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**MOVING DOWN: WOMEN'S PART-TIME WORK AND
OCCUPATIONAL CHANGE IN BRITAIN 1991-2001**

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Abstract

The UK's Equal Opportunities Commission has recently drawn attention to the 'hidden brain drain' when women working part-time are employed in occupations below those for which they are qualified. These inferences were based on self-reporting. We give an objective and quantitative analysis of the nature of occupational change as women make the transition between full-time and part-time work.

We construct an occupational classification which supports a ranking of occupations based on the average level of qualification of those employed there on a full-time basis. Using the NESPD and the BHPS for the period 1991-2001 we show that perhaps one-quarter of women moving from full- to part-time work move to an occupation at a lower level of qualification. Over 20 percent of professional women downgrade, half of them moving to low-skill jobs; two-thirds of nurses leaving nursing become care assistants; women from managerial positions are particularly badly affected.

Women remaining with their current employer are much less vulnerable to downgrading, and the availability of part-time opportunities within the occupation is far more important than the presence of a pre-school child in determining whether a woman moves to a lower-level occupation.

These findings indicate a loss of economic efficiency through the underutilisation of the skills of many of the women who work part-time.

Part-time work by women has been a major source of employment growth in the UK over the past 30 years, and around 40 per cent of women now in work are in part-time jobs. Much of this growth reflects its increasing role as the route by which women combine continuing labour market participation with home and family responsibilities particularly during the childcare years. As is widely documented, part-time work in the UK is disproportionately concentrated in low reward, low status jobs (Manning and Petrongolo, here; Grimshaw and Rubery, 2001; Blossfeld and Hakim, 1997; Hakim, 1998). It can be argued that, in the context of women's work-family preferences, inferior conditions, notably lower pay, are not necessarily evidence of discrimination or disadvantage. Women may choose to accept lower labour market rewards in return for other benefits they perceive in part-time work, such as shorter hours or the timing of the work week. However, an insidious dimension of the growth of part-time work is the movement of women from 'better' jobs into lower skilled occupations where part-time opportunities are more readily available and they can find the flexibility in working hours that they seek. Moving to part-time jobs at a lower occupational level than if they were to continue in full-time work implies underutilization of their actual and potential human capital - referred to in a recent report by the Equal Opportunities Commission (2005) as the 'hidden brain drain' of women's part-time work. This hidden brain drain, where women working part-time are employed in jobs below their levels of education and qualifications, is clearly in conflict with national strategies of improving educational attainment and raising skills at the workplace. It poses significant issues of economic efficiency as well as gender equity.

The Equal Opportunities Commission identified the 'hidden brain drain' through two sets of questions in a qualitative survey. Respondents were asked first whether they had previously held jobs which involved more supervision or management of staff, or needed a higher level of qualifications or skills than were required in their current job, and then more broadly whether they were working in jobs which did not use their latent potential (see Darton and Hurrell, 2005). In this paper we focus on the first aspect: the extent to which individual women change occupation on switching to part-time work, and how far

this involves a move to an occupation where a lower level of qualification or skills is involved. We identify the incidence of downgrading, including those occupations which are particularly hospitable, or inhospitable, to part-time work, and some of the resulting pathways. We then provide a quantitative measure of the extent of the hidden brain drain of occupational downgrading, in terms of the underutilisation of human capital.

In order to analyse occupational downgrading in terms of human capital we develop a measure of the average level of qualifications of workers in each occupation, and construct a ranking of occupations from this. Our analysis is thus complementary to that of Manning and Petrongolo (here). With their focus on the part-time pay penalty, Manning and Petrongolo identify downgrading as moving from an occupation with higher average pay to one where pay is lower, with the extent of downgrading measurable by the difference in pay. Our focus on human capital makes the appropriate measure of downgrading the difference in average qualification level between the occupations. The construction of this measure, and the ranking of occupations derived from it, are described below. Comparison of the skill level of her previous full-time occupation with her occupation following the switch to part-time work allows us to identify downgrading, and measure the implied underutilisation of qualifications. We find that downgrading is extensive; at very least 14 percent and probably nearer one-quarter of women switching from full- to part-time work move to an occupation at a lower level of qualification. Among women from professional and associate professional occupations (excluding teaching and nursing) over 20 percent downgrade, half of them moving to jobs at lower clerical level, as care assistants or to even lower-skill jobs, underutilising three, four or even more years of high level education and training. Two-thirds of nurses leaving nursing on the move to part-time work downgrade to care assistants, where their nursing skills remain relevant but with three years implied overqualification. Women in managerial positions are particularly badly affected. Among corporate managers 29 percent or more downgrade, two-thirds to clerical jobs and the remaining third to a range of low-skill jobs. Managers of shops, salons and restaurants are the worst affected group, 47 percent giving up their managerial responsibilities to become sales assistants, hairdressers and similar. We find clear evidence that women remaining with their current

employer on switching to part-time work are much less vulnerable to downgrading, and that the availability of part-time opportunities within the occupation is far more important than the presence of a pre-school child in determining whether a woman moves to a lower-level occupation.

The structure of the paper is as follows. Section 2 develops the occupational groupings which we use, and presents the skill ranking constructed from them. The datasets used are described in Section 3. In Section 4 we analyse the incidence of occupational downgrading (and upgrading) with switches between full- and part-time work, identifying the role of change of employer. Section 5 relates occupational change to further personal characteristics and the availability of part-time opportunities, measured by the share of part-time jobs within the occupation. Section 6 profiles the patterns of downgrading by occupation and presents estimates of the underutilisation of human capital involved. Section 7 concludes with some implications for policy.

2. The ranking of occupations by qualifications

To identify how far switching to part-time work involves a shift into a job with lower skill requirements we need a measure of the level of skills or qualifications used in each occupation and a ranking of these. The Standard Occupational Classification 1990 (SOC90) identifies occupations with reference to ‘the similarity of qualifications, training, skills and experience associated with competent performance of the work activities involved’, and to ‘the nature of these work activities’.¹ This approach is appropriate for our purposes in being a classification of jobs, defined by their typical attributes, with individuals assigned to occupations on the basis of the job they hold. However the dual basis of the classification, conflating the skill level required with the nature of the job, means that SOC90 at any of its higher levels of aggregation only partially provides the occupational hierarchy by skills which we require. At its most aggregate level of the nine Major Groups, Major Group 1, Managers and Administrators,

includes owner/managers of shops and hairdressing salons along with top corporate managers while Major Group 7, Sales Occupations, includes relatively high-skill jobs such as buyers and brokers alongside shop assistants and checkout operators. Moving to the level of the 22 Sub-major Groups typically introduces further horizontal rather than vertical differentiation, for example by sub-dividing the classification of Professionals among Science, Health and Teaching.

We therefore construct a 15-occupation classification primarily delineated by the average level of qualification of those working there but also related through similarity in work activities. The classification is constructed from groupings of the 370 Unit Groups distinguished within SOC90. The main principles are that qualification levels within occupational categories should be similar, and that occupations should be separated vertically where standard levels of qualification differ significantly across the Unit Groups involved.

Data on the level of qualifications held by individuals within each Unit Group of SOC90 are taken from the *Labour Force Survey* 2000. This asks for all qualifications to be listed, starting with the highest; respondents are prompted against a detailed check-list of some 30 educational qualifications in a face-to-face interview. We allocate individuals the highest level of qualification which they hold. The detailed information on qualifications from the LFS can be mapped across academic and vocational qualifications into a ranked scale, following McIntosh (2006), Conlon (2001), Dearden et al. (2002), and Clark, Conlon and Galinda-Rueda (2005). The basis for the scale is the time required to gain the qualifications, adjusted to full-time equivalent years, augmented by the entry requirements to commence the qualification. This gives a six-point scale of 0 - 5 which we have expanded to eight points by including separately nursing and teaching qualifications, in view of their importance for women. The eight-point scale is:

- 0 no qualifications
- 1 sub-GCSE/O-level
- 2 GCSE/O-level or equivalent

- 3 A-level or equivalent
- 4 Nursing qualifications
- 5 HND or equivalent
- 6 Teaching qualifications
- 7 Degree level or above.

