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## 1. Creation of ILR-WPLS dataset

In the accompanying BIS Research Paper No. XX, we update the findings from Buscha and Urwin (2013), estimating separately the (i) earnings, (ii) employment probability and (iii) probability of being on active benefits, for those who achieve their highest learning aim whilst studying at an English Further Education Institution (FEI), relative to those who have the same highest learning aim, but do not achieve. This approach to estimation is made possible by the construction of a database linking administrative FE learner information, with benefit and PAYE employment histories. In this first section of the Technical Annex we describe, in more detail, construction of the ILR-WPLS dataset (also see Bibby et al., 2012) and some limitations of the data. In the main body of the report we have already mentioned two key data issues that limit our ability to identify full-time workers and those transitioning to HE. The issues discussed here are considered less problematic for estimation, but are worthy of consideration.

The first step in compiling the data for analysis is the creation of a unique identifier linking an individual's records across the constituent databases and data files. Each constituent data source has its own unique individual identifier which may not be internally unique, and which (before transfer to the project team) may incorrectly ascribe records to the same individual; and conversely not match records correctly to the same individual. We use the 3 identifiers from the ILR, National Benefits Database (CCORCID) and the HMRC person-instance-ID (PID) to construct an over-arching Person-key to link records in the data sources reliably to the same individual.

The identification of distinct ILR learners starts to take place where there is at least one other referencing identifier - here CCORCID and PID (noting that not all individuals have both of these records). We use the three identifiers in a process of 'record chaining' to show the relationships between them, accepting that we have insufficient information to indubitably decide which linkages are correct and which are not. As a consequence, we develop a set of procedures to arbitrate between competing matching possibilities according to circumstances, but without rejecting the possibility of the same individual having more than one CCORCID or PID. These procedures lead to the creation of our Person-Key, which identifies the same individual in the various data sources within our database.

This results in just over 25 million Person-Keys, which reduce to almost 22 million once individuals found only in European Social Fund (ESF) and Adult and Community Learning (ACL) ILR files are disregarded for analysis. Of this latter total, some 0.5 million PersonKeys (2.5\%) are associated with more than one PID (and a few with more than one CCORCID). A majority of Person-Keys do not have a CCORCID and although this will be associated with younger FE learners not having been in receipt of benefits when first matched (and never being matched subsequently), some of the absent matches will be related to under-matching as a result of the fields used in the matching routines.

We have confidence that the majority of matches in our database are secure, but there remain undoubted questions over a small minority. For example, just over 30\% of PersonKeys do not have either a CCORCID or PID between 2002 and 2012. The vast majority of these will be (predominantly younger) individuals who have an ILR learning spell, but no earnings or benefit records as yet. However, there is no way of distinguish learners under-
matched to WPLS from those who are genuinely not contained within it, and in addition we have no information which would tell us how many duplicate sets of ILR identifiers still remain amongst this group. Omission of unmatched learners from our analysis would happen anyway, as they have no earnings or employment observations. However, if a minority of this group are essentially 'missing' earnings observations, this could bring in an element of sample selection bias. However, the extent to which this impacts any estimates depends on the (unobservable) distribution of missing observations across treated and control groups. We would argue that the use of an achiever $V$ non-achiever framework makes this less of a problem, as both our treatment and control groups select into treatment and, if anything, we would expect a higher proportion of these missing (likely lower) earners to be amongst the non-achievers. If anything their exclusion implies a downward bias in our estimates. A similar argument applies when we consider the fact that our data do not include all workers with income below the tax threshold (the fact that we do not capture returns of the self-employed is a limitation of most studies in this area of academic study).

