

**The Labour Market Returns to BTEC Qualifications: An Analysis
Using the UK Labour Force Survey**

Steven McIntosh

**Department of Economics
University of Sheffield
9 Mappin Street
Sheffield
S1 4DT**

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1. Introduction

This study investigates whether the holding of BTEC qualifications improves people's labour market outcomes, in terms of the wage that they receive, and the chances of them finding employment. To do so, we use a large, nationally representative survey, namely the Labour Force Survey (LFS). This survey asks respondents for detailed information about many aspects of their working lives, education and training. Crucially for this project, respondents report whether or not they are in work, the wage that they receive if they are in work, and which of a long list of qualifications that they hold. It is therefore an ideal data set for answering the above question.

Since 1992 the LFS has been based on a systematic random sample design, which makes it representative of the whole of the UK. It is conducted quarterly, with around 60,000 private households surveyed each quarter. All members of a surveyed household are included, with information gathered separately on each. Another feature of the survey is that households take part in the survey for 5 successive quarters, or waves. In any one quarterly survey, one wave will be receiving their first interview, one wave their second, and so on, with one wave receiving their fifth and final interview. There are therefore approximately 12,000 households in each wave in each quarter.

In order to increase sample sizes, we combined the quarterly data sets in each of the chosen years into annual data sets. Since wage information is only collected from respondents in the first wave interview and their fifth wave interview, only these waves were included in the annual data sets to be analysed. This had the advantage that no individual could appear in an annual data set more than once, since a person's first wave appearance in the survey and their fifth wave appearance cannot be in the same calendar year. The years chosen for analysis were 1996, 2001 and 2006. 1996 was chosen as it was the first year in which the LFS asked respondents to report *all* qualifications that they hold, which is relevant for the reasons explained in the methodology section below. 2006 is the most recent full year of data available, with 2001 chosen as an intermediate year.

The aim of the analysis is to determine whether individuals who have obtained a BTEC qualification earn more in the labour market, and have a higher probability of

being in work, compared to those individuals without a BTEC. The results will be disaggregated in several ways, for example by gender, by age and by highest qualification obtained at school.

2. Methodology

As stated in the Introduction, the aim of the wage analysis is determine whether those individuals who obtain a BTEC qualification earn more than those without. One way to do this would be to simply compare the wages of BTEC holders to non-BTEC holders. However, there will be other characteristics of individuals associated with the likelihood of them obtaining a BTEC qualification, and which also impact on their wages. For example, consider if people with a BTEC qualification are on average older than the typical worker in the labour market. Also, assume that the empirical results show that BTEC-holders earn more than non-BTEC holders. Since we know that older people earn more, on average, than younger people, we would not know whether the wage advantage attached to BTECs was due to the qualification itself, or simply due to the fact that BTEC holders are older on average. We therefore estimate wage equations using the Ordinary Least Squares (OLS) regression based technique. Such equations attempt to explain the wages that individuals receive, in terms of the qualifications that they hold, and also in terms of other characteristics that they have (known as control variables). The big advantage of OLS is that the impact of each variable in the equation (say, the impact of holding a BTEC) can be interpreted holding the effect of all the other variables in the equation constant. The control variables actually used in the wage equations are age¹, ethnicity², the region in which individuals live, the size of the workplace in which they work³, and whether they work in the public or the private sector. Thus, when interpreting the coefficients on the BTEC variables in the wage equation, we can say that if we take individuals of the same gender, age and ethnicity, living in the same region, working in a similar sized workplace in the same sector, with one group holding a BTEC qualification and the

¹ An age-squared term is also included, to capture the fact that wages do not generally rise linearly with age, but increase at a declining rate as workers become older, producing a convex, or 'hump-shaped' age-earnings profile.

² Due to small sample numbers in the non-white categories, we simply distinguish between individuals who are white and individuals who are non-white.

³ Workplace size is measured by number of employees at the workplace, with a distinction made between small workplaces that have fewer than 25 employees, and larger workplaces that have 25 or more employees. This variable is included as previous evidence has shown that individuals in larger workplaces tend to earn more, on average.

other not, then the estimated difference in their average wages will be given by the coefficient on the BTEC variable. In actual fact, the wage equations are estimated with the natural logarithm of wages as the dependent variable, since this has been shown in previous work to be a more appropriate functional form. In this case, the interpretation of the BTEC coefficient is the *percentage* difference in wages between BTEC and non-BTEC holders, holding all other factors constant. An hourly wage rate was considered, so that the results are not affected by how many hours people work, which would have been the case if weekly or annual earnings had been used.

It should be acknowledged at this point that there may be other differences in the characteristics of BTEC and non-BTEC holders that cannot be controlled for, due to a lack of data on such characteristics in the LFS data set. A classic example is the natural ability of the respondents, which is not observed in the data. Since ability will also affect wages, whichever group has the higher ability will earn more for this reason, on average, regardless of their qualifications. It is not immediately obvious whether the BTEC or the non-BTEC group will have the highest natural ability, and so it cannot be predicted in advance whether this bias would be positive or negative.

The wage equations were estimated on a sample of full-time employees only. The self-employed are not asked about their earnings in the LFS, and so only employees could be considered. It was decided also to only focus on full-timers, since part-time workers typically earn less, even per hour, than full-time workers, but many have specifically chosen to work part-time, and so to include such workers would require some modelling of this full-time/part-time decision.

The estimation methodology is slightly different for the employment equations, since the dependent variable in this case simply takes the value of 1 or 0, according to whether the respondent is in employment or not. An estimation method was chosen that makes specific allowance for the nature of the dependent variable, namely probit analysis. In this case, the estimated coefficients on the BTEC variables can be interpreted as the difference in the probability of being in employment between BTEC-holders and non-BTEC-holders, holding constant the other characteristics included in the equation. The other control variables used were the same as in the wage equation, with the exception that workplace size and sector of work could not be included, as they clearly are not defined for those not in work. The chosen sample

was only those employed or unemployed, and so excluded the inactive⁴. Thus the analysis is considering, amongst those who have actively chosen to participate in the labour force, who is more likely to obtain a job.

Finally considering the nature of the qualifications variables, the LFS offers respondents a long list of qualifications on which they record all that hold⁵. Amongst qualification categories, respondents can also record the level at which they hold such qualifications. Thus we observe individuals with all 3 levels of BTEC qualifications: Higher National Diploma/Certificate (HND/HNC), Ordinary National Diploma/Certificate (OND/ONC), First/General Diploma or First/General Certificate. These qualifications correspond to Levels 4 to 2 respectively on the National Qualifications Framework. The estimated equations include variables indicating *all* qualifications that individuals hold. Thus the same individual can appear in multiple qualification categories. The advantage of including all qualifications of individuals, rather than just their highest qualification, is that the wage differential can then be calculated on the basis of all people who hold that qualification, rather than only people who hold that qualification as their highest qualification, who could be a small and highly-selected subset of the former group. Also, by including all qualifications, the researcher does not have to decide which qualification should be rated as the highest, which sometimes can be quite an arbitrary decision when the choice is between two qualifications at the same level. The interpretation in an ‘all-qualifications’ specification, of the coefficients on any of the BTEC qualifications, is then the estimated average wage differential between people with and without that qualification, holding constant all other characteristics included in the equation. The non-BTEC group will therefore include, for example, people with degrees. It might be thought that this is an unfair comparison, however recall that all other qualifications are also included in the estimated equation and so are also held constant. In effect, what is being compared is the wages of people with the same background characteristics *and* the same list of qualifications, except one group have a BTEC qualification and the other group do not.

The next section presents the results of this analysis.

⁴ The inactive, as far as the labour market is concerned, include those in education, those who do not want a job such as home-makers, and the retired.

⁵ Prior to 1996, respondents were asked only to record their highest three qualifications, so 1996 was chosen as the start date for the analysis.

3. Results

3.1 Wage Returns to BTEC Qualifications for the Working Age Population

We first estimate the average wage differential attached to each BTEC qualification across the whole working age population of 16-65 in each of the studied years separately, with the results presented in Tables 1 and 2 below, for men and women respectively⁶.

Table 1: Wage Returns to BTEC Qualifications – Males

	1996	2001	2006
HND/HNC, BTEC/SCOTVEC Higher	13.9% *	13.3% *	15.0% *
ONC/OND, BTEC/SCOTVEC National	11.4% *	9.7% *	7.6% *
BTEC/SCOTVEC First/General Diploma	5.7%	1.6%	-
BTEC/SCOTVEC First/General Certificate	6.4%	2.8%	-

Table 2: Wage Returns to BTEC Qualifications – Females

	1996	2001	2006
HND/HNC, BTEC/SCOTVEC Higher	6.5% *	9.0% *	5.3% *
ONC/OND, BTEC/SCOTVEC National	11.6% *	5.3% *	5.1% *
BTEC/SCOTVEC First/General Diploma	9.0% *	-	-
BTEC/SCOTVEC First/General Certificate	-	3.8%	7.0%

In these, and all other tables in the report, a * on an estimated wage return or differential indicates that it is significantly different from zero at least at the 5% level. Where a dash (-) is placed in a table, this indicates that not only was an estimated wage differential statistically insignificant, it was actually negative.⁷ In all cases, the estimated wage differentials are cumulative. Thus, if an individual obtained both a First Diploma and a First Certificate, for example, then the total increase in the wages relative to someone without either of these qualifications would be the sum of the estimated returns to the two qualifications.

