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**THE MYTH OF PARITY OF ESTEEM:  
EARNINGS AND QUALIFICATIONS**

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## ABSTRACT

There is no parity of esteem between academic and vocational qualifications in the labour market. Data from the Labour Force Survey show that on average men and women working full-time with academic qualifications at one level in the national qualifications framework earn about the same as men and women with vocational qualifications set notionally one level higher. So those with A levels have earnings similar to those with higher or level 4 vocational qualifications, those with 5 or more O levels or higher grade GCSEs have earnings similar to those with level 3 vocational qualifications, and those with 1-4 O levels or higher grade GCSEs have earnings similar to those with level 2 vocational qualifications.

These higher earnings occur firstly because academic qualifications at a given level are more successful in buying access to more highly paid occupations. Secondly, **within** the most highly paid managerial, professional and technical occupations, academic qualifications are associated with higher earnings.

These findings raise significant issues for public policy, calling into question the way in which the UK's National Targets for Education and Training have been formulated and much work on international comparisons of educational attainment.

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**THE MYTH OF PARITY OF ESTEEM:  
EARNINGS AND QUALIFICATIONS**

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# **THE MYTH OF PARITY OF ESTEEM: EARNINGS AND QUALIFICATIONS**

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*“The research which informs the development of .... (education and training) comes from a range of disciplines which often do not have the language or inclination to speak to each other. For example, educationalists examine the curriculum and qualifications structures, whilst economists examine labour market issues.”*

(Huddleston and Unwin, 1997.)

*“... but if you go in there and say I haven't actually got the GCSEs but I've got the equivalent they still look at you down their nose as if to say well why didn't you bother to do the originals in the first place”.*

(Respondent quoted in Campanelli and Channell, 1996.)

## **INTRODUCTION**

A common theme running through educational policy in Britain is the perceived need to establish parity of esteem between the ‘academic’ or ‘general’ route through post-compulsory education and training and the ‘vocational’ route. The former route is symbolised by A levels, often referred to as the ‘gold standard’ of the English education system. The latter route has long been characterised by a wide range of traditional vocational qualifications and by the more recent introduction of National Vocational Qualifications (NVQs) and General National Vocational Qualifications (GNVQs) which run alongside the older qualifications.

The nature of the debate is best summed up by reference to the setting of the National Targets for Education and Training. These are



targets for the attainment of qualifications at different levels and rely heavily on the supposed equivalence of different qualifications (as set out in Table 1). Someone with an HND/HNC or BTEC Higher, for example, is said to have a qualification equivalent to a first degree, someone with an OND/ONC or BTEC National is said to have a qualification equivalent to 2 A levels, and so on.

However, despite these notional equivalences it has frequently been observed that young people who leave compulsory schooling at age 16 with good GCSE results tend to enrol on courses leading to A levels. Students with more modest GCSE results tend to enrol on courses leading to various vocational qualifications (many in the mid-1990s onto GNVQ courses — see Further Education Unit, 1994). In other words at age 16 young people are already voting with their feet to demonstrate that they do not believe in these equivalences. They do not appear to believe that there is parity of esteem between the academic and vocational routes. This is in spite of the assertions by those who make and influence public policy that, for example, the attainment of a BTEC National or Advanced GNVQ is equivalent to achieving 2 A levels. This paper seeks to demonstrate that the choices which we see young people at age 16 making generally seem rational based on the employment prospects which are associated with different qualifications in the labour market. There can be no parity of esteem in education and training between academic and vocational qualifications because there is no parity of esteem in the labour market — academic qualifications tend to offer access to more highly paid occupations, and often pay a higher wage within some of those occupations, than their notionally equivalent vocational counterparts. This is true at all levels of the national qualifications framework.

The approach taken in this paper provides a contrast to the approach taken by the policy makers and educationalists. Rather than trying to establish equivalences by comparing the curricula of the different qualifications or the skills which they are trying to develop, we look at the jobs and earnings which are obtained in the labour market by people with different qualifications.

The strength of this approach is that it is likely to mirror the approach which young people themselves take. When making decisions about which courses to take individuals will for the most part be making a judgement about how far those qualifications will improve their long-run employment prospects. Few individuals study for its own sake. For most it is a pragmatic decision based on where they would like to be in the labour market. The focus here is not just on young people. In practice most mature adults will be undertaking the same pragmatic assessment of the extra leverage in the labour market which attaining qualifications might deliver. This is not to say that other considerations, such as social class, do not influence the decisions which people make, only that an individual's judgement about their labour market prospects will play a very important role.

This paper builds on a range of previous literature. Amongst the best known is the work by Bennett *et al* (1992) which used the General Household Survey to look at how the earnings associated with different qualifications had changed over time. The report clearly indicated that academic qualifications delivered a better pay off than notionally equivalent vocational qualifications, though the report appears to have had a surprisingly limited impact in influencing the debate in this respect. The report itself built on the careful work undertaken by Schmitt (1995), also using the General Household Survey, and looking at trends in male earnings. Although Schmitt was not looking specifically at the issues addressed in this paper his results were highly relevant to the debate.

This paper is firstly an attempt to update that work. Bennett *et al* (1992) and Schmitt (1995) were using data up to 1986-88. This paper uses data from the Labour Force Survey for 1993-95. It thus presents the most up-to-date estimates of the earnings associated with different qualifications feasible with current data. The use of the Labour Force Survey (LFS) also presents significant advantages over the General Household Survey (GHS) which are explored in the next section.

The first section of the paper outlines the main results on the earnings associated with different qualifications, for men and for women. The second section exploits one of the main advantages of the LFS — its larger sample size — to conduct a more detailed analysis of why academic qualifications deliver higher earnings than their vocational counterparts. By looking at the occupations which people with different qualifications gain access to, and by looking at the pay **within** occupations for people with different qualifications, it is shown that academic qualifications not only help secure access to the better paid occupations, but are also associated with higher pay within many of those occupations. It is the combination of both these factors which deliver the relatively higher earnings for academic qualifications. This section also offers a range of labour market information which helps make sense of the educational choices being made by individuals. The third section compares the LFS results with those from the GHS and looks at changes over time.

The paper summarises the findings in a way so as to illustrate the kinds of choices which rational people would be making based on their understanding of the labour market. The final section of the paper discusses the implications of the findings for the current educational debate, especially in relation to the National Targets for Education and Training and international comparisons of educational attainment.

The paper is written primarily for people involved in the education debate. In the first section some data and statistical issues are discussed. This part is starred and can be omitted without losing the thread of the argument.

## **A. EARNINGS AND QUALIFICATIONS**

Figure 1 and Figure 2 report the earnings associated with holding different qualifications, for men and women respectively, for full-time employees evaluated after 20 years experience, for the years 1993-95. The earnings are estimated for people holding their highest

qualifications at these various levels evaluated relative to someone with no qualifications at all.

### **The Labour Force Survey data\***

The estimates in this paper are based on over 40,000 observations for men employed full-time and over 24,000 observations for women employed full-time, along with nearly 15,000 observations for women part-timers, drawn from the Labour Force Survey. This illustrates one of the main advantages of the LFS, in that its relatively large sample size allows for a more reliable set of estimates to be established for a wider range of qualifications. For example Bennett *et al* (1992) in using the GHS would have had about 6,000 annual observations for male full-timers in 1986 compared with around 16,000 from the LFS in 1993. Bennett *et al* report the results for 10 aggregated categories of qualifications. Here the results for 18 (men) and 22 (women) qualifications are reported.

The estimates report weekly earnings for full-timers and hourly earnings for part-timers. Weekly earnings were estimated so that the results could be compared with those from Schmitt (1995) and Bennett *et al* (1992) who are obliged to use weekly earnings because of the limitations of the GHS. In practice hours of work vary little across qualifications so that little appears to be lost by using weekly earnings.

The estimates control for years of experience, defined conventionally as years since leaving full-time education so that in practice it is **potential** labour market experience which is being controlled for. Controlling for experience is important because of the finding that lifetime earnings follow a hump shaped pattern, rising in the early years before declining somewhat for men after about age 40 and women after about age 30 (Elias and Gregory, 1994). As the unqualified are disproportionately older (and therefore likely to be witnessing declining relative earnings) and those with A levels and O levels are disproportionately younger, the earnings of both will be understated when compared with those with higher education unless

potential time in the labour market is controlled for. The only other main control employed is for region.

With the large sample sizes employed most of the differences between qualifications reported in Figures 1 and 2 will be statistically significant. For the estimates for different occupations (Figures 12-20) where sample sizes are much smaller a rule of thumb would be that differences greater than 5 percentage points are big enough to be statistically significant at the 5% level in most cases.

The main disadvantage of the LFS is that it offers no time series. Wage data from the LFS first became available in the last quarter of 1992. The GHS can offer wage data going back to the early 1970s and is therefore the only source which can be used to look at changes over time in the earnings associated with different qualifications. In section C the GHS and LFS results are compared.

Blundell *et al* (1996) offer an excellent review of a range of previous work by economists in this area in the UK and in the United States. Their own work uses the National Child Development Study to assess the returns to qualifications. The NCDS is a longitudinal study tracking individuals born in one week in March 1958. Because they are using such a rich longitudinal data set they are able to control for a much wider range of background variables than is possible using the LFS, in particular family variables and variables relating to past educational attainment. Sources such as the GHS or LFS do not have such a range of variables. Therefore the estimated earnings associated with different qualifications derived from these sources will also be picking up the returns to other background variables which are correlated with the holding of different qualifications. Blundell *et al* (1996) use the same qualifications schema as Schmitt (1995), but are then obliged because of the small sample being used to report results using highly aggregated categories of qualifications which fail to distinguish between academic and vocational qualifications. This means that their results cannot be easily compared with those offered here.

Blundell *et al* (1997) use the NCDS to look at the earnings at age 33 of individuals with different forms of higher education compared with individuals with A levels who did not proceed into higher education. Their basic results are similar to those reported here. Men with first degrees had weekly earnings at age 33 which were 22 percentage points higher than men with A levels. In the LFS sample used in this paper men with first degrees and 10 years experience in the labour market had a very similar 21 percentage point weekly earnings premium over men with A levels. Blundell *et al* (1997) report that women with first degrees in the NCDS had weekly earnings at age 33 which were 42 percentage points higher than women with A levels. This was significantly higher than the 25 percentage point weekly earnings premium of women with first degrees and 10 years experience in the LFS sample.

Importantly, Blundell *et al* (1997) show that the use of extensive controls for family background variables such as social class, innate ability proxied by test scores at age 7 in reading and mathematics, and a number of other variables, only reduce these premiums by a modest amount for women (3 percentage points) and a little more for men (5 percentage points). If these findings comparing men and women with higher education and A levels hold at other levels of education, then the absence of controls for background variables in the LFS should not bias the results reported here to any significant extent.

## **The Main Results**

Table 2 sets out the highest qualifications obtained by men and women working full-time, and women working part-time, in the Labour Force Survey sample used for the analysis in this paper. In comparing across the three groups it can be seen that the main contrast is not between male and female full-timers, where a similar proportion have higher education or are unqualified. Instead this LFS sample confirms the findings of Harkness (1996), that female part-timers are significantly less well qualified than full-timers of either gender. The main contrast

between full-timers is that far more women have O levels or higher grade GCSEs as their highest qualification, while their male counterparts have trade apprenticeships. Over one quarter of all women full-timers and nearly one third of men have one or other of these as their highest qualification. Thus finding the relative labour market leverage gained by having either some O levels or higher grade GCSEs or a trade apprenticeship is critical to understanding the gender balance in qualifications.

The results reported in Figures 1 and 2 show that for men and even more for women working full-time, the holding of qualifications at all levels yields significantly higher earnings than being unqualified. Women working full-time with a first degree earn on average a nearly 90% higher salary than wholly unqualified women. The differential for men with first degrees is smaller but still substantial at 78%. The earnings associated with the holding of a range of intermediate qualifications, including A levels, the HND/HNC or BTEC Higher, the ONC/OND or BTEC National and O level and GCSEs at grade C and above, are very similar between men and women. The earnings associated with holding some lower qualifications such as trade apprenticeships or CSEs and lower grade GCSEs are higher for men than for women.

On the other hand the results also show differentials in earnings which do not accord with the notional equivalences outlined in the National Qualifications framework. These results demonstrate that there is no parity of esteem in the labour market between academic and vocational qualifications.

The results are re-arranged in Figures 3 and 4 to make the point clearer. The earnings associated with academic and vocational qualifications at notionally equivalent levels are set alongside one another.

Men with first degrees earn on average a 24 percentage point premium over men with notionally equivalent vocational qualifications at HND/HNC standard, even though both qualifications are assigned to level 4 in the national framework (Figure 3). The differential for

women is substantially greater (Figure 4). There is also a 30 percentage point differential between women with first degrees and those with nursing qualifications, though in the national framework both are also placed at level 4. The differential between women with first degrees and those with specialist teaching qualifications is much smaller at around 10 percentage points.

Men with 2 or more A levels earn on average a nearly 20 percentage point premium over men with the notionally equivalent OND/ONC or BTEC National. The differential between men with 2 or more A levels and the notionally equivalent City and Guilds Advanced craft qualification is even greater at over 30 percentage points. The differences between women with these different level 3 qualifications is more modest. Holding 2 or more A levels offers women a 13 percentage point advantage over holding an OND/ONC or BTEC National and a 23 percentage point advantage over holding an RSA Advanced Diploma.

At level 2 in the national qualifications framework, men with 5 or more O levels or GCSEs at grade C or above have earnings very similar to men with one A level, and 20 percentage points higher than a man with a notionally equivalent City and Guilds Craft qualification. Women with 1 A level have significantly higher earnings on average than those with 5 or more O levels or higher grade GCSEs who in turn have a 13 percentage point advantage over women with the notionally equivalent RSA Diploma.

Finally, men with 1-4 O levels or higher grade GCSEs have an 11 percentage point earnings advantage over those with CSEs or lower grade GCSEs and a 23 percentage point advantage over those with a level one City and Guilds qualification. Women with 1-4 O levels or higher grade GCSEs have a 13 percentage point advantage over those holding CSEs or lower grade GCSEs. Women with 1-4 O levels have a 22 percentage point advantage over those with a level one RSA qualification. So even at the lowest level of the national qualifications framework those with only a few O levels or higher grade GCSEs earn significantly more than those with notionally equivalent vocational



qualifications. Indeed those with CSEs or lower grade GCSEs earn more than those with level 1 vocational qualifications.

Men and women with a trade apprenticeship as their highest qualification are dealt with arbitrarily in the national qualifications framework. Half are assigned to level 3 (notionally equivalent to 2 or more A levels) and half to level 2 (notionally equivalent to 5 or more O levels or higher grade GCSEs). The results here make that assignment seem even more arbitrary. Men with a trade apprenticeship have earnings very similar to men with a City and Guilds craft qualification, but their earnings are 37 percentage points below the earnings associated with holding 2 or more A levels, 22 percentage points below those holding 5 or more O levels or higher grade GCSEs, and even seven percentage points below those holding 1-4 O levels or higher grade GCSEs. The position for women holding a trade apprenticeship is even less favourable when compared with women holding A or O level equivalent qualifications. These results suggest that the way in which those with trade apprenticeships are assigned to different levels in the national qualifications framework is indeed entirely arbitrary. As over 10% of the workforce report the holding of trade apprenticeships as their highest qualification this has significant implications for the way in which overall levels of attainment are measured.

Figure 5 reports the earnings for female part-timers. The additional (hourly) earnings associated with having qualifications are generally lower when compared with full-timers (Figure 2). Exceptions are women part-timers with nursing qualifications and the RSA Higher. Part-timers with first degrees still earn significantly more than their counterparts with level 4 vocational qualifications. However, women part-timers with A levels and with the OND/ONC or BTEC National have similar earnings, as do women with O levels or higher grade GCSEs and the RSA Diploma, and women part-timers with RSA other qualifications and CSEs or lower grade GCSEs. However, women with City and Guilds craft qualifications appear to have earnings lower than women part-timers who are wholly unqualified.

An obvious omission from the qualifications whose earnings are estimated here are the new qualifications — NVQs and GNVQs. GNVQs were only launched nationally in 1993-94, so hardly anyone with a GNVQ will have been in employment in this data set covering 1993-95. It will be a number of years before the earnings associated with GNVQs can be estimated.

NVQs were launched nationally in 1988. However, by 1994 fewer than 100,000 people in employment were reporting NVQs as their highest qualification (Robinson, 1996). It was not felt possible to undertake the detailed work necessary to isolate those with NVQs as their highest qualification within this data set given the likelihood that the numbers with NVQs as their highest qualification at different levels would be too small to undertake any detailed analysis. Nevertheless, such work is close to being feasible using data from the Spring 1996 LFS onwards, when those with NVQs (and GNVQs) as their highest qualification are separately identified.

Before Spring 1996, those with NVQs at their highest level were assigned to the ‘other qualifications’ category in the LFS. As can be seen from Figures 1 and 2 using the 1993-95 LFS data the earnings associated with the holding of ‘other qualifications’ is not very high and is on a par with the holding of CSEs or lower grade GCSEs.

A safe working assumption to make would be that the earnings associated with the new vocational qualifications will be very similar to the earnings associated with the traditional vocational qualifications which they have in part displaced. Indeed, in the absence of evidence to the contrary it would be unwise to assume anything else. We can certainly surmise that young people and other individuals will continue with that assumption when making choices about qualification routes, as they will demand unambiguous signals from the labour market that things have changed before they change their own behaviour.

## **Progression on the Academic and Vocational Routes**

The data on the earnings associated with qualifications can be presented in a third way, as in Figures 6 and 7. These explore the extra pay one would obtain by progressing from one level to another on either the vocational or academic routes. Men (Figure 6) on the academic route with only CSEs or lower grade GCSEs would secure higher earnings by obtaining 1-4 O levels or higher grade GCSEs and the extra gain from going further and securing 5 or more would be greater still. There is no premium from obtaining just one A level compared with 5 O Levels or higher grade GCSEs, but significantly higher earnings would result from obtaining 2 A levels and even higher earnings from attaining a first degree. There are extra rewards from having a higher degree but this last step delivers less of an increment than the steps up from O level to A level and then to a first degree.

For men on the vocational route the extra pay which results from progressing to a higher qualification is less impressive. Having an HND/HNC rather than an OND/ONC yields only an extra 11 percentage points, compared with the 16 percentage point gain in earnings when a man with 2 A levels attains a first degree. The incentive for someone to move from having a City and Guilds Craft qualification to having an Advanced Craft qualification seems very limited, with only a four percentage difference in the earnings associated with these two qualifications.

For women (Figure 7) the picture is similar. One significant difference is that the extra premium from having a degree when compared with 2 A levels is 31 percentage points compared with only 16 percentage points for men. So women have a much greater incentive to work for a first degree (a finding echoed by Blundell *et al* 1997). Another variation is that for women there is less difference in the pay earned by women with one A level compared with 2 A levels. There is a similar gap for men and women in the extra earnings associated with having 2 A levels rather than 5 or more O levels or higher grade GCSEs. Women with O levels or higher GCSE passes earn a similar premium over their counterparts with CSEs or lower grade GCSEs. Generally women have a greater incentive to do well in

terms of academic qualifications. A woman progressing from CSEs to a first degree makes a 72 percentage point improvement to her earnings compared with a 57 percentage point improvement for a man.

Women progressing from an ONC/OND to an HND/HNC make the same modest increase in earnings as men, and well below the equivalent progression from A levels to a first degree. Likewise, women moving from an RSA Diploma to an Advanced Diploma and then to the Higher Diploma earn a more modest premium at each step than their academic counterparts. A woman with the RSA Higher Diploma earns 16 percentage points more than a woman with the RSA Diploma, compared with the 50 percentage point difference between a woman with a first degree and one with 5 or more O levels or higher grade GCSEs. The extra pay associated with a woman moving from a City and Guilds craft to an Advanced craft qualification is as disappointing as the extra earnings for a man.

Clearly the academic route offers a more rewarding path for progression than the notionally equivalent vocational routes. One telling criticism of the 'academic-vocational' divide is that it is very difficult to switch routes. One exception to this is the break between level 3 and level 4. At this point someone with a BTEC National or Advanced GNVQ or its equivalent could apply for a course leading to a general first degree rather than the HND/HNC or some other vocational route such as nursing. Alternatively they could progress from an HND/HNC to a first degree. Making such a switch would appear to offer the potential of significantly higher returns (especially for women). Thus we can make sense of the observation that many people pursuing advanced vocational courses in further education have aspirations for entry into mainstream higher education (Further Education Unit, 1994). The difference in potential earnings between entering the labour market with a BTEC National or Advanced GNVQ and a first degree is for women as great as the difference between having a level 3 vocational qualification and being wholly unqualified.

