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Highly qualified women

How does the employment of highly qualified women differ from that of highly qualified men? Do women qualified to the same level as men earn similar amounts and have the same levels of seniority?

How do family responsibilities affect such women's employment prospects?

These and other issues are examined in this article, based on an analysis of the 1991 and 1992 sweeps of the British Household Panel Study.¹

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Key findings

- Highly qualified men earned significantly more than highly qualified women, but women with a higher academic qualification earned more than vocationally qualified women.
- A quarter of women of working age held qualifications above 'A' level GCE. More younger than older women held a degree.
- Highly qualified women were more likely to be in paid employment and work full-time than less qualified women. They were less likely to consider that they were constrained in their capacity to work by family responsibilities, such as childcare, and were more likely to share domestic tasks and childcare with their spouse or partner than less qualified women when they did work.
- Highly qualified men and women with degrees were equally likely to be in managerial or professional occupations. However, women professionals were substantially less likely than men to work in the field of science and engineering, but were more likely to be in teaching or health professions.
- Women with degrees were less likely than men with degrees to be in jobs which used their qualifications.
- Highly qualified women spent approximately two thirds of their potential working lives in full-time employment, compared to almost 90 per cent for highly qualified men.
- Having children negatively affected women's earning capacity, even when they were highly qualified.

Introduction

IT IS well documented that women are disadvantaged in the labour market compared with men. On average, women tend to receive lower wages, occupy a smaller range of occupations, have less autonomy and responsibility in their jobs, and often have less security and fewer opportunities for career advancement. Fewer women than men are in professional occupations or are employers or managers, and more are in junior non-manual and lower-level manual work (*Barron and Norris, 1976; Dale, 1987, Crompton and Sanderson 1990*).

Since the 1980s, efforts in Britain and Europe to attract more women into the male-dominated fields of science and engineering, corporate management and administration, appear to have been partly successful.¹ Although women still make up a very small proportion of science and engineering professionals, there has also been an unprecedented rise in the number

Figure 1 Highest educational qualification of highly qualified sample

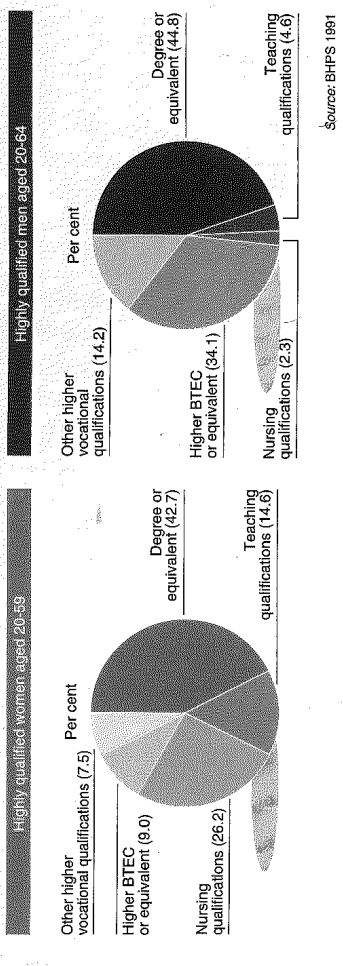
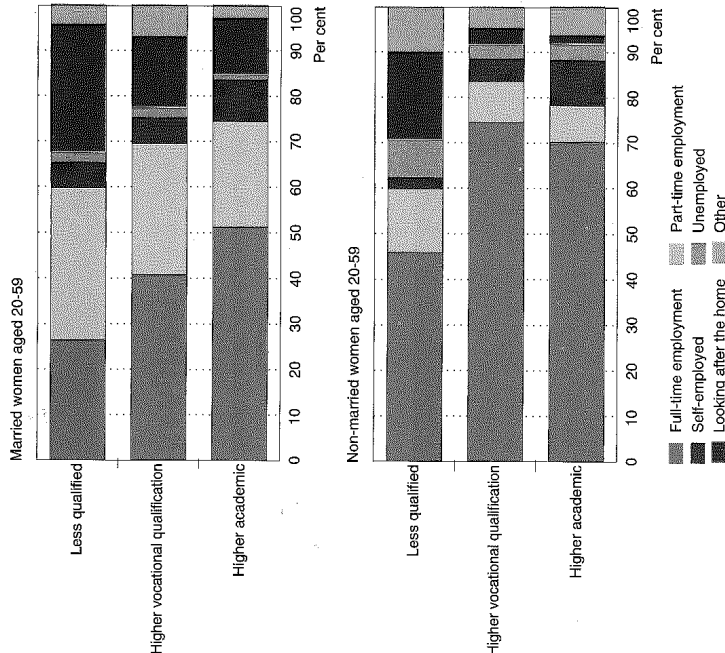