⁶ The full regression results, showing estimated coefficients and standard errors for all the variables in the wage equations, are presented in Table A1 and A2 in the appendix. This will similarly be done for all other analyses in this report. The figures in Tables 1 and 2 are derived from the estimated coefficients in the appendix tables, as $e^{\beta} - 1$ where β is the appropriate estimated coefficient in the appendix.

⁷ The interpretation of negative wage differentials will be discussed in more detail at a later point.

The results in Table 1 show that BTEC qualifications at Levels 3 and 4 (national and higher level) have a substantial impact on the wages of men who hold them. In 2006, the most recent year for which data are available, a man with an HND/HNC earned on average 15% more than a man without an HND/HNC but otherwise with the same qualifications and other characteristics. This is clearly a sizeable impact. If we look at the coefficients on all of the qualifications in the estimated wage equations in Table A1 in the appendix, then the wage differential attached to HND/HNCs is the highest of all the qualifications in the table, with the exception of the academic qualifications 5+ GCSEs at grade C or above, 2+ A Levels and a first degree, plus professional qualifications. HND/HNCs therefore seem to attract a higher wage return than, amongst others, higher education diplomas and other HE qualifications below degree level, as well as teaching and nursing qualifications. It is therefore clearly a well-regarded qualification in the labour market, and has maintained its value across the ten years studied here. The wage differential attached to the Level 3 BTEC qualification (OND/ONC) is slightly smaller, at 7.6% in 2006, though this still suggests a significant labour market impact⁸. If we again compare this figure to those on other qualifications in Appendix Table A1, then it is clear that the OND/ONC qualification attracts a higher wage differential than any other Level 3 vocational qualification considered. There is, however, some evidence that the wage differential attached to OND/ONC qualifications has declined over the last decade. Although the fall is not dramatic, it does appear to be present, with the estimated wage differential falling from 11.4% in 1996 to 9.7% in 2001, and then 7.6% in 2006.

Turning to BTEC qualifications at the lower level, the picture is not as positive. In the first year considered, 1996, the wage returns to a BTEC First Diploma and First Certificate are estimated to be 5.7% and 6.4% respectively. These are respectable numbers in terms of size. A significance test reveals that neither figure is statistically significantly different from zero, although this is likely to be due to the smaller

⁸ The reason why the wage return is lower for the OND/ONC compared to the HND/HNC is not simply that the former is a Level 3 qualification, while the latter is a Level 4 qualification and so naturally more highly rewarded. Recall that, since all an individual's qualifications are included in the wage equation rather than just their highest qualification, then the interpretation of the estimated wage differential is the *marginal* change in an individual's wages from acquiring just that qualification, rather than the cumulative total effect of all qualifications obtained up to that level. There is therefore no reason why a Level 3 qualification could not attract a higher wage return than a Level 4 qualification. As long as the Level 4 return is positive, then the individual with the Level 4 qualification would still earn more than the individual with the Level 3 qualification, but the *step-up* or *change* in wages would have been greater for the Level 3 individual than the Level 4 individual, relative to their respective wages before they acquired the qualification.

number of observations in the data set with these qualifications reducing their statistical precision, rather than the true wage differentials actually being zero. There is suggestive evidence that the value of these qualifications has fallen since this date, however. By 2001, the estimated wage differentials have fallen to 1.6% and 2.8% respectively, which are clearly much smaller numbers, making it more likely the true unknown differentials are actually zero by this point. In 2006, there is no evidence of any positive impact of lower level BTEC qualifications on male wages at all. The estimated coefficients are both actually negative, though statistically insignificantly different from zero. It is extremely unlikely that acquiring a qualification could actually reduce someone's wages, and so not much should be made of the negative coefficient⁹. The result should be phrased in terms of there being no evidence for any positive impact of such qualifications on men's wages. It should be pointed out that no other Level 1 or 2 vocational qualifications attract a positive and statistically significant wage return in either Table A1 or A2, with the exception of craft level City and Guilds for men. This absence of wage returns to Level 1 and 2 vocational qualifications has been observed in numerous previous studies, and seems to be a persistent feature of the UK education system and labour market.

Considering the results for females in Table 2, the first thing to note is that at the HND/HNC level, the wage differential attached to this qualification is much smaller for women than for men. For women it is just 5.3% in 2006. A similar figure of 5.1% is observed for the OND/ONC wage differential, with there again being some suggestion, as for men, that the labour market value of this qualification has declined somewhat over the previous 10 years.

For the First Diploma qualification, the pattern for women is similar to men. The wage differential attached to this qualification was very respectable in 1996 at 9%, and even statistically significant for women. Since that date however, there is no evidence at all of any positive wage return to a BTEC First Diploma for women. With respect to First Certificates, the picture does differ somewhat. Although none of the estimated wage differentials for this qualification are statistically significant, the

⁹ The most likely cause of the negative estimated coefficients is that they reflect some unobserved (and so uncontrolled for) characteristic of Level 2 BTEC holders that reduces their earnings. For example, if the individuals who apply for such qualifications have a low earnings power, and earnings power is not measured in the data set and so not controlled for in the analysis, then the lower wages observed by First Diploma and Certificate holders could be due to this lower earnings power, rather than due to the qualifications themselves.

size of the wage returns have at least increased at each point at which they were observed, unlike their female Level 2 or male Level 2 counterparts.

3.2 Effect of BTEC Qualifications on the Likelihood of Employment

A potentially higher wage rate is not the only way in which individuals' labour market outcomes can be affected by the qualifications that they hold. This section therefore considers the impact that qualifications, in particular BTEC qualifications, have on the likelihood of their holders being employed. Tables 3 and 4 report the difference in the probability of being employed between BTEC and non-BTEC holders, holding constant other qualifications held, as well as the usual other personal characteristics, for men and women respectively. In all cases, individuals who do not participate in the labour market are removed from the data set. The analysis is therefore considering, amongst those who have actively joined the labour force, whether BTEC qualifications are associated with a higher probability of being employed rather than unemployed.¹⁰

Table 3: Change in Employment Likelihood Associated with BTEC Qualifications – Males

	1996	2001	2006
HND/HNC, BTEC/SCOTVEC Higher	1.9 pp *	0.9 pp *	1.6 pp *
ONC/OND, BTEC/SCOTVEC National	1.6 pp *	0.9 pp *	0.3 pp *
BTEC/SCOTVEC First/General Diploma	-	1.3 pp	-
BTEC/SCOTVEC First/General Certificate	4.3 pp *	-	1.4 pp

Table 4: Change in Employment Likelihood Associated with BTEC Qualifications – Females

	1996	2001	2006
HND/HNC, BTEC/SCOTVEC Higher	0.7 pp	0.4 pp	-
ONC/OND, BTEC/SCOTVEC National	-	0.6 pp	1.0 pp *
BTEC/SCOTVEC First/General Diploma	0.1 pp	1.7 pp *	-
BTEC/SCOTVEC First/General Certificate	2.2 pp	0.0 pp	-

Considering the effects for men in Table 3 first, we observe a similar pattern of results as for the male wage effects. BTEC qualifications at Levels 3 and 4 are associated with statistically significantly higher likelihoods of employment for their holders, with

¹⁰ An individual who is unemployed differs from someone who is 'inactive' in the labour market, by the fact that the former is looking for a job and is ready and available to start a job.

some evidence that the size of the Level 3 (OND/ONC) impact has fallen over the last decade. Thus, by 2006, having an HND/HNC increased a man's chances of being in employment by 1.6 percentage points, while having an OND/OND raised them by 0.3 percentage points. While these effects do not sound large, a glance at the full set of results in Table A3 in the appendix reveals that none of the estimated effects are particularly large. Amongst the various qualifications, the ones that increase a person's employability the most are holding 5 or more good GCSEs, which raised a man's chances of employment by 5.6 percentage points in 1996, though this had fallen to 2.9 percentage points by 2006. Most of the other qualification effects, if they exist at all, are of a similar order of magnitude to the HND/HNC effects. The reason for this is that with unemployment rates of 5 or 6%, most people who want a job have one whatever their qualifications, and thus the difference in employment rates between qualification groups is small. The largest labour market impact of qualifications, by far, is therefore on the wage rate received once in work, rather than on the chances of finding work in the first place.

Considering the lower level BTEC qualification, there is some evidence of positive effects on the likelihood of being in employment, including one that is statistically significant for First Certificates in 1996, though these effects have not consistently been in evidence across the ten years. Similarly for women, BTEC qualifications at none of the three available levels consistently achieved a positive effect on employment likelihoods in all three years studied, and only two instances of statistically significant effects are observed.