Another way of thinking about progression is to consider again the choices which we observe young people at age 16 making (Figure

8). 16 year olds with 5 or more higher grade GCSEs tend to opt for the A level route. The advanced or level 3 vocational route tends to recruit those with 1-4 higher grade GCSEs. Those with no higher grade GCSEs tend to enrol on courses leading to level 1 or level 2 vocational qualifications. After 1-2 years this latter group may obtain a level 2 vocational qualification, which will over the long-run yield earnings similar to those associated with having 1-4 higher grade GCSEs. In the meantime their counterparts at aged 16 with 1-4 higher grades may have obtained a level 3 vocational qualification, which will over the long-term yield earnings similar to those associated with holding 5 or more higher grade GCSEs. But meanwhile those who had 5 or more higher grade GCSEs at age 16 may have obtained A levels. Their vocational counterparts may only attain the same earnings power after they have achieved level 4 vocational qualifications, by which time those on the ‘academic’ A level track may have attained a first degree. Those on the vocational route may only catch-up if eventually they switch to the ‘academic’ route by taking a first degree.

We can illustrate this model of progression by looking again at the earnings associated with the different routes. A young woman aged 16 with 1-4 higher grade GCSEs who obtained a BTEC National (or advanced GNVQ) after two years further education would see an increase of 15 percentage points in her earnings after 20 years potential experience (Figure 7). Her counterpart with 5 or more higher grade GCSEs who obtained 2 A levels after two years further education would see an increase of 17 percentage points in her earnings after 20 years potential experience. So the extra potential earnings power obtained from two years further education are similar on the A level and advanced vocational route, but crucially young women on the two routes are starting from a different base.

## **A Summing Up of the Main Results**

Overall then, the evidence is quite clear. There is no parity of esteem between academic and vocational qualifications in the labour market,

which is almost certainly why we do not observe parity of esteem in the education system. At every level in the national framework individuals working full-time with academic qualifications earn significantly more than individuals with notionally equivalent vocational qualifications. Only for women working part-time do some vocational qualifications at level 3 and below yield similar earnings to their academic counterparts.

**Indeed the national qualifications framework appears to be skewed by one whole level.** Men with 2 A levels working full-time earn significantly more than their counterparts with the HND/HNC or BTEC Higher, and women full-timers earn about the same. However, those with A levels are assigned to level 3 and those with the HND/HNC to level 4. Men with 5 or more O levels or higher grade GCSEs earn more than their counterparts with the OND/ONC or BTEC National, while women earn somewhat less. However, those with O levels are assigned to level 2 and those with the BTEC National to level 3. Men and women with 1-4 O levels or higher grade GCSEs tend to earn significantly more than men and women with City and Guilds craft qualifications or women with the RSA Diploma, though those with 1-4 O levels are placed at level 1 and those with the vocational qualifications at level 2.

These findings are supported by Blundell *et al* (1997) who report that men aged 33 with vocational forms of higher education such as the HND/HNC have earnings which are not significantly different from men with A levels. Women aged 33 with vocational forms of higher education such as nursing qualifications have earnings which are significantly lower than women with first degrees, though higher than women with A levels. Interestingly, Blundell *et al* (1997) find that men with A levels who go on to obtain higher vocational qualifications do have earnings significantly higher than those who only have A levels. However, their results imply that men who start on the vocational route at age 16 and do not take A levels, but eventually progress to obtain higher vocational qualifications, have earnings which are lower than those who only have A levels. This reinforces the point

that the A level route offers significant advantages over the advanced vocational route post-16. However, although in the NCDS there are very few examples of men or women who take the vocational route post-16 and then eventually take a first degree, their earnings seem comparable to those who proceed from A levels to a first degree. So as Figure 8 suggests, those on the vocational route post-16 who switch to the academic route at the final stage and obtain a first degree may earn a significant pay-off from doing so.

### **Age-Earnings Profiles**

All of the results discussed so far involve estimating the earnings of individuals after 20 years potential experience in the labour market. This is a standard methodology used, for example, by Schmitt (1995) and by Bennett *et al* (1992). Someone with 20 years experience will be about half way through their potential working lives. Much previous research has shown that for men, earnings also tend to peak after around 20 years in the labour market, that is around the age of 40 (see, for example, Elias and Gregory, 1994). For women earnings peak much earlier, after around 10 years at around age 30, a finding associated with many women exiting the labour market at around the time of starting a family. It might make more sense to evaluate women's earnings at 10 years rather than 20.

It is of interest to compare the age earnings profiles for men and women with different qualifications (Figures 9, 10, 11 and 12). These plot relative earnings at different years of potential experience. Similar profiles are also offered in Bennett *et al* (1992) and the results reported here are close to those reported in that earlier work. These profiles offer important information on why the returns to academic qualifications look so much more impressive than the returns to their vocational counterparts.

Figure 9 plots the age earnings profiles for men with higher and intermediate qualifications. The profiles for men with first degrees and the HND/HNC or BTEC Higher are very similar and show the classic

shape of rising relative earnings in the first 10-15 years before some tailing off after this point. However, the advantage of having a first degree is maintained throughout. The profile for men with the OND/ONC or BTEC National is very similar, but with earnings always significantly lower. However, the profile for men with A levels is different. Relative earnings rise more sharply during the early years in the labour market. They are always above earnings for men with the OND/ONC, but it is not until after 15 years experience that men with A levels catch up with men holding the HND/HNC.

Figure 10 reports age earnings profiles for men with a range of lower qualifications. Men with trade apprenticeships and City and Guilds Advanced craft qualifications see their relative earnings deteriorate throughout their time in the labour market. By contrast men with O levels or higher grade GCSEs see their relative earnings rise sharply over the first 20-25 years of labour market experience. Young men with apprenticeships or Advanced craft qualifications earn significantly more than their counterparts with O levels, until after 15 years of experience, at which point O levels begin to yield a much better return. The profiles for men with City and Guilds craft qualifications or CSE and lower grade GCSEs follow the conventional pattern.

Figure 11 reports age earnings profiles for women with higher and intermediate qualifications. The profiles for women with first degrees, A levels or the OND/ONC or BTEC National are very similar to those reported for men. However, the relative earnings of women with nursing qualifications follow a stranger profile, falling through the early years until after 20 years they are only marginally higher than the earnings associated with having A levels. However, after this point relative earnings for women with nursing qualifications rise again slightly while the relative earnings for those with A levels dip. So evaluating women's earnings after 20 years experience yields an unduly pessimistic picture of the earnings of women with nursing qualifications when compared with their counterparts with A levels. This is a relief



as otherwise we might be struggling to explain why young women with A levels would want to become nurses.

Figure 12 reports the age earnings profiles for women with a range of lower qualifications. It shows a very similar pattern to that reported for men with the relative earnings of women with RSA Advanced and Diploma qualifications tending to fall over time while their counterparts with O levels see their earnings increase significantly over their first 20 years of potential labour market experience. When evaluated after just ten years experience, women with O levels are attaining relative earnings similar to women with the RSA Diploma, while women with the RSA Advanced diploma are earning significantly more. Only after 20 years experience are women with O levels earning significantly more than their counterparts with the RSA Diploma and with earnings similar to those with the Advanced diploma.

So if we were to evaluate women's earnings after 10 years potential labour market experience rather than 20 it would slightly alter the pattern of conclusions. The position of women with nursing qualifications would look a little better. However, women with first degrees would still have higher earnings than their counterparts with level 4 vocational qualifications. Women with A levels would still have a significant earnings advantage over women with notionally equivalent BTEC, RSA or City and Guilds vocational qualifications. However, women with O levels or higher grade GCSEs would have earnings similar to those with the RSA diploma (but still higher than those with City and Guilds craft qualifications).

The age earnings profiles reported in Figures 9-12 tend to suggest that individuals with academic qualifications, and especially those with O levels or higher grade GCSEs, see their advantage over those with notionally equivalent vocational qualifications emerge over the long run. If young people were looking at the returns to qualifications over a shorter time scale they could feel that they had more incentive to work for an apprenticeship or a craft or entry level clerical qualification than if they were looking more longer term. This might not be an unreasonable assumption to make about young people with modest

school attainments looking for routes into intermediate positions in the labour market. However, over the long haul the attainment of a batch of O levels might yield a better return. Although not reported formally here, men with 5 or more O levels (or 2 or more A levels) seem to have especially steep age earnings profiles. As will be explored in the next section men with A levels and O levels are well represented amongst managers and this may give some clues about why the relative earnings of men with these qualifications improve so much with years of experience.

## **B. QUALIFICATIONS AND ACCESS TO OCCUPATIONS**

### **The Changing Structure of Occupations**

Over time the occupational structure of employment in the UK has been shifting away from manual jobs primarily towards managerial, professional and technical jobs, a trend to be witnessed across the OECD countries (see Robinson, 1997a). It is this trend which in turn provides one justification for the expansion of further and higher education, as the expanding forms of employment generally require higher levels of formal qualifications. The extent to which the expansion of qualifications has kept pace with these increases in higher level employment is explored in Robinson and Manacorda (1997).

The shift in the occupational structure of employment in Britain for men and for women over the period 1984-94 is shown in Tables 3 and 4. These tables report trends for the 22 sub-major categories of the Standard Occupational Classification. To aid understanding of this classification, Appendix 1 outlines some typical job titles associated with these occupational categories. Tables 3 and 4 show the steady decline in the share of manual employment for men and women — both skilled (craft), semi-skilled (operatives) and unskilled (other occupations). These jobs have mainly been replaced by managerial, professional and technical employment. There has been especially

strong growth in the share of corporate managers and administrators. There has also been some growth in the share of the personal service occupations covering such employment as care assistants, though this is the only less skilled set of occupations to show any significant growth in share. The share of clerical and especially secretarial employment has declined modestly for women and employment in sales jobs has maintained a relatively constant share.

At the same time as these changes in the share of the occupations in the employment structure, there have been changes in the relative rates of pay on offer in these occupations. Tables 5 and 6 show median pay in the occupations relative to median pay in the whole labour market, along with changes in relative earnings over the periods 1975-90 and 1991-96, for men and for women. Changes over the period 1975-90 are drawn from Elias and Gregory (1994) who only indicate whether relative earnings have gone up, gone down or stayed the same. This is supplemented by estimates from the New Earnings Survey for the period 1991-96 which tend to confirm the direction of movement identified by Elias and Gregory.

Over time the relative earnings of corporate managers and administrators have increased significantly, matching the strong growth in employment for these occupations. There has also been some growth in relative earnings for the managers and proprietors of service establishments, whose share of total employment has fallen slightly.

Within the professional and associate professional and technical occupations the trend in relative earnings shows some variation between the sub-categories and between the genders, though the share of employment of all these occupations has increased. The relative earnings of science and engineering professionals appeared to fall over the period 1975-90. On the other hand relative pay in the science and engineering associate professional occupations, which includes technicians and computer programmers, has increased for men. For both men and women the other associate professional and technical occupations, which include such occupations as investment analysts

and journalists, showed growth in relative earnings over the period 1975-90.

The relative pay of men and women in the clerical and secretarial occupations has fallen. Relative pay in the personal service occupations has declined significantly, which is in stark contrast to the increased share of employment of those occupations. Relative pay has also fallen in the sales occupations in the early 1990s.

Relative pay in the manual occupations fell uniformly over the period from 1975-90. However, over the much shorter period since 1991 the pattern is less clear cut with some gain in relative earnings in the skilled engineering craft occupations, steady relative earnings in a number of the other manual occupations and declines for transport operatives and unskilled manual occupations.

Overall if one combined the shifts in employment shares with the level and shifts in relative earnings, one could obtain an indicator of the relative attractiveness of the different occupations. If we come back to the idea of a 16 year old trying to make career choices, they would generally be attracted to occupations where the share of employment was rising, and where relative earnings were high and/or rising. They would be less attracted to occupations where the share of employment was falling, and where relative earnings were low and/or declining. This is not to deny that many other variables will enter into the decision-making of young people, but their interpretation of their labour market prospects will be a dominant consideration.

Viewed in these terms the labour market will have been sending out generally quite clear signals. The managerial, professional and technical occupations generally offer the best prospects, with a rising share of total employment and high, and in some cases, rising relative earnings. The manual occupations offer the poorest prospects, with falling employment shares and generally modest and falling earnings. The clerical and secretarial occupations might no longer offer such attractions, with their shares of employment and relative earnings declining somewhat. More difficult occupations to interpret might be the skilled engineering craft occupations where relative earnings remain

at around the median for men, but where the share of employment has still declined sharply, and the personal service occupations where the share of employment (albeit predominantly part-time) is rising but relative earnings are falling.

In terms of making choices over qualification pathways young people will want to steer for routes which offer the best chances for accessing the growing and well paid occupations. A critical question is whether the academic or vocational routes offer the best chances for obtaining such desirable employment?

## **Qualifications and Occupations**

How far do the differing earnings associated with qualifications reflect the ability of certain qualifications to buy access to different occupations?

In section 2 we saw that the earnings associated with first degrees were much greater than the earnings associated with the notionally equivalent HND/HNC or BTEC higher. Indeed the earnings associated with these higher vocational qualifications were equivalent to the earnings associated with A levels, which in turn were higher than for notionally equivalent level 3 vocational qualifications. O levels or higher grade GCSEs were associated with earnings which were often similar to those for level 3 vocational qualifications and higher than those for level 2 vocational qualifications.

Tables 7 and 8 try to see how far this pattern of earnings reflects the ability of these different qualifications to buy access to different occupations. To do this the 22 occupations from the Standard Occupational Classification have been grouped into five categories according to the median earnings in those occupations relative to median earnings in the whole labour market. So the first category includes corporate managers and administrators and all the professional occupations where relative earnings are the highest (and where employment shares are rising). The next category includes the associate professional and technical occupations and the protective

services. The third category includes occupations paying at or just above the median — skilled engineering craft jobs, sales representatives and managers or proprietors of service establishments. The fourth category is the biggest covering the skilled and semi-skilled manual occupations and the clerical and secretarial occupations, jobs which have long provided the bedrock of the labour market, but whose share of employment has been in steady decline. The final category is the lowest paid — unskilled manual workers, sales assistants and the personal service occupations.

Although these categories have been arrived at by looking at relative earnings it would also be possible to suggest that they bear some relationship with the educational requirements required for access to the different occupations. Professional jobs will generally require higher education as will many managerial positions, though many managers will have entered their positions on the basis of their experience even if their formal qualifications are modest. The second category of mainly associate professional and technical jobs (like nursing) will tend to require more ‘vocational’ forms of higher education. The third category might typically recruit people with craft/technician or equivalent qualifications, though this category also includes managers or proprietors of service establishments where in many cases formal qualifications might be less relevant. The fourth category might typically recruit those with O levels or higher grade GCSEs, trade apprenticeships or level 2 vocational qualifications, though many manual jobs may not require formal qualifications. The final category includes many unskilled jobs where qualifications might not be too relevant and others, such as hairdressing, requiring the kinds of entry qualifications acquired through work based training and some further education.

Tables 7 and 8 show that 70% of men and 65% of women with first degrees in 1993-95 were working in the managerial and professional occupations. By contrast only 43% of men and 28% of women with the HND/HNC or BTEC Higher were employed in these occupations. A much higher proportion of men and women with these

higher vocational qualifications were working in technician and craft jobs and in the case of women the clerical and secretarial occupations. Perhaps unsurprisingly then the very different earnings associated with ‘academic’ and ‘vocational’ higher education are closely linked to the different occupations to which these qualifications buy access.

If we compare the occupational spread of those holding A levels and those with the OND/ONC or BTEC National we can see that a much higher proportion of women and especially men with A levels are in the top occupations. Fully one quarter of men with A levels are corporate managers and administrators, which offer for men the highest pay outside of the health professions. Men with the OND/ONC or BTEC National are heavily concentrated in the skilled engineering craft occupations and other skilled and semi-skilled manual occupations and their female counterparts overwhelmingly in the clerical and secretarial occupations. Women with A levels are also heavily represented in the clerical occupations but their representation here is somewhat lower than for their OND/ONC counterparts and much higher in the top occupations.

Men with City and Guilds Advanced craft qualifications are more heavily concentrated in a range of manual occupations paying below median earnings than their OND/ONC counterparts and are less well represented in the top occupations. Women with the RSA Advanced diploma have a similar occupational spread to their counterparts with the OND/ONC or BTEC National. Overall the higher earnings associated with having A levels compared with their notionally equivalent vocational counterparts to a large degree reflects the different occupations to which these qualifications buy access.

Fully one fifth of all men with O levels as their highest qualification work in the top occupations, almost all as managers and administrators, compared with fewer than one-in-ten of those with the notionally equivalent City and Guilds craft qualification. Unsurprisingly, men with City and Guilds qualifications are concentrated in the skilled manual occupations. Comparing women with O levels to those with the RSA Diploma reveals a more similar

spread through the occupations, with both groups heavily represented amongst the clerical and secretarial occupations. There are slightly more women with O levels in the top occupations but also a higher proportion in the lowest paid occupations.

Overall there is a clear pattern for level 3 and level 4 qualifications in that the 'academic' ones tend to be more successful in buying access to the better paid occupations than their notionally equivalent vocational counterparts. At level 2 the differences are also apparent for men with O levels compared with those with notionally equivalent vocational qualifications, though the differences are less clear for women.

Men and women with A levels and O levels working as managers and administrators are likely to have worked their way up from the shop floor. This might in turn explain the steeper age-earnings profiles for those with A levels and O levels noted in section A. People with these academic qualifications may enter the labour market in manual or clerical and secretarial positions, but one interpretation of the evidence here is that those qualifications are more likely to secure promotion to supervisory or management posts.

However, the other key question to address is how far the different qualifications deliver different returns **within** each of the occupations. This can only be addressed for a limited number of the occupations where there are a sufficient number of observations from the Labour Force Survey. Figures 13-21 look at the earnings associated with holding different qualifications in a range of occupations, for employees evaluated after 20 years experience relative to someone with no qualifications. For each occupation the qualification which is held by the highest proportion of employees or by the median employee is starred, and sample numbers are given in notes to the Figures.

Figure 13 looks at the earnings of men with different qualifications working as corporate managers and administrators. It has already been stressed that this occupation offers the best pay prospects for men outside of the health professions and has the sharpest rising



share of total employment. The ‘typical’ male manager has A levels, with about half holding higher qualifications and half lower qualifications. Within these occupations we can see differences in the returns to ‘academic’ and ‘vocational’ qualifications similar to those reported for the whole sample of men. Male managers with a first degree have a 30 percentage point earnings advantage over their counterparts with the HNC/HND or BTEC Higher. Men with A levels earn at least as much as those with the HNC/HND and earn a very significant premium over those with the OND/OND or BTEC National or City and Guilds Advanced qualifications. Indeed the earnings of male corporate managers with O levels match those for men with level 3 vocational qualifications. So for men the possession of ‘academic’ qualifications is not only more likely to buy access to the top occupations when compared with notionally equivalent vocational qualifications, they also buy men a bigger salary when they get there.

For women the pattern is a little less clear (Figure 14). The most common qualification held by female managers are some O levels. There is an even bigger gap in the earnings of female corporate managers with first degrees and women with the HND/HNC or BTEC Higher. Women managers with A levels earn significantly more on average than women with the ONC/OND or BTEC National who have earnings at a level similar to those with O levels or higher grade GCSEs. However, those women in managerial or administrative positions with RSA qualifications appear to do quite well. Those with the Advanced Diploma have earnings close to those with A levels and women with the RSA Diploma earn more than their O level counterparts.

The bottom half of Figure 13 also presents information on men working as managers in service establishments such as shops and restaurants (though not including the self-employed). The ‘typical’ manager of such an establishment has some O levels. Although it throws no light on the issue of the differential earnings associated with academic and vocational qualifications it offers an insight into another issue, that of ‘credentialism’. This occupational category saw an above

average increase in the proportion of graduates employed in such jobs between 1984 and 1994 (Robinson and Manacorda 1997). Some observers have long argued that if we find more shop managers with degrees this might reflect the over-supply of graduates rather than such positions really requiring graduate level skills. The analysis here provides some backing for this scepticism. Men with first degrees working as managers of service establishments have earnings not statistically different from men with A levels.

The top half of Figure 15 looks at men working as science and engineering associate professionals. This includes technicians and computer programmers, which might be thought to be precisely the occupations for which more technical or vocational higher education would provide the best route. Indeed the 'typical' technician holds an HND/HNC qualification. However, even here men with first degrees earn significantly more than men with the HND/HND or BTEC Higher and men with A levels and O levels earn more than men with the HND/HNC or OND/ONC or BTEC National.

The bottom half of Figure 15 looks at men in the other associate professional and technical occupational category, including various jobs in financial and business services such as investment analysts. It is the associate professional category which showed the highest increase in its share of employment over the period 1984-94. The 'typical' man in this occupation has A levels. Again men with first degrees and A levels earn significantly more than men with the HND/HNC or BTEC Higher and even men with O levels earn at least as much.

So throughout the associate professional and technical occupations, although a similar proportion of men with first degrees, HND/HNCs or BTEC Highers, OND/ONCs or BTEC National and with A levels work in these occupations (Table 7), the academic qualifications always yield a significantly greater reward in terms of higher earnings.

It is only when we go down the occupational hierarchy that we find evidence for some 'parity of esteem'. The top half of Figure 16

looks at earnings within the skilled engineering craft occupations. Men working here earn at around the median for all men, though employment opportunities have been declining. The most frequently held qualification is a trade apprenticeship. Clearly possession of technician qualifications in the form of the HND/HNC or BTEC Higher and the OND/OND or BTEC National offer the highest relative earnings. The small proportion of men with A levels (only 3% of all men in this occupational category) have relatively poor earnings. We might speculate that these are men with only one perhaps unrelated low grade A level. However, men with O levels earn significantly more than those with City and Guilds Advanced and Craft qualifications or men with trade apprenticeships. So within this important skilled manual category, BTEC vocational qualifications give a significant advantage over notionally equivalent academic qualifications, but possession of City and Guilds qualifications or a trade apprenticeship do not.