Figure 2 Employment status of women by level of qualification and marital status



of women entering into higher-level professional occupations such as medicine, accountancy, law and pharmacy.

The past decade has also seen a growth of the number of women entering management-related jobs, although these are likely to be in traditionally female-dominated occupations such as catering and retail. Many women therefore find themselves in 'occupational niches' in the labour market (Crompton and Sanderson, 1990).

Participation in the labour market and career prospects are recognised to be related to educational attainment. Crompton and Sanderson (1990) suggest that many of the qualifications gained by women are gender-related for the very reason that women may tend to anticipate gender segregation in their employment. The distribution of male and female students in subjects at secondary school and tertiary college is also often very uneven, with some subjects (such as science) being mainly studied by boys.² Despite the increase in the number of women pursuing post-compulsory educational courses and gaining qualifications over the past few decades, career opportunities available to qualified men and women remain unequal. Women lower starting salaries and lifetime earnings expectancy.³ Access to job-related training is also found to be unequal.⁴ In the 1980s, many women were found to be working in occupations below their educational capacity: many of these women had above General Certificate of Education (GCE) A level qualifications (Dex, 1992).

This article provides current information about the employment characteristics of women who held qualifications above GCE A level. The

Study (BHFS) conducted in 1991 and 1992 (see *technical note*) and the sample analysed consists of men aged 20-64 and women aged 20-59.

Numbers of highly qualified women

In 1991 a quarter of men and women of working age held qualifications above GCE A level. Figure 1 shows that men were marginally more likely than women to hold degree-level qualifications, while a far greater proportion of men held higher BTEC or City and Guilds equivalent qualifications. Women, on the other hand, were almost ten times more likely to hold nursing qualifications, and twice as many women had non-degree level teaching qualifications.

Of the highly qualified women, 43 per cent had a university degree or equivalent, 41 per cent a nursing or non-university teaching qualification; 9 per cent held a Higher National Diploma, BEC/BTEC/TEC Higher Certificate or Higher Diploma or Advanced or Final City and Guilds Certificate; and 7 per cent had an 'other' higher vocational qualification.

Being highly qualified does not assume that A levels are a prerequisite. Just over half of all the qualified adults in the survey had taken alternative routes to higher or further education such as through access courses, or had pursued further or higher education courses as mature students.

Additional vocational qualifications were more likely to be held by both women and men with a higher BTEC/City and Guilds qualification than by those with a degree or teaching qualification. This largely reflects the type of occupational paths pursued by those with vocational qualifications, who are more likely to obtain professional affiliations.

Educational achievement by age

Significant differences in educational achievement by age were evident, with a quarter of women and men aged under 44 holding higher qualifications compared with only a fifth of those who were aged over 44. Furthermore, twice as many younger people of working age held either a degree or a higher BTEC or City and Guilds or equivalent than did their older counterparts. However, fewer younger than older adults held teaching qualifications.

Employment status

Highly qualified women were more likely than less qualified women to be in full-time employment, regardless of marital status. Although married women, in general, had lower participation rates than non-married women, Figure 2 shows that for highly qualified women, the differential was not as high.

Half of married women with higher academic qualifications and 40 per cent of those with a higher vocational qualification were in full-time jobs, compared with only a quarter of less qualified married women. Part-time work was more common among less qualified married women than among the highly qualified married women or among non-married women in general.

For non-married women, employment patterns also differed by level of qualification; almost three quarters of those with a higher qualification were working full-time compared with just under half of less qualified married women. While very few non-married women with higher qualifications were looking after the home, as many as a fifth of their less qualified counterparts were.