3.3 Wage Returns to BTEC Qualifications by Level of Achievement at School

The analysis in this section returns to a study of the wage impacts of BTEC qualifications, and disaggregates them by the level of qualifications achieved at school. The idea behind this analysis is that such qualifications may have more value for some groups than others. In particular, individuals who have obtained very good qualifications at school may receive less additional value from acquiring BTEC qualifications, particularly at the lower level, than individuals who may not have achieved very highly at school. The hope was that, although the aggregate results in Section 3.1 above did not observe any impact of BTEC qualifications at Level 2, when the analysis is disaggregated then some value in terms of higher wages may be observed for these qualifications amongst individuals with a low level of achievement

at school. Four levels of school achievement are identified; no qualifications, some GCSEs but none at grade C or above, 1-4 GCSEs at grade C or above, and finally 5+ GCSEs at grade C or above¹¹. Too few A level holders subsequently acquired BTEC qualifications to provide a sufficiently large sample for analysis, and so this group was not considered. In order to ensure sufficiently large sample sizes for the remaining school achievement groups, we merged the 3 years' worth of data that we have been using in the analysis so far¹². The results are provided in Tables 5 and 6 for men and women respectively.

The results for men in Table 5 do not fit the hoped-for pattern. HND/HNC and OND/OND qualifications achieve very healthy wage returns as expected, with the highest being amongst men who left school with no or few qualifications. Moving to the lower level, however, even amongst men who left school with no qualifications at all, there is still no evidence of a positive gain in wages following the acquisition of a BTEC First Diploma or Certificate. There is some evidence for positive wage effects from acquiring a First Diploma amongst those men who left school with some GCSEs (or equivalent amongst older workers) but who failed to achieve five or more at grade C or above. Why low level BTECs should benefit these groups, but not the group who left school with no qualifications at all, is not immediately obvious.

Table 5: Wage Returns to BTEC Qualifications, by School Achievement – Males

	No school quals	GCSEs below grade C	1-4 grade A*-C GCSEs	5+ grade A*-C GCSEs
HND/HNC, BTEC/SCOTVEC Higher	26.5% *	19.7% *	21.7% *	14.9% *
OND/OND, BTEC/SCOTVEC National	16.0% *	14.5% *	13.0% *	9.2% *
BTEC/SCOTVEC First/General Diploma	-	-	3.7%	0.9%
BTEC/SCOTVEC First/General Certificate	-	9.3%	13.9% *	-

¹¹ In actual fact, we cannot be sure that these qualifications were actually obtained at school. For all but the highest qualification, the LFS does not ask at what educational institution the qualification was obtained, or at what age. It is therefore simply assumed that *most* of the acquisition of the GCSE qualifications observed here was undertaken at school.

¹² Dummy variables were inserted into the estimated equations to control for the year in which each individual in the combined data set was observed, to allow for inflation in wage rates over time.

Table 6: Wage Returns to BTEC Qualifications, by School Achievement – Females

	No school quals	GCSEs below grade C	1-4 grade A*-C GCSEs	5+ grade A*-C GCSEs
HND/HNC, BTEC/SCOTVEC Higher	16.9% *	18.6% *	11.4% *	11.0% *
ONC/OND, BTEC/SCOTVEC National	12.2% *	15.4% *	10.6% *	7.9% *
BTEC/SCOTVEC First/General Diploma	11.7%	6.7%	-	-
BTEC/SCOTVEC First/General Certificate	10.5%	2.2%	6.6%	1.3%

The results for women in Table 6 are more in line with what had been expected. As usual, HND/HNC and OND/ONC qualifications lead to high wage differentials for all groups, with the highest occurring amongst the groups with the lowest level of school achievement. When we consider the women who hold no school qualifications at all, we observe large wage differentials to BTEC First Diplomas and Certificates, of 11.7% and 10.5% respectively. Although these estimated effects just fail to achieve statistical significance, this is more likely to be because of small sample sizes due to fewer women holding these qualifications, rather than their true wage effects actually being zero. Thus Level 2 BTEC qualifications seem to have a relatively large effect on the wages of women who have left school with no qualifications at all.

3.4 Wage Returns to BTEC Qualifications for those Aged Under 30

The analysis so far has considered all people of working age. Some of the BTEC qualifications on which we are estimating the wage differentials could therefore have been acquired many years ago. In the section, we analyse only those aged under 30, thus ensuring all of the qualifications that we consider have been obtained relatively recently. Since we are focussing on a small sub-sample of the full working population, we again use the aggregate data set, pooling the three years considered into a single data source, in order to maximise sample sizes. The results are provided in Table 7.

Table 7: Wage Returns to BTEC Qualifications for Those Aged Under 30

	Males	Females
HND/HNC, BTEC/SCOTVEC Higher	9.6% *	2.9% *
ONC/OND, BTEC/SCOTVEC National	7.7% *	0.9%
BTEC/SCOTVEC First/General Diploma	-	-
BTEC/SCOTVEC First/General Certificate	5.0%	-

The results reveal a similar pattern for the under 30s as for the working age population as a whole. Thus for young men, only BTEC qualifications at Level 3 and 4 (HND/HNC and OND/ONC) attract positive and statistically significant wage returns. For young women, the wage returns are, as usual, smaller, with only the HND/HNC qualification attracting a significant wage return (and that only 3%). There is therefore no evidence that BTEC qualifications are more valuable for younger than for older workers.

3.5 Wage Returns to BTEC Qualifications Using Specific Comparison Groups

The final piece of analysis in this report takes a closer look at who the non-BTEC group are, to whom the BTEC-holders are being compared. As was mentioned in the methodology section, the interpretation of the estimated wage differentials is the difference in wages between someone with a BTEC and someone without. The group without a BTEC qualification will include some highly qualified individuals. Although we control for all other qualifications held, as well as the personal and job characteristics described above, it could be that BTEC holders are simply fundamentally different to, for example, degree holders, in ways that could never be controlled for in a statistical analysis through the use of other qualifications or the limited personal characteristics included here. This may be a particular problem for the lower BTEC qualifications, and may explain some of the perverse (negative) results observed above for these qualifications. The final piece of analysis therefore excludes anyone from the comparison group (i.e. the non-BTEC group) whose highest qualification is above Level 3. The wage differentials earned by the three lower BTEC qualifications relative to this new comparison group are presented in Table 8¹³.

¹³ Qualifications other than BTECs held at Level 3 or below are still controlled for, as before.

Table 8: Wage Returns to BTEC Qualifications Relative to a Comparison Group with at Best Level 3 Qualifications

	Males	Females
ONC/OND, BTEC/SCOTVEC National	13.0% *	10.6% *
BTEC/SCOTVEC First/General Diploma	3.7%	1.9%
BTEC/SCOTVEC First/General Certificate	4.8% *	4.2%

The main thing to notice about the results in Table 8 is that all of the estimated returns are positive, with no evidence for the negative returns obtained for the low level BTEC qualifications in the earlier analysis using the full comparison group. When an appropriate comparison group for the BTEC qualifications is therefore being used, there is evidence that BTEC qualifications at all level raise an individual's wages. For men, OND/ONC qualifications attract a large and highly significant wage differential of 13%. The lower two BTEC qualifications also now attract reasonable wage differentials of 3.7% and 4.8% respectively for First Diplomas and First Certificates (the latter being statistically significant). The wage differential on BTEC First Diplomas is second only to City and Guilds Craft Level, of the Level 2 vocational qualifications.

Turning to the results for women when the comparison group is restricted to those at Level 3 or below, as usual the returns to BTEC qualifications are lower than for men. There is a very healthy wage differential of 10.6% earned by women with OND/ONC qualifications. The lower two BTEC qualifications are still estimated to earn positive wage differentials for women, though neither is statistically significantly different from zero.

4. Conclusion

The analysis presented in this report has examined the labour market impacts, mainly the wage differentials earned, from holding BTEC qualifications. The key results are that holding an HND/HNC qualification earns men a substantial wage differential in the labour market of around 15%, compared to other men with similar characteristics and the same other qualifications held. This differential has stayed fairly constant over the last ten years. For women, the wage differential earned by those with an HND/HNC is much smaller, though is still statistically significantly different from

zero at around 5%. For BTEC qualifications at Level 3 (OND/ONC), evidence of a significantly positive wage differential again exists, though there is some evidence that its magnitude has declined over the last ten years, with its estimated value falling from 11% to 8% for men, and from 12% to 5% for women, between 1996 and 2006.

With respect to BTEC qualifications at the lower level, in the aggregate sample across all working individuals, there is again evidence that the value of any wage differential earned has declined over the last ten years, with no evidence of any positive wage differential remaining for men with these qualifications by 2006, and no statistically significant evidence for women either. Such results have been observed frequently in the literature with respect to other vocational qualifications at Levels 1 and 2 on the National Qualifications Framework. There is some evidence, however, that this may be due to unobservable characteristics of individuals who hold these qualifications affecting the results. Although the methodology used has attempted to control for differences in characteristics between the BTEC and non-BTEC groups that might influence the wages that they receive, some characteristics cannot be controlled for, such as motivation, natural ability etc (factors that could generically be labelled as 'earnings power'). These factors could be very different between the BTEC group and certain members of the non-BTEC group, in particular those who have reached high levels on the qualifications framework. In an attempt to reduce the influence of these unobserved characteristics, we therefore omitted from the control group all individuals qualified to Level 4 or above (for whom the differences in these unobserved characteristics relative to the BTEC group might be supposed to be greatest). When we do this, we do find some evidence of positive wage differentials earned by people with lower level BTEC qualifications, compared to non-BTEC holders with similar characteristics who are educated to Level 3 at best. The estimates suggest a BTEC First Certificate raises wages by about 5% for men and 4% for women, with figures of 4% and 2% respectively for First Diplomas. The First Certificate estimates are statistically significant for men and almost so for women. Therefore even lower level BTEC qualifications seem to have some labour market value amongst the group who typically acquire them.