The bottom half of Figure 16 shows earnings within the other skilled manual category, including such occupations as motor mechanics, where again the most frequently held qualification is a trade apprenticeship. Here there are no significant differences in the pay earned by people with academic and vocational qualifications at different levels. In this relatively less well paid occupational category there is some 'parity of esteem', but this seems to reflect the fact that even mediocre qualifications like CSEs or lower grade GCSEs provide a surprising pay off and qualifications above this level appear to get you no further.

Figure 17 shows earnings for men with different qualifications working as industrial plant and machine operatives (top half) and drivers (bottom half). There is evidence here too that those men holding BTEC technical qualifications and working as operatives earn a significant premium. The City and Guilds qualifications also offer returns on a par with their academic counterparts. Here then there is parity of esteem.

For drivers the most common qualifications held fall into the ‘other qualifications’ category, which consists mainly of men with relevant vehicle licences. The possession of other academic qualifications seems to make little difference to earnings, so that in these occupations it looks as though all that is necessary is the very narrow ‘vocational’ qualifications entitling someone to drive the relevant vehicle and little else matters.

Figure 18 shows earnings for women in the clerical (top half) and secretarial occupations (bottom half), where around one third of women hold O levels as their highest qualification. Within the quantitatively more important clerical occupations, academic qualifications appear to deliver modestly higher earnings than their notionally equivalent vocational counterparts, though the differences are much more modest than for all women in full-time employment. This can be seen by comparing women with first degrees and those with the HND/HNC or BTEC Higher or RSA Higher diploma, by comparing women with A levels to those with the RSA Advanced Diploma or OND/ONC or BTEC National, and women with O levels and the RSA Diploma.

It is also interesting to note the earnings of women with ‘other qualifications’, which in this context will include a range of other entry level clerical qualifications, and those with NVQs at levels 1, 2 and 3 as their highest qualification. Their earnings are significantly lower than those with O levels.

For women in secretarial jobs the BTEC qualifications and the RSA Higher Diploma gain the best earnings, superior to having either a first degree or A levels. The RSA Advanced diploma compares reasonably well with A levels, though the RSA Diploma does not compare as well with O levels. So here the specific vocational qualifications at levels 3 and 4 do yield some labour market advantage. Women with ‘other qualifications’, including NVQs, have earnings significantly lower than those with O levels or higher grade GCSEs and comparable only with women with CSEs or lower grade GCSEs.

Within the ‘intermediate’ ranges of the labour market then, there are some occupations — skilled engineering craftsmen, machine operatives and the secretarial occupations — where the BTEC and RSA qualifications at levels 3 and 4 in the national qualifications framework offer significant advantages over notionally equivalent academic qualifications in terms of earnings. However, within the quantitatively important clerical occupations, academic qualifications are associated with modestly higher earnings. Within some other manual occupations only limited qualifications seem to be required anyway, such as the relevant licences for people driving goods vehicles.

Figure 19 presents earnings for women with different qualifications working full and part-time within the personal service occupations. This category covers a range of jobs, including ambulance staff and nursing auxiliaries which is why we find a non-negligible number of women with nursing qualifications who earn the highest rewards within this occupational category. The single biggest group of full-time women doing these jobs have some O levels or higher grade GCSEs and their earnings compare well with those full-timers who have trade apprenticeships (probably including many hairdressers and catering staff). Those with CSEs and lower grade GCSEs earn more than those with a range of ‘other qualifications’, which will include NVQs in the care and catering occupations. For female part-timers, only those with nursing qualifications earn a large premium. For those with a range of other qualifications the extra earnings associated with them are very modest indeed.

Finally, Figures 20 and 21 look at earnings for female part-timers in some of those other occupations where they provide a large proportion of the workforce. Figure 20 looks at the clerical and secretarial occupations. In the clerical occupations all qualifications provide much less of a boost to earnings for part-timers when compared with their full-time counterparts (Figure 18). The RSA Advanced Diploma compares well with A levels, but the other RSA qualifications compare poorly with their academic counterparts. However, women

part-time secretaries with the RSA diploma do well when compared with their academic counterparts.

Figure 21 suggests that for women working part-time as sales assistants and in unskilled manual jobs (such as cleaners) most kinds of qualifications are generally irrelevant to earnings prospects. In other words at the lower end of the labour market, for women working part-time in the personal services, as sales assistants and in unskilled manual occupations, qualifications of any kind are of less relevance.

## Conclusions

To sum up this section. Academic qualifications such as first degrees, A levels and O levels and higher grade GCSEs offer a better route into more highly paid occupations than their notionally equivalent vocational counterparts. In particular first degrees offer entry into the most highly paid professional occupations and to management positions. Higher vocational qualifications tend to offer entry to less well paid associate professional and technical and craft jobs. People with A levels and O levels as their highest qualification tend to be found across the labour market, but with a surprisingly high proportion in managerial and administrative positions. People with level 2 and level 3 vocational qualifications tend to have a less good occupational profile with a heavy concentration in the intermediate reaches of the labour market, in skilled and semi-skilled manual and clerical and secretarial occupations.

However, in addition to this occupational spread, people with academic qualifications tend to secure significantly higher earnings **within** the top managerial and associate professional and technical occupations, when compared with their counterparts with vocational qualifications. There are some intermediate occupations — skilled engineering craft, some semi-skilled manual and secretarial jobs — where the possession of BTEC and RSA qualifications at levels 3 and 4 give the holders a significant earnings premium. In the clerical occupations academic qualifications seem to carry more leverage. In

a number of occupations at the lower end of the labour market very specific qualifications like vehicle licences are important, but in others the possession of any type of qualification seems to have less relevance to earnings potential. This is especially true for many women working part-time in the lower occupations.

If we come back to our 16 year old deciding on which qualification path to choose, access to the best paid occupations for which the share of employment is rising most sharply, is most easily secured through the academic GCSE-A level-first degree route. Vocational qualifications at levels 3 and 4 can help buy access to some of the well paid associate professional and technical occupations which also show growth in their share of employment, but they will get you a somewhat lower salary when you get there compared with their academic counterparts. These level 3 BTEC and RSA vocational qualifications also offer advantages for those in the skilled engineering craft and secretarial occupations, but these represent a declining share of employment.

Overall, the academic route for those who are successful on it, will tend to offer the better labour market prospects.

### **C. CHANGES OVER TIME IN EARNINGS AND QUALIFICATIONS**

Trying to establish patterns of change over time in the earnings associated with different qualifications is very difficult. Although the Labour Force Survey now provides the best source for looking at the earnings of people with a range of qualifications, because earnings information is only available from the end of 1992 it cannot yet be used to construct a time series.

The General Household Survey has traditionally been used to establish a time series on the earnings associated with different qualifications. It is the source used by Schmitt (1995) and by Bennett *et al* (1992). These authors presented results which suggested that over

the period from 1978-80 to 1986-88 there was an increase in the earnings associated with most qualifications which did not quite compensate for a decline in relative earnings in the period between 1974-76 and 1978-80. In other words the earnings associated with having most qualifications relative to having no qualifications were lower in the late 1980s than in the mid-1970s.

Figures 22 and 23 report Schmitt's results for the earnings of full-time men with different sets of aggregated qualifications evaluated after 20 years experience. The Figures also provide more up-to-date estimates from the General Household Survey for 1990-92 and also the results from the Labour Force Survey for 1993-95, where the qualification categories in the Labour Force Survey have been amalgamated to match those used by Schmitt.

Figure 22 suggests that for men by the early to mid-1990s the earnings associated with having higher academic qualifications (higher, first or other degrees) had now more than made up lost ground and were modestly higher than in the mid-1970s. The results from the LFS match well the results from the GHS. The estimates also suggest a modest increase in the earnings associated with level 4 vocational qualifications (HND/HNC or BTEC Higher, RSA Diploma, Diploma in Higher Education and other higher education). The LFS suggests somewhat higher returns to these qualifications than the GHS.

The results for those holding A levels or their equivalent (including SCE Highers to be consistent with Schmitt) as their highest qualifications are not, however, consistent between the GHS and the LFS. Estimates for 1990-92 from the GHS show an implausible leap up and are much higher than those from the LFS. In fact the estimates from the GHS show a worrying degree of instability from year to year which is not evidenced in the LFS. As the LFS has a much greater sample size, if the two estimates conflict it would seem wise to rely on the LFS as the more likely reliable source. Also estimates for the British Household Panel Survey (Harkness, 1996) tend to match well the LFS estimates and contradict those from the GHS. The LFS and BHPS results for the early 1990s would suggest little change in the



earnings associated with having A levels or their equivalent as the highest qualifications when compared with the GHS results for the mid-1970s.

The earnings associated with having level 3 vocational qualifications (OND/ONC or BTEC National, City and Guilds Advanced, RSA Advanced) appear to have risen for men between the mid-1970s and mid-1990s. In this case the LFS and GHS results are consistent. This increase in earnings could potentially reflect a compositional effect, in that by the 1990s a higher proportion of those men holding level 3 vocational qualifications could be holding the BTEC qualifications, which we have seen secure higher earnings than their City and Guilds equivalents.

Figure 23 also suggests problems with the GHS in terms of the estimates of the earnings of those holding O levels as their highest qualifications. Again they are not very stable across years and the estimates for 1990-92 look implausibly high. If these later estimates from the GHS are discounted and the LFS results are relied upon instead, then over the whole period from the mid-1970s to the mid-1990s the earnings associated with the possession of 5 or more O levels or higher grade GCSEs and 1-4 O levels or higher grade GCSEs appear to have remained the same.

The earnings associated with having level 2 vocational qualifications (City and Guilds craft, RSA Diploma) are consistent between the LFS and GHS and may have risen modestly. According to the GHS the earnings associated with holding apprenticeships have always been modest and show no trend. The LFS shows higher relative earnings, but in this context like is not being compared with like, as in the LFS men with apprenticeships as their highest qualification may also have some O levels, CSEs or GCSEs which will be boosting their earnings.

Figures 24 and 25 present time series for women holding various qualifications. Figure 24 shows little change between the mid-1970s and mid-1990s in the earnings associated with women holding higher academic qualifications, with the GHS and LFS giving almost identical

estimates. The GHS also suggests little change in the earnings associated with holding higher vocational qualifications, though the LFS suggests somewhat lower relative earnings. The GHS suggests little change in the earnings associated with holding teaching qualifications, though the LFS shows significantly higher earnings. What is striking though is the lack of change for women holding most higher qualifications. The exception is women holding nursing qualifications where the GHS and LFS estimates are very close and suggest a sharp increase in the earnings of these women. This result is also born out by looking directly at the trend in earnings for women working as nurses as shown in the New Earnings Survey (Elliot and Duffus, 1996).

Figure 25 shows that we have the same problems in terms of the reliability of the GHS results for women holding A levels or their equivalent, or O levels or the equivalent, as was found for men. According to the GHS the earnings associated with women holding A levels as their highest qualifications have risen modestly between the mid-1970s and early 1990s. However, the LFS shows significantly lower earnings for those holding A levels, so this leaves the issue of change over time unresolved. Likewise the GHS suggests little change in the earnings associated with holding O levels or higher grade GCSEs (either 5+ or 1-4), but the LFS shows somewhat lower earnings.

For women holding level 3 qualifications there are no reliable estimates for earlier years from the GHS due to low numbers holding the qualifications. For later years the estimates from the GHS are different to those from the LFS so that the evidence for any change is unclear. For women holding level 1 and 2 clerical qualifications the GHS shows some modest increase in relative earnings between the mid-1970s and early 1990s and the LFS results for the mid-1990s are consistent with the GHS.

Overall this evidence on changes over time suggests a remarkable degree of stability in the earnings associated with holding various qualifications when comparing the mid-1970s with the mid-1990s for both men and women. The only concrete exception would be the

sharp increase in the relative earnings of women with nursing qualifications. At all times the earnings associated with holding academic qualifications are significantly higher than for the notionally equivalent vocational qualifications. Over time there is some evidence for this gap diminishing for those holding level 4 qualifications, but largely due to the increase in the relative earnings of nurses. At level 3 the issue is clouded by the unreliability of the GHS estimates for those holding A levels. At lower levels there is some evidence that women with entry level clerical qualifications may have made up some ground relative to women with O levels or higher grade GCSEs.

This relative stability in the earnings associated with holding qualifications at different levels may appear to be at odds with the evidence showing a dramatic increase in overall earnings inequality since the late 1970s. However, much of this increase in inequality has occurred **within** groups defined by occupation or by educational background. Little of it seems associated with any major change in the earnings associated with holding different qualifications.

#### **D. CONCLUSIONS: QUALIFICATIONS AND PUBLIC POLICY**

There is no parity of esteem between academic and vocational qualifications in the labour market. On average men and women working full-time with academic qualifications at one level in the national qualifications framework earn about the same as men and women with vocational qualifications set notionally one level higher. So those with A levels have earnings similar to those with higher or level 4 vocational qualifications, those with 5 or more O levels or higher grade GCSEs have earnings similar to those with level 3 vocational qualifications, and those with 1-4 O levels or higher grade GCSEs have earnings similar to those with level 2 vocational qualifications.

These higher earnings occur firstly because academic qualifications at a given level are more successful than notionally equivalent vocational qualifications in buying access to more highly paid occupations. Secondly, **within** the most highly paid managerial, professional and technical occupations academic qualifications are associated with higher earnings. Only in some intermediate occupations — skilled engineering craft and secretarial jobs — are level 3 and 4 vocational qualifications associated with higher earnings than their academic counterparts and these occupations represent a declining share of total employment.

Over the period between the mid-1970s and mid-1990s, and bearing in mind some inconsistencies in the results from the Labour Force and General Household Surveys, the earnings associated with holding various qualifications seem fairly stable, with the exception of the increased earnings of women holding nursing qualifications.

These findings raise significant issues for public policy. Insisting, as so many of those who make or influence public policy do, that academic and vocational qualifications do or should have ‘parity of esteem’, flies in the face of the evidence from the labour market that this is not the case. It is this evidence, rather than protestations to the contrary, which will influence the decisions made by people who are making choices between different qualification routes. The labour market provides clear signals which explain why young people with the best GCSE scores at age 16 tend to opt for the academic A level route rather than the vocational route. To do so is rational because it is likely to get them a better job.

There are a number of public policy issues which are raised by these results.

## **The National Targets for Education and Training**

The way in which qualifications are assigned to different levels in the national qualifications framework, so that the proportion of the workforce reaching certain levels can be estimated and reported by the National Advisory Council for Education and Training Targets (NACETT), has always smacked of a degree of arbitrariness. Clearly the finding that academic qualifications at any one level are associated with earnings similar to those for vocational qualifications one level higher would call into the question all the NACETT targets and the measurement of progress towards them.

Four specific examples deserve mention. Half of those with trade apprenticeships as their highest qualifications are assigned to level 3 and half to level 2 by NACETT. This has always been arbitrary. It has significant implications for the measurement of progress towards the National Targets because over 10% of the labour force hold apprenticeships as their highest qualification. However, the earnings of those in employment with apprenticeships are significantly lower than the earnings for those with 1-4 O levels or higher grade GCSEs who are placed at level one. It is difficult to justify placing half of those with apprenticeships at a level equivalent to holding 2 A levels; indeed it is difficult to justify placing the other half at the same level as those holding 5 or more O levels or higher grade GCSEs.

There is another issue here. NACETT has been concerned that far fewer women have vocational qualifications at level 3 and above than men (NACETT 1994, see also Feldstead *et al*, 1994). This is entirely due to more men having trade apprenticeships and City and Guilds Advanced craft qualifications than women. But if trade apprenticeships and Advanced craft qualifications give such modest leverage in the labour market for both men and women then this looks like an equal opportunities red herring.

The evidence suggests that people holding 1-4 O levels do reasonably well in the labour market, earning at a similar level to those with level 2 vocational qualifications. To exclude them from having

attained any of the National Target benchmarks because given the way they are currently measured they are not at level 2 is not consistent with the evidence from the labour market. These results would also of course call into question the heavy focus of school league tables on the magic 5 or more higher grade GCSEs benchmark. As people with fewer higher grade GCSEs than this still do relatively well in the labour market, to devalue their achievements in the way in which institutions are judged would also seem to have a limited empirical basis.

The Scottish equivalent of NACETT reports that Scotland has a higher level of attainment than England in terms of progress towards the various Foundation and Lifetime Learning Targets (Skills Audit, 1996). This relies heavily on the notion that Scottish Highers are equivalent to A levels. The evidence from the labour market does not bear this out. Employees with Scottish Highers have earnings more similar to those with 5 or more O levels or higher grade GCSEs. They do not approach the earnings of those with 2 or more A levels as their highest qualification.

## **International Comparisons of Educational Attainment**

If we have not been comparing attainment between England and Scotland correctly this would seem to counsel even more caution about comparisons of levels of attainment across countries wider afield. The Governments 'Skills Audit' (1996) suggested that UK levels of attainment lagged behind those in a number of other countries at what would be defined in the UK debate as levels 2, 3 and 4. In this Audit the headline results treated those in Britain with trade apprenticeships as wholly unqualified, which lowered UK relative performance significantly. This seemed as arbitrary as NACETT counting them at level 2 or level 3. Indeed all of the international comparisons in the Skills Audit (1996) and in much other literature rely on the equivalences embedded in the National Targets, and then try to establish further notional equivalences with foreign qualifications. But if the notional equivalences embedded in the British framework are

wrong when judged against actual labour market experience, this raises worries that the international comparisons are likewise going to be problematic.

To give an example, one issue raised in the Skills Audit (1996) was whether Americans with Associate Degrees should be equated with English people with A levels or with HND/HNCs. The evidence here would suggest that this debate has been unnecessary, as people with A levels have similar earnings in the labour market to those with the HND/HNC or other higher vocational qualifications.

A very influential strand of literature (Prais, 1990) has long argued that the main gap in educational attainment when comparing Britain with some other countries such as Germany lies in intermediate craft qualifications. How far this gap actually impacts on relative economic performance is unclear (Robinson, 1995). However, it is not sufficient to advocate that Britain should therefore turn out more people with craft qualifications. The British labour market sends out signals to young people that the attainment of City and Guilds craft qualifications will give them at best only modest earnings, while the types of jobs which these qualifications buy access to are a declining share of total employment. So long as these are the signals, young people will generally be reluctant to opt for those qualifications no matter how many reports urge them to do so.

The methodology of looking at what qualifications actually do for people in the labour market, rather than trying to notionally assign equivalences to wholly different qualifications based on judgements about the relative merits of the curricula and assessment processes of different courses, thus raises a whole set of fundamental questions relevant to the education debate in the UK. In particular it calls into question the way in which the National Targets for Education and Training have been formulated and counsels further caution with respect to international comparisons of educational attainment. These issues are discussed further in Robinson (1997b).

## APPENDIX 1

### The Standard Occupational Classification

Sub-major Group	Examples of job titles
1a Corporate managers and administrators	Corporate managers, Senior civil servants
1b Managers/proprietors in agriculture & services	Farmers, shop/restaurant managers and owners
2a Science and engineering professions	Engineers, Natural scientists
2b Health professions	Doctors
2c Education professions	Teachers
2d Other professions	Accountants
3a Science and engineering associate professions	Computer analysts, Technicians
3b Health associate professions	Nurses
3c Other associate professions	Investment analysts
4a Clerical occupations	Clerks
4b Secretarial occupations	Secretaries
5a Skilled construction trades	Bricklayers
5b Skilled engineering trades	Fitters
5c Other skilled trades	Motor mechanics
6a Protective service occupations	Police Officers
6b Personal service occupations	Catering staff, Care assistants, Hairdressers
7a Buyers, brokers and sales reps	Sales representatives
7b Other sales occupations	Sales assistants
8a Industrial plant machine operators & assemblers	Operatives, Assembly line workers
8b Drivers and mobile machine operators	Crane drivers, Truck drivers
9a Other occupations in agriculture	Farm workers
9b Other elementary occupations	Labourers, Cleaners



TABLE 1

## The National Qualifications Framework

(1) NVQ level	(2) GNVQs	(3) Traditional Vocational Qualifications	(4) Academic Qualifications
1	Foundation	RSA Other C & G Other	4 or fewer O level/CSE/GCSE passes
2	Intermediate	C & G craft RSA diploma	5+ O levels/GCSEs at grade C+
3	Advanced	OND/ONC, BTEC National RSA Advanced	2+ A levels
4	*	HND/HNC, BTEC Higher	First degree
5	*	MBA	Higher degree

**TABLE 2**  
**Highest Qualifications Held by People in Employment, 1993-95**

	% of all those in employment			
	Male FT	Female FT	Female PT	Total
<b>Highest qualification</b>				
Higher degree	4.0	2.8	0.6	3.0
First degree	10.7	11.5	4.1	9.7
Other degree	3.2	1.6	0.7	2.2
Diploma in HE	0.6	1.2	0.7	0.8
HND/HNC, BTEC Higher	6.7	2.6	1.1	4.3
Teaching	0.6	3.1	2.1	1.6
Nursing	0.5	5.8	5.7	3.2
Other higher below degree	0.5	0.6	0.6	0.5
RSA Higher Diploma	-	0.5	0.9	0.3
A level & equivalent	5.7	6.9	4.6	5.9
RSA Advanced Diploma	-	0.6	0.3	0.2
OND/ONC, BTEC National	3.6	2.7	1.8	3.0
City and Guilds Advanced	3.8	0.5	0.5	2.2
Scottish CSYS	0.1	0.1	0.4	0.1
SCE Higher	0.7	1.1	1.3	0.9
A/S level	0.1	0.1	0.3	0.1
Trade apprenticeship	17.9	3.7	4.7	11.1
RSA Diploma	0.1	3.4	2.6	1.6
City and Guilds craft	1.5	0.7	0.8	1.1
BTEC/SCOTVEC first diploma	0.1	0.4	0.3	0.2
O level/higher grade GCSE	13.3	23.7	21.5	18.0
CSE/lower grade GCSE	4.5	4.6	6.2	4.9
BTEC etc general certificate	0.1	0.1	0.1	0.1
YT, YTP	0.1	0.1	0.1	0.1
SCOTVEC National certificate	0.1	0.1	0.2	0.1
RSA Other	0.2	2.2	2.9	1.3
City and Guilds other	0.7	0.5	0.5	0.6
Other qualification	7.2	5.2	6.1	6.4
No qualifications	13.2	13.5	28.0	16.0
N/A	0.1	0.1	0.1	0.1
<b>Total sample</b>	<b>40,169</b>	<b>24,430</b>	<b>14,725</b>	<b>79,324</b>

Source: Labour Force Survey, 1993-95.