The bottom three levels all involve the compulsory minimum 10-11 years of schooling, but with different levels of qualification gained: no qualifications at level 0, minimal at level 1, and at least one 'pass' grade A*-C at GCSE/O-level at level 2. Level 3 is the standard leaving level for high-school, involving a further two years at school or college with at least one pass grade at A-level or equivalent. HNDs are less common among women, but they and nursing qualifications typically require at least three years of training beyond compulsory schooling, and teaching and all degree and post-graduate professional qualifications five or more years.

For each of the 370 Unit Group occupations the average level of qualifications held by those working there is calculated. Since our concern is with adult women in employment we restrict the sample to the 22-59 age-group. In order to avoid any implications for the skill structure from the incidence of part-time work within occupations the classification is based on the qualifications of men and women in full-time work only. The average level of qualification within Unit Group occupations ranges from 7 for barristers and veterinarians to less than 1 among cleaners and road-sweepers.

We then aggregate the 370 Unit Groups into a 15-occupation classification on the basis of similarity in the level of qualifications of those employed there and the nature of the jobs. The classification is given in Table 1. It departs from the SOC groupings in several respects. Three large and rather heterogeneous Major groups are sub-divided. Within Managers and Administrators 'Corporate managers and administrators' are distinguished from 'Other managers', of shops, restaurants and hairdressing salons. The large group of Clerical/secretarial jobs is divided between 'Higher-level' and 'Lower-level clerical occupations', where higher level includes civil service administrative/clerical officers,

accounts clerks and cashiers, and the lower level clerks/typists and receptionist/telephonists. A category of 'Higher-skill services' is separated from Other personal services to recognize the higher levels of general education and further training of, among others, the uniformed services and buyers and brokers. Their importance as jobs for women leads us to identify 'Teachers', 'Nurses' and 'Cleaners' as individual occupations, and also to distinguish 'Caring services', which include nursery staff and care attendants, separately from 'Other personal services'. The full allocation of Unit Groups to the 15-occupation classification is given in Appendix 1, where key groups within each occupation are also identified.

Table 1 about here

A notable feature of our 15-occupational classification is that the professional occupations rank above the managerial categories, including corporate managers. This arises directly from the fact that entry into professional occupations is regulated on the basis of formal qualifications, reflected in the high average and low variance in qualification level there; teaching, for example, is a largely graduate (7-point) profession and as a minimum requires certification at level 6. For entry to managerial positions, on the other hand, formal qualifications may be a requirement, but equally may be replaced by experience and career progression in the job. This is reflected in the high variance as well as lower average level of qualifications among managers.

The right-hand column of Table 1 shows the level and ranking by earnings. Familiarly, corporate managers and professionals (other than teachers) come to the top, closely followed by teachers. The occupations where pay is low relative to qualification level are nursing and higher-level clerical jobs, both heavily female-dominated.

The distribution of women's employment between full- and part-time work within these 15 occupations is given in Table 2. This confirms the relative location of full- as against part-time jobs in the occupational hierarchy. The higher-ranked occupations employ larger shares of the women working full-time, while lower-ranked occupations account for larger shares of women working part-time. Each of the top ten occupations employs a larger share of women working full-time than part-time; each of the bottom five takes a larger share of the women in part-time work. The lowest presence of part-timers is among managers, both corporate and 'other' (restaurant and similar), followed by professions outside teaching. Part-time employment is the dominant form among cleaners and sales assistants.

Table 2 about here

3. Data: New Earnings Survey Panel (NESPD) and British Household Panel (BHPS)

Following the occupational trajectories of women as they switch from full- to part-time work requires panel data. Since the number who make the switch in any year is relatively small a large sample is desirable. Since the switch is influenced by personal and household characteristics outside the labour market a rich set of information on these is also desirable. No single dataset provides all of this. To optimise in both dimensions we use two datasets, the New Earnings Survey Panel Dataset (NESPD), a large employee-based survey, and the British Household Panel Survey (BHPS), a household survey with a smaller sample but a much richer set of personal and household information. We track women's employment on an annual basis over the years 1991 to 2001. This covers the full period over which occupations were classified on the basis of SOC90 in both surveys.

The NESPD is the panel dataset generated from the sequential annual New Earnings Surveys (NES). The NES is a survey of the pay, hours of work, occupation and other employment details for a random sample of all employees drawn from individual

National Insurance numbers. Since individuals retain their NI number for life and the same terminating digits are used to draw the sample in each year, the cross-sectional sampling frame automatically generates a panel; this forms the New Earnings Survey Panel Dataset (NESPD), currently available to 2001. The NESPD provides a very large sample, over 70,000 women each year. By sampling randomly on individual NI numbers it covers women at all stages of the life-cycle and in employment in all types and sizes of firms. The Statistics of Trade Act, under which the Survey is conducted, makes return of the Survey questionnaire compulsory, providing a high response rate. The process of sample location, through employers' PAYE returns to the tax authorities in each year, allows individuals who have been out of the Survey in any period, due to non-employment or a failure of sampling, to be re-identified in subsequent employment, minimizing cumulative attrition. However, part-time workers are known to be under-sampled in the NES.² The location of the sample through the employer's PAYE return means that employees falling below the PAYE tax threshold, whom employers are not required to include, may not be identified for the Survey; those low-paid in terms of total earnings are most likely to be working part-time. In practice, however, the employer's return often includes them. In addition, at least a month elapses between the date at which the individuals for the NES sample are located and their employer identified from the PAYE returns, and the Survey pay week. Those changing employer in this interval are lost to the sample, even where there is a direct job-to-job move; the previous employer does not have pay information for the relevant week, while the new employer cannot be identified. This leads to significant undersampling of job-movers. Further, to the extent that part-time workers change jobs more frequently this becomes a further source of their under-sampling. As an administrative dataset drawn from payroll records, the NES contains only limited information on personal characteristics, only gender, age and occupation, and none on household characteristics.

The better-known BHPS was established in 1991 as an in-depth annual survey of a nationally representative sample of some 5,500 households.³ Each adult member of the household is interviewed, including new members as they join. Adults leaving their original household are followed to their new household and all adult members there also

included. Children are added as survey respondents when they reach age 16. In addition to employment status and occupation the BHPS records a range of further personal and household circumstances potentially affecting women's labour supply, including presence of spouse or partner, number and ages of children present, and highest level of qualification held. The survey comprises around 2,500 women of working age each year. To match in with the period available in the NESPD and with the use of SOC90 for occupational coding we use the first 11 waves, covering the period 1991-2001.

To classify occupations the NES Survey asks the employer to supply a job title for the employee, which is then coded into the SOC classification by the statistical agency from a very detailed look-up list of job titles. The employer, however, has the option of sidestepping the insertion of a job title by checking a box for 'same job as a year ago'; the statistical agency then repeat the previous year's occupation code. This may exaggerate occupational stability (although fresh coding each year would risk exaggerating mobility due to errors of classification). In BHPS occupations are classified according to the SOC90 classification on the basis of a detailed job description given in the interview; this includes exact job title and a description of the nature of the work, such as materials used.

In the NES the employer is asked to record the worker's contractual basic hours, and in BHPS the respondent is asked for her usual weekly hours of work. In both surveys part-time is then defined as fewer than 30 hours per week.

Since we are interested in the role of part-time work for adult women we select only those aged 22-59, to avoid part-time work by students and the impact of pension entitlement on employment choices. Our focus on occupational change as women switch from full- to part-time work requires observations on employment in consecutive years. In the BHPS employment status is based on the main job, defined as that with most hours. This is derived in a face-to-face interview, with maternity leave one of the options that the respondent can record. Provided information on hours of work is given, we classify maternity leave as in full- or part-time employment, as appropriate. The NES is a 'spot' survey, relating to a specified week in April each year, reporting employment

status as at that week. No guidance is given to the employer (in practice the payroll department) on how to report women absent on maternity leave. Even women taking the statutory minimum period of maternity leave within continuous employment could fail to be recorded in the survey, if their leave spans April; this risk increases when longer leave is taken. In the NESPD therefore we classify a single-year gap as continuous employment.⁴

After dropping a tiny number of cases with missing data the NESPD sample comprises 577,386 observations on 110,212 women, an average of 58,000 observations per year, with women recorded on average for 5.2 years of employment. The BHPS sample gives 15,157 observations on 6,337 women, an average of 2,500 records per year with women recorded for 4.2 years of employment.