Table A1: Wage Returns to Detailed Qualifications – Males

	1996	2001	2006
higher degree	0.113 (0.025)**	0.130 (0.015)**	0.118 (0.016)**
first degree	0.221 (0.014)**	0.235 (0.010)**	0.246 (0.011)**
other HE below degree level	0.089 (0.041)*	0.075 (0.026)**	0.090 (0.029)**
higher education diploma	0.077 (0.025)**	0.019 (0.021)	0.038 (0.021)
has 2 or more A levels or equivalent	0.156 (0.013)**	0.152 (0.010)**	0.154 (0.010)**
has 1 and only 1 A level or equivalent	0.085 (0.023)**	0.058 (0.014)**	0.028 (0.016)
any A-S levels	0.016 (0.084)	0.006 (0.032)	-0.031 (0.026)
5 or more grade C or above GCSEs or equivalent	0.270 (0.011)**	0.247 (0.008)**	0.217 (0.009)**
fewer than 5 GCSE passes at grade C or above, or equivalent	0.162 (0.010)**	0.143 (0.008)**	0.119 (0.009)**
any GCSEs, grade D or below or equivalent	0.088 (0.014)**	0.026 (0.011)*	0.051 (0.012)**
professional qualification - graduate level	0.317 (0.022)**	0.355 (0.019)**	0.357 (0.025)**
teaching qualification	0.047 (0.024)	0.076 (0.017)**	0.106 (0.018)**
nursing qualification	0.055 (0.037)	0.087 (0.030)**	0.120 (0.027)**
RSA higher	0.093 (0.291)	-0.040 (0.108)	0.049 (0.152)
RSA advanced diploma	0.100 (0.167)	-0.063 (0.101)	-0.092 (0.123)
RSA diploma	-0.142 (0.097)	-0.072 (0.059)	-0.050 (0.095)
RSA other	-0.053 (0.031)	-0.067 (0.019)**	-0.044 (0.031)
city and guilds advanced craft level	0.044 (0.014)**	0.047 (0.009)**	0.045 (0.011)**
city and guilds craft level	0.003 (0.016)	0.065 (0.016)**	0.129 (0.021)**
city and guilds other (part 1)	0.040 (0.013)**	-0.035 (0.014)*	-0.082 (0.018)**
HND/HNC, BTEC/SCOTVEC Higher	0.130 (0.014)**	0.125 (0.009)**	0.140 (0.011)**
ONC/OND, BTEC/SCOTVEC National	0.108 (0.013)**	0.093 (0.010)**	0.073 (0.012)**
BTEC/SCOTVEC First/General Diploma	0.055 (0.035)	0.016 (0.031)	-0.042 (0.039)
BTEC/SCOTVEC First/General Certificate	0.062 (0.038)	0.028 (0.033)	-0.018 (0.044)
NVQ level 4/5	0.084 (0.041)*	0.053 (0.018)**	0.053 (0.025)*
NVQ level 3	-0.005 (0.033)	0.003 (0.012)	0.032 (0.012)**
NVQ level 2/GNVQ intermediate	-0.066 (0.022)**	-0.091 (0.012)**	-0.094 (0.011)**

NVQ level 1/GNVQ foundation	-0.130	-0.070	-0.122
	(0.040)**	(0.019)**	(0.020)**
other prof./vocational/foreign qualification	0.044	0.058	0.057
	(0.007)**	(0.005)**	(0.006)**
age	0.101	0.091	0.085
	(0.002)**	(0.002)**	(0.002)**
age squared / 100	-0.110	-0.099	-0.091
	(0.003)**	(0.002)**	(0.002)**
nonwhite	-0.110	-0.134	-0.113
	(0.022)**	(0.014)**	(0.014)**
rest of Northern region	0.043	-0.006	0.050
	(0.029)	(0.022)	(0.024)*
South Yorkshire	-0.011	-0.002	0.023
	(0.034)	(0.023)	(0.025)
West Yorkshire	0.035	0.006	0.081
	(0.028)	(0.021)	(0.023)**
rest of Yorkshire & Humberside	0.001	0.038	0.091
	(0.030)	(0.022)	(0.025)**
East Midlands	0.058	0.039	0.061
	(0.026)*	(0.019)*	(0.021)**
East Anglia	0.072	0.070	0.115
	(0.028)**	(0.022)**	(0.024)**
Inner London	0.267	0.342	0.318
	(0.032)**	(0.026)**	(0.029)**
Outer London	0.247	0.289	0.283
	(0.027)**	(0.020)**	(0.022)**
rest of South East	0.187	0.218	0.223
	(0.024)**	(0.018)**	(0.020)**
South West	0.057	0.061	0.082
	(0.026)*	(0.019)**	(0.021)**
West Midlands (met county)	0.074	0.041	0.076
	(0.028)**	(0.020)*	(0.024)**
rest of West Midlands	0.059	0.070	0.101
	(0.028)*	(0.020)**	(0.022)**
Greater Manchester	0.022	0.016	0.046
	(0.028)	(0.021)	(0.023)
Merseyside	0.054	0.015	0.094
	(0.034)	(0.025)	(0.030)**
rest of North West	0.047	0.052	0.064
	(0.028)	(0.021)*	(0.024)**
Wales	0.012	0.007	0.025
	(0.027)	(0.020)	(0.022)
Strathclyde	0.088	0.008	0.051
	(0.031)**	(0.021)	(0.024)*
rest of Scotland	0.040	0.026	0.056
	(0.027)	(0.020)	(0.022)*
Northern Ireland	-0.057	-0.032	0.011
	(0.030)	(0.022)	(0.023)
at least 25 employees at workplace	0.179	0.150	0.150
	(0.008)**	(0.006)**	(0.007)**
working in the public sector	-0.011	-0.046	-0.023
	(0.008)	(0.006)**	(0.007)**
Constant	-0.596	-0.153	0.080
	(0.045)**	(0.034)**	(0.038)*
Observations	16483	28375	22022
R-squared	0.41	0.41	0.39

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A2: Wage Returns to Detailed Qualifications – Females

	1996	2001	2006
higher degree	0.123	0.142	0.143
	(0.029)**	(0.019)**	(0.016)**
first degree	0.233	0.244	0.235
	(0.016)**	(0.010)**	(0.010)**
other HE below degree level	0.109	0.108	0.076
	(0.032)**	(0.022)**	(0.025)**
higher education diploma	0.147	0.112	0.103
	(0.020)**	(0.016)**	(0.017)**
has 2 or more A levels or equivalent	0.135	0.137	0.121
	(0.014)**	(0.010)**	(0.010)**
has 1 and only 1 A level or equivalent	0.056	0.066	0.078
	(0.018)**	(0.013)**	(0.014)**
any A-S levels	-0.175	-0.048	-0.036
	(0.048)**	(0.036)	(0.023)
5 or more grade C or above GCSEs or equivalent	0.235	0.214	0.214
	(0.013)**	(0.009)**	(0.010)**
fewer than 5 GCSE passes at grade C or above, or equivalent	0.152	0.113	0.092
	(0.012)**	(0.009)**	(0.010)**
any GCSEs, grade D or below or equivalent	0.067	-0.010	0.008
	(0.020)**	(0.015)	(0.016)
professional qualification - graduate level	0.358	0.395	0.415
	(0.032)**	(0.022)**	(0.029)**
teaching qualification	0.267	0.258	0.224
	(0.018)**	(0.013)**	(0.013)**
nursing qualification	0.154	0.161	0.141
	(0.015)**	(0.011)**	(0.013)**
RSA higher	-0.057	0.078	0.004
	(0.054)	(0.056)	(0.072)
RSA advanced diploma	0.018	-0.045	0.084
	(0.043)	(0.032)	(0.047)
RSA diploma	0.051	0.037	-0.051
	(0.036)	(0.030)	(0.056)
RSA other	0.028	-0.003	-0.016
	(0.010)**	(0.008)	(0.010)
city and guilds advanced craft level	-0.065	-0.032	-0.091
	(0.038)	(0.026)	(0.031)**
city and guilds craft level	0.045	0.044	0.038
	(0.036)	(0.028)	(0.033)
city and guilds other (part 1)	-0.065	-0.079	-0.109
	(0.018)**	(0.020)**	(0.025)**
HND/HNC, BTEC/SCOTVEC Higher	0.063	0.086	0.052
	(0.019)**	(0.014)**	(0.014)**
ONC/OND, BTEC/SCOTVEC National	0.110	0.052	0.050
	(0.022)**	(0.014)**	(0.016)**
BTEC/SCOTVEC First/General Diploma	0.086	-0.024	-0.038
	(0.038)*	(0.030)	(0.039)
BTEC/SCOTVEC First/General Certificate	-0.043	0.037	0.068
	(0.041)	(0.034)	(0.040)
NVQ level 4/5	0.015	0.085	0.093
	(0.040)	(0.019)**	(0.021)**
NVQ level 3	-0.011	0.002	-0.026
	(0.034)	(0.012)	(0.010)*
NVQ level 2/GNVQ intermediate	-0.086	-0.065	-0.115
	(0.020)**	(0.010)**	(0.011)**
NVQ level 1/GNVQ foundation	-0.062	-0.087	-0.079
	(0.044)	(0.022)**	(0.021)**