TABLE 3

## Changes in the Occupational Structure of Employment for Men, 1984-1994

	% of total employment	
	1984	1994
<b>Occupation</b>		
1a Corporate managers/admin	9.2	13.6
1b Managers/proprietors in services	6.7	6.2
2a Science/engineering prof	3.8	4.1
2b Health professions	0.7	0.9
2c Education professions	2.8	2.9
2d Other professions	2.8	3.3
3a Science/eng associate prof	3.0	3.5
3b Health associate professions	0.5	0.7
3c Other associate professions	3.5	4.7
<b>'Managerial/Professional/Technical'</b>	<b>33.0</b>	<b>39.9</b>
4a Clerical occupations	6.6	6.5
4b Secretarial occupations	0.3	0.3
6a Protective Services	2.0	3.1
6b Personal Services	2.3	2.8
7a Sales representatives	2.6	2.3
7b Other sales occupations	1.9	2.3
<b>'Service occupations'</b>	<b>15.7</b>	<b>17.3</b>
5a Skilled construction trades	4.9	4.3
5b Skilled engineering trades	8.8	7.3
5c Other skilled trades	13.2	10.7
8a Plant/machine operators/assemblers	8.3	7.3
8b Drivers	6.8	6.4
9a Agricultural occupations	1.4	1.0
9b Other elementary occupations	7.8	5.9
<b>'Manual occupations'</b>	<b>51.2</b>	<b>42.9</b>

Source: Labour Force Survey, Spring, SOC classification. Data for 1984 reclassified to SOC using mapping provided by Peter Elias from the Institute of Employment Research, Warwick University.

**TABLE 4**  
**Changes in the Occupational Structure of Employment for Women,**  
**1984-1994**

Occupation	% of total employment	
	1984	1994
1a Corporate managers/admin	2.8	7.8
1b Managers/proprietors in services	4.3	4.0
2a Science/engineering prof	0.3	0.7
2b Health professions	0.4	0.6
2c Education professions	5.6	6.2
2d Other professions	1.1	2.2
3a Science/eng associate prof	0.9	1.0
3b Health associate professions	5.6	5.8
3c Other associate professions	2.5	4.3
<b>'Managerial/Professional/Technical'</b>	<b>23.5</b>	<b>32.6</b>
4a Clerical occupations	18.3	17.4
4b Secretarial occupations	11.1	8.7
6a Protective Services	0.4	0.5
6b Personal Services	11.2	14.0
7a Sales representatives	0.9	1.0
7b Other sales occupations	9.8	8.9
<b>'Service occupations'</b>	<b>51.7</b>	<b>50.5</b>
5a Skilled construction trades	-	-
5b Skilled engineering trades	0.2	0.2
5c Other skilled trades	4.1	2.7
8a Plant/machine operators/assemblers	6.1	4.2
8b Drivers	0.4	0.3
9a Agricultural occupations	0.5	0.5
9b Other elementary occupations	13.5	9.0
<b>'Manual occupations'</b>	<b>24.8</b>	<b>16.9</b>

Source: Labour Force Survey, Spring, SOC classification.

Data for 1984 reclassified to SOC using mapping provided by Peter Elias from the Institute of Employment Research, Warwick University.



**TABLE 5**  
**Changes in the Relative Pay of Men by Occupation, 1975-1996**

Occupation (SOC)	Change 1975-90*	% of median = 100	
		1991	1996
1a Corporate managers/admin	+	146	152
1b Managers/proprietors in services	+	98	100
2a Science/engineering prof	-	140	141
2b Health professions	+	193	210
2c Education professions	-	140	144
2d Other professions	+	139	139
3a Science/eng associate prof	+	115	118
3b Health associate professions	=	111	111
3c Other associate professions	+	126	127
4a Clerical and secretarial occupations	-	79	77
6a Protective Services	=	117	114
6b Personal Services	-	69	62
7a Sales representatives	=	105	108
7b Other sales occupations	-	64	55
5a Skilled construction trades	-	78	79
5b Skilled engineering trades	-	100	104
5c Other skilled trades	-	82	83
8a Plant/machine operators/assemblers	-	87	87
8b Drivers	-	85	82
9a Agricultural occupations	-	64	65
9b Other elementary occupations	-	74	71

Sources: 1975-90 Elias and Gregory 1994. + indicates increase in relative earnings.  
- indicates decline. = indicates stability. 1991-96 New Earnings Survey.

TABLE 6

## Changes in the Relative Pay of Women by Occupation, 1975-1996

Occupation (SOC)	Change 1975-90*	% of median = 100	
		1991	1996
1a Corporate managers/admin	+	145	150
1b Managers/proprietors in services	+	98	101
2a Science/engineering prof	-	160	158
2b Health professions	=	229	230
2c Education professions	-	170	170
2d Other professions	=	154	157
3a Science/eng associate prof	+	142	131
3b Health associate professions	=	138	137
3c Other associate professions	+	134	133
4a Clerical occupations	-	92	90
4b Secretarial occupations	=	98	94
6a Protective Services	+	146	145
6b Personal Services	-	76	69
7a Sales representatives	=	117	112
7b Other sales occupations	=	64	60
5 Skilled manual occupations	-	74	73
8 Operatives and drivers	-	79	78
9 Other occupations	-	70	64

Sources: 1975-90 Elias and Gregory 1994. + indicates increase in relative earnings.  
 - indicates decline. = indicates stability. 1991-96 New Earnings Survey.



**TABLE 7****The Occupational Spread of Men with Different Qualifications**

Occupational groups	% of men employed full-time with the qualifications working in these occupations				
	(1)	(2)	(3)	(4)	(5)
<b>Qualifications</b>					
Higher degree	86.6	8.5	2.3	2.1	0.5
First degree	70.4	15.9	5.6	6.6	1.5
HND/HNC, BTEC Higher	43.1	23.0	18.9	12.2	2.9
A level	32.2	20.4	13.4	27.2	6.8
SCE Higher	18.6	17.0	12.9	43.6	8.0
OND/ONC, BTEC National	22.1	17.9	26.3	26.9	6.9
C & G Advanced	16.9	10.7	24.0	40.2	8.2
C & G Craft	8.4	10.5	20.3	43.3	17.5
O level/GCSE C+	20.0	14.4	14.2	37.7	13.8
CSE/GCSE lower grade	7.1	6.1	11.2	54.3	21.2
Trade apprenticeship	12.7	10.1	22.9	44.8	9.5
No qualifications	6.8	5.1	8.9	55.2	24.0
All in employment	28.3	12.8	13.9	34.0	10.9

Notes: Occupational groups:

- (1) SOC groups 1a, 2.
- (2) SOC groups 3, 6a.
- (3) SOC groups 1b, 5b, 7a.
- (4) SOC groups 4, 5a, 5c, 8.
- (5) SOC groups 6b, 7b, 9.

Source: Labour Force Survey, 1992-95.  
44,157 men employed full-time.

TABLE 8

## The Occupational Spread of Women with Different Qualifications

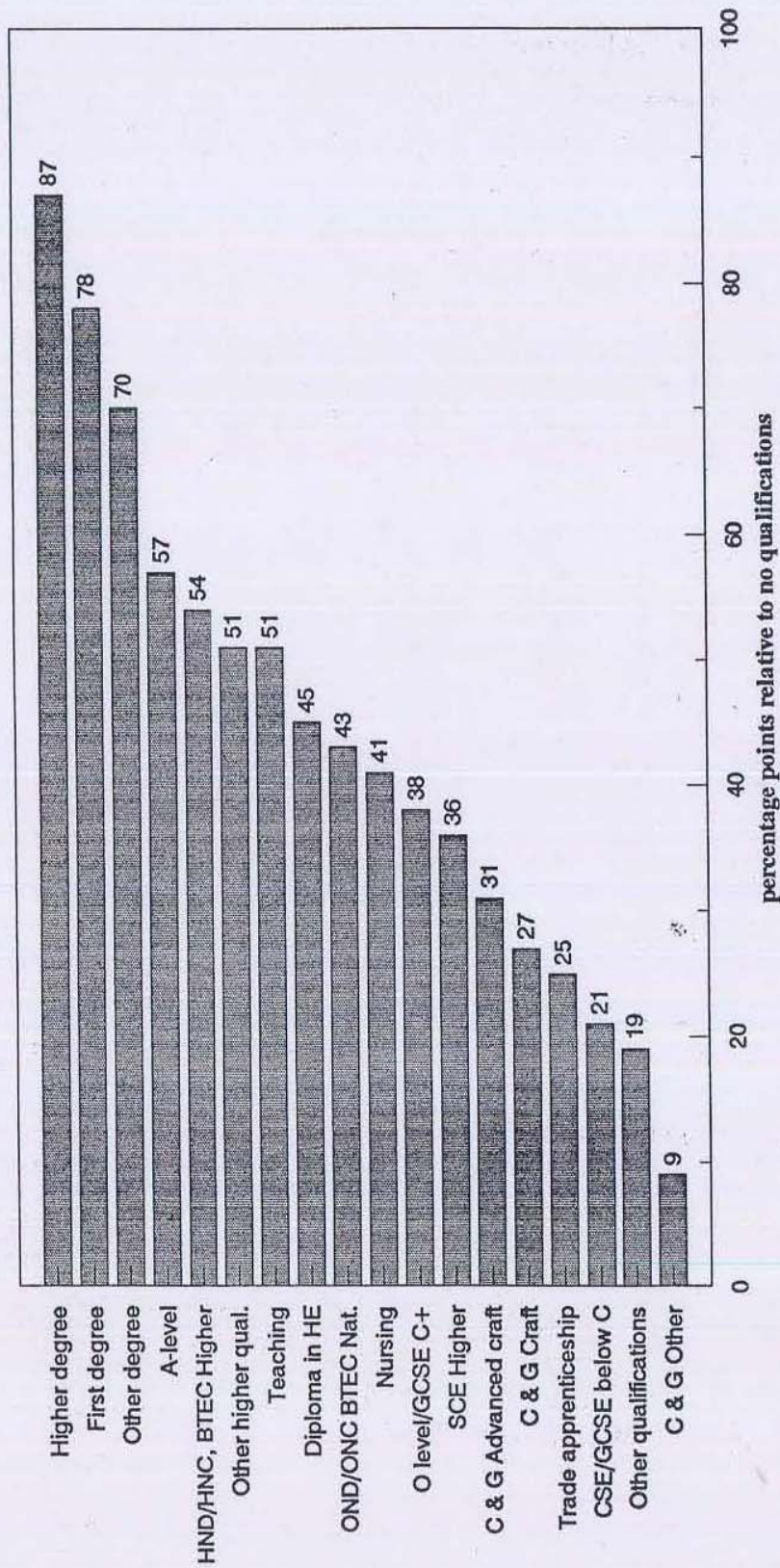
Occupation groups	% of women employed full-time with the qualifications working in these occupations				
	(1)	(2)	(3)	(4)	(5)
<b>Qualifications</b>					
Higher degree	79.3	13.3	1.8	4.2	1.3
First degree	65.1	17.2	3.5	11.0	3.2
HND/HNC, BTEC Higher	28.1	17.4	11.1	37.2	6.1
A level	22.6	15.5	5.8	45.2	10.9
SCE Higher	21.2	9.3	4.7	48.9	15.9
OND/ONC, BTEC National	16.8	10.8	5.9	52.1	14.4
RSA Advanced Diploma	18.1	7.0	4.6	56.7	13.7
RSA Diploma	15.5	3.5	2.5	69.9	8.6
O level/GCSE C+	15.2	7.3	5.7	54.1	17.7
CSE/GCSE lower grade	8.4	4.1	5.1	55.7	26.7
No qualifications	6.0	2.7	4.8	53.5	33.0
<b>All in employment</b>	<b>24.6</b>	<b>13.0</b>	<b>5.1</b>	<b>39.9</b>	<b>17.4</b>

Notes: Occupational groups:  
 (1) SOC groups 1a, 2.  
 (2) SOC groups 3, 6a.  
 (3) SOC groups 1b, 5b, 7a.  
 (4) SOC groups 4, 5a, 5c, 8.  
 (5) SOC groups 6b, 7b, 9.

Source: Labour Force Survey, 1992-95.  
 26,245 women employed full-time.

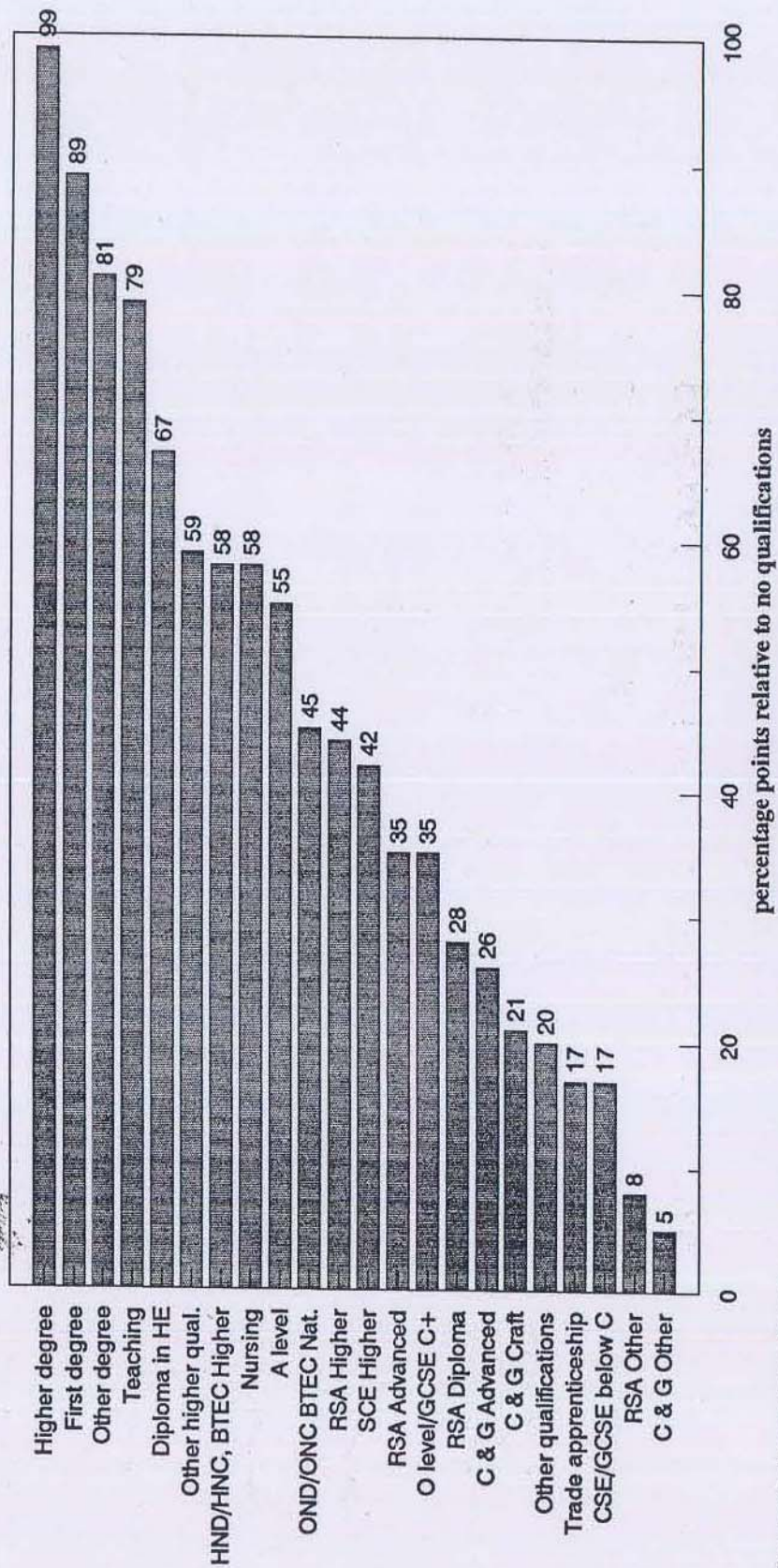


**Figure 1**  
**Male earnings by experience, 1993-95**  
**Full time employees evaluated after 20 years**



Source: Labour Force Survey

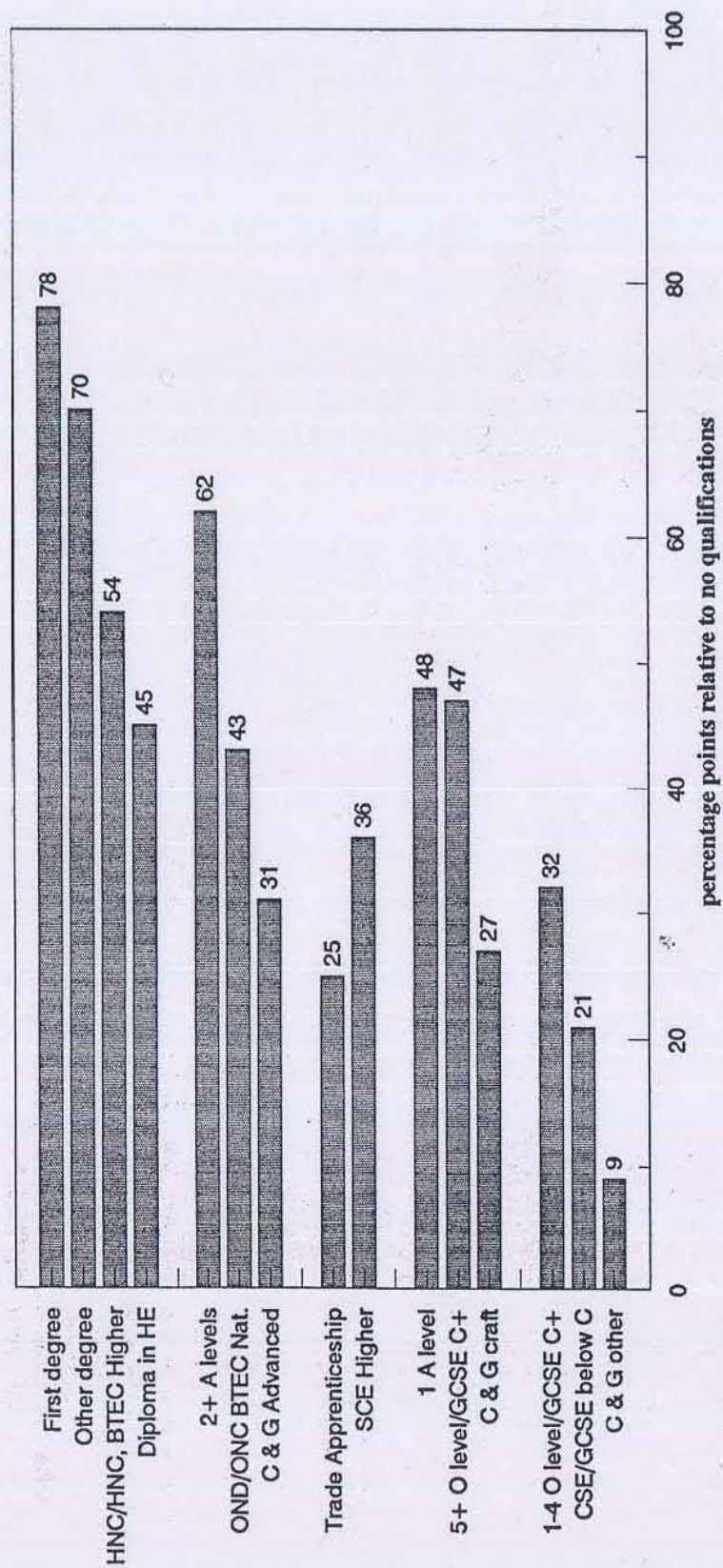
**Figure 2**  
**Female earnings by experience, 1993-95**  
**Full time employees evaluated after 20 years**