Table 3 compares the structures of the NESPD and BHPS samples along the main dimensions of interest. In spite of the entirely different basis, method and scale of the two surveys the resulting samples are extremely similar in the distribution of working women between full- and part-time employment.⁵ Transition rates between full- and part-time employment are rather lower in the NESPD, consistent with its undersampling of part-timers. The biggest discrepancy relates to the proportion changing employer, where the lower proportion in the NESPD is consistent with its weakness in locating recent job-changers. Since many of those changing employment status also change jobs (see below), this will further reduce the incidence of switching in the NESPD. This alignment of discrepancies relative to the BHPS with known biases in the NES sampling process indicates that the NESPD figures on transitions between employment states and particularly on job-changes should be regarded as lower bounds. On the other hand the small numbers switching employment status within the BHPS - an average of 87 per year in each direction, to be attributed across 15 occupations - indicates that sampling variability within the BHPS may be significant. We will therefore treat the two surveys as complementary, involving a trade-off between the known biases in NESPD and the small sample size of BHPS for present purposes.

Table 3 about here

4. Occupational downgrading with change in employment status: transition matrices

Using the occupational ranking derived above, Table 4 shows the occupational transitions and extent of up/downgrading for women switching between full- and part-time work relative to those continuing in either state. Since a variety of studies (Manning and Petrongolo, 2004, and Blundell, Brewer and Francesconi, 2005, for the UK; Altonji and Paxton, 1988 and 1992, for the US; Euwals, 2001, for the Netherlands) have reported that changes in hours of work are commonly achieved through a change of employer in the face of inflexibility of hours within the job the lower panels distinguish those staying with their current employer from those moving.

Switching from full- to part-time work in consecutive years is a relatively infrequent event⁶, involving only around 5 percent of working women each year, 7-9 percent of those in full-time work. But once the transition is made persistence is high; between 84 and 87 percent of part-timers continue in part-time work in the following year, not far below the 92 percent persistence rate in full-time work. Part-time work is not, on average, a short-term episode. The implications of the switch, therefore, in terms of human capital utilisation or other work conditions, are clearly important.

Table 4 about here

Occupational stability is high, particularly among those continuing in full- or part-time employment, and at very similar levels between the two. (The very high figure in

NESPD is likely to be attributable at least in part to the inertia in its occupational coding noted above.) Both surveys indicate that upgrading is marginally more frequent than downgrading, consistent with upwards career progression on average. Switching between full- and part-time work is much more likely to bring occupational change. Of key interest for present purposes, both surveys record downgrading as substantially the more frequent experience for women switching into part-time work. In the BHPS, one-quarter of women switching into part-time work, in continuous employment, move downwards in occupation, although 17 percent move upwards. This balance is reversed on the switch out of part-time into full-time work. Taken together these patterns - downgrading on the switch into part-time work and upgrading on the switch to full-time work - give *prima facie* evidence that it is part-time status itself which is associated with occupational downgrading.

In our samples 31 percent (NESPD) and 36 percent (BHPS) of those switching into part-time employment also change employer. Distinguishing stayers and movers significantly sharpens the differing experiences of the various groups. A large majority of those switching between full- and part-time status while remaining with their current employer do so at the same occupational level. This feature is of considerable relevance for policy - although both surveys show that, even for stayers, the switch into part-time work brings some downgrading (and the return to full-time employment some upgrading). Among job movers, on the other hand, the degree of occupational change is very much greater, including among those continuing to work full- or part-time. The most striking differences involve those who change employment status as well as employer. In BHPS although 23 percent of women who switch to part-time work and change employer move up the occupational ladder, 41 percent move down. This latter figure clearly signals a cause for concern.

Part of the observed downgrading is likely to be job-churning between lower-skill occupations, while the underutilisation of higher-level skills is the principal issue of concern. In Table 5 the 15 occupations are grouped into three categories by broad skill level: the high skill top five - the professions and corporate management; intermediate

skills, occupations 6 - 9 in the ranking, including 'other' managerial positions and higher level service and clerical occupations; and the bottom six low-skill occupations. The upper panel gives the incidence of up- and down-grading on the switch into part-time work, by the skill category of the previous full-time job. Both surveys give a similar, and very striking, picture of downgrading from higher-skill occupations. One-third of the high-skilled, those with professional qualifications or working in corporate management, who change to a part-time job with a new employer downgrade in occupation. This figure is even higher, over half, for those from intermediate-skill occupations. Even those who remain with their current employer tend to lose, although the risk is much reduced. The lower panel reports women making the reverse switch, out of part-time work. 47 percent (NESPD) and 59 percent (BHPS) of women leaving part-time work for a full-time high-skill occupation with a new employer are upgrading as they move. For new full-time jobs at intermediate skill level the proportion upgrading is 62 percent. For women with skills, quitting part-time work and making a fresh job start is a major boost to their occupational attainment. Even those remaining with their current employer, already noted as downgrading less frequently on switching to part-time work, tend to upgrade on returning to full-time work.

Table 5 about here

These transitions document the patterns of occupational change associated with the switch of employment status. The next section explores how far these striking differences can be explained by a range of potential determinants.

5. Occupational downgrading/upgrading with employment status: multinomial logit estimates

A substantial literature documents the major factors influencing a woman's choices between full- and part-time work: the number and ages of children, partner's presence and income, and her own educational level (e.g. Paull, here). Our focus is not on the part-time decision itself but on concomitant occupational down- or upgrading. Are the same influences that affect the choice of part-time work also associated with the incidence of occupational change, or can other factors be identified leading to the transition patterns observed above?

Tables 6A and 6B report multinomial logit estimates for NESPD and BHPS of occupational change upwards or downwards. Specification one includes only the employment status measures differentiated by stayer/mover. This replicates the transitions given in Table 4, now reported as odds ratios (against a base category of 'same' ranking) and with standard errors. As above, in each employment state moving employer makes occupational change more likely. But upgrading and downgrading are generally equally likely, except, as above, for job movers switching into part-time work (strong odds on downgrading) and from part- into full-time work (likely to upgrade).

Tables 6A and 6B about here

Specification two adds the limited set of personal characteristics available in both surveys: the woman's age, time spent in full- and part-time work and tenure in her current job. In both Tables controlling for these personal characteristics brings some reduction in the relative likelihood of occupational change for movers, although the odds on downgrading with the switch to part-time and on upgrading with the switch to full-time remain strong. Strikingly, these personal characteristics impact virtually symmetrically on the odds of upgrading and downgrading; this applies equally when age is specified in five-year bands rather than quadratic, and when birth cohorts are included to allow for the growth of qualifications, the evolving distribution of occupations or changing attitudes towards work and family.

Specification three in Table 6B adds a further range of personal and household characteristics available in the BHPS, and typically associated with the switch to part-time work, including spousal status, presence of children and educational qualifications. . Controlling for these brings only marginal further reductions in the relative risks of up/downgrading for the various categories of stayers and movers. Their impact is largely symmetric between upgrading and downgrading, and appears small. Given the importance of the presence of children for the part-time decision itself, Figure 1 shows the evaluated probabilities of downgrading where the youngest child is of pre-school or primary school age. For those who stay with their current employer the limited personal characteristics included in specification two leave the probability of downgrading unchanged, at around 13 percent for sample average characteristics. The presence of a pre-school child increases this to 17 percent, but it falls back again when the youngest child is in primary school. Among women changing employer the basic probability from specification one is much higher, as already noted, at 39 percent; controlling for age and labour market experience reduces this to 35 percent. The presence of a pre-school child (and the further characteristics) raises the probability to 41 percent before it drops to 35 percent when the youngest child is at primary school. These evaluated probabilities confirm the role of the presence of a pre-school child in mothers' vulnerability to downgrading; however, the change in risk, 3-5 percentage points, is modest relative to the overall risk level.