other prof./vocational/foreign qualification	0.036	0.063	0.083
	(0.009)**	(0.006)**	(0.007)**
age	0.078	0.068	0.065
	(0.003)**	(0.002)**	(0.002)**
age squared / 100	-0.090	-0.077	-0.071
	(0.004)**	(0.002)**	(0.002)**
nonwhite	-0.122	-0.080	-0.031
	(0.022)**	(0.014)**	(0.014)*
rest of Northern region	0.007	-0.006	-0.025
	(0.034)	(0.025)	(0.023)
South Yorkshire	-0.037	0.005	-0.048
	(0.035)	(0.029)	(0.027)
West Yorkshire	0.038	0.022	0.017
	(0.032)	(0.024)	(0.023)
rest of Yorkshire & Humberside	-0.020	0.006	-0.013
	(0.036)	(0.026)	(0.027)
East Midlands	0.013	0.016	0.038
	(0.031)	(0.023)	(0.021)
East Anglia	0.017	0.055	0.022
	(0.034)	(0.026)*	(0.026)
Inner London	0.344	0.402	0.331
	(0.034)**	(0.026)**	(0.028)**
Outer London	0.303	0.321	0.250
	(0.031)**	(0.024)**	(0.022)**
rest of South East	0.171	0.176	0.133
	(0.029)**	(0.022)**	(0.020)**
South West	0.008	0.041	0.024
	(0.031)	(0.023)	(0.021)
West Midlands (met county)	0.049	0.058	0.012
	(0.033)	(0.024)*	(0.024)
rest of West Midlands	-0.021	0.044	0.023
	(0.033)	(0.024)	(0.024)
Greater Manchester	0.029	0.049	0.017
	(0.032)	(0.024)*	(0.023)
Merseyside	0.058	0.072	0.003
	(0.041)	(0.031)*	(0.028)
rest of North West	0.007	0.048	-0.010
	(0.033)	(0.025)	(0.024)
Wales	-0.024	0.012	-0.017
	(0.032)	(0.024)	(0.023)
Strathclyde	0.056	0.027	-0.031
	(0.034)	(0.025)	(0.024)
rest of Scotland	0.007	-0.002	-0.015
	(0.031)	(0.024)	(0.022)
Northern Ireland	-0.003	0.006	0.019
	(0.035)	(0.026)	(0.024)
at least 25 employees at workplace	0.116	0.110	0.110
	(0.009)**	(0.007)**	(0.007)**
working in the public sector	0.096	0.022	0.044
	(0.009)**	(0.006)**	(0.007)**
Constant	-0.182	0.218	0.460
	(0.056)**	(0.041)**	(0.042)**
Observations	9828	17978	15372
R-squared	0.43	0.42	0.40

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

**Table A3: Impact of Detailed Qualifications on Employment Probabilities–
Males**

	1996	2001	2006
higher degree	0.023	0.012	0.006
	(0.011)*	(0.005)*	(0.005)
first degree	0.008	-0.000	0.007
	(0.007)	(0.004)	(0.003)
other HE below degree level	-0.031	-0.000	-0.016
	(0.022)	(0.010)	(0.011)
higher education diploma	0.021	0.015	-0.001
	(0.011)	(0.007)*	(0.008)
has 2 or more A levels or equivalent	0.014	0.010	-0.000
	(0.006)*	(0.003)**	(0.003)
has 1 and only 1 A level or equivalent	0.008	0.005	-0.000
	(0.010)	(0.005)	(0.006)
any A-S levels	-0.029	0.017	0.015
	(0.034)	(0.008)*	(0.005)**
5 or more grade C or above GCSEs or equivalent	0.056	0.027	0.029
	(0.004)**	(0.002)**	(0.003)**
fewer than 5 GCSE passes at grade C or above, or equivalent	0.036	0.021	0.019
	(0.003)**	(0.002)**	(0.002)**
any GCSEs, grade D or below or equivalent	0.023	0.011	0.004
	(0.005)**	(0.003)**	(0.004)
professional qualification - graduate level	0.029	0.017	0.029
	(0.009)**	(0.006)**	(0.005)**
teaching qualification	0.006	0.011	0.023
	(0.014)	(0.007)	(0.006)**
nursing qualification	0.033	0.024	0.023
	(0.016)*	(0.008)**	(0.009)**
RSA higher	-0.003		-0.067
	(0.096)		(0.102)
RSA advanced diploma	0.021	-0.004	
	(0.055)	(0.036)	
RSA diploma	-0.127	-0.008	-0.055
	(0.074)	(0.032)	(0.065)
RSA other	-0.020	-0.047	-0.038
	(0.018)	(0.012)**	(0.017)*
city and guilds advanced craft level	0.018	0.009	0.007
	(0.007)**	(0.004)**	(0.004)
city and guilds craft level	0.014	0.019	-0.006
	(0.008)	(0.004)**	(0.009)
city and guilds other (part 1)	0.007	-0.015	0.004
	(0.006)	(0.006)*	(0.007)
HND/HNC, BTEC/SCOTVEC Higher	0.019	0.009	0.016
	(0.006)**	(0.003)**	(0.003)**
ONC/OND, BTEC/SCOTVEC National	0.016	0.009	0.003
	(0.007)*	(0.004)*	(0.005)
BTEC/SCOTVEC First/General Diploma	-0.004	0.013	-0.044
	(0.019)	(0.010)	(0.020)*
BTEC/SCOTVEC First/General Certificate	0.043	-0.010	0.014
	(0.012)**	(0.014)	(0.013)
NVQ level 4/5	-0.003	0.001	-0.003
	(0.022)	(0.008)	(0.011)
NVQ level 3	-0.017	0.014	0.008
	(0.016)	(0.004)**	(0.004)*
NVQ level 2/GNVQ intermediate	-0.046	-0.005	-0.011
	(0.013)**	(0.004)	(0.005)*

NVQ level 1/GNVQ foundation	-0.075	-0.022	-0.016
	(0.024)**	(0.008)**	(0.008)*
other prof./vocational/foreign qualification	0.015	0.010	0.012
	(0.003)**	(0.002)**	(0.002)**
age	0.012	0.008	0.010
	(0.001)**	(0.000)**	(0.000)**
age squared / 100	-0.012	-0.009	-0.010
	(0.001)**	(0.001)**	(0.001)**
nonwhite	-0.067	-0.046	-0.036
	(0.010)**	(0.005)**	(0.005)**
rest of Northern region	0.016	0.011	0.011
	(0.010)	(0.005)*	(0.006)
South Yorkshire	0.014	0.018	0.009
	(0.012)	(0.005)**	(0.007)
West Yorkshire	0.027	0.025	0.020
	(0.009)**	(0.004)**	(0.004)**
rest of Yorkshire & Humberside	0.031	0.020	0.011
	(0.009)**	(0.004)**	(0.006)
East Midlands	0.041	0.025	0.018
	(0.007)**	(0.004)**	(0.005)**
East Anglia	0.041	0.028	0.020
	(0.007)**	(0.003)**	(0.005)**
Inner London	-0.024	0.005	0.005
	(0.015)	(0.006)	(0.006)
Outer London	0.030	0.023	0.011
	(0.008)**	(0.004)**	(0.005)*
rest of South East	0.048	0.036	0.024
	(0.007)**	(0.003)**	(0.004)**
South West	0.035	0.028	0.027
	(0.008)**	(0.003)**	(0.004)**
West Midlands (met county)	0.016	0.010	0.014
	(0.010)	(0.005)	(0.005)**
rest of West Midlands	0.044	0.029	0.027
	(0.007)**	(0.003)**	(0.004)**
Greater Manchester	0.023	0.020	0.021
	(0.009)*	(0.004)**	(0.004)**
Merseyside	-0.013	0.002	0.010
	(0.015)	(0.007)	(0.007)
rest of North West	0.043	0.025	0.020
	(0.007)**	(0.004)**	(0.005)**
Wales	0.026	0.015	0.018
	(0.009)**	(0.005)**	(0.005)**
Strathclyde	-0.011	-0.009	0.007
	(0.013)	(0.007)	(0.006)
rest of Scotland	0.035	0.015	0.020
	(0.008)**	(0.005)**	(0.004)**
Northern Ireland	0.017	0.015	0.021
	(0.010)	(0.005)**	(0.004)**
Observations	28665	52273	44961