Source: Labour Force Survey



**Figure 3**  
**Male earnings by experience, 1993-95**  
**Parity of esteem?**

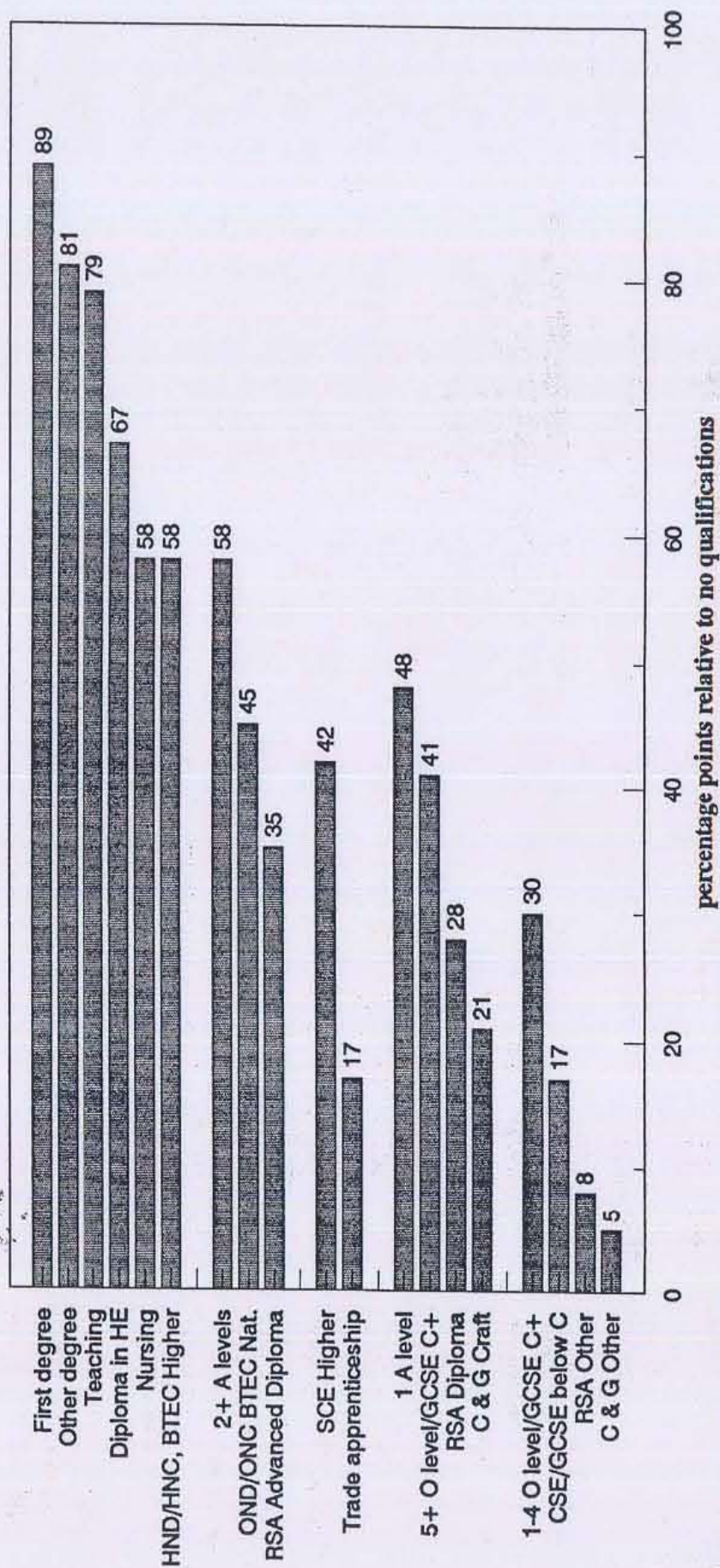


Source: Labour Force Survey  
 Note: Evaluated at 20 years experience  
 A & O level split 4 Qs 1994-95 only.

# Figure 4

## Female earnings by experience, 1993-95

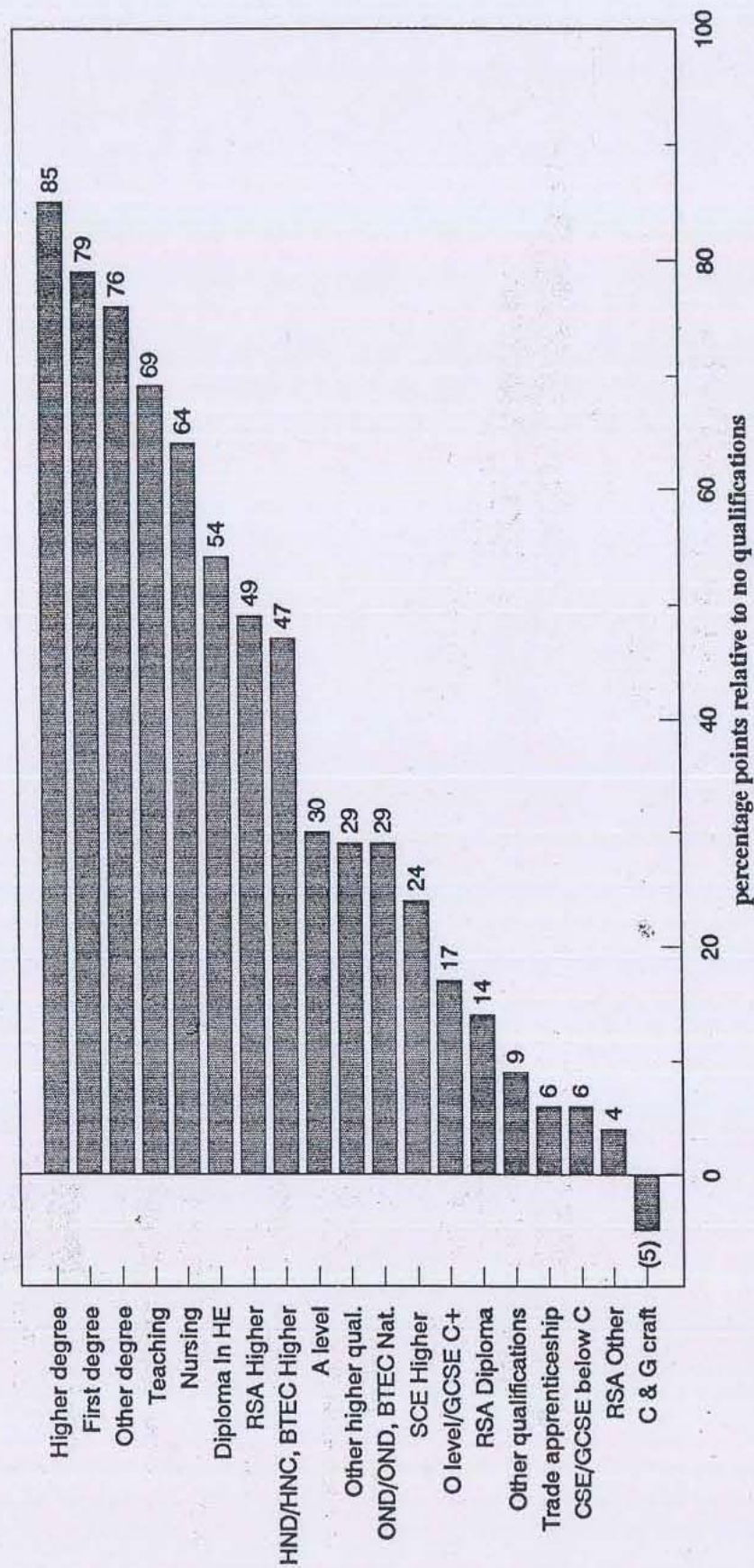
### Parity of esteem?



Source: Labour Force Survey  
 Note: Evaluated at 20 years experience  
 A & O level split for 4 Qs 1994-95 only

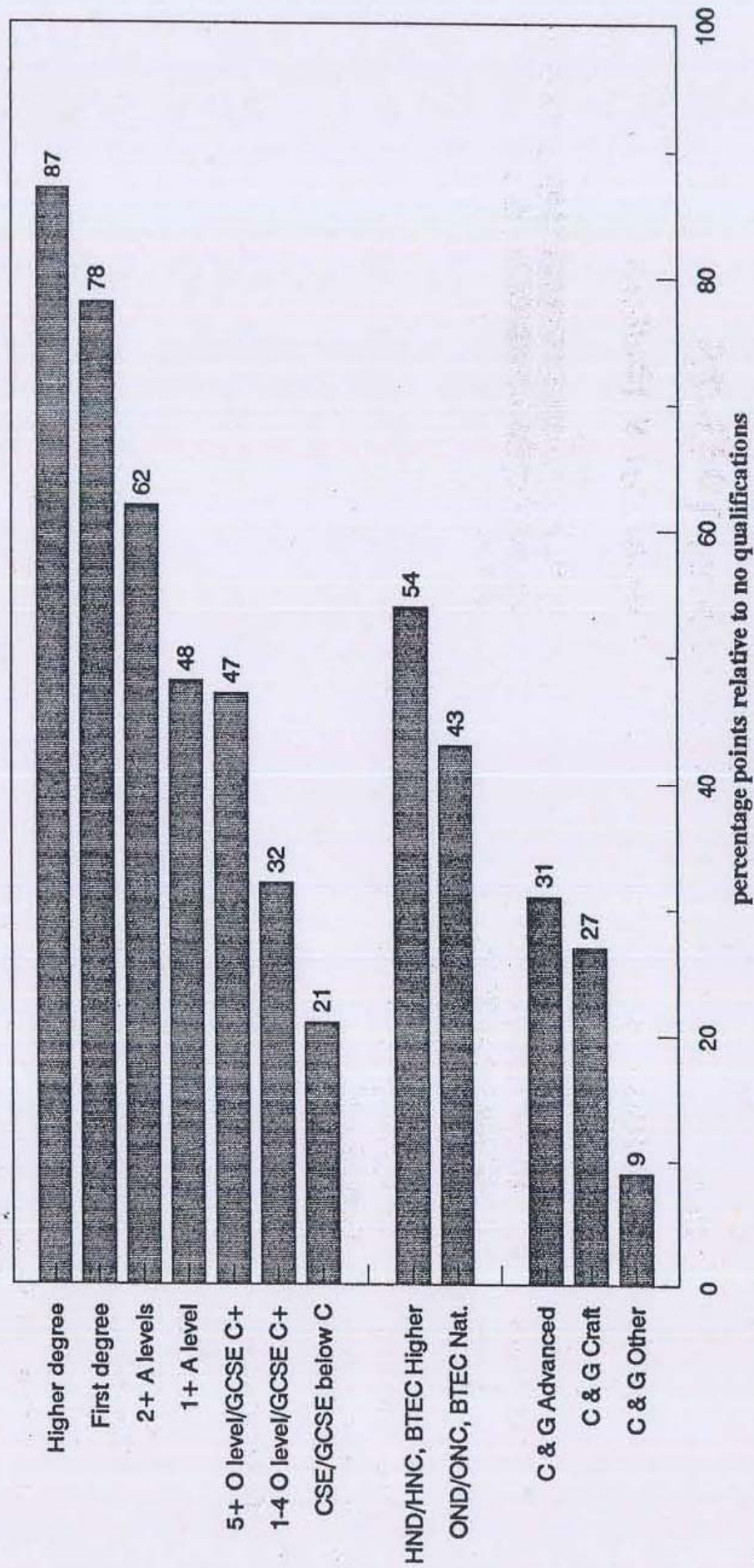


**Figure 5**  
**Female earnings by experience, 1993-95**  
**Part-time employees evaluated after 20 years**



Source: Labour Force Survey  
 Note: Hourly earnings

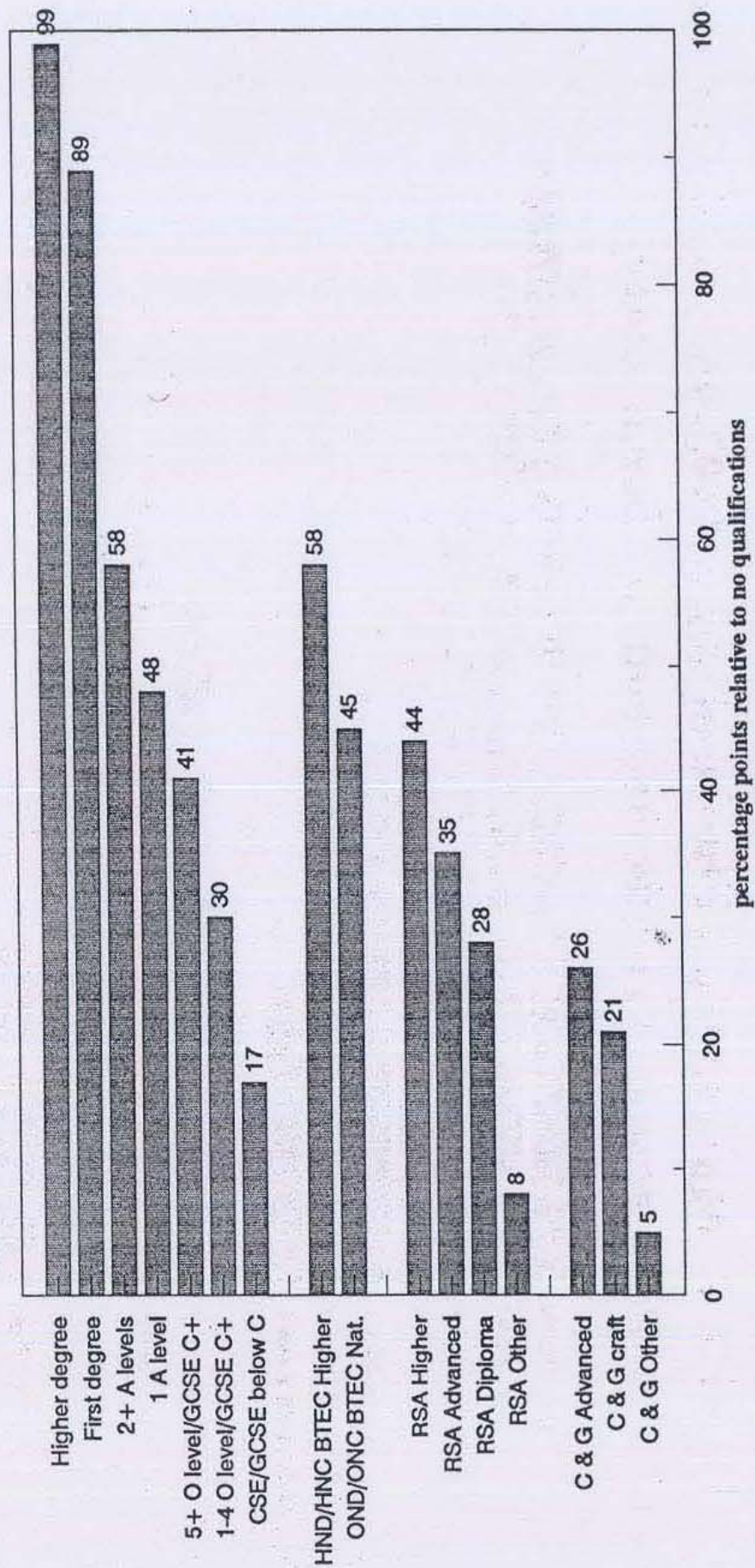
**Figure 6**  
**Male earnings by experience, 1993-95**  
**Progression - the academic and vocational routes**



Source: Labour Force Survey  
 Note: Evaluated at 20 years experience



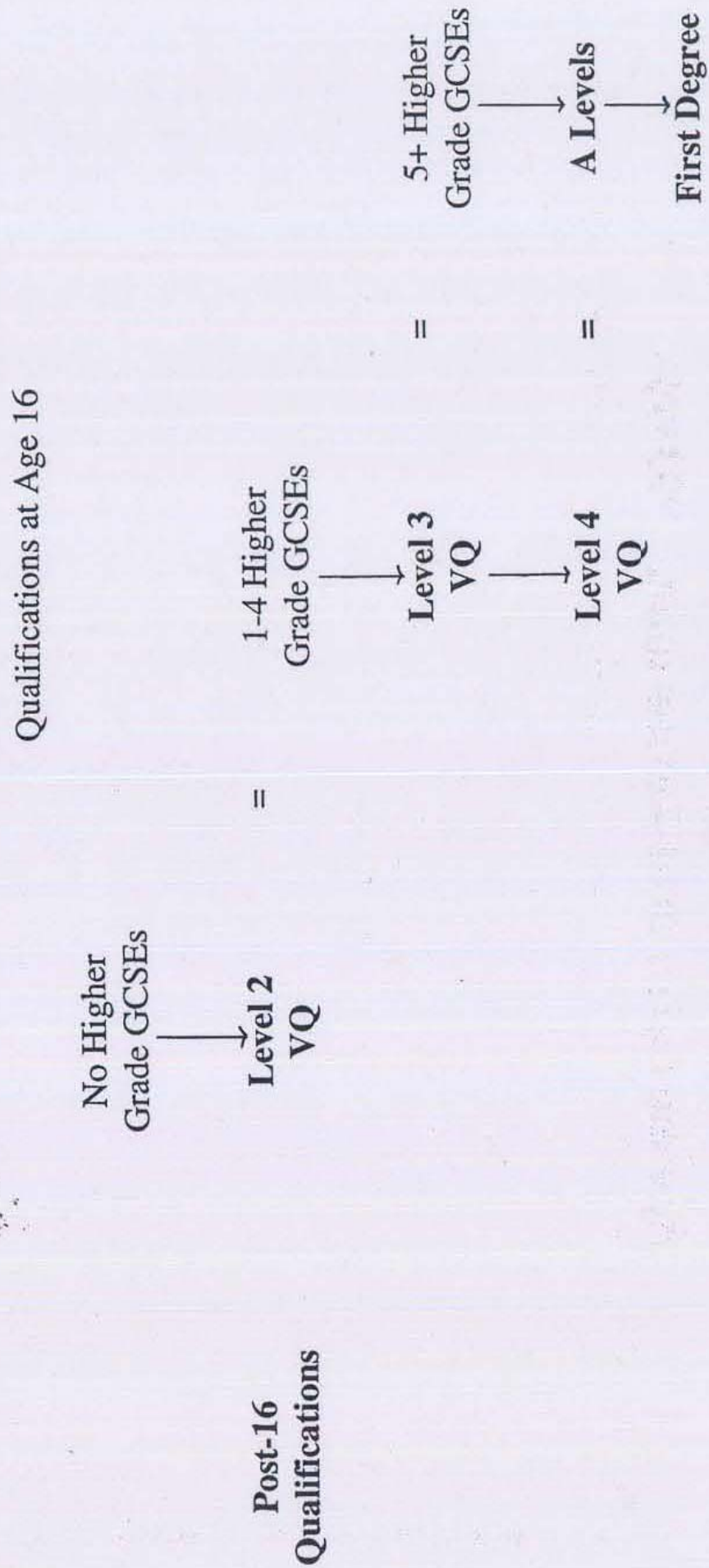
**Figure 7**  
**Female earnings by experience, 1993-95**  
**Progression - the academic and vocational routes**