Labour force participation and dependent children

Highly qualified women with dependent children were just as likely to be looking after the home as less qualified women. Three quarters of all women without dependent children were in employment, compared with just over half of those who had them. Overall, having a higher qualification was not associated with variations in these labour force participation rates. Of those with children aged under five, 62 per cent of mothers with a higher qualification were working compared with only 40 per cent of less

qualified mothers. Of those working mothers with children aged under five, the hours a woman worked (full-time or part-time) did not vary significantly according to their level of qualification. For mothers with children aged 5-15, however, two-thirds of mothers worked full-time compared with just under half of mothers with a higher vocational qualification and only just over a third of less qualified mothers.

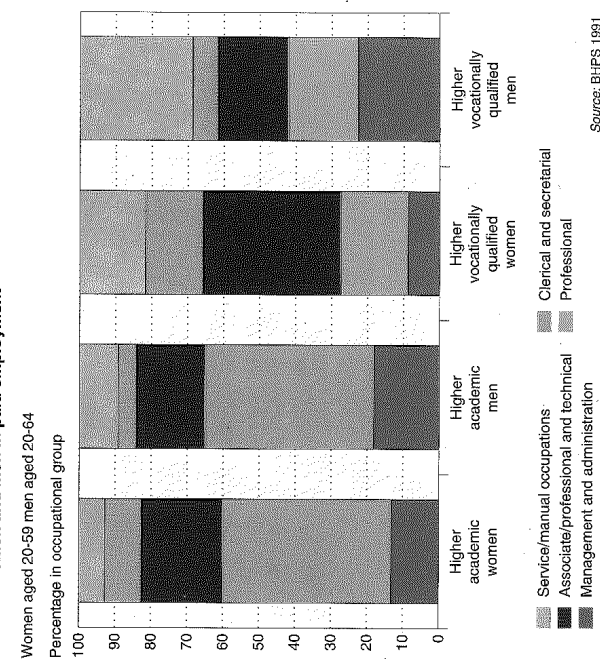
Family responsibilities

Fewer highly qualified than less qualified women said that over the previous year family responsibilities had prevented them from looking for a job, taking a job they were offered or working more hours. For the highly qualified women who said that family responsibilities had constrained their employment, childcare was the constraint most often cited. Most women saw childcare as being their primary responsibility, regardless of the level or type of qualification held; however, employed highly qualified women were more likely than those not employed to say that they shared childcare with their spouse or partner.

Occupational success

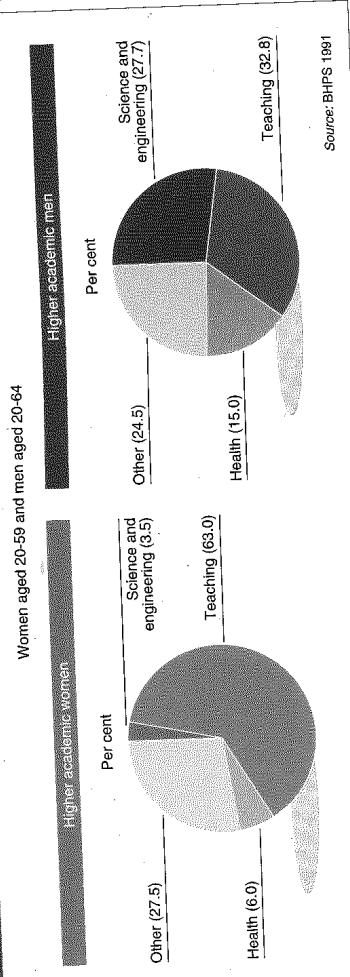
Occupational success is commonly recognised as achieving a high-status post or high pay, although the two may not

Figure 3 Standard Occupational Classification (major group) of highly qualified women and men in paid employment



Source: BHFS 1991

Figure 4 Professional Standard Occupational Classification (sub-major group) of women and men with higher academic qualifications



Source: BHPS 1991

necessarily go together. In 1991, highly qualified men and women with degrees were equally likely to be in the top three occupational groups (SOC), comprising managerial or administrative, professional and associate professional occupations. Fewer women with vocational qualifications were in these occupations (figure 3).