Figure 1 about here

Since these factors potentially shaping preferences in labour supply appear to have only a modest influence on occupational outcomes, we turn to differences in constraints as an explanation for up/downgrading. The widely differing role of part-time jobs across occupations shown in Table 2 suggests that finding part-time work within the occupation may be relatively easy in some jobs but difficult in others. Table 7 incorporates the availability of part-time opportunities by adding to the previous specifications firstly a set

of dummy variables for the occupation previously held (specification four), and, alternatively, the share of part-time workers in that previous occupation (specification five). The role of the previous occupation is clear. Working in a higher-skill occupation increases the odds on downgrading by more than the odds on upgrading, with the reverse for a previous low-skill occupation. In both datasets the switch point occurs around the boundary between intermediate and low-skill occupations, at skilled trades/lower clerical occupations. Specification five shows that a higher share of part-time workers in the previous occupation increases the chance of upward occupational mobility, confirming the relevance of the availability of part-time opportunities for the up/downgrading outcome. The evaluated probabilities from specification five are shown in Figure 2 for the full range, 14 to 87 percent, of shares of part-time employment (at sample means for all other characteristics). The probability of downgrading declines strikingly as the share of part-time workers in the previous occupation rises; the lowest share of part-time employment, among managers, gives a probability of downgrading of over 60 percent for those changing employers and over 30 percent for stayers. The impact of this demand-side characteristic, from employers, greatly outweighs the supply-side impact of personal characteristics, including the presence of a pre-school child. The strong and systematic impact of the share of part-time jobs applies for both stayers and job movers, but the evaluated risk is twice as high for movers, reinforcing the evidence above that the risk of downgrading is significantly lower for those who remain with their current employer.

Table 7 about here

Figure 2 about here

6. Counting the cost: the underutilisation of skills with occupational downgrading

This section traces the pathways taken as women downgrade from different occupations on the switch to part-time work and gives an evaluation of the costs in terms of the number of years of education underutilised.

Table 8 shows the incidence of downgrading from each occupation, the destination occupations by quartile (descending), the number of years of education underutilised at these quartile points, and in the final column the (weighted) average number of years underutilised across all new occupations. Evaluating the extent of the underutilisation of formally acquired skills is a rather approximate exercise, as individual Unit Groups within each of the 15 occupations involve differing numbers of years of post-compulsory education, and the structure, particularly of vocational qualifications, has evolved across age-groups. Nonetheless it is potentially instructive to develop an overall estimate for each occupation, by combining the distribution of destinations on downgrading with a measure of the reduction in skill use. Because of small numbers for the 15 x 15 occupational transitions only the NESPD results are reported (noted above as likely to be lower bounds). The full transition matrix is given in Appendix 2.

Table 8 about here

First the good news. Not all occupations pose a major risk of downgrading on switching into part-time work (column 1). Teaching and nursing stand out as occupations where the switch into part-time employment can be successfully made without change of occupation; 89% of teachers and nurses who switch to part-time work do so while remaining in their professions, with only 9 and 8 percent respectively downgrading. This reflects the relative availability of part-time positions in these occupations, particularly nursing. Among the limited numbers of teachers leaving teaching one-third move into other skilled occupations, suggesting that the switch to part-time work can become the moment for a career change. But the bad news: virtually one-half of teachers leaving teaching move into low-skill occupations, such as lower clerical jobs (10%) or caring

services (24%). On average 3.9 years of advanced education and training are no longer formally used when teachers leave teaching; but among the half who move to low-skill jobs it is five years or more years. Two-thirds of nurses who leave nursing become carers; they continue to use skills specific to nursing, but only in lower-level roles requiring three years less training; Although 10 percent of nurses move into associate professional or corporate management positions, this is offset by 18 percent moving into the four lowest-skill occupations.

20 percent of women from the higher professions (occupation 2 in the ranking) downgrade on the switch to part-time work. While this is not one of the largest proportions their high skill level makes it potentially particularly costly. As with teachers, half respond to the switch to part-time work to move into other high-skill jobs, as associate professionals or corporate managers, suggesting career flexibility as much as downgrading. 44 percent, however, move into a range of lower-skill jobs, such as carers, implying four or more years of education underused. The rate of downgrading among associate professionals is similar, at 22 percent; the majority disperse to clerical jobs with 17 percent becoming carers; most seriously, a third move into the lowest-skill occupations such as sales assistants. While the average underutilisation of education across professional and associate occupations is 2.7 years, this conceals substantial patches of much more severe overqualification of professional women in part-time jobs.

Corporate managers have a relatively high incidence of downgrading, 29 percent, with the majority moving to clerical positions. Because career progression in corporate management is based as much on job experience and in-house training as on formal qualifications, skill levels and their underutilisation measured in this way, although significant, have limited appropriateness as measures of the failure to use higher-level skills. Other managers are the occupational group most vulnerable to downgrading, 47 percent moving downwards, typically into personal service and sales jobs. This is consistent with the survey evidence from EOC (2005) that women moving to part-time work give up their managerial or supervisory responsibilities; to the extent that they remain in the line of business, as the destination occupations suggest (salon managers

continue as hairdressers, shop managers become sales assistants) some job-specific skills will be retained, although, as with nurses becoming carers, used at a lower level. Similar partial skill retention, but with overqualification, can be inferred for the other intermediate skills occupations, higher level service and clerical jobs.

7. Conclusions

Part-time work is an important form of employment, predominantly for women. The flexibility of hours which it offers has facilitated employment amongst women of all ages, most importantly by allowing them to combine work with responsibilities in the home. However, part-time jobs are disproportionately concentrated into low-skill, low-wage sectors, often with a strong female presence. Given women's rapidly rising levels of educational attainment, and their outperformance of young men in more recent cohorts, it is clear that a substantial number of women in part-time work must be overqualified for the jobs they are doing. This paper examines occupational change among women switching to part-time employment.

We have based the analysis on two very different datasets, the NESPD and the BHPS. Although the numerical incidence of some of the changes we examine differs, sometimes quite noticeably, between them, the differences are consistent with known biases in the NESPD and the vulnerability of BHPS to small samples in this context. More importantly, in spite of their differing basis, scale and sampling methodology, the thrust of the results from the two is closely comparable on all the aspects examined. We have therefore been able to treat them as complementary, capitalising on the size of NESPD to give robust lower bound estimates of the incidence of changes associated with part-time work, and on the rich content of BHPS to open up further avenues.

The incidence of occupational downgrading is substantial. At least 14 percent, and probably around one-quarter of women switching to part-time work move to an occupation where the average qualification level is below that of her previous full-time job. Downgrading affects as many as 29 percent of women from professional and

corporate management jobs, and up to 40 percent in jobs at intermediate skill level. While some professional women take the opportunity of the switch to part-time work to move into a new career requiring a high level of skills, in one of associate professions occupations or corporate management, at least as many take up jobs in a range of low-skill occupations, as care assistants, or in clerical or sales jobs, underutilising between three and five years of higher education and professional training (even more for the most highly qualified). The most frequent 'victims' of downgrading, willing or otherwise, are women in smaller-scale managerial positions, in restaurants, salons and shops, almost half of whom shed their managerial and supervisory responsibilities and revert to being standard personal service or sales assistants.

In sharp contrast with the decision to switch to part-time work, made by women in all occupations, the incidence of downgrading is affected to only a relatively small extent by personal or household characteristics, such as labour market experience, educational attainment or the presence of children. A pre-school child adds only 3-5 percentage points to the 35 percent risk of downgrading faced by the mother when she leaves her current employer for a new part-time job, and this is largely reversed when the child reaches primary school. By contrast, the risk of downgrading is strongly influenced by the (lack of) part-time opportunities within her current occupation. This indicates that the demand by employers for part-time workers in different occupations is of central importance in determining the risk of downgrading. This is further confirmed by the finding that, across a wide range of occupations, downgrading is greatly reduced for women who cut their working hours while remaining with their current employer (although some survey evidence questions whether these part-time positions are truly on a par with their full-time counterparts, even when nominally the same job; see Houston and Marks, 2003). This analysis of downgrading, focused on women moving directly to part-time work while remaining in continuous employment, is the rosier part of the picture. Not discussed here are the downgrading experiences of women who take breaks from employment and then return to part-time work. Among them the incidence of downgrading is at least doubled.