Source: Labour Force Survey  
 Evaluated at 20 years experience

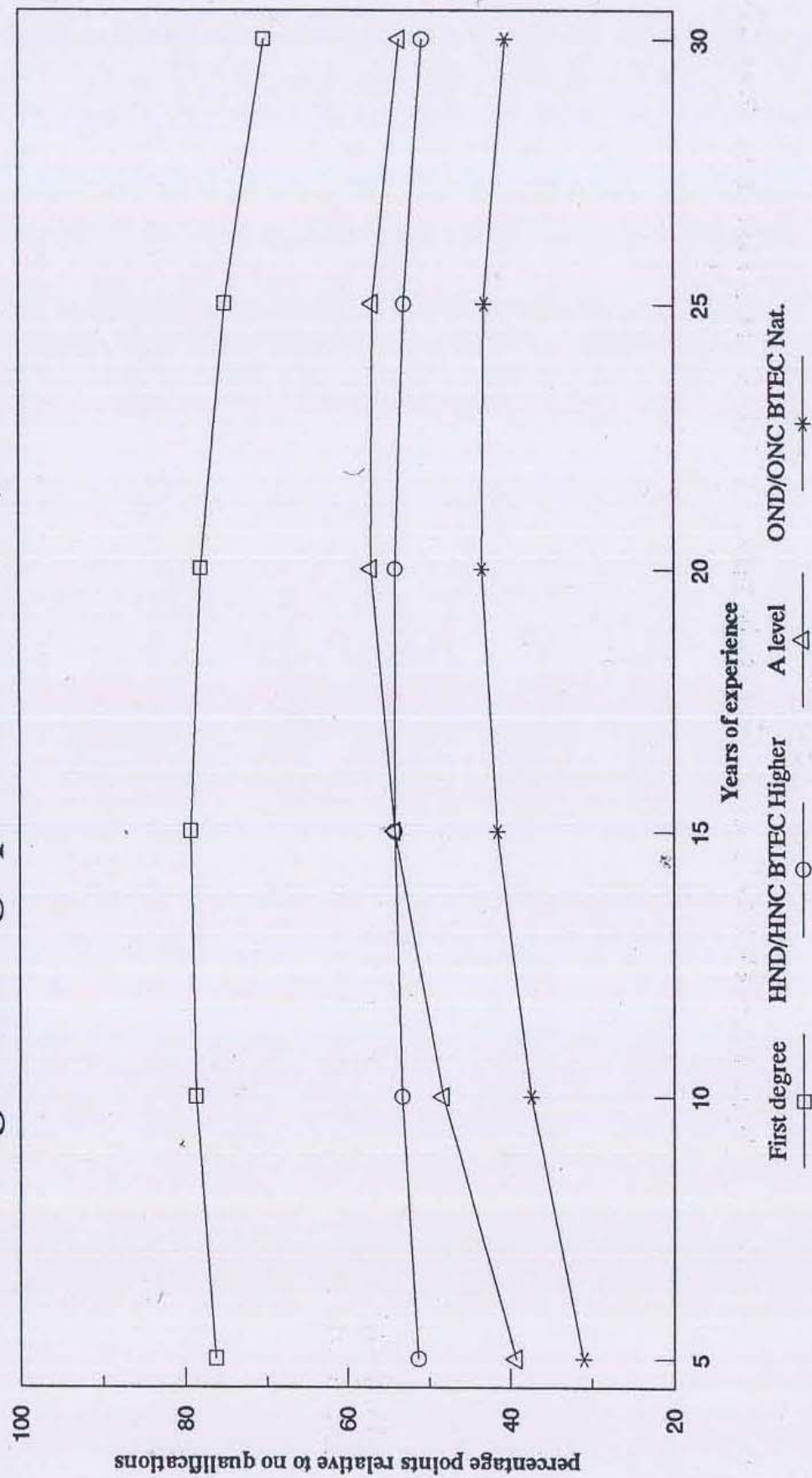
**Figure 8**

# **A Model of Progression on the Academic and Vocational Routes**



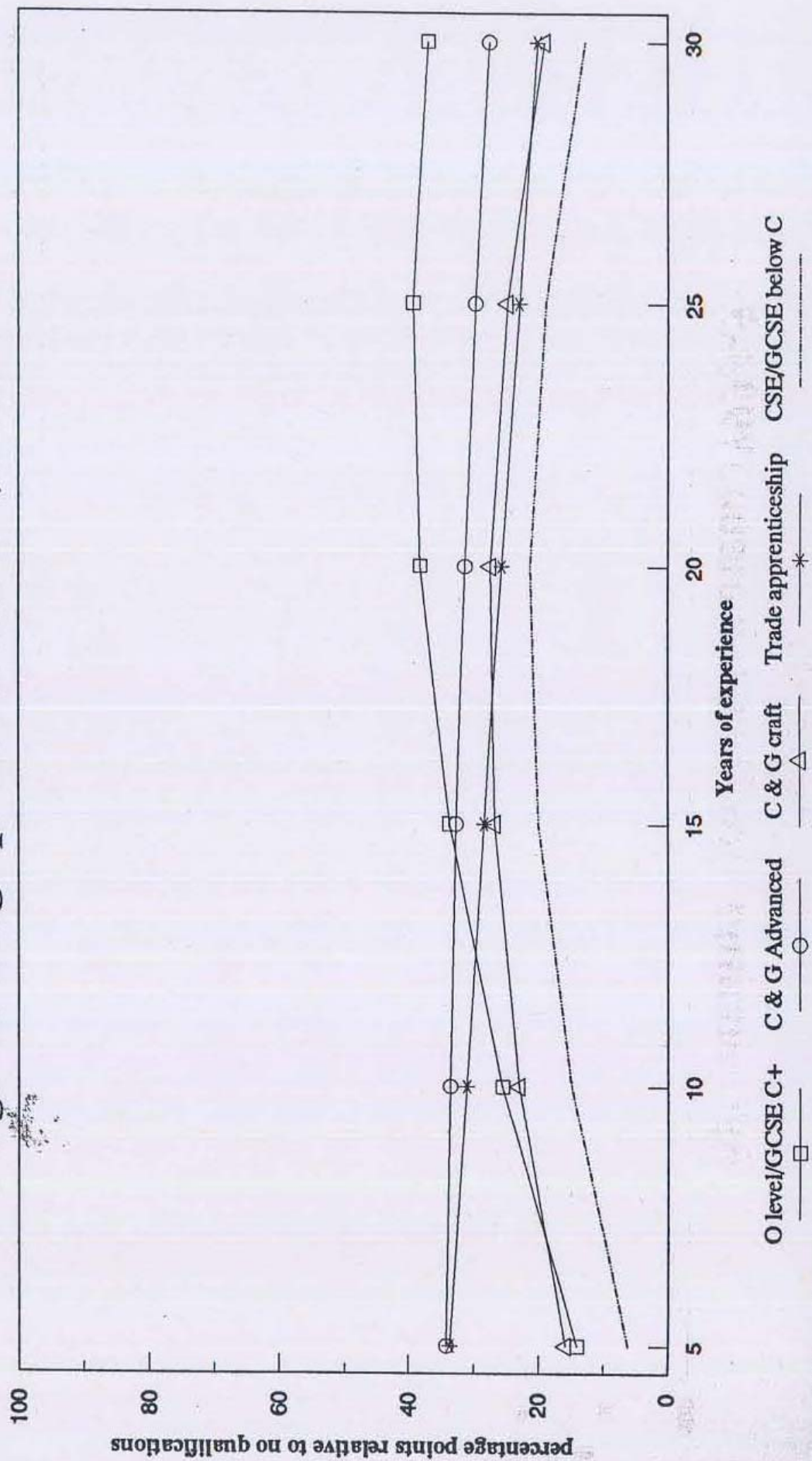


**Figure 9**  
**Age earnings profiles for men, 1993-95**



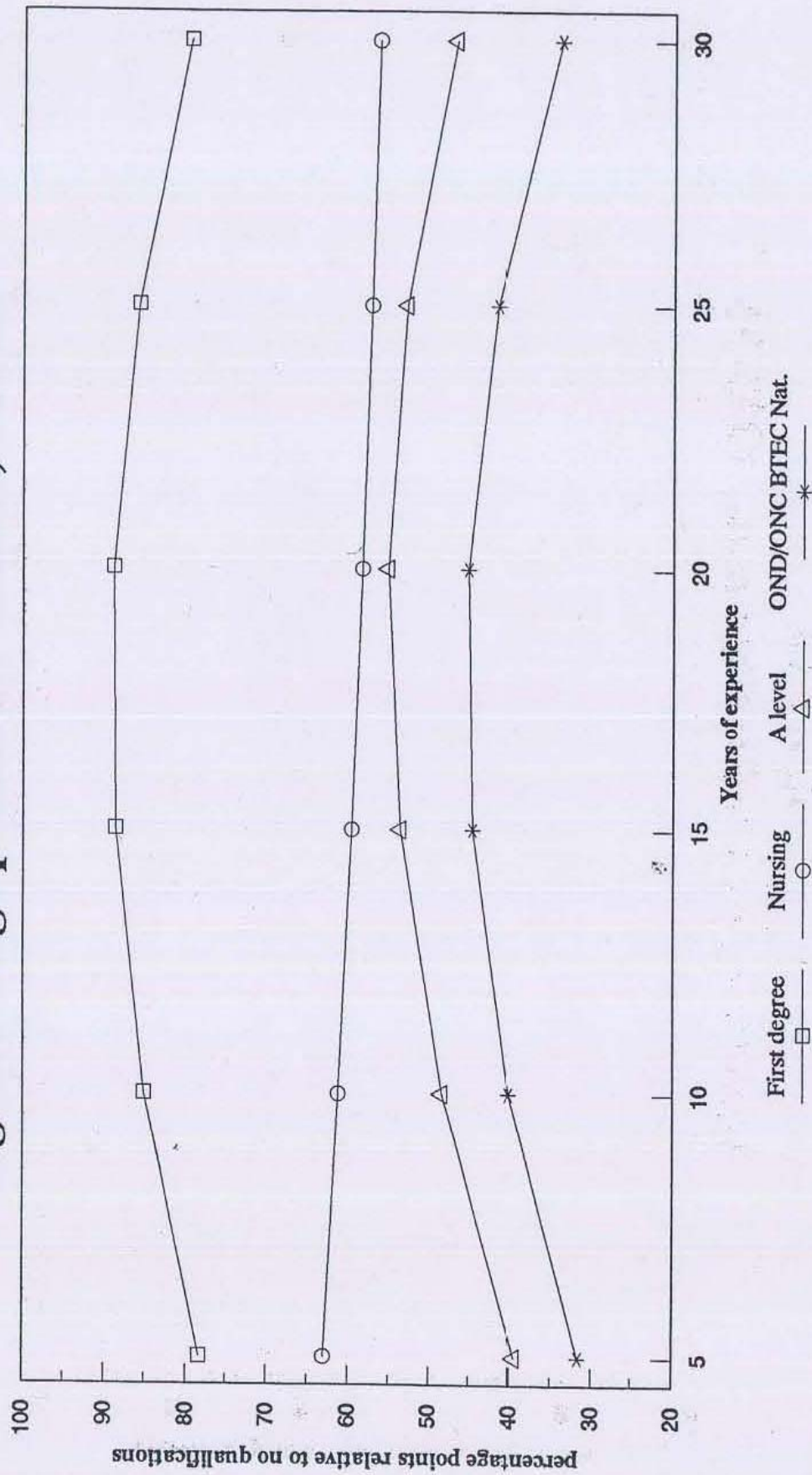
Source: Labour Force Survey

**Figure 10**  
**Age earnings profiles for men, 1993-95**



Source: Labour Force Survey

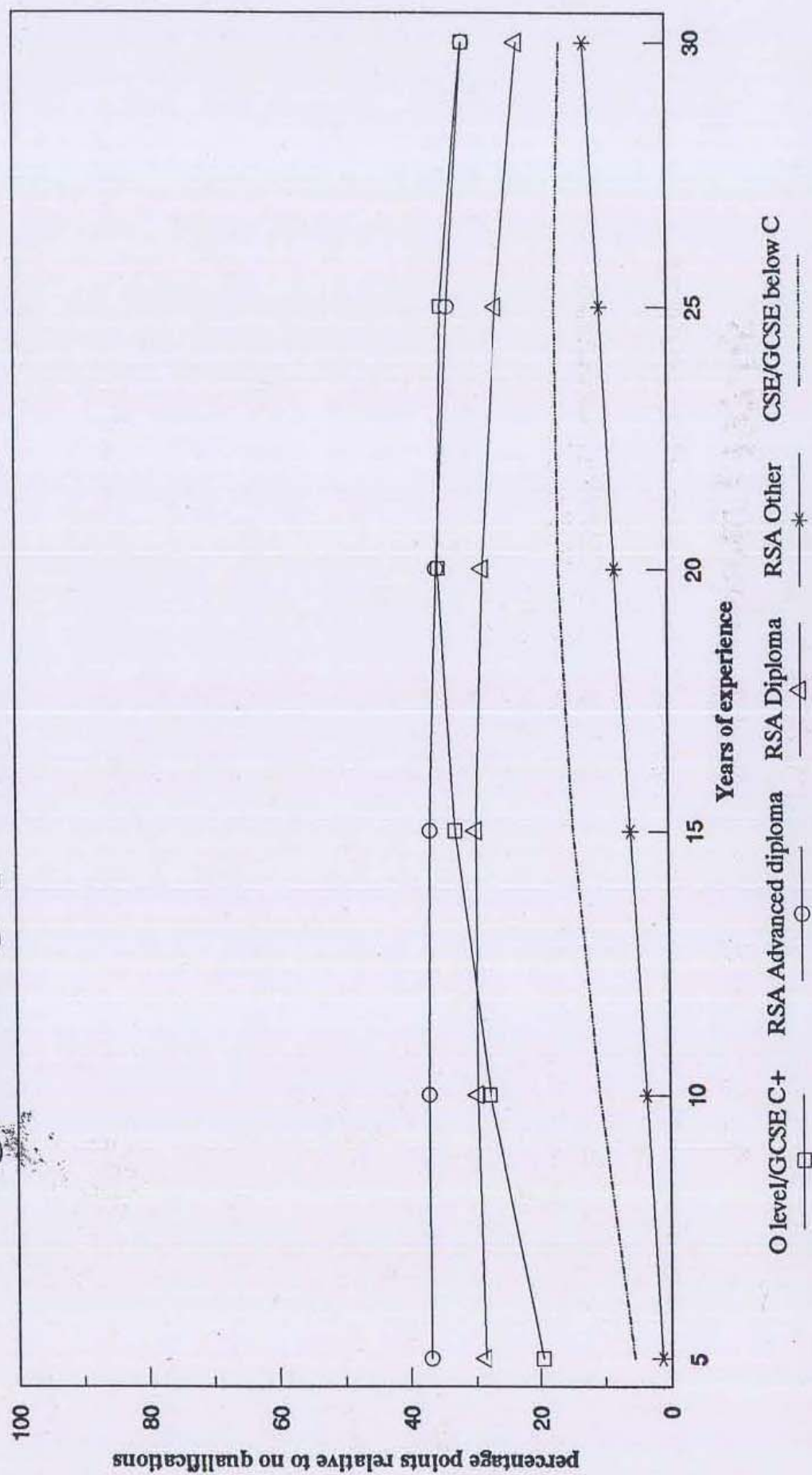
**Figure 11**  
**Age earnings profile for women, 1993-95**



Source: Labour Force Survey

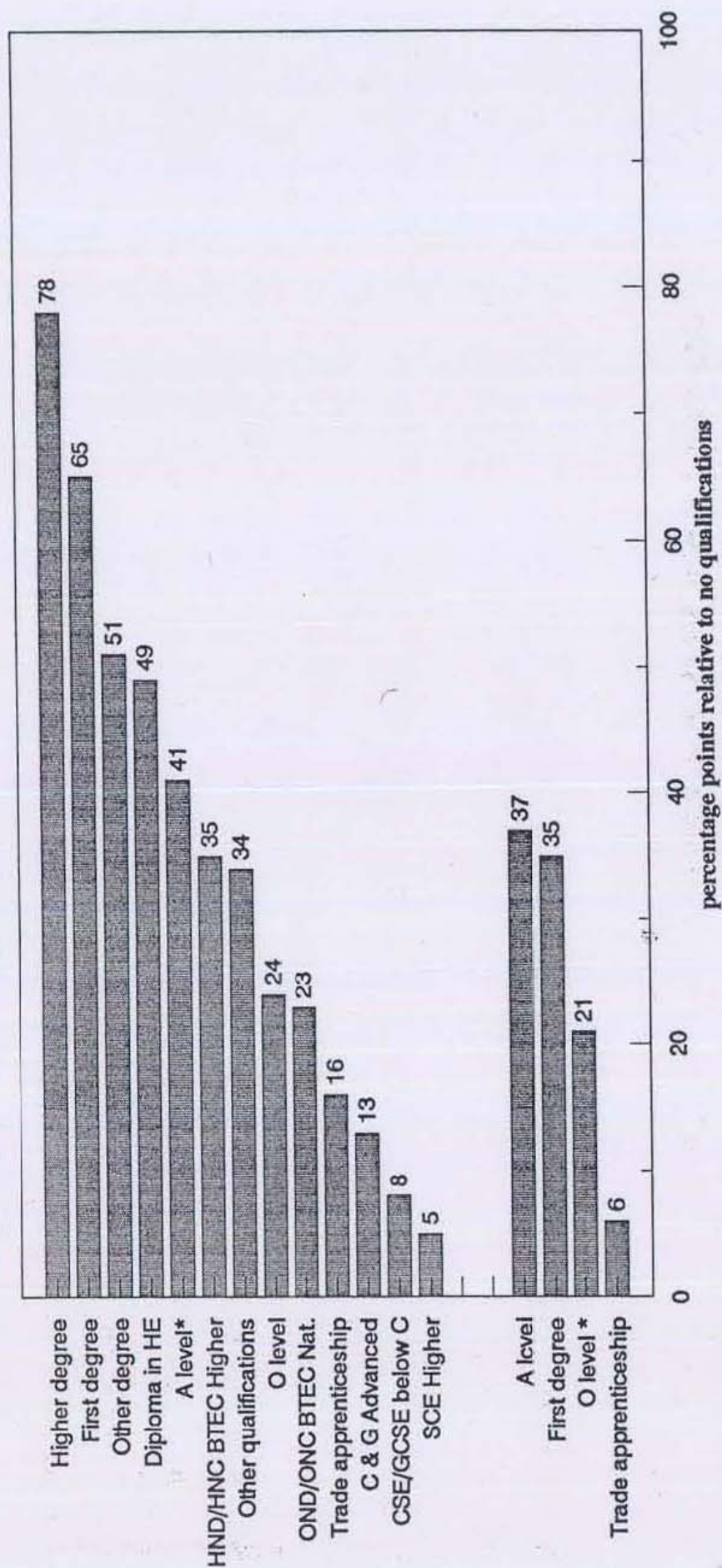


**Figure 12**  
**Age earnings profiles for women, 1993-95**



Source: Labour Force Survey

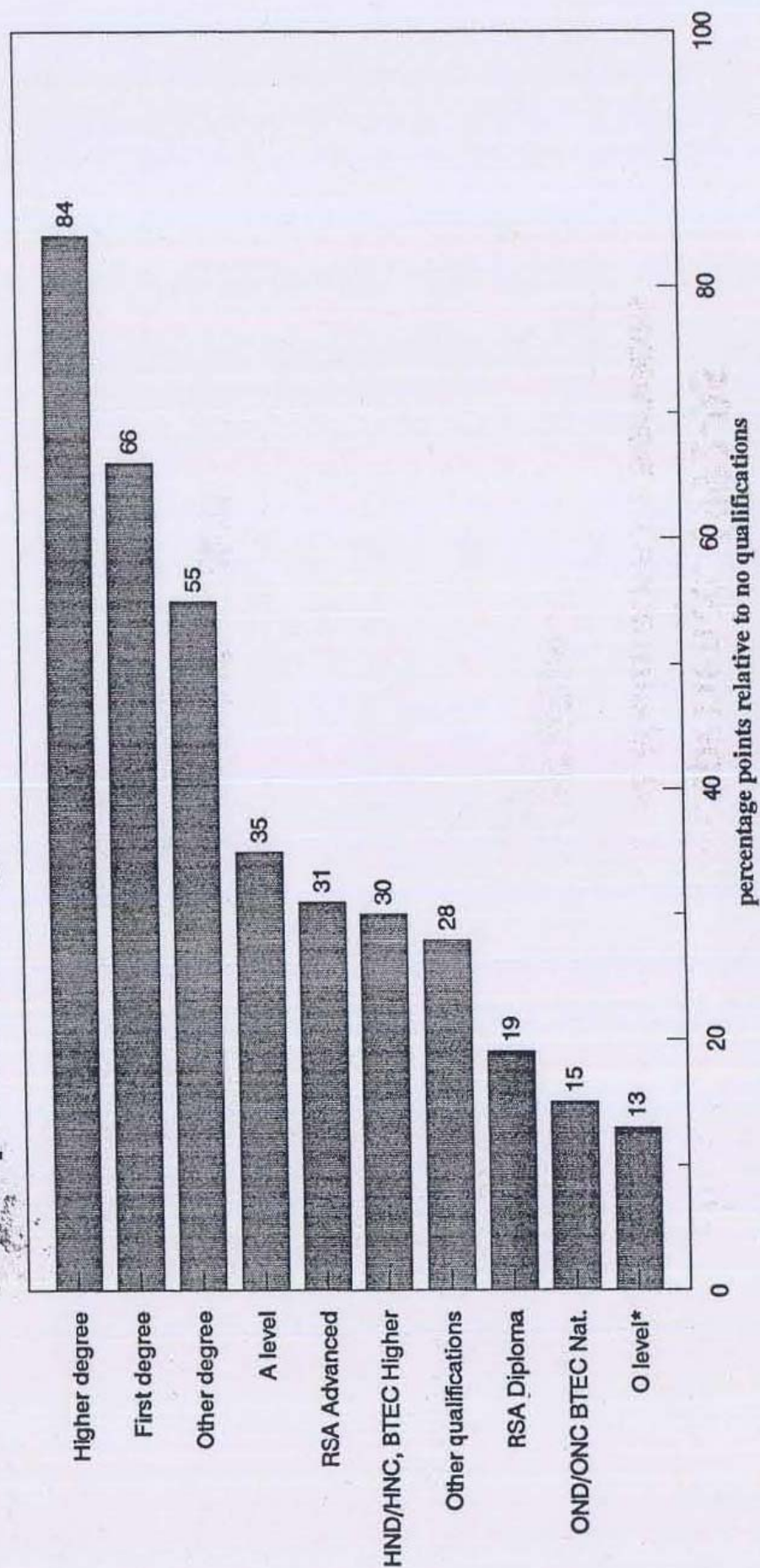
**Figure 13**  
**Male earnings by experience, 1992-95**  
**Corporate managers and Managers in services**



Source: Labour Force Survey  
 Note: SOC 1a - 6941 observations  
 SOC 1b - 1438 observations