Very few (under four per cent) highly qualified men in the top three occupational groups were working on a part-time basis. However, 11 per cent of highly qualified women managers and administrators and a quarter in the professions and associate professions were working part-time. Part-time work was even more likely in the lower SOC groups: 29 per cent of highly qualified women in clerical and secretarial workers, 30 per cent of those in sales jobs, and 40 per cent of those in craft, personal and protective services were working part-time.

Sector

Of those with higher academic qualifications, professional women were substantially less likely than men to be in science and engineering; instead, they were largely found in teaching or in associate health professions (figure 4). While similar proportions of men and women with higher academic qualifications occupied top corporate manager and administrative jobs, only very few women with higher vocational qualifications occupied these types of job. Half as many highly qualified women as men were working in private firms or companies, or the Civil Service. Such women tended to work in local government or local education to a greater extent than their male equivalents. Vocationally qualified women were largely located in the National Health Service or state higher education.

Gender mix

Many highly qualified women and men were working in jobs where the majority of workers were of the same gender. Women with a higher academic qualification were far more likely to be working in male-dominated jobs or jobs with a more even gender mix than were women with a higher vocational qualification.

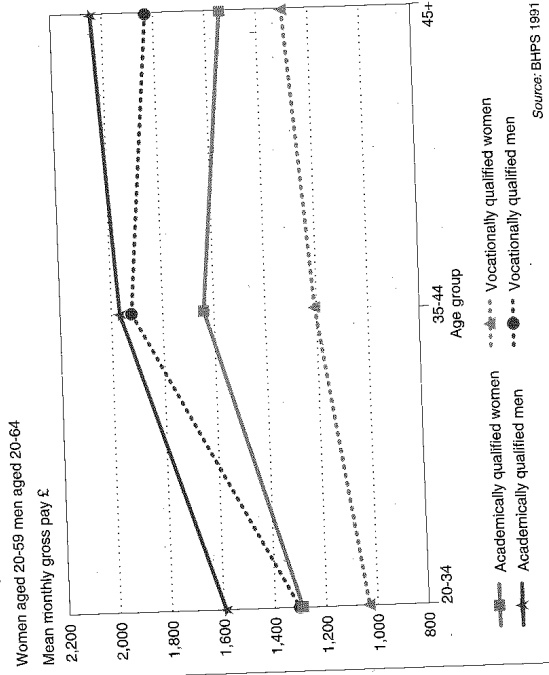
Earnings

Earnings from employment for highly

qualified men were substantially higher than for their female counterparts. Based on usual gross pay from their main job, over a quarter more highly qualified men were among the top 25 per cent of earners than women with equivalent qualifications. Moreover, women with a higher vocational qualification earned significantly less than higher academically qualified women.

These patterns persisted regardless of age, but the main patterns suggest that mean earnings from employment peaked

Figure 5 Mean monthly usual gross pay of highly qualified full-time employees by gender and age