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

**Table A4: Impact of Detailed Qualifications on Employment Probabilities–
Females**

	1996	2001	2006
higher degree	0.001 (0.014)	-0.008 (0.008)	0.010 (0.005)*
first degree	-0.007 (0.008)	0.007 (0.003)*	0.008 (0.003)**
other HE below degree level	0.015 (0.013)	0.001 (0.008)	0.010 (0.006)
higher education diploma	0.005 (0.010)	0.005 (0.006)	-0.001 (0.006)
has 2 or more A levels or equivalent	0.019 (0.005)**	0.007 (0.003)**	0.004 (0.003)
has 1 and only 1 A level or equivalent	-0.007 (0.009)	0.002 (0.004)	-0.005 (0.005)
any A-S levels	-0.013 (0.026)	-0.005 (0.009)	0.002 (0.005)
5 or more grade C or above GCSEs or equivalent	0.035 (0.004)**	0.026 (0.002)**	0.033 (0.002)**
fewer than 5 GCSE passes at grade C or above, or equivalent	0.020 (0.003)**	0.015 (0.002)**	0.012 (0.002)**
any GCSEs, grade D or below or equivalent	0.021 (0.005)**	-0.001 (0.004)	0.003 (0.003)
professional qualification - graduate level	0.002 (0.013)	0.017 (0.005)**	0.019 (0.005)**
teaching qualification	0.001 (0.009)	0.009 (0.005)	0.012 (0.004)**
nursing qualification	0.035 (0.005)**	0.024 (0.003)**	0.021 (0.003)**
RSA higher	-0.007 (0.032)	0.020 (0.015)	0.013 (0.019)
RSA advanced diploma	-0.001 (0.020)	0.014 (0.012)	-0.020 (0.022)
RSA diploma	0.001 (0.015)	0.012 (0.010)	-0.012 (0.016)
RSA other	0.011 (0.004)**	-0.003 (0.003)	-0.006 (0.004)
city and guilds advanced craft level	0.014 (0.014)	-0.001 (0.008)	0.013 (0.007)
city and guilds craft level	0.018 (0.010)	0.009 (0.006)	0.008 (0.007)
city and guilds other (part 1)	-0.003 (0.008)	-0.015 (0.007)*	-0.023 (0.009)*
HND/HNC, BTEC/SCOTVEC Higher	0.007 (0.009)	0.004 (0.005)	-0.002 (0.005)
ONC/OND, BTEC/SCOTVEC National	-0.001 (0.009)	0.006 (0.004)	0.010 (0.004)*
BTEC/SCOTVEC First/General Diploma	0.001 (0.014)	0.017 (0.007)*	-0.005 (0.010)
BTEC/SCOTVEC First/General Certificate	0.022 (0.014)	0.000 (0.011)	-0.021 (0.016)
NVQ level 4/5	0.029 (0.011)*	-0.000 (0.007)	0.020 (0.005)**
NVQ level 3	-0.005 (0.014)	0.015 (0.003)**	0.015 (0.002)**
NVQ level 2/GNVQ intermediate	-0.014 (0.009)	0.001 (0.003)	0.005 (0.003)

NVQ level 1/GNVQ foundation	-0.018	-0.010	-0.016
	(0.016)	(0.007)	(0.006)**
other prof./vocational/foreign qualification	0.008	0.002	0.003
	(0.003)**	(0.002)	(0.002)
age	0.007	0.005	0.004
	(0.001)**	(0.000)**	(0.000)**
age squared / 100	-0.006	-0.005	-0.003
	(0.001)**	(0.001)**	(0.001)**
nonwhite	-0.046	-0.037	-0.028
	(0.010)**	(0.005)**	(0.004)**
rest of Northern region	0.012	-0.010	0.007
	(0.010)	(0.008)	(0.006)
South Yorkshire	-0.005	0.009	0.004
	(0.013)	(0.006)	(0.007)
West Yorkshire	0.025	0.008	0.012
	(0.008)**	(0.006)	(0.005)*
rest of Yorkshire & Humberside	0.018	0.002	0.009
	(0.009)*	(0.007)	(0.006)
East Midlands	0.014	0.005	0.008
	(0.009)	(0.006)	(0.005)
East Anglia	0.024	0.009	0.008
	(0.008)**	(0.006)	(0.006)
Inner London	-0.012	-0.008	-0.012
	(0.013)	(0.008)	(0.008)
Outer London	0.010	0.006	0.003
	(0.009)	(0.006)	(0.006)
rest of South East	0.024	0.008	0.007
	(0.008)**	(0.005)	(0.005)
South West	0.017	0.009	0.013
	(0.008)*	(0.005)	(0.004)**
West Midlands (met county)	0.010	0.004	0.001
	(0.010)	(0.006)	(0.006)
rest of West Midlands	0.020	0.013	0.012
	(0.008)*	(0.005)*	(0.005)**
Greater Manchester	0.019	0.012	0.011
	(0.008)*	(0.005)*	(0.005)*
Merseyside	-0.007	-0.004	-0.003
	(0.014)	(0.009)	(0.008)
rest of North West	0.018	0.015	0.013
	(0.009)*	(0.005)**	(0.005)**
Wales	0.015	0.002	0.010
	(0.009)	(0.007)	(0.005)
Strathclyde	0.004	-0.013	0.006
	(0.011)	(0.009)	(0.006)
rest of Scotland	0.022	-0.001	0.009
	(0.008)**	(0.007)	(0.005)
Northern Ireland	0.014	-0.000	0.011
	(0.010)	(0.007)	(0.005)*
Observations	23962	45477	41872

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A5: Wage Returns to Detailed Qualifications, by Highest School Qualification– Males, 1996-2006

	No school quals	GCSEs below grade C	1-4 grade A*-C GCSEs	5+ grade A*-C GCSEs
higher degree	0.151 (0.041)**	0.097 (0.178)	0.201 (0.063)**	0.132 (0.035)**
first degree	0.440 (0.025)**	0.306 (0.066)**	0.152 (0.023)**	0.167 (0.016)**
other HE below degree level	0.171 (0.055)**	0.202 (0.162)	0.094 (0.040)*	0.143 (0.037)**
higher education diploma	0.176 (0.038)**	0.027 (0.117)	0.103 (0.032)**	0.049 (0.027)
professional qualification - graduate level	0.594 (0.046)**	0.376 (0.144)**	0.177 (0.048)**	0.244 (0.028)**
teaching qualification	0.130 (0.054)*	0.117 (0.083)	0.038 (0.049)	0.109 (0.029)**
nursing qualification	0.232 (0.040)**	0.089 (0.115)	0.137 (0.039)**	-0.002 (0.033)
RSA higher	0.148 (0.367)	-0.353 (0.073)**	-0.003 (0.122)	-0.000 (0.159)
RSA advanced diploma	0.127 (0.165)	0.053 (0.077)	-0.120 (0.135)	0.009 (0.122)
RSA diploma	-0.011 (0.078)	-0.088 (0.039)*	-0.076 (0.124)	-0.158 (0.078)*
RSA other	-0.003 (0.032)	-0.043 (0.056)	-0.043 (0.027)	-0.074 (0.029)**
city and guilds advanced craft level	0.033 (0.013)*	0.042 (0.024)	0.072 (0.011)**	-0.018 (0.013)
city and guilds craft level	0.078 (0.018)**	0.084 (0.027)**	0.017 (0.018)	-0.015 (0.027)
city and guilds other (part 1)	0.021 (0.015)	0.007 (0.023)	0.013 (0.016)	-0.046 (0.023)*
HND/HNC, BTEC/SCOTVEC Higher	0.235 (0.019)**	0.180 (0.035)**	0.196 (0.014)**	0.139 (0.011)**
ONC/OND, BTEC/SCOTVEC National	0.148 (0.022)**	0.135 (0.037)**	0.122 (0.013)**	0.088 (0.011)**
BTEC/SCOTVEC First/General Diploma	-0.026 (0.068)	-0.029 (0.071)	0.036 (0.030)	0.009 (0.037)
BTEC/SCOTVEC First/General Certificate	-0.091 (0.061)	0.089 (0.070)	0.130 (0.034)**	-0.040 (0.039)
NVQ level 4/5	0.120 (0.032)**	0.094 (0.068)	0.072 (0.027)**	0.021 (0.026)
NVQ level 3	0.016 (0.017)	0.069 (0.026)**	0.023 (0.016)	0.051 (0.016)**
NVQ level 2/GNVQ intermediate	-0.075 (0.014)**	-0.051 (0.019)**	-0.061 (0.013)**	-0.117 (0.019)**
NVQ level 1/GNVQ foundation	-0.102 (0.023)**	-0.050 (0.031)	-0.099 (0.024)**	-0.151 (0.028)**
other prof./vocational/foreign qualification	0.083 (0.006)**	0.009 (0.012)	0.009 (0.007)	0.038 (0.008)**
age	0.065 (0.002)**	0.080 (0.005)**	0.087 (0.002)**	0.100 (0.002)**
age squared / 100	-0.071 (0.002)**	-0.092 (0.007)**	-0.095 (0.003)**	-0.108 (0.003)**
nonwhite	-0.165 (0.013)**	-0.117 (0.034)**	-0.099 (0.023)**	-0.124 (0.026)**