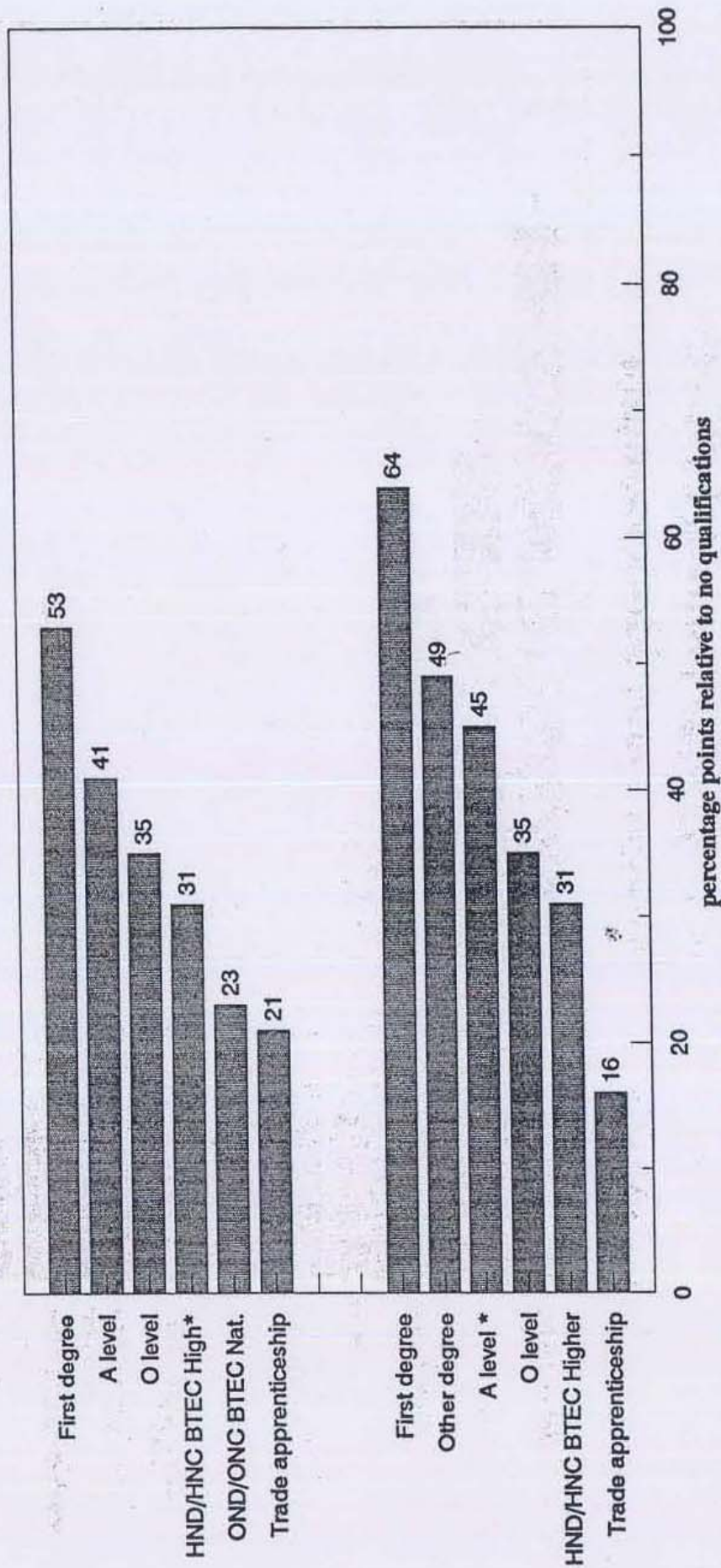


**Figure 14**  
**Female earnings by experience, 1992-95**  
**Corporate managers and administrators**



Source: Labour Force Survey  
 Note: SOC 1a - 3007 observations

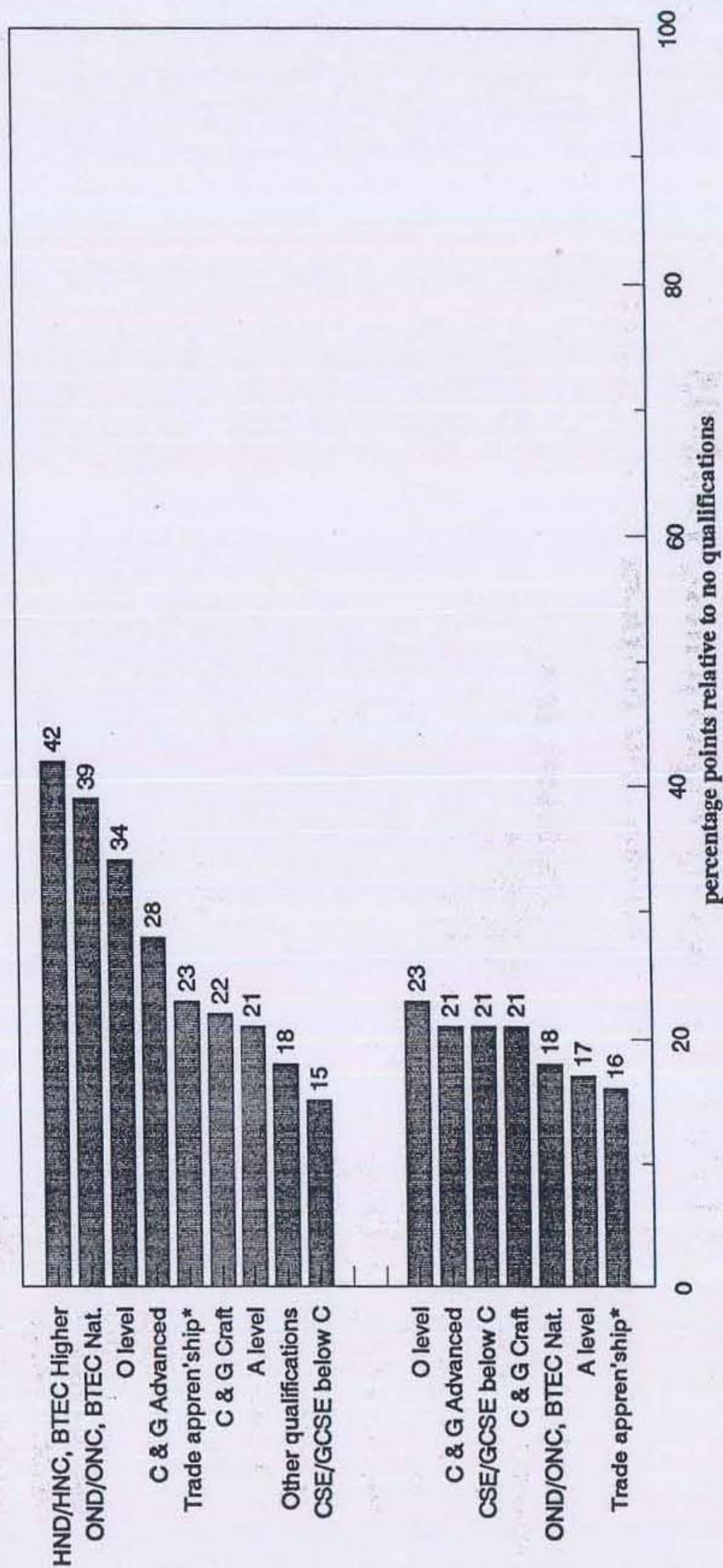
**Figure 15**  
**Male earnings by experience, 1992-95**  
**Technicians and other associate professionals**



Source: Labour Force Survey  
 Note: SOC 3a - 1777 observations  
 SOC 3c - 1763 observations



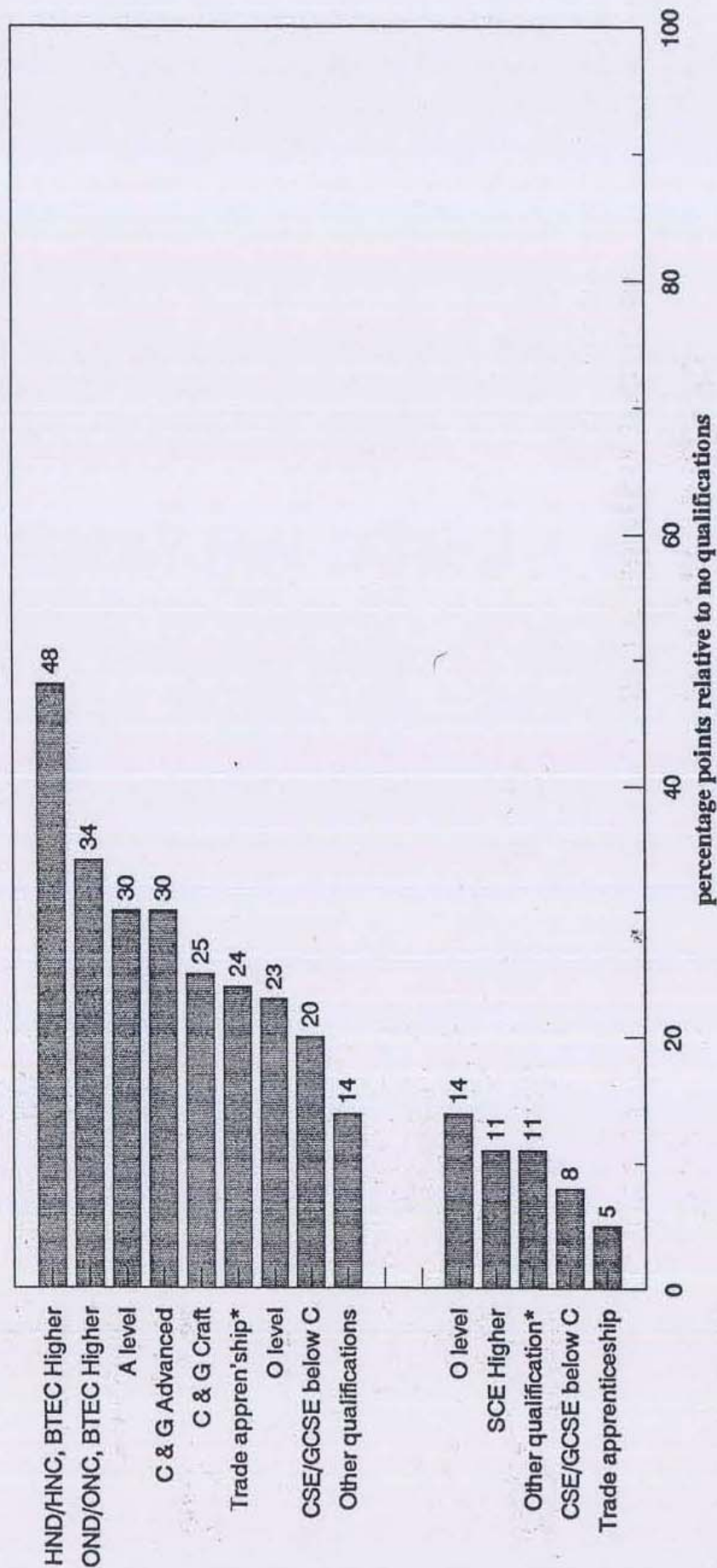
**Figure 16**  
**Male earnings by experience, 1992-95**  
**Skilled engin. craftsmen & other skilled manual**



Source: Labour Force Survey  
 Note: SOC 5b - 3613 observations  
 SOC 5c - 4013 observations

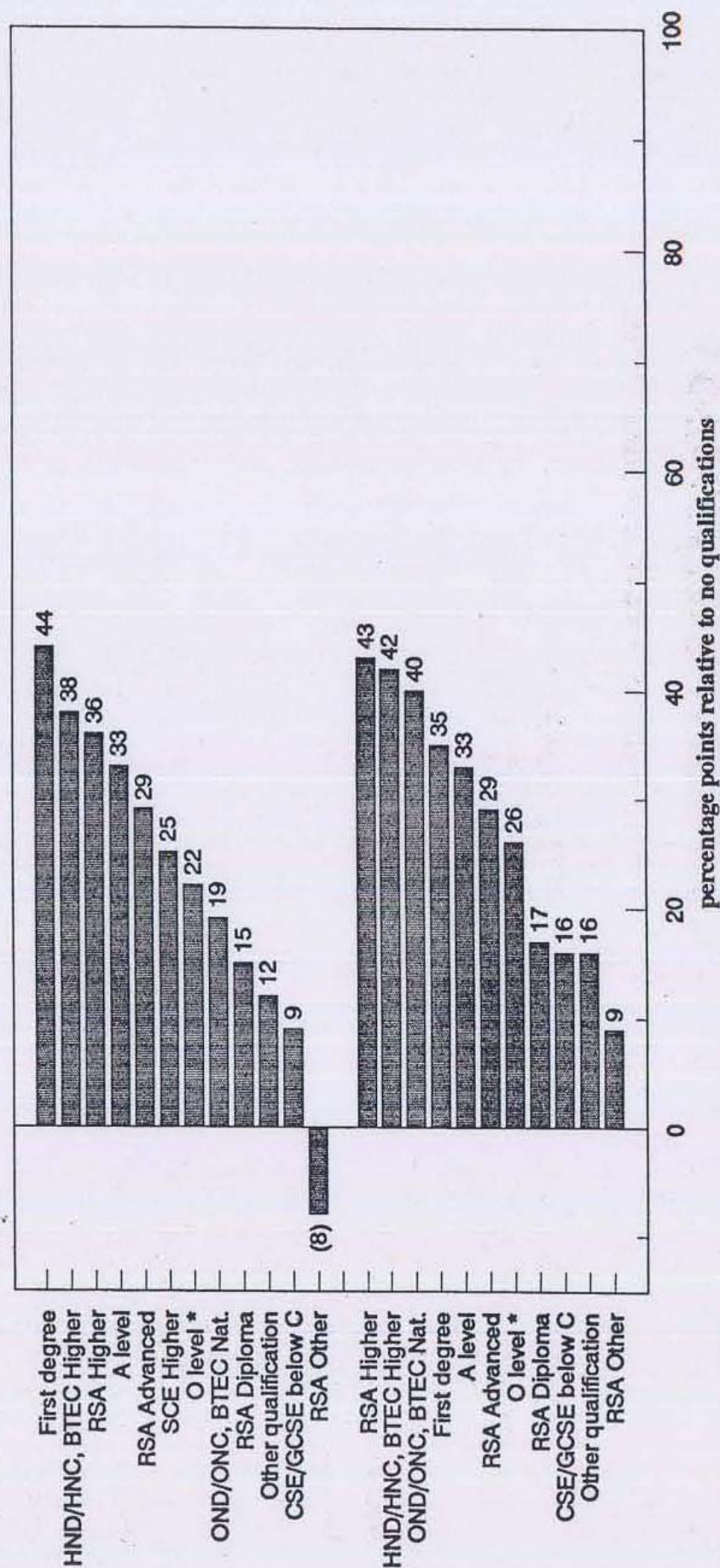


**Figure 17**  
**Male earnings by experience, 1992-95**  
**Operatives and drivers**



Source: Labour Force Survey  
Note: SOC 8a - 3809 observations  
SOC 8b - 2978 observations

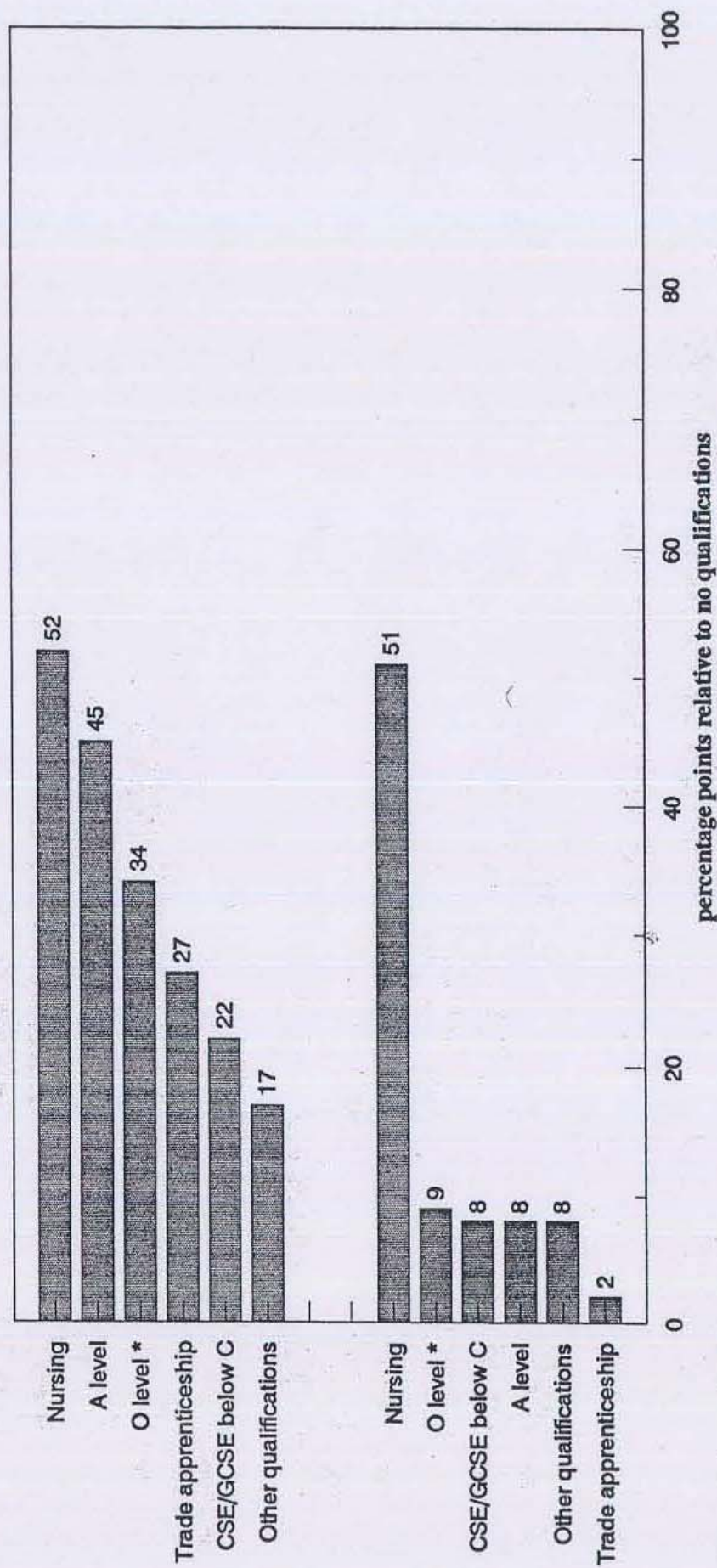
**Figure 18**  
**Female earnings by experience, 1992-95**  
**Clerical and secretarial staff**



Source: Labour Force Survey  
 Note: SOC 4a - 5534 observations  
 SOC 4b - 2563 observations