Source: BHPS 1991

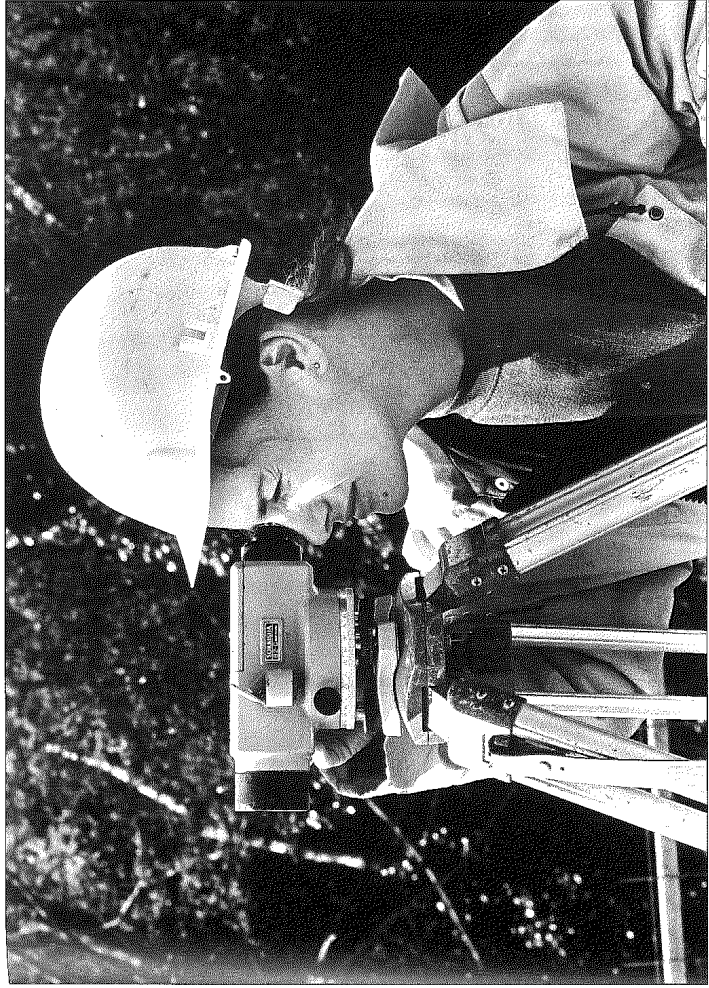
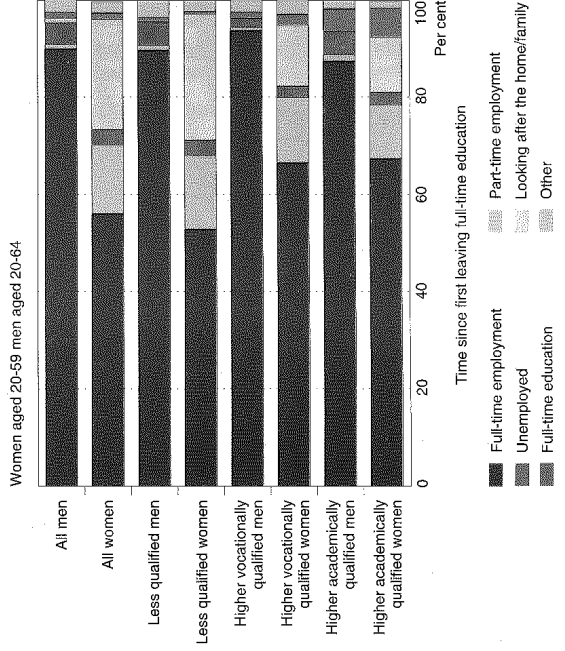