Assessing the underutilisation of qualifications with downgrading shows some pathways to be less socially inefficient than others. A nurse becoming a carer is likely to experience a pay cut of the same order as her colleagues who become sales assistants; the impact on personal earnings and on GDP can be identical. But as a carer she continues to use occupation-specific skills, even if at a lower level, maintaining a social return to elements of her training and perhaps facilitating a future return to nursing. The issue of social efficiency applies widely where, as with nurses and graduates generally, the investment in skills is publicly provided.

At a time when national education and training strategies are focused on extending educational participation and enhancing skills training the underutilisation of the skills of women working part-time is wasteful and inappropriate. The key to curbing downgrading is the greater availability of opportunities for part-time work within women's existing jobs. That this can be effective is shown by the experience of nursing and teaching where 89 percent of women who move to part-time work remain within the profession. The structural reasons for the availability of part-time jobs in these occupations are obvious: the 24/7 basis for nursing care, in teaching the need for sickness cover and fractional provision. The question arises why similar considerations are not equally persuasive over a much wider range of public and private sector services at the professional, managerial and higher skill levels. Noting that nursing and teaching are heavily female occupations, are the constraints on the creation of good part-time jobs elsewhere structural, or due to managerial conservatism? The 'right to request flexible working' introduced in 2003 makes a start in the appropriate direction but is restricted in scope (only parents of children under six) and allows employers wide scope for refusal. Strengthening this right is a very feasible step towards reducing the 'hidden brain drain' of the skills of women in part-time work.

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Appendix 1

The 15-Occupation Classification

	Title	Constituent Occupations
1	Corporate managers & administrators	Unit Groups 100-139, 150-155, 169-170, 176-177, 190-199 Average qualification 3.0-4.9 General managers and administrators in national and local government and large organizations; production, marketing, personnel and computing systems managers; bank and travel agency managers; civil service executive officers; uniformed services officers.
2	Other managers	Unit Groups 140-142, 160, 171-175, 178-179 Average qualification 2.7-2.9 Hotel and accommodation, restaurant and catering, and hairdressing managers; service industry managers, including retailing.
3	Teachers	Unit Groups 230-239 Average qualification 6.3-6.8 Higher education, secondary, primary and special education teachers; education officers.
4	Other professionals	Unit Groups 200-224, 240-293 Average qualification 5.2-7.0 Medical practitioners; scientists and engineers; solicitors; certified accountants; management and business consultants; librarians; social workers.
5	Nurses	Unit Groups 340-341 Average qualification 4.7-5.2 Nurses; midwives.
6	Other associate professionals	Unit Groups 300-332, 342-399 Average qualification 3.5-6.0 Laboratory and medical technicians; computer analysts; physio- and occupational therapists; financial analysts; personnel, welfare and training officers; matrons; authors; designers.
7	Higher level clerical jobs	Unit Groups 400-411, 420-421, 490-491 Average qualification 2.7-3.4 Civil service and local government administrative/clerical officers; accounts and records clerks; cashiers; library assistants; computer officers
8	Lower level clerical jobs	Unit Groups 412, 430, 440-463 Average qualification 2.1-2.6 Clerk/typists; stores clerks; medical and legal secretaries; word processor operators; receptionists; telephonists.

9	Higher-skill services	Unit Groups 600-613, 700-719, 790-792 Average qualification 2.5-3.5 Police officers (sergeant and below); buyers; sales representatives; merchandisers.
10	Skilled trades	Unit Groups 500-599 Average qualification 1.4-3.2 Sewing machinists; printing trades
11	Caring services	Unit Groups 640-659 Average qualification 1.9-2.9 Nursing assistants; ambulance staff; dental nurses; care attendants; nursery nurses; educational assistants; child minders; playgroup leaders and assistant.
12	Other personal services	Unit Groups 614-631, 660-699 Average qualification 1.4-2.6 Chefs and cooks; waiters; bar staff; travel attendants; hairdressers; housekeepers (non-domestic); dry cleaners.
13	Sales assistants	Unit Groups 720-732 Average qualification 1.5-2.1 Sales assistants; checkout operators; petrol pump attendants.
14	Other low-skill jobs	Unit Groups 800-899, 900-957, 959-999 Average qualification 1.2-2.2 Food processing operatives; electronic components assemblers; packers and bottlers; postal workers; drivers; catering assistants; shelf fillers.
15	Cleaners	Unit Groups 958 Average qualification 1.2 Domestic and office cleaners.

Appendix 2

Occupational Transition Matrix for Women Experiencing Occupational Downgrading when Switching from Full- to Part-time Employment; NESPD 1991-2001

	Previous occupation													
Current occupation	Teachers	Other prof.	Nurses	Assoc. prof.	Corp. managers	High. skill services	Higher level clerical	Other managers	Skilled trades	Lower level clerical	Caring services	Other personal services	Sales	Other low skill
Other professional	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nurses	3.1	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Associate professional	16.1	29.1	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corporate managers	7.3	14.6	1.8	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Higher skill service	0.0	0.6	0.6	1.3	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Higher skill clerical	14.5	7.6	3.5	16.3	25.2	15.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other managers	1.0	0.6	0.6	0.3	2.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Skilled trades	0.0	0.0	0.6	1.6	0.2	1.4	0.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Lower level clerical	10.4	7.0	2.9	21.9	39.6	36.2	50.6	17.8	10.1	0.0	0.0	0.0	0.0	0.0
Caring services	24.4	17.7	68.2	16.7	7.4	8.0	8.1	6.1	13.8	16.0	0.0	0.0	0.0	0.0
Other personal services	2.6	4.4	3.5	7.8	7.2	11.6	10.9	16.8	7.8	22.3	19.0	0.0	0.0	0.0
Sales assistants	5.7	3.8	5.3	11.1	8.4	17.4	18.4	47.2	29.9	38.9	23.9	37.5	0.0	0.0
Other low skill occupations	3.6	4.4	0.6	6.5	3.2	3.6	6.9	5.6	18.7	12.8	16.1	37.0	60.6	0.0
Cleaners	3.1	2.5	4.1	5.9	2.5	5.1	4.2	5.6	19.8	9.9	41.0	25.5	39.4	100.
% of All	5.2	4.2	4.6	8.2	10.8	3.7	19.1	5.7	7.2	13.6	5.5	5.6	2.5	4.2

Table 1: The 15-Occupation Classification, Ranked by Average Level of Qualification, Full-Time Adult Men and Women, 2000

Ranked occupation	No. of full-time adult workers	Average qualification level	Standard deviation of qualification	Full-time hourly pay (ranking)
1. Teachers	1947	6.6	1.1	£13.25 (3)
2. Other professionals	2888	5.7	2.0	£14.11 (2)
3. Nurses	760	4.7	1.5	£9.62 (6)
4. Other associate professionals	3320	4.5	2.2	£11.15 (4)
5. Corporate managers	5817	4.2	2.3	£14.53 (1)
6. Higher-skill services	1629	3.2	1.9	£10.43 (5)
7. Higher level clerical	2579	3.0	2.0	£7.66 (9)
8. Other managers	1472	2.8	1.9	£9.23 (7)
9. Skilled trades	4419	2.5	1.5	£7.96 (8)
10. Lower level clerical	2770	2.4	1.7	£6.92 (10)
11. Caring services	1167	2.3	1.6	£5.64 (13)
12. Other personal services	1170	2.1	1.7	£6.07 (12)
13. Sales assistants	825	2.0	1.8	£5.40 (14)
14. Other low skill occupations	5547	1.6	1.4	£6.61 (11)
15. Cleaners	246	1.1	1.4	£4.53 (15)
Total	36556	3.4	2.3	£9.76

Source: Labour Force Survey 2000.

Table 2: Distribution of Women's Employment between Full- and Part-time Work by 15 Occupations, 2000.