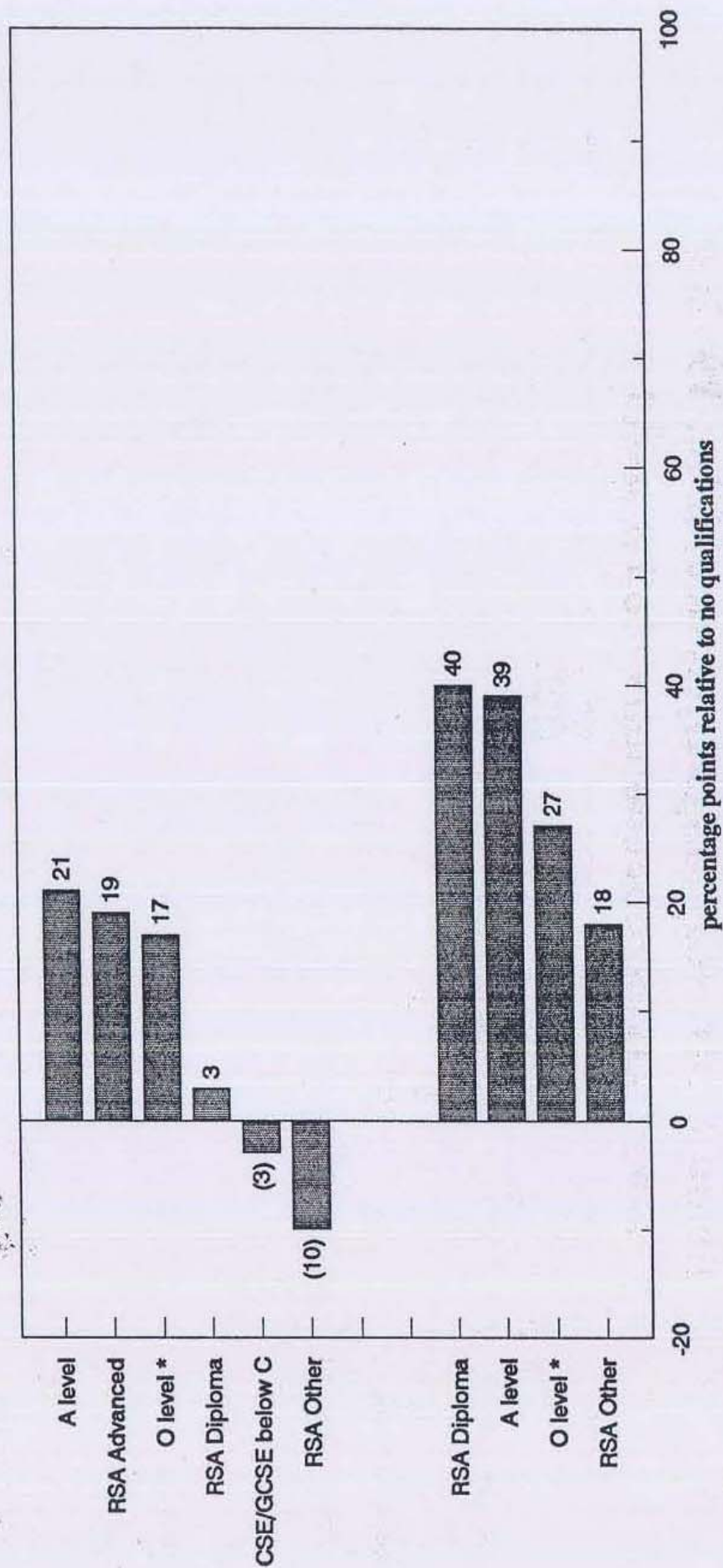


**Figure 19**  
**Female earnings by experience, 1992-95**  
**Personal service occupations - full & part time**



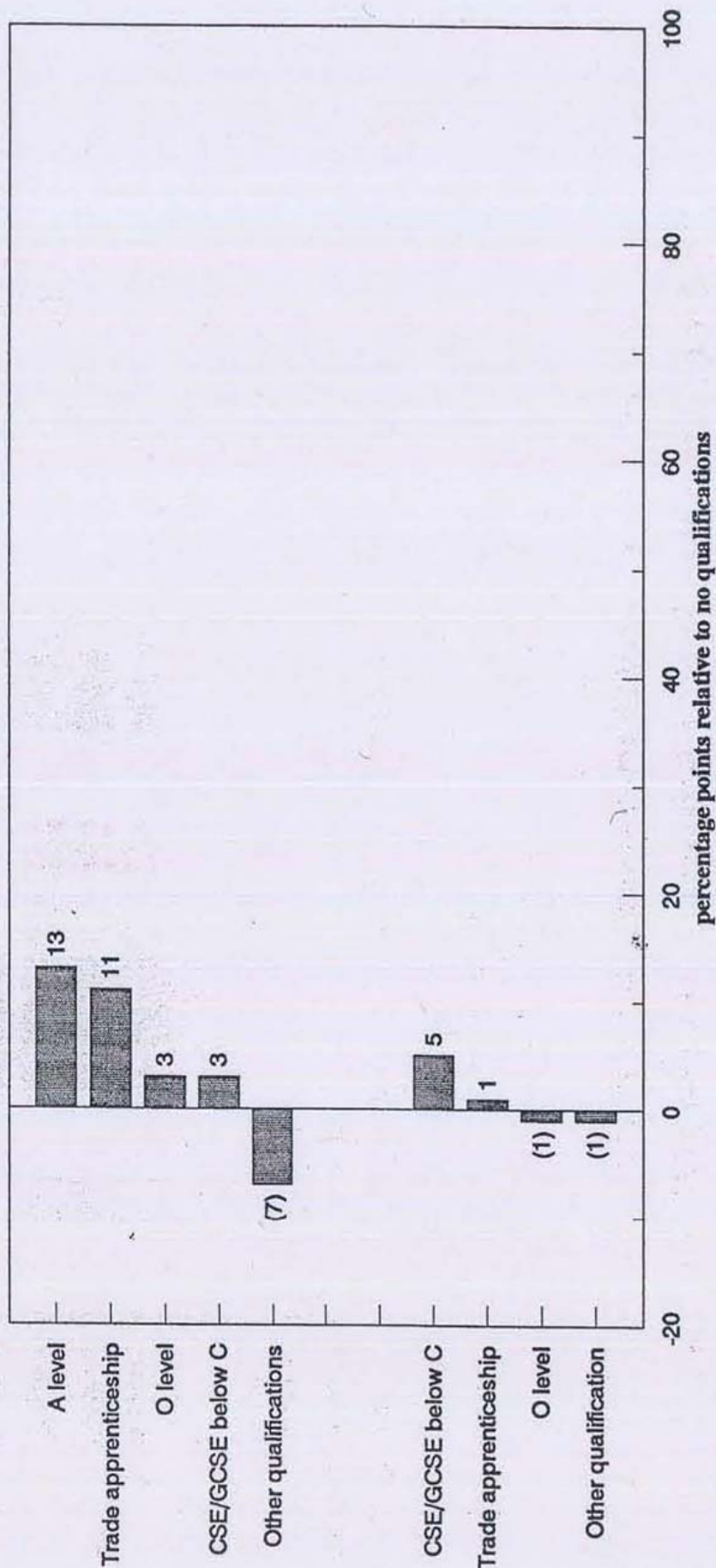
Source: Labour Force Survey  
 Note: SOC 6a - 2496 observations full-time  
 3364 observations part-time

**Figure 20**  
**Female part-time earnings by experience, 1992-95**  
**Clerical and secretarial**



Source: Labour Force Survey  
 Note: SOC 4a - 2262 observations  
 SOC 4b - 1462 observations

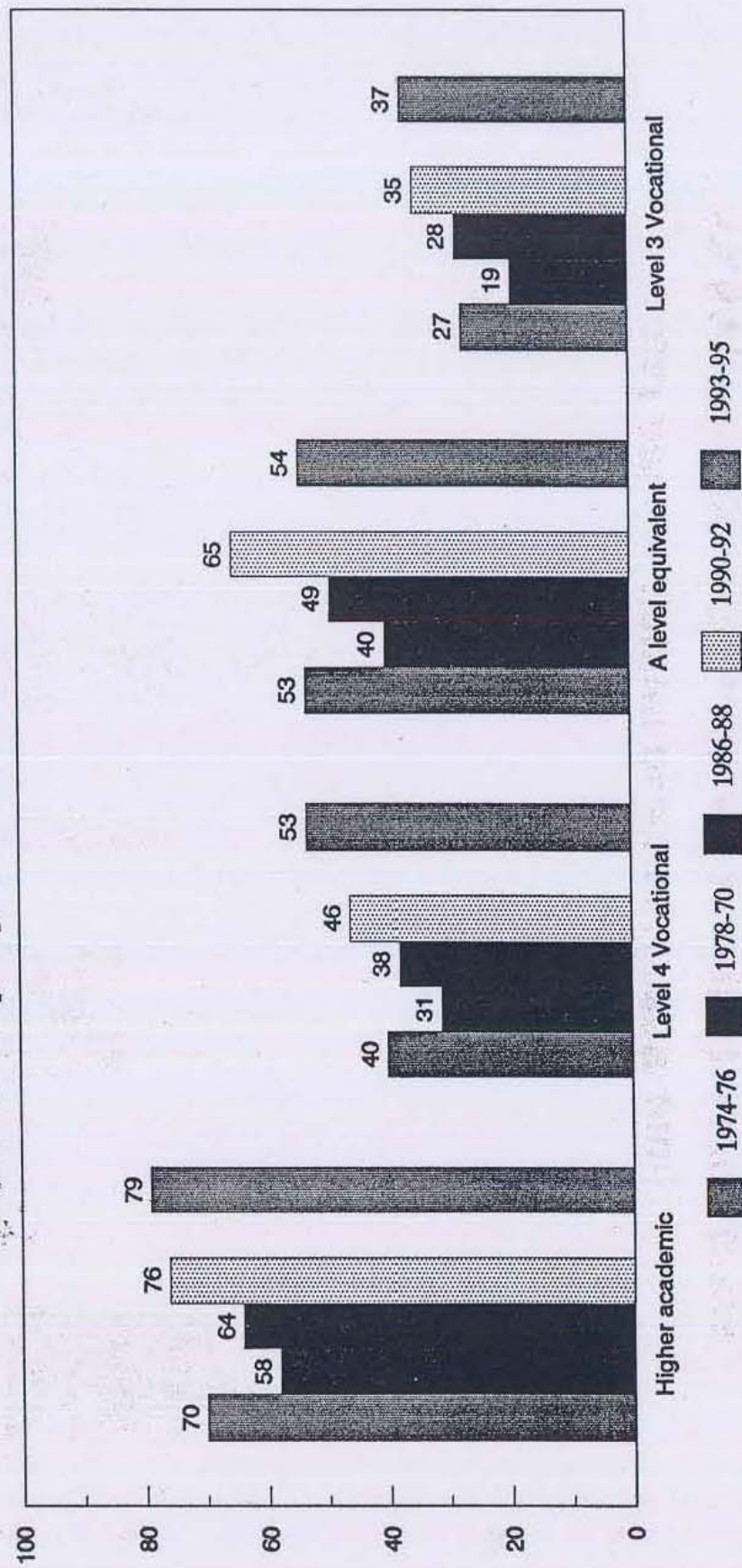
**Figure 21**  
**Female part-time earnings by experience, 1992-95**  
**Sales assistants and unskilled manual**



Source: Labour Force Survey  
 Note: SOC 7b - 2698 observations  
 SOC 8a - 2967 observations

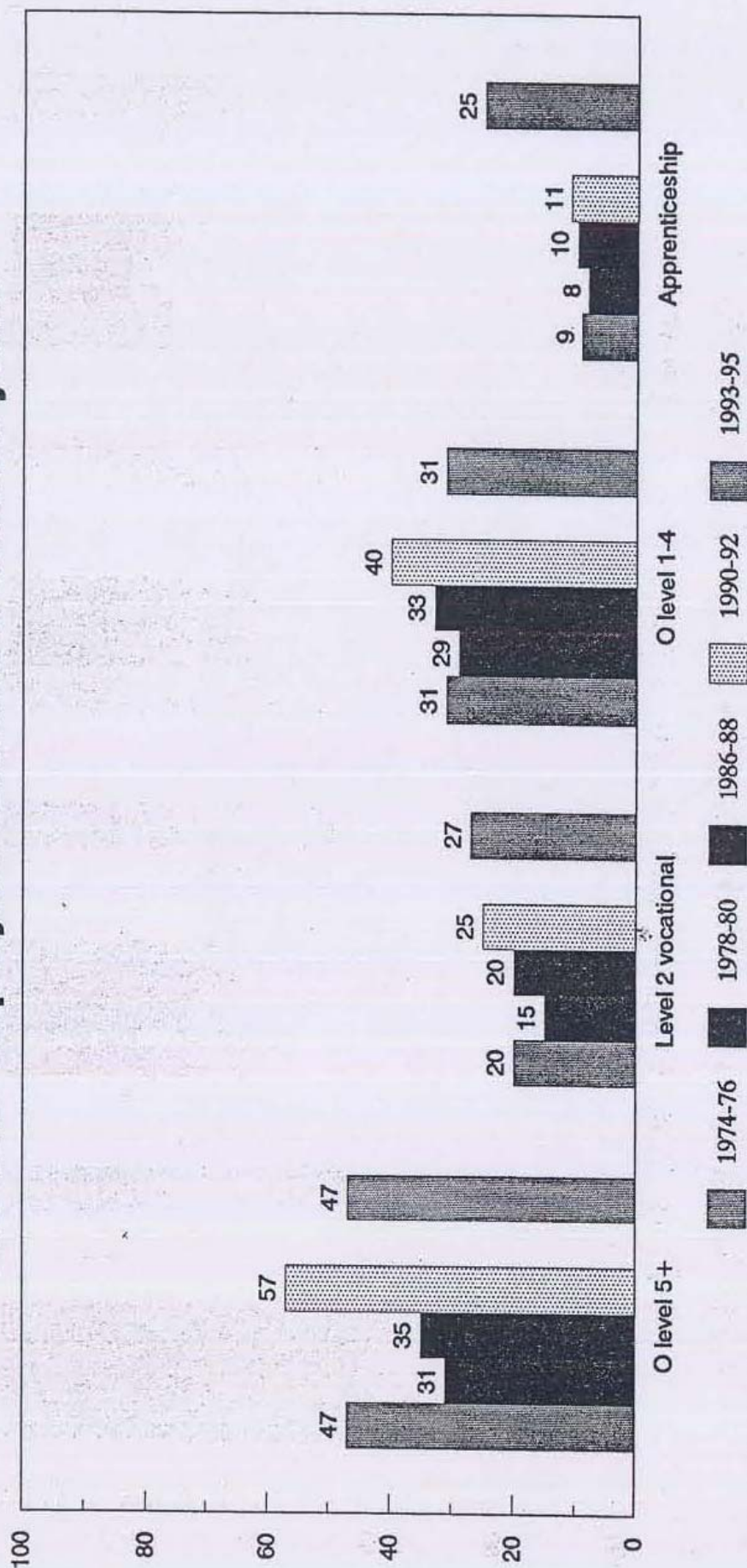


**Figure 22**  
**Male earnings by experience, 1976/78 - 1993/95**  
**Full time employees evaluated after 20 years**



Sources: 1976/78 - 1986-88, General Household Survey, Schmitt 1995. 1990-92 General Household Survey. 1993-95 Labour Force Survey.

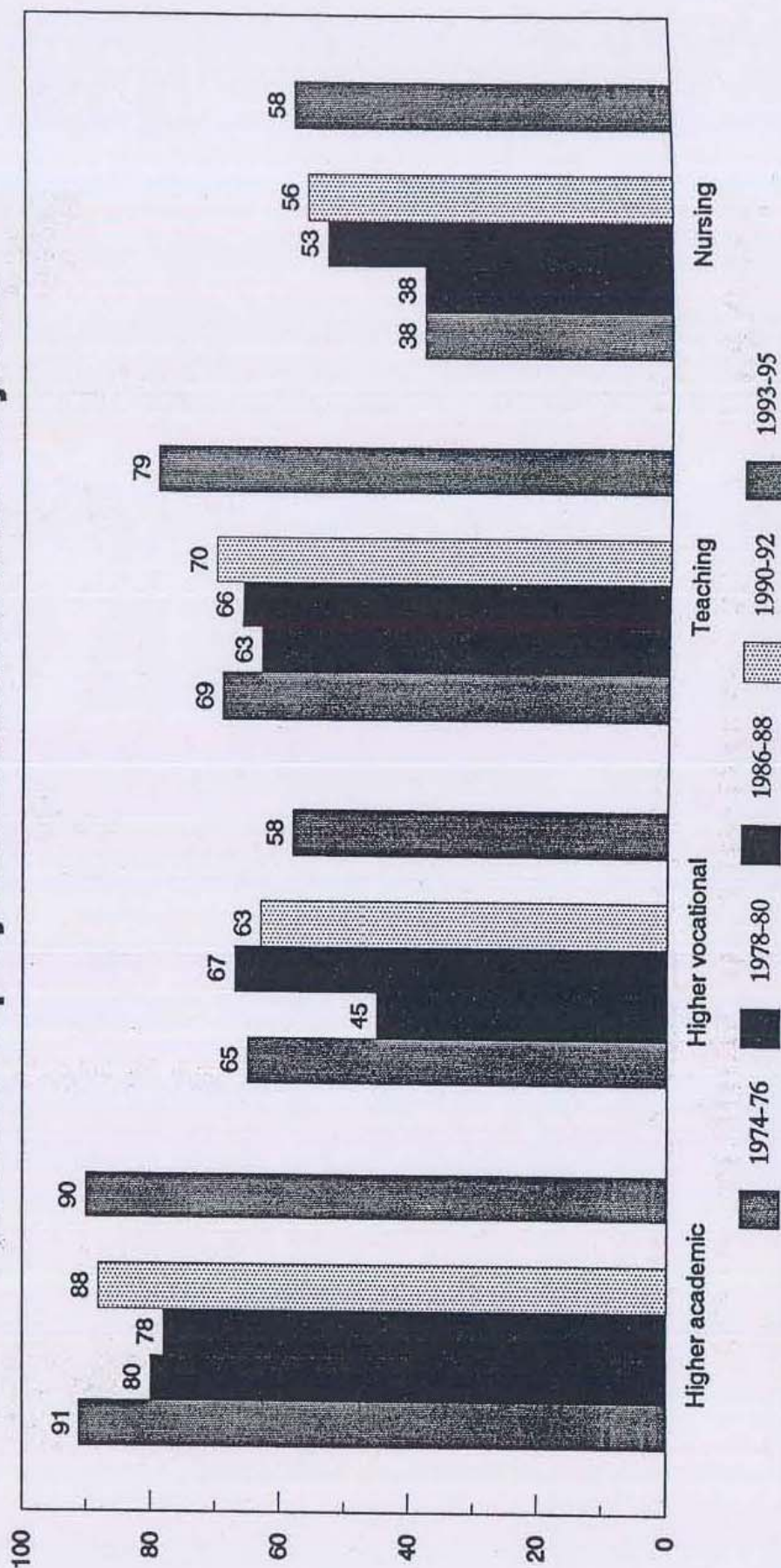
**Figure 23**  
**Male earnings by experience, 1974/76 - 1993/95**  
**Full time employees evaluated after 20 years**



Sources: 1974/76 - 1986-88 General Household Survey, Schmitt. 1990-92 General Household Survey. 1993-95 Labour Force Survey.



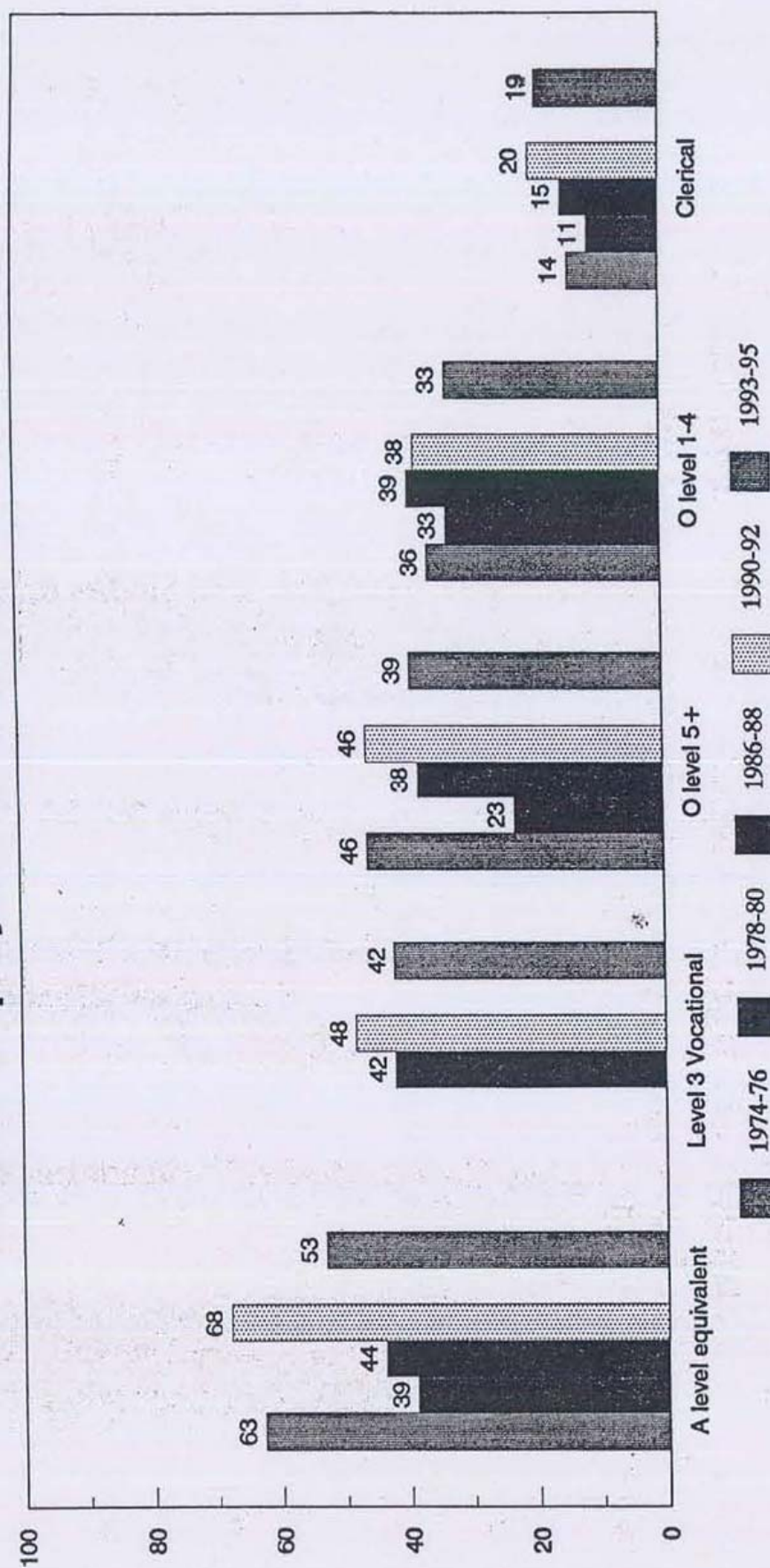
**Figure 24**  
**Female earnings by experience, 1976/78 - 1993/95**  
**Full time employees evaluated after 20 years**



Sources: 1974/76 - 1990-92 General Household Survey. 1993-95 Labour Force Survey.



**Figure 25**  
**Female earnings by experience, 1976/78 - 1993-95**  
**Full time employees evaluated after 20 years**



Sources: 1974/76 - 1990-92 General Household Survey. 1993-95 Labour Force Survey.

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