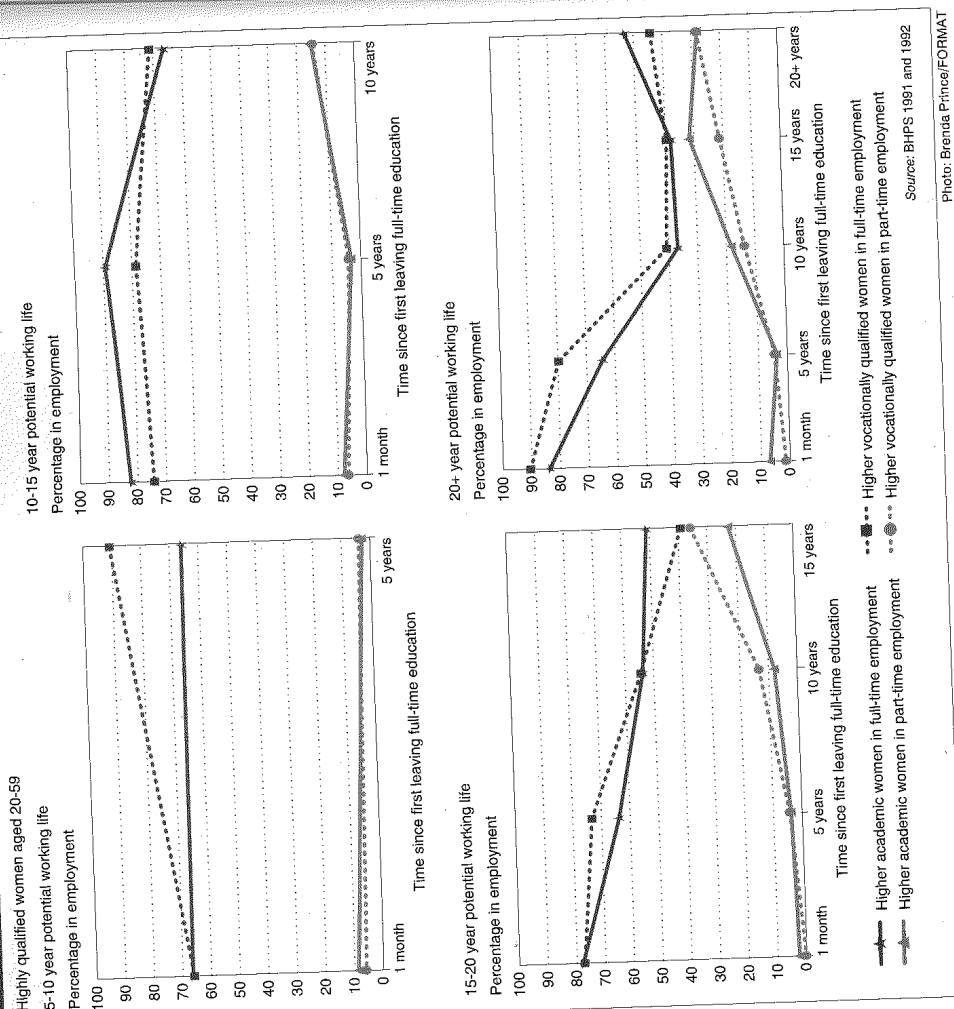
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Figure 6 Mean percentage of time spent since leaving full-time education in given employment status by level of qualification and gender



Source: BHPS 1991 and 1992

Figure 7 Participation (of highly qualified women) in paid employment at five-year intervals since first leaving full time education (by type of higher qualification and cohort)



The BHPS survey contained details about individuals' working lives since they had left full-time education up to the date of interview in 1992. Individuals of different ages provided varying amounts of information about their past, since their potential working lives varied according to their age and education. It was possible to calculate the amount of time individuals had spent in full or part-time work, in unemployment, and in various states of economic inactivity. Also, the frequencies of periods of paid work and inactivity could be calculated (see *technical note*).

Since first leaving full-time education, women were generally less likely than men to have been in the same economic activity status throughout their lives.

Women with a degree were least likely to have remained in a single spell of full-time employment. Instead, they had moved between full-time work, part-time work, unemployment, full-time education and looking after the home. However, women with degrees were less likely than women with higher vocational qualifications to have spent time out of paid work looking after the home and family.

Even between the dates of the 1990 and 1991 surveys, highly qualified women were more likely than less qualified women to have had more than one spell of employment.

Younger women
The extent of continuity of labour market participation is seen to fall dramatically in the younger women's cohorts. Figure 7 shows the employment status of highly qualified women at various points in their lives since leaving full-time education for the first time. Although

the majority of highly qualified women aged over 45 had entered full-time employment directly after leaving education, ten years later saw significantly fewer women in full-time work and more in part-time work.

By contrast, fewer younger women with higher qualifications took up full-time work straight after leaving education than their older counterparts. The dramatic shift some years later to part-time work was not evident for this younger group.

It is interesting to note that more younger men with higher qualifications had experienced unemployment and spells out of full-time employment than had older men with higher qualifications.

Using higher qualifications in current job

Other studies have shown that it is common for women to be doing jobs which do not make use of their level of qualification (Dex 1987, 1992). The BHPS 1991 survey found that women with a higher academic qualification were less likely than their male counterparts to be in jobs which made use of their qualifications. Although it is true that women with teaching qualifications were far more likely to be currently in teaching posts than their male counterparts, women with nursing qualifications often found themselves in lower-status jobs than their qualifications merited. As far as obtaining top-level jobs is concerned, men with BTEC/City and Guilds qualifications were significantly more likely than women qualified to the same level to be in managerial jobs which normally require a degree. At the other end of the spectrum, however, many men with a higher vocational qualification were in occupations generally demanding a lower level of qualification than they held.