rest of Northern region	0.048	-0.023	0.023	0.011
	(0.024)*	(0.048)	(0.030)	(0.034)
South Yorkshire	0.000	0.005	-0.020	-0.004
	(0.025)	(0.054)	(0.034)	(0.034)
West Yorkshire	0.048	0.006	0.002	0.075
	(0.022)*	(0.049)	(0.029)	(0.033)*
rest of Yorkshire & Humberside	0.037	0.039	0.033	0.047
	(0.025)	(0.051)	(0.030)	(0.035)
East Midlands	0.042	0.024	0.053	0.052
	(0.021)*	(0.045)	(0.027)*	(0.030)
East Anglia	0.090	0.037	0.087	0.055
	(0.023)**	(0.050)	(0.029)**	(0.033)
Inner London	0.313	0.124	0.223	0.291
	(0.029)**	(0.091)	(0.043)**	(0.044)**
Outer London	0.274	0.230	0.243	0.292
	(0.023)**	(0.049)**	(0.029)**	(0.032)**
rest of South East	0.197	0.163	0.189	0.215
	(0.020)**	(0.044)**	(0.025)**	(0.028)**
South West	0.068	0.032	0.073	0.067
	(0.021)**	(0.045)	(0.026)**	(0.029)*
West Midlands (met county)	0.058	0.045	0.057	0.076
	(0.022)**	(0.049)	(0.029)	(0.034)*
rest of West Midlands	0.078	0.036	0.076	0.087
	(0.022)**	(0.049)	(0.028)**	(0.033)**
Greater Manchester	0.026	0.040	-0.001	0.022
	(0.022)	(0.050)	(0.029)	(0.033)
Merseyside	0.029	0.086	0.009	0.080
	(0.028)	(0.076)	(0.036)	(0.042)
rest of North West	0.047	0.045	0.025	0.070
	(0.023)*	(0.052)	(0.030)	(0.033)*
Wales	0.021	0.018	-0.012	0.011
	(0.022)	(0.050)	(0.028)	(0.031)
Strathclyde	0.034	0.089	0.000	0.058
	(0.024)	(0.066)	(0.033)	(0.037)
rest of Scotland	0.048	0.226	-0.005	0.022
	(0.022)*	(0.086)**	(0.028)	(0.032)
Northern Ireland	-0.029	-0.019	-0.082	-0.032
	(0.023)	(0.058)	(0.034)*	(0.034)
at least 25 employees at workplace	0.126	0.151	0.144	0.159
	(0.006)**	(0.013)**	(0.008)**	(0.010)**
working in the public sector	0.019	0.015	-0.000	-0.030
	(0.008)*	(0.017)	(0.009)	(0.010)**
year== 2001	0.208	0.169	0.186	0.167
	(0.007)**	(0.015)**	(0.009)**	(0.011)**
year== 2006	0.397	0.376	0.335	0.312
	(0.008)**	(0.017)**	(0.010)**	(0.011)**
Constant	0.187	-0.011	-0.114	-0.277
	(0.040)**	(0.096)	(0.047)*	(0.052)**
Observations	22131	3815	12027	11240
R-squared	0.29	0.41	0.38	0.40

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A6: Wage Returns to Detailed Qualifications, by Highest School Qualification– Females, 1996-2006

	No school quals	GCSEs below grade C	1-4 grade A*-C GCSEs	5+ grade A*-C GCSEs
higher degree	0.018 (0.040)	0.000 (0.000)	0.290 (0.066)**	0.199 (0.044)**
first degree	0.422 (0.025)**	0.511 (0.077)**	0.207 (0.029)**	0.216 (0.017)**
other HE below degree level	0.185 (0.044)**	0.147 (0.072)*	0.114 (0.041)**	0.109 (0.028)**
higher education diploma	0.170 (0.035)**	0.243 (0.068)**	0.150 (0.027)**	0.118 (0.022)**
professional qualification - graduate level	0.531 (0.063)**	0.542 (0.067)**	0.377 (0.051)**	0.354 (0.040)**
teaching qualification	0.341 (0.036)**	-0.164 (0.139)	0.168 (0.034)**	0.238 (0.024)**
nursing qualification	0.262 (0.020)**	0.214 (0.050)**	0.190 (0.016)**	0.156 (0.014)**
RSA higher	0.035 (0.077)	0.172 (0.061)**	-0.040 (0.052)	0.041 (0.073)
RSA advanced diploma	0.055 (0.065)	0.075 (0.097)	0.038 (0.037)	0.036 (0.047)
RSA diploma	0.066 (0.055)	0.076 (0.062)	0.031 (0.042)	-0.036 (0.047)
RSA other	0.086 (0.012)**	0.099 (0.019)**	0.043 (0.010)**	-0.034 (0.010)**
city and guilds advanced craft level	0.021 (0.043)	0.099 (0.074)	-0.020 (0.027)	-0.083 (0.037)*
city and guilds craft level	0.038 (0.037)	-0.067 (0.048)	0.020 (0.033)	0.050 (0.040)
city and guilds other (part 1)	-0.056 (0.024)*	-0.018 (0.031)	-0.069 (0.020)**	-0.099 (0.026)**
HND/HNC, BTEC/SCOTVEC Higher	0.156 (0.031)**	0.171 (0.070)*	0.108 (0.022)**	0.104 (0.017)**
ONC/OND, BTEC/SCOTVEC National	0.115 (0.037)**	0.143 (0.048)**	0.101 (0.019)**	0.076 (0.014)**
BTEC/SCOTVEC First/General Diploma	0.111 (0.061)	0.065 (0.059)	-0.025 (0.033)	-0.010 (0.036)
BTEC/SCOTVEC First/General Certificate	0.100 (0.076)	0.022 (0.116)	0.064 (0.035)	0.013 (0.039)
NVQ level 4/5	0.134 (0.045)**	0.044 (0.088)	0.120 (0.029)**	0.101 (0.022)**
NVQ level 3	0.015 (0.017)	0.033 (0.033)	0.029 (0.015)	-0.024 (0.014)
NVQ level 2/GNVQ intermediate	-0.088 (0.014)**	-0.031 (0.021)	-0.070 (0.013)**	-0.117 (0.015)**
NVQ level 1/GNVQ foundation	-0.078 (0.024)**	-0.054 (0.043)	-0.090 (0.029)**	-0.066 (0.031)*
other prof./vocational/foreign qualification	0.109 (0.008)**	-0.017 (0.017)	0.024 (0.008)**	0.039 (0.008)**
age	0.038 (0.003)**	0.063 (0.006)**	0.059 (0.003)**	0.072 (0.003)**
age squared / 100	-0.043 (0.003)**	-0.076 (0.009)**	-0.066 (0.004)**	-0.081 (0.003)**
nonwhite	-0.112 (0.015)**	0.020 (0.037)	-0.015 (0.022)	-0.077 (0.022)**

rest of Northern region	0.076	-0.056	-0.058	-0.029
	(0.031)*	(0.051)	(0.033)	(0.032)
South Yorkshire	-0.024	-0.070	-0.030	0.018
	(0.037)	(0.054)	(0.034)	(0.036)
West Yorkshire	0.064	-0.055	-0.006	0.020
	(0.031)*	(0.055)	(0.032)	(0.031)
rest of Yorkshire & Humberside	0.036	-0.088	-0.031	-0.007
	(0.034)	(0.049)	(0.035)	(0.035)
East Midlands	0.084	-0.046	-0.009	0.028
	(0.029)**	(0.045)	(0.031)	(0.030)
East Anglia	0.082	-0.001	0.022	0.037
	(0.032)*	(0.056)	(0.035)	(0.034)
Inner London	0.499	0.317	0.259	0.271
	(0.033)**	(0.064)**	(0.039)**	(0.040)**
Outer London	0.398	0.228	0.277	0.281
	(0.030)**	(0.054)**	(0.032)**	(0.032)**
rest of South East	0.233	0.078	0.149	0.158
	(0.027)**	(0.042)	(0.029)**	(0.027)**
South West	0.097	-0.019	0.008	0.028
	(0.029)**	(0.044)	(0.031)	(0.029)
West Midlands (met county)	0.079	-0.078	0.033	0.044
	(0.030)**	(0.055)	(0.034)	(0.031)
rest of West Midlands	0.084	-0.042	0.008	0.045
	(0.030)**	(0.052)	(0.033)	(0.031)
Greater Manchester	0.095	-0.031	-0.011	0.011
	(0.030)**	(0.051)	(0.032)	(0.031)
Merseyside	0.103	0.196	-0.013	0.089
	(0.036)**	(0.118)	(0.037)	(0.039)*
rest of North West	0.054	-0.061	0.015	0.017
	(0.031)	(0.053)	(0.033)	(0.032)
Wales	0.052	-0.040	-0.030	-0.023
	(0.030)	(0.060)	(0.032)	(0.030)
Strathclyde	0.097	0.018	-0.023	-0.063
	(0.032)**	(0.076)	(0.034)	(0.036)
rest of Scotland	0.092	-0.151	-0.049	-0.054
	(0.030)**	(0.066)*	(0.032)	(0.032)
Northern Ireland	0.020	0.035	-0.040	0.019
	(0.031)	(0.093)	(0.037)	(0.033)
at least 25 employees at workplace	0.099	0.101	0.121	0.119
	(0.008)**	(0.019)**	(0.009)**	(0.010)**
working in the public sector	0.113	0.055	0.046	0.008
	(0.009)**	(0.020)**	(0.009)**	(0.009)
year== 2001	0.229	0.174	0.183	0.183
	(0.010)**	(0.022)**	(0.010)**	(0.011)**
year== 2006	0.425	0.387	0.347	0.361
	(0.011)**	(0.026)**	(0.012)**	(0.012)**
Constant	0.493	0.249	0.344	0.204
	(0.060)**	(0.114)*	(0.057)**	(0.052)**
Observations	10668	1660	7694	8808
R-squared	0.37	0.41	0.37	0.39