Ranked occupation	No. of women employed	% of full-time women	% of part-time women	Part-time share in occupation
1. Teachers	1687	8.7	4.5	26.6
2. Other professionals	906	5.2	1.7	19.1
3. Nurses	1151	4.8	4.6	40.4
4. Other associate professionals	1847	9.3	5.2	27.4
5. Corporate managers	2198	13.1	3.4	15.6
6. Higher-skill services	619	3.2	1.6	26.0
7. Higher level clerical	3002	13.2	11.1	35.2
8. Other managers	572	3.5	0.9	14.4
9. Skilled trades	443	2.3	1.1	25.4
10. Lower level clerical	3293	14.2	12.6	37.4
11. Caring services	2712	7.6	15.8	63.2
12. Other personal services	1116	3.4	6.1	58.2
13. Sales assistants	2037	3.6	14.7	75.4
14. Other low skill occupations	1763	6.9	7.6	45.5
15. Cleaners	1097	1.0	9.1	86.8
Total	24443	100	100	42.4

Source: Labour Force Survey 2000.

Table 3 Employment Status and Transitions in NESPD and BHPS, 1991-2001

	NESPD		BHPS	
	number	%	number	%
Sample: total	577386	100	15157	100
Employment status				
full-time	372193	64.5	9615	63.7
part-time	205193	35.5	5542	36.3
Transitions				
full-time to full-time	346536	60.0	8,750	57.7
part-time to part-time	179331	31.1	4,676	30.9
full-time to part-time	25862	4.5	866	5.7
part-time to full-time	25657	4.4	865	5.7
Full-time workers	372398	100	9616	100
continue full-time	346536	93.1	8750	91.0
switch to part-time	25862	6.9	866	9.0
Part-time workers	204988	100	5541	100
continue part-time	179331	87.5	4676	84.4
switch to full-time	25657	12.5	865	15.6
Change of employer				
same employer	498128	86.3	11596	76.5
change employer	79258	13.7	3561	23.5

Table 4: Occupational Transitions, Full- and Part-time Employment Status, and by Stayers and Job Movers, NESPD and BHPS 1991-2001

	Occupational Rank									
	NESPD					BHPS				
	Number	Group share (%)	Up (%)	Same (%)	Down (%)	Number	Group share (%)	Up (%)	Same (%)	Down (%)
<i>All</i>	577386	100	5.8	89.6	4.6	15,157	100	14.7	71.8	13.5
Remains FT	346536	60.0	5.1	91.3	3.7	8,750	57.7	14.4	72.4	13.2
Remains PT	179331	31.1	5.1	90.6	4.4	4,676	30.9	12.2	76.4	11.3
Switches FT to PT	25862	4.5	9.6	75.9	14.4	866	5.7	17.1	57.2	25.8
Switches PT to FT	25657	4.4	16.6	75.0	8.4	865	5.7	28.4	54.7	16.9
<i>Stayers</i>	498128	100	2.6	95.3	2.1	12,082	100	11.3	77.9	10.8
Remains FT	304714	61.1	2.3	96.0	1.7	7,044	58.3	11.5	77.2	11.3
Remains PT	157755	31.7	2.5	95.3	2.2	3,958	32.8	9.6	81.8	8.7
Switches FT to PT	17878	3.6	4.5	89.5	6.1	553	4.6	13.6	69.1	17.4
Switches PT to FT	17781	3.6	6.7	89.5	3.8	527	4.4	19.4	67.2	13.5
<i>Job movers</i>	79258	100	25.9	54.0	20.2	3,075	100	28.0	47.7	24.3
Remains FT	41822	52.8	25.2	56.9	18.0	1,706	55.5	26.4	52.6	21.0
Remains PT	21576	27.2	24.2	55.7	20.1	718	23.3	26.9	47.1	26.0
Switches FT to PT	7984	10.1	21.2	45.6	33.2	313	10.2	23.3	36.1	40.6
Switches PT to FT	7876	9.9	39.0	42.3	18.7	338	11.0	42.6	35.2	22.2

Transition rates are annual averages over the ten years 1991-2001.

Table 5: Occupational Transitions by Broad Skill Level of Origin and Destination, Stayers and Job Movers, NESPD and BHPS, 1991-2001

Full- to part-time employment, by occupation of origin						
	NESPD			BHPS		
	Number	Up (%)	Down (%)	Number	Up (%)	Down (%)
<i>High skill</i>						
All FT to PT	7927	3.3	15.5	242	7.9	28.9
Stayer & FT-PT	5700	1.8	8.0	127	5.5	18.1
Mover & FT-PT	2227	7.3	34.9	115	10.4	40.9
<i>Intermediate skill</i>						
All FT to PT	4985	5.4	26.7	197	13.2	40.6
Stayer & FT-PT	3308	3.1	9.8	99	11.1	20.2
Mover & FT-PT	1677	10.0	60.2	98	15.3	61.2
<i>Low skill</i>						
All FT to PT	12950	15.1	9.0	427	24.1	17.1
Stayer & FT-PT	8870	6.7	3.5	222	14.9	7.7
Mover & FT-PT	4080	33.4	21.1	205	34.1	27.3
Part- to full-time employment, by destination occupation						
	NESPD			BHPS		
	Number	Up (%)	Down (%)	Number	Up (%)	Down (%)
<i>High skill</i>						
All FT to PT	7571	21.4	3.1	261	40.6	5.0
Stayer & PT-FT	5128	9.3	1.6	140	25.0	2.1
Mover & PT-FT	2443	47.0	6.4	121	58.7	8.3
<i>Intermediate skill</i>						
All FT to PT	4232	28.6	5.9	173	46.2	9.2
Stayer & PT-FT	2799	11.3	3.0	85	29.4	8.2
Mover & PT-FT	1433	62.6	11.7	88	62.5	10.2
<i>Low skill</i>						
All FT to PT	13854	10.3	12.0	431	13.9	27.1
Stayer & PT-FT	9854	4.1	5.2	227	6.2	18.5
Mover & PT-FT	4000	25.6	28.7	204	22.5	36.8

Transition rates are annual averages over the ten years 1991-2001.

Table 6A Multinomial Logit Regressions on Occupational Up/Downgrading including Stayer/Mover Status; Women aged 22-59; NESPD 1991- 2001

	Specification One		Specification Two	
	Up	Down	Up	Down
<i>Stayer</i>				
Remains in full-time employment	-	-	-	-
Remains in part- time employment	1.08 (0.02)	1.31 (0.03)	0.99 (0.02)	1.32 (0.04)
Switches into part- time employment	2.03 (0.08)	3.83 (0.13)	1.90 (0.07)	3.78 (0.13)
Switches into full- time employment	3.05 (0.10)	2.40 (0.10)	2.77 (0.09)	2.33 (0.10)
<i>Mover</i>				
Remains in full-time employment	18.32 (0.31)	18.11 (0.35)	14.02 (0.29)	13.56 (0.31)
Remains in part- time employment	17.91 (0.37)	20.69 (0.47)	13.05 (0.36)	15.97 (0.48)
Switches into part- time employment	19.21 (0.61)	41.68 (1.22)	14.70 (0.50)	31.74 (1.03)
Switches into full- time employment	37.93 (1.06)	25.43 (0.87)	27.44 (0.87)	19.31 (0.74)
Age	-	-	1.04 (0.01)	1.04 (0.01)
Age ²	-	-	1.00 (0.00)	1.00 (0.00)
Years of full-time experience	-	-	0.97 (0.00)	0.99 (0.00)
Years of full-time experience ²	-	-	1.00 (0.00)	1.00 (0.00)
Years of part-time experience	-	-	1.00 (0.01)	0.98 (0.01)
Years of part-time experience ²	-	-	1.00 (0.00)	1.00 (0.00)
Experience prior to 1975*	-	-	1.02 (0.00)	1.01 (0.00)
Tenure	-	-	0.96 (0.00)	0.95 (0.00)
	Number of obs = 577386		Number of obs = 577268	
	LR chi2(32) = 91718.97		LR chi2(48) = 93615.67	
	Prob > chi2 = 0		Prob > chi2 = 0	
	Log likelihood = -187536.58		Log likelihood = -186527.34	

'Same' ranking is the reference category.

The Table reports odds ratios [exp(β)] and associated standard errors are given in parentheses. All equations include time dummies.

* Potential experience prior to the survey.