Conclusions

Women with higher qualifications did better in the labour market than less qualified women but they fared less well than men qualified to a similar level.

Many of the higher-status occupations which demand higher qualifications for entry show gender imbalances. Although female employment in the professions showed significant growth during the 1970s and 1980s, in 1991 men still dominated the science and engineering sectors of the professional job market, with women dominant in teaching and nursing. This suggests that equal opportunities policies and incentives designed to attract women into traditionally male-dominated sectors of the labour market have had only limited success.

Not only does segregation affect highly qualified women in the labour market, but the marked inequality in pay from employment suggests that women with

equivalent qualifications to those of men are continuing to suffer a ceiling effect. Highly qualified women are far more likely to have spent less of their lives in paid employment than men with equivalent qualifications, and to have experienced more separate spells both in and out of the labour market.

Across all types of occupations, highly qualified women were less likely than men to have had continuous labour market participation in the past. For both women and men alike, employment continuity in the past had made a substantial difference to their earned income (in 1991). Those who had had time out of paid work since leaving school or college had significantly lower earnings. Of all highly qualified women, those with higher vocational qualifications are the group most likely to have had time out of paid work; it was these women who had the lowest earnings.

Both men and women with higher qualifications who have not been in continuous employment since first leaving school or college had lower earnings than those with unbroken employment records. For men, continuity of labour market participation was positively associated with occupational and managerial status. For highly qualified women, while there was no significant correlation between occupational status and continuity, having a continuous career was associated with substantially higher earnings. This was particularly true for women with a higher vocational qualification.

Labour market projections suggest that there is likely to be a continued demand among employers for highly qualified staff. The demand is likely to exist in science and technology, corporate management and administration - fields in which women are still currently under-represented. Those concerned to meet the demand for highly qualified individuals in these fields over the next few years should note that there are still many women who are not fully using their qualifications. Future changes in the career patterns of women with higher qualifications can be monitored using forthcoming waves of the BHPS.

Footnotes

- 1 A full report analysis of the Wave 1 Data included in this project is planned to be published shortly by the Employment Department in its Research Series under the title *Highly Qualified Women*.
- 2 For example, there have been specific initiatives such as Women into Science and Engineering and Women into Industry as well as many courses designed to help retrain women who had taken time out of the labour market to look after children.
- 3 Although a higher proportion of girls take courses at further education colleges, boys are still more likely to go to university (*Skills and Enterprise Network*, 1992). In higher education, engineering and technology are still largely male preserves while women tend to specialise in arts and

languages. Women also account for the majority of those training to enter teaching, nursing, midwifery and pre-school occupations. Women are largely responsible for boosting the numbers of mature students entering into higher education in the 1980s.

4 A follow-up study of graduates suggested that seven years on, the majority of men who graduated in 1980 were in employment, while 11 per cent of women who graduated in 1980 were economically inactive and not seeking work (*Dolan and Makepeace*, 1992). From the work histories of women, family commitments were found to be a major influence on the reasons given for leaving jobs over time.

5 Many employers are found not to have any long-term commitment to training and it is women - particularly those returning to work - who are disadvantaged with regard to their access to training. Factors accounting for this disadvantage include family commitments, lack of child care facilities, high costs of training, inaccessibility and travel-time constraints, and lack of knowledge about the sorts of training available (*Skills and Enterprise Network* 1992).

6 For example, as shown in *Martin and Roberts* (1984) and *Dex* (1992).

References

Barron K D and Norris G M (1976): 'Sexual divisions and the dual labour market' in *Work and Marriage*. London: Longman.

Crompton R and Sanderson K (1990): *Gendered Jobs and Social Change*. London: Unwin Hyman.

Dale A (1987): 'Occupational inequality, gender and life-cycle. Work, Employment and Society, volume 1, no 3, pp 326-351.

Dex S (1987): *Women's Occupational Mobility*. London: Macmillan.

Dex, S (1992): 'Labour force participation of women during the 1990s: occupational mobility and part-time employment', in Lindley R M (ed): *Women's Employment: Britain and the Single European Market*. Research Series, Equal Opportunities Commission, London: HMSO.

