	-0.024 (0.020)	-0.037 (0.022)	-0.005 (0.024)	-0.065 (0.043)
married	-0.029 (0.006)	-0.033 (0.009)	-0.022 (0.008)	-0.023 (0.008)	-0.054 (0.017)
number of kids aged below 5 in household	0.089 (0.006)	0.014 (0.008)	0.215 (0.011)	0.171 (0.014)	0.170 (0.018)
number of kids aged 5-11 in household	0.034 (0.004)	0.016 (0.006)	0.053 (0.006)	0.040 (0.009)	0.018 (0.010)
number of kids aged 12- 18 in household	0.015 (0.005)	0.014 (0.007)	0.013 (0.008)	0.023 (0.009)	-0.011 (0.013)
workplace <25 employees	0.081 (0.008)	0.081 (0.010)	0.072 (0.011)	0.017 (0.012)	0.090 (0.024)
workplace 25-99 employees	0.026 (0.008)	0.027 (0.010)	0.022 (0.012)	0.000 (0.012)	0.036 (0.026)
workplace 99-499 employees	0.007 (0.008)	0.013 (0.007)	0.002 (0.013)	0.000 (0.012)	-0.004 (0.028)
number of observations	14561	7021	7540	4180	3360
R^2	0.048	0.044	0.089	0.069	0.099

Table 9
Chow Tests and Oaxaca Decompositions

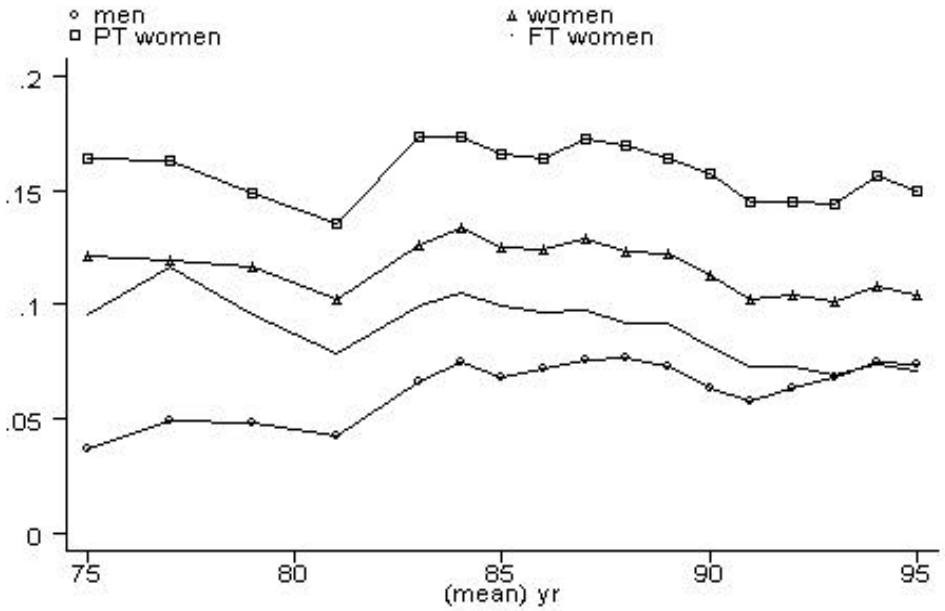
A. Men versus Women

	Chow test for equality of coefficients	Raw Differential	Oaxaca Decompositions			
			Female Characteristics		Male characteristics	
			coefficients	characteristics	coefficients	characteristics
log wage	42.3 (40,14520)	0.36	0.28	0.08	0.27	0.09
log wage change	0.98 (40, 12966)	-0.0040	-0.0036	-0.0004	-0.0072	0.0032
entry log wage	3.09 (37,1518)	0.25	0.24	0.01	0.21	0.04
entrant proportion	10.07 (37,14525)	-0.031	-0.021	-0.010	-0.033	0.002