Table 6B Multinomial Logit Regressions on Occupational Up/Downgrading including Stayer/Mover Status; Women aged 22-59; BHPS 1991- 2001

	Specification One		Specification Two		Specification Three	
	Up	Down	Up	Down	Up	Down
<i>Stayer</i>						
Remains in full-time employment	-	-	-	-	-	-
Remains in part- time employment	0.71 (0.05)	0.67 (0.05)	0.73 (0.06)	0.76 (0.07)	0.69 (0.06)	0.72 (0.07)
Switches into part- time employment	1.02 (0.16)	1.23 (0.18)	1.10 (0.18)	1.41 (0.21)	1.08 (0.18)	1.37 (0.21)
Switches into full- time employment	1.51 (0.20)	1.10 (0.17)	1.42 (0.21)	1.16 (0.20)	1.40 (0.21)	1.14 (0.20)
<i>Mover</i>						
Remains in full-time employment	3.46 (0.23)	2.86 (0.20)	2.71 (0.22)	2.42 (0.20)	2.76 (0.22)	2.44 (0.21)
Remains in part- time employment	4.28 (0.39)	4.13 (0.39)	3.48 (0.38)	3.73 (0.42)	3.28 (0.37)	3.53 (0.41)
Switches into part- time employment	4.07 (0.55)	7.09 (0.84)	3.24 (0.48)	6.22 (0.82)	3.19 (0.48)	5.99 (0.80)
Switches into full- time employment	7.81 (0.92)	4.42 (0.61)	5.62 (0.78)	3.61 (0.58)	5.51 (0.78)	3.54 (0.57)
Age	-	-	0.96 (0.02)	0.94 (0.02)	0.97 (0.03)	0.94 (0.03)
Age ²	-	-	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Years of full-time experience	-	-	0.97 (0.01)	0.99 (0.01)	0.97 (0.01)	0.97 (0.01)
Years of full-time experience ²	-	-	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Years of part-time experience	-	-	1.00 (0.01)	0.98 (0.01)	0.98 (0.01)	0.96 (0.01)
Years of part-time experience ²	-	-	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Tenure	-	-	0.96 (0.01)	0.97 (0.01)	0.96 (0.01)	0.96 (0.01)
Single	-	-	-	-	-	-
Married	-	-	-	-	1.24 (0.12)	1.38 (0.14)
Divorced	-	-	-	-	1.42 (0.18)	1.58 (0.21)
Separated	-	-	-	-	1.06 (0.21)	1.53 (0.28)
No qualifications	-	-	-	-	-	-
Sub-age 16 qualifications	-	-	-	-	1.24 (0.12)	1.27 (0.13)
O-level qualifications or equivalent	-	-	-	-	1.13 (0.09)	1.26 (0.11)
A-level qualifications or equivalent	-	-	-	-	1.01 (0.11)	1.05 (0.12)

Nursing qualifications	-	-	-	-	0.56 (0.11)	0.72 (0.13)
High level vocational qualifications	-	-	-	-	0.87 (0.08)	1.01 (0.10)
Teaching qualifications	-	-	-	-	0.46 (0.08)	0.65 (0.10)
Degree	-	-	-	-	0.67 (0.07)	0.78 (0.09)
No children	-	-	-	-	-	-
Pre-school age children	-	-	-	-	0.96 (0.08)	1.11 (0.10)
Primary school age children	-	-	-	-	1.00 (0.07)	0.88 (0.06)
Secondary school age children	-	-	-	-	0.97 (0.07)	1.05 (0.08)
Children aged 16 or older	-	-	-	-	0.80 (0.11)	1.07 (0.14)
	Number of obs = 15775		Number of obs = 13845		Number of obs = 13845	
	LR chi2(30) = 1525.24		LR chi2(44) = 1428.85		LR chi2(78) = 1574.93	
	Prob > chi2 = 0		Prob > chi2 = 0		Prob > chi2 = 0	
	Log likelihood = -11743.224		Log likelihood = -9961.0699		Log likelihood = -9888.0344	

'Same' ranking is the reference category. Table reports odds ratios $\exp(\beta)$ and associated standard errors are given in parentheses. All equations include time dummies.

*Table 7 Multinomial Logit Regressions on Occupational Up/Downgrading including Stayer/Mover Status and Lagged Occupation;
Women aged 22-59; NESPD 1991- 2001*

	<i>NESPD 1991- 2001</i>				<i>BHPS 1991- 2001</i>			
	Specification Four		Specification Five		Specification Four		Specification Five	
	Up	Down	Up	Down	Up	Down	Up	Down
<i>Stayer</i>								
Remains in full-time employment	-	-	-	-	-	-	-	-
Remains in part- time employment	0.84 (0.02)	1.64 (0.05)	0.82 (0.02)	1.68 (0.05)	0.56 (0.05)	0.96 (0.09)	0.61 (0.05)	1.00 (0.09)
Switches into part- time employment	1.81 (0.08)	3.80 (0.16)	1.69 (0.07)	3.81 (0.16)	1.01 (0.17)	1.46 (0.24)	1.01 (0.17)	1.49 (0.24)
Switches into full- time employment	2.42 (0.10)	2.61 (0.13)	2.27 (0.09)	2.56 (0.13)	1.31 (0.21)	1.30 (0.23)	1.30 (0.20)	1.30 (0.23)
<i>Mover</i>								
Remains in full-time employment	14.70 (0.35)	13.36 (0.36)	13.91 (0.33)	13.47 (0.36)	2.79 (0.24)	2.52 (0.22)	2.79 (0.23)	2.44 (0.21)
Remains in part- time employment	10.97 (0.36)	22.03 (0.81)	10.21 (0.33)	20.52 (0.74)	2.58 (0.31)	5.73 (0.74)	2.82 (0.33)	5.38 (0.67)
Switches into part- time employment	13.97 (0.57)	38.98 (1.50)	13.17 (0.52)	35.13 (1.32)	2.72 (0.43)	7.86 (1.14)	2.94 (0.45)	7.07 (0.99)
Switches into full- time employment	25.32 (1.00)	23.94 (1.10)	21.85 (0.82)	22.55 (1.02)	4.90 (0.74)	5.25 (0.91)	4.96 (0.71)	4.93 (0.83)
<i>Previous occupation</i>								
Teachers	0.00 (0.00)	0.42 (0.02)	-	-	0.00 (0.00)	1.34 (0.27)	-	-
Other professionals	0.06 (0.01)	1.72 (0.08)	-	-	0.02 (0.01)	7.21 (1.24)	-	-
Nurses	0.04 (0.00)	0.68 (0.03)	-	-	0.03 (0.01)	0.86 (0.20)	-	-
Other associate professionals	0.33 (0.02)	1.72 (0.07)	-	-	0.39 (0.06)	4.19 (0.65)	-	-
Corporate managers	0.26 (0.01)	1.38 (0.06)	-	-	0.44 (0.07)	4.41 (0.70)	-	-