Dolan P J and Makepeace G H (1992): *The Early Careers of 1980 Graduates: Work histories, job tenure, career mobility and occupational choice*. Research Paper 79, Employment Department Group.

General Household Survey (1987). London: HMSO.

Martin J and Roberts C (1984): *Women and Employment: a lifetime perspective*. London: HMSO.

Skills and Enterprise Network (1992): *Giving women equal access to training: Skills and Enterprise Briefing*, issue 22/92, August 1992, Nottingham. Standard Occupational Classification (SOC) volume 3, London, OPCS, HMSO 1991.

The British Household Panel Study

The data used in this feature are drawn from Waves 1 and 2 of the British Household Panel Study (BHPS), a national household panel survey of over 10,000 individuals in some 5,500 households in Britain. The sample was drawn from the small users file of the Postcode Address File and covers non-institutional residences in England, Wales and Scotland (north of the Caledonian Canal excluded).

The BHPS is an annual survey which started in September 1991 and will return to re-interview panel members on an annual basis over the coming years. At Wave 1, 9,912 eligible adults aged 16 or over were interviewed and 352 proxy interviews taken, giving an upper response rate (full interviews with at least one member of the household) of 74 per cent. At Wave 2, 9,459 eligible adults were interviewed and 386 proxy interviews were taken giving an upper response rate of 89 per cent. The Wave 2 sample includes 892 new entrants, not interviewed at Wave 1 but with full interviews at Wave 2, and excludes 1,345 respondents who were interviewed at Wave 1 but not at Wave 2.

The baseline information about education and qualifications is drawn from the 1991 Wave 1 interview. The BHPS collects information about education and qualifications for individuals to a level of detail comparable with the General Household Survey (GHS 1987). This covers school, further and higher educational qualifications, and specifies the type and number of each qualification gained by respondents in their lifetimes. The BHPS dataset also provides valuable information on the domestic and household

circumstances of women which may be important factors in determining a woman's decision to enter into paid employment outside the household.

In addition to gathering similar core information concerning annual retrospective changes in employment, the Wave 2 BHPS questionnaire also collected a retrospective employment status history starting from the date the respondent first left full-time education. This information did not extend to changes between different employers or changes within jobs, but was limited to transitions in and out of the labour market and between full-time and part-time work. These retrospective data therefore provide a summary history of transitions in and out of various states of employment (a full job history covering details of all respondents' past jobs is asked in the Wave 3 BHPS questionnaire).

Definitions

Qualifications

In this feature the 'highly qualified' are defined as those having qualifications above GCE A level who hold one or more of the following qualifications: University or CNAA Higher degree of UK standard; University or CNAA First Degree or equivalent; teaching qualification (excluding degrees); nursing qualification (including SEN, SRN, SCM); Higher National Certification (HNC) or Diploma (HND), BEC, TEC, SCOTVEC, BTEC Higher Certificate or Higher Diploma, City and Guilds Certificate Full Technological, Part III (hereafter Higher BTEC/City and Guilds equivalent); other higher technical, professional or higher qualification (where any of above are not held).

Qualifications gained at University or from CNAA awarding institutions were defined as 'higher academic' and the

remainder of the list above as 'higher vocational'. For coding purposes a higher level of academic qualification takes priority, such that someone with a degree and an additional higher technical qualification would be classified first as having a degree. The term 'less qualified' is used to refer to those individuals not holding any of the qualifications listed above.

Lifetime employment history

The information on continuity of employment is drawn from the Wave 2 retrospective employment status history. The summary measures of lifetime employment status histories used in this analysis include employment statuses at various intervals after first leaving full-time education, the number of spells in various states of employment, the percentage of time spent in various employment states, and continuity of labour market participation.

A three-category measure was constructed to classify the continuity of labour market participation since leaving full-time education until the date of the Wave 2 interview. Individuals who had spent over 90 per cent of their potential working lives up to 1992 in either full-time, self-employed or part-time employment were classified as having a 'continuous' career. It should be noted that the summary measure of 'continuity' used here counts one month of full-time, one month of part-time or one month of self-employment all equally as one month of employment. In this respect, therefore, these figures do not calculate full-time equivalent years in paid employment.

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