B. FT versus PT Women

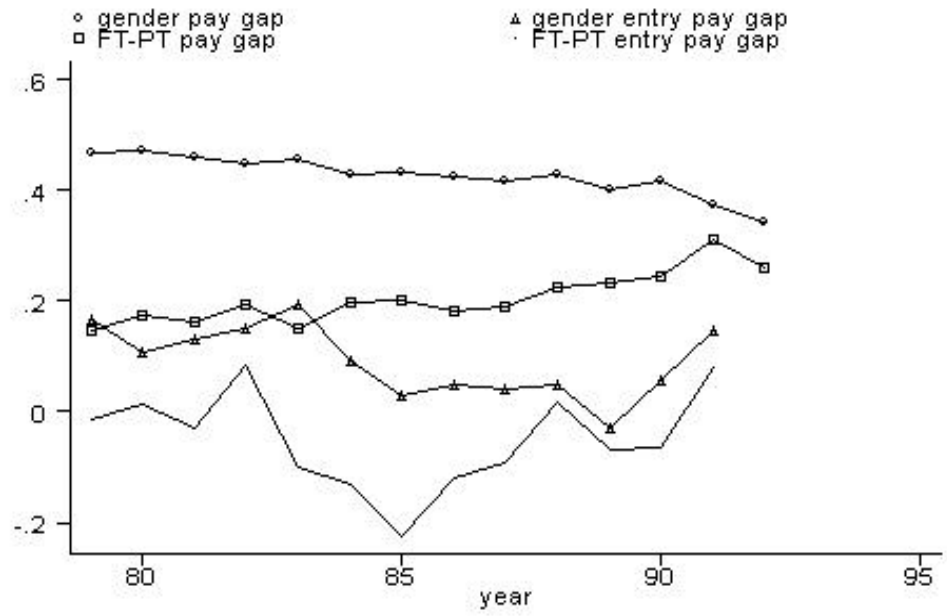
	Chow test for equality of coefficients	Raw Differential	Oaxaca Decompositions			
			PT Characteristics		FT characteristics	
			coefficients	characteristics	coefficients	characteristics
log wage	5.77 (40,7500)	0.24	0.09	0.15	0.10	0.14
log wage change	2.06 (40, 6580)	-0.0105	-0.0362	0.0257	-0.0415	0.0310
entry log wage	1.51 (37,884)	0.09	-0.025	0.112	-0.016	0.104
entrant proportion	5.80 (37,7504)	-0.113	-0.083	-0.029	-0.115	0.002

Figure 1
The Entrant Share, 1975-95



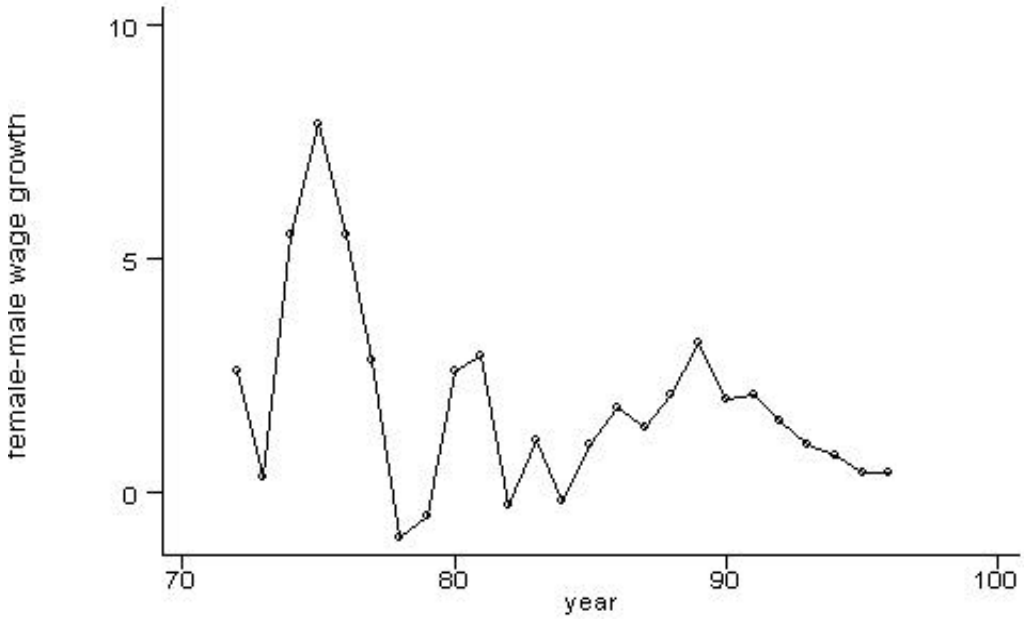
Source: Labour Force Survey

Figure 2
The Entry and Average Gender Pay Gap, 1979-91



Source: General Household Survey

Figure 3
The Female-Male Wage Growth Differential, 1972-96



Source: New Earnings Survey

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