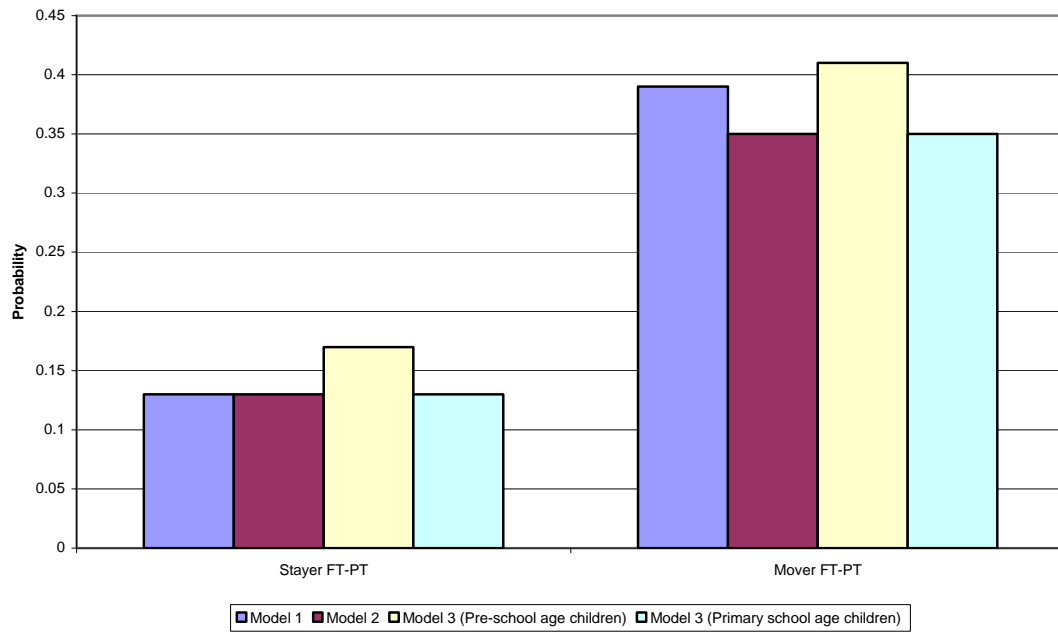
Higher-skill services	0.69 (0.04)	1.85 (0.10)	-	-	0.39 (0.10)	3.12 (0.61)	-	-
Higher level clerical	0.51 (0.02)	1.17 (0.05)	-	-	0.59 (0.08)	2.07 (0.30)	-	-
Other managers	0.67 (0.04)	1.59 (0.09)	-	-	0.44 (0.08)	2.90 (0.49)	-	-
Skilled trades	0.29 (0.02)	1.68 (0.09)	-	-	0.35 (0.08)	1.82 (0.34)	-	-
Lower level clerical	0.78 (0.03)	0.33 (0.01)	-	-	1.24 (0.15)	0.54 (0.09)	-	-
Caring services	0.79 (0.03)	0.49 (0.02)	-	-	0.48 (0.07)	0.53 (0.09)	-	-
Other personal services	-	-	-	-	-	-	-	-
Sales assistants	0.77 (0.03)	0.23 (0.01)	-	-	1.05 (0.14)	0.36 (0.07)	-	-
Other low-skill occupations	1.04 (0.04)	0.22 (0.01)	-	-	1.43 (0.19)	0.16 (0.04)	-	-
Cleaners	1.57 (0.06)	0.02 (0.00)	-	-	1.70 (0.25)	0.00 (0.00)	-	-
<i>Share of part-time jobs in previous occupation</i>	-	-	8.59 (0.35)	0.04 (0.00)			3.90 (0.59)	0.01 (0.00)
	Number of obs = 467070		Number of obs = 467070		Number of obs = 13845		Number of obs = 13845	
	LR chi2(80) = 91023.64		LR chi2(54) = 77666.33		LR chi2(114) = 3768.24		LR chi2(88) = 2469.87	
	Prob > chi2 = 0		Prob > chi2 = 0		Prob > chi2 = 0		Prob > chi2 = 0	
	Log likelihood = -134575.64		Log likelihood = -141254.29		Log likelihood = -8791.3773		Log likelihood = -9440.5636	

‘Same’ ranking is the reference category. Table reports odds ratios $\exp(\beta)$ and associated standard errors are given in parentheses. All specifications include time dummies, the NESPD specifications include the demographics used in Specification Two and the BHPS specifications include the demographics used in Specification Three. Firm size dummies were also included but were not significant.

Table 8 Evaluating the Underutilisation of Skills on Occupational Downgrading with the Switch to Part-time Work; Women Aged 22-59; NESPD 1991-2001

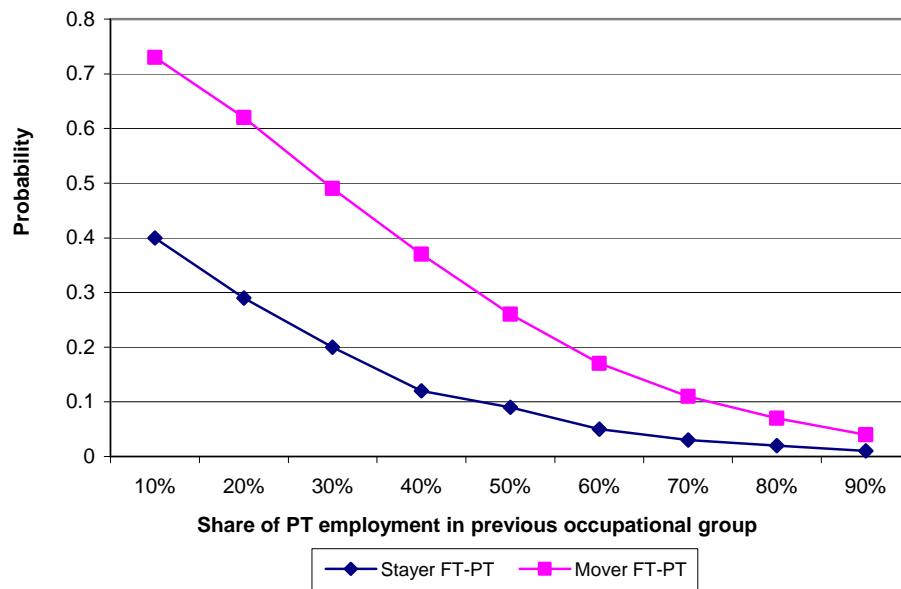
	% down-grading	New occupation			Underutilised years			
		25%	50%	75%	25%	50%	75%	Average
1. Teachers	9	4. Other assoc. professionals	8. Other managers	11. Caring services	-2	-4	-5	-3.92
2. Other professionals	20	4. Other assoc. professionals	5. Corporate managers	11. Caring services	-1	-2	-4	-2.63
3. Nurses	8	11. Caring services	11. Caring services	11. Caring services	-3	-3	-3	-2.77
4. Other associate professionals	22	7. Higher level clerical	10. Lower level clerical	12. Other personal services	-2	-3	-3	-2.85
5. Corporate managers	29	7. Higher level clerical	10. Lower level clerical	11. Caring services	-1	-2	-2	-1.83
6. Higher-skill services	33	10. Lower level clerical	10. Lower level clerical	13. Sales assistants	-1	-1	-2	-1.09
7. Higher level clerical	21	10. Lower level clerical	10. Lower level clerical	13. Sales assistants	-1	-1	-2	-1.29
8. Other managers	47	12. Other personal services	13. Sales assistants	13. Sales assistants	-1	-2	-2	-1.58
9. Skilled trades	36	12. Other personal services	13. Sales assistants	14. Other low skill occupations	0	-1	-1	-0.68
10. Lower level clerical	13	12. Other personal services	13. Sales assistants	13. Sales assistants	0	-1	-1	-0.62
11. Caring services	8	13. Sales assistants	14. Other low skill occupations	15. Cleaners	-1	-1	-1	-0.81
12. Other personal services	16	13. Sales assistants	14. Other low skill occupations	15. Cleaners	-1	-1	-1	-1.00
13. Sales assistants	6	14. Other low skill occupations	14. Other low skill occupations	15. Cleaners	0	0	0	0
14. Other low skill occupations	7	15. Cleaners	15. Cleaners	15. Cleaners	0	0	0	0
15. Cleaners	-	-	-	-	-	-	-	-

Figure 1 Evaluated Probabilities of Downgrading; BHPS



Probabilities are evaluated at the sample means.

Figure 2 Evaluated Probabilities of Downgrading with Share of Part-time in Previous Occupation; BHPS



Probabilities are evaluated at the sample means.

¹ The Standard Occupational Classification is described in full in OPCS (1990), volumes 1-3.

² For discussion see Stuttard and Jenkins (2001).

³ The BHPS is also used by Booth and van Ours (here) and Paull (here).

⁴ Records involving one-year gaps make up 7% of the number of observations, against 89% for consecutive observations. The results reported in the remaining sections are unchanged if the more stringent definition is applied.

⁵ The part-time share of 36% in both the NESPD and BHPS samples in Table 3 differs from the 42% in the LFS sample in Table 2 for two reasons: it is the average over the decade 1991-2001 rather than the level in 2000; and women working exactly 30 hours per week are classified as full-time, following the NES and BHPS definitions, where the LFS classifies this as part-time. For 2000 on the LFS basis the part-time share in NESPD is 40.3% and in BHPS 39.1%. The definition of part-time work as less than 30 hours per week is also adopted for international comparisons by the OECD (van Bastelaer et al. 1997; OECD 1999).

⁶ These are direct transitions; allowing for breaks in economic activity increases the incidence somewhat.