Robust standard errors in parentheses
* significant at 5%; ** significant at 1%

Table A7: Wage Returns to Detailed Qualifications, Under 30s, 1996-2006

	Male	Female
higher degree	0.083	0.073
	(0.022)**	(0.019)**
first degree	0.151	0.160
	(0.012)**	(0.010)**
other HE below degree level	0.019	0.095
	(0.039)	(0.033)**
has 2 or more A levels or equivalent	0.061	0.087
	(0.011)**	(0.010)**
has 1 and only 1 A level or equivalent	-0.009	0.056
	(0.016)	(0.014)**
any A-S levels	0.014	-0.009
	(0.023)	(0.021)
5 or more grade C or above GCSEs or equivalent	0.145	0.133
	(0.010)**	(0.012)**
fewer than 5 GCSE passes at grade C or above, or equivalent	0.074	0.054
	(0.010)**	(0.012)**
any GCSEs, grade D or below or equivalent	0.049	-0.019
	(0.013)**	(0.016)
higher education diploma	0.031	0.062
	(0.029)	(0.020)**
professional qualification - graduate level	0.245	0.280
	(0.031)**	(0.030)**
teaching qualification	0.160	0.179
	(0.031)**	(0.019)**
nursing qualification	0.124	0.092
	(0.047)**	(0.015)**
RSA higher	-0.345	0.054
	(0.120)**	(0.079)
RSA advanced diploma	-0.054	0.067
	(0.094)	(0.058)
RSA diploma	-0.159	0.053
	(0.063)*	(0.052)
RSA other	-0.019	0.033
	(0.024)	(0.010)**
city and guilds advanced craft level	0.076	-0.038
	(0.015)**	(0.032)
city and guilds craft level	0.016	0.029
	(0.020)	(0.031)
city and guilds other (part 1)	0.003	-0.073
	(0.016)	(0.019)**
HND/HNC, BTEC/SCOTVEC Higher	0.092	0.029
	(0.013)**	(0.014)*
ONC/OND, BTEC/SCOTVEC National	0.074	0.009
	(0.013)**	(0.014)
BTEC/SCOTVEC First/General Diploma	-0.013	-0.012
	(0.029)	(0.028)
BTEC/SCOTVEC First/General Certificate	0.049	-0.014
	(0.030)	(0.034)
NVQ level 4/5	0.040	0.065
	(0.021)	(0.022)**
NVQ level 3	0.048	0.008
	(0.012)**	(0.011)
NVQ level 2/GNVQ intermediate	-0.026	-0.036
	(0.010)*	(0.011)**
NVQ level 1/GNVQ foundation	-0.043	-0.033
	(0.017)*	(0.021)
other prof./vocational/foreign qualification	0.041	0.035
	(0.007)**	(0.007)**

age	0.210	0.151
	(0.012)**	(0.014)**
age squared / 100	-0.313	-0.208
	(0.026)**	(0.030)**
nonwhite	-0.072	-0.050
	(0.016)**	(0.015)**
rest of Northern region	0.002	-0.044
	(0.029)	(0.028)
South Yorkshire	-0.042	-0.044
	(0.032)	(0.028)
West Yorkshire	0.003	0.017
	(0.027)	(0.025)
rest of Yorkshire & Humberside	-0.034	-0.052
	(0.030)	(0.027)
East Midlands	0.010	-0.014
	(0.025)	(0.024)
East Anglia	0.050	0.047
	(0.027)	(0.027)
Inner London	0.338	0.330
	(0.030)**	(0.027)**
Outer London	0.225	0.252
	(0.026)**	(0.025)**
rest of South East	0.136	0.140
	(0.024)**	(0.022)**
South West	0.044	0.029
	(0.025)	(0.024)
West Midlands (met county)	0.052	0.004
	(0.028)	(0.026)
rest of West Midlands	0.037	0.005
	(0.027)	(0.025)
Greater Manchester	-0.022	0.004
	(0.027)	(0.025)
Merseyside	0.031	-0.021
	(0.033)	(0.033)
rest of North West	-0.004	-0.023
	(0.028)	(0.027)
Wales	-0.038	-0.017
	(0.027)	(0.025)
Strathclyde	-0.009	-0.036
	(0.029)	(0.027)
rest of Scotland	0.001	-0.047
	(0.026)	(0.025)
Northern Ireland	-0.050	-0.047
	(0.028)	(0.027)
at least 25 employees at workplace	0.138	0.125
	(0.007)**	(0.007)**
working in the public sector	-0.017	0.038
	(0.009)	(0.008)**
year== 2001	0.221	0.217
	(0.008)**	(0.008)**
year== 2006	0.370	0.369
	(0.009)**	(0.009)**
Constant	-1.821	-1.074
	(0.141)**	(0.168)**
Observations	14129	12057
R-squared	0.49	0.52

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

Table A8: Wage Returns to Detailed Qualifications, Where the Comparison Group is Everyone Whose Highest Qualification is at Level 3 or Below, 1996-2006

	Male	Female
has 2 or more A levels or equivalent	0.173 (0.009)**	0.127 (0.009)**
has 1 and only 1 A level or equivalent	0.081 (0.012)**	0.070 (0.012)**
any A-S levels	-0.009 (0.026)	-0.064 (0.024)**
5 or more grade C or above GCSEs or equivalent	0.251 (0.006)**	0.221 (0.007)**
fewer than 5 GCSE passes at grade C or above, or equivalent	0.142 (0.005)**	0.119 (0.006)**
any GCSEs, grade D or below or equivalent	0.050 (0.007)**	0.016 (0.010)
RSA advanced diploma	-0.034 (0.067)	0.056 (0.026)*
RSA diploma	-0.089 (0.051)	0.045 (0.025)
RSA other	-0.048 (0.016)**	0.043 (0.006)**
city and guilds advanced craft level	0.055 (0.007)**	-0.043 (0.021)*
city and guilds craft level	0.054 (0.011)**	0.046 (0.020)*
city and guilds other (part 1)	0.005 (0.009)	-0.068 (0.013)**
ONC/OND, BTEC/SCOTVEC National	0.122 (0.009)**	0.101 (0.012)**
BTEC/SCOTVEC First/General Diploma	0.036 (0.021)	0.019 (0.023)
BTEC/SCOTVEC First/General Certificate	0.047 (0.023)*	0.041 (0.025)
NVQ level 3	0.035 (0.009)**	0.024 (0.009)**
NVQ level 2/GNVQ intermediate	-0.079 (0.008)**	-0.074 (0.008)**
NVQ level 1/GNVQ foundation	-0.097 (0.013)**	-0.072 (0.015)**
other prof./vocational/foreign qualification	0.058 (0.004)**	0.063 (0.005)**
age	0.085 (0.001)**	0.061 (0.001)**
age squared / 100	-0.093 (0.001)**	-0.069 (0.002)**
nonwhite	-0.152 (0.011)**	-0.070 (0.012)**
rest of Northern region	0.016 (0.016)	-0.008 (0.019)
South Yorkshire	-0.003 (0.017)	-0.032 (0.021)
West Yorkshire	0.042 (0.015)**	0.020 (0.018)
rest of Yorkshire & Humberside	0.038 (0.016)*	-0.026 (0.020)
East Midlands	0.040 (0.014)**	0.017 (0.017)

East Anglia	0.084	0.052
	(0.016)**	(0.019)**
Inner London	0.301	0.414
	(0.022)**	(0.022)**
Outer London	0.282	0.336
	(0.015)**	(0.018)**
rest of South East	0.204	0.189
	(0.013)**	(0.016)**
South West	0.066	0.037
	(0.014)**	(0.017)*
West Midlands (met county)	0.061	0.042
	(0.015)**	(0.018)*
rest of West Midlands	0.065	0.030
	(0.015)**	(0.018)
Greater Manchester	0.018	0.028
	(0.015)	(0.018)
Merseyside	0.036	0.046
	(0.019)	(0.022)*
rest of North West	0.047	0.004
	(0.016)**	(0.019)
Wales	0.009	-0.013
	(0.015)	(0.018)
Strathclyde	0.033	-0.003
	(0.017)*	(0.020)
rest of Scotland	0.014	-0.004
	(0.015)	(0.018)
Northern Ireland	-0.042	-0.004
	(0.016)**	(0.020)
at least 25 employees at workplace	0.135	0.113
	(0.004)**	(0.005)**
working in the public sector	0.009	0.038
	(0.005)	(0.005)**
year== 2001	0.190	0.204
	(0.005)**	(0.006)**
year== 2006	0.359	0.393
	(0.005)**	(0.007)**
Constant	-0.245	0.134
	(0.024)**	(0.030)**
Observations	46221	27183
R-squared	0.35	0.34

Robust standard errors in parentheses

* significant at 5%; ** significant at 1%