The construction of Person-Keys within the database allows us to group overlapping and adjacent learning aims, and to do the same for periods of employment and benefit spells. This makes possible an analysis of any of the 3 activities individually and collectively between any two dates or for any specified time period. From the ILR component, we identify the highest level of study within a learner's aims (if there was more than one) undertaken within a single learning spell (of which there could be more than one), together with its characteristics (such as length of the aim and whether the aim was completed or achieved); creating almost 29 million learning spells (55\% at NQF Level 2 or above) for nearly 22 million Person-Keys. From the WPLS component, we create analogous spells for benefit periods, primarily to identify continuous periods (spans) when individuals are in receipt of 'Active' benefits. Partially overlapping periods of JSA, JTA and ESA could extend a continuous Active Benefit span but, unlike learning spells, breaks of more than one day in a continuous spell are treated as a separate benefit span.

Benefit start and end dates are not measured to the day: regular scans of the databases are taken so the accuracy of these dates depends on the frequency of the scans. JSA scans, for example, are taken every 14 days. The employment spells we have created (from P45 data) should be accurate to the day - since employers should in principle know when an employee begins and finishes a period of PAYE employment. However, 34\% of spells appear to have start or end dates that are missing or have been assigned an HMRC default.

The data and information available for the project are not sufficient to permit unambiguous procedures to replace missing or default data so that we can calculate the length of employment spells. The volume of default data is such that we necessarily create an extensive decision rule process to, firstly, establish the possible range of start and end dates and, secondly, develop a structure to assign specific dates within the ranges. The proportion of learners with imputed start or end dates varies over the 8 years for which we have P45 data, and between the two illustrative dates in the year we choose to interpret what our imputation processes has achieved. The rate for all but the latest three years (tax years 2010, 2011 and 2012) is generally between 3.5\% and 5\%, and higher in April at the start of the tax year. We observe that rates are higher in April 2008 (9.5\%) and January 2009 (7\%) following an HMRC reconciliation of P45 and P14 systems during 2008/9.

Clearly there are likely problems that arise from this process of imputation when considering employment spell length, but again the question is whether this is likely to differentially impact treated and control, in ways that we cannot accommodate. The omission of start or end dates in P45 returns is a result of employer behaviour, not the individual. It is quite possible that such employer behaviours are correlated with job characteristics (firm size and sector subject area for example), but it would seem reasonable to suggest that our controls for sector subject area, prior sustained employment and a number of other characteristics should counter this. If we still believe that the distribution of imputed employment spells is not spread evenly across treated and control, then our controlling for prior earnings and employment trends in the diff-in-diff framework should further accommodate this. Readers should refer to Bibby et. al. (2012) for more detail of the process of data matching and manipulation and also see the Appendix of the main report for a Table of descriptive statistics.

Finally, our categories of qualification are as follows:

- In the Full level 2 category we include all highest aims that are equivalent to 5 GCSEs at grade $A^{*}$ to $C$ (including apprenticeship qualifications)
- In the Full level 3 category we include all highest aims that are equivalent to two A levels (including apprenticeship qualifications)
- Level 2 and Level 3 include learners with highest aims at these levels of study, but which fall below the equivalence required to be considered 'Full'.
- Level 4+ and Below Level 2 are self-explanatory.

These 'Level of study' categories are based on all aims undertaken by a learner within a spell (not just their single highest aim). For instance, an individual undertaking 5 GCSEs (and nothing else) will be categorised as 'Full Level 2' even though the single highest aim would only be worth $20 \%$ of the Level 2 threshold. NVQs will always figure in our Full categories, as will the majority of BTECs, whereas RSA and City \& Guilds qualifications could fit into either Full or Other depending on the level of commitment required of the learner.

## 2. Tables with Standard Errors

This second section of the Technical Annex sets out all Tables from the main report, with all Tables of regression results presented with Standard Errors.

Table 1: Example of treatment (achievers) and control (non-achievers)

| Highest Aim | Highest level of Achievement |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Null | Below L2 | Level 2 | Full Level 2 | Level 3 | Full Level 3 | Level 4+ |
| Below Level 2 |  |  |  |  |  |  |  |
| Level 2 |  |  |  |  |  |  |  |
| Full Level 2 |  | X |  |  |  |  |  |
| Level 3 |  |  |  |  |  |  |  |
| Full Level 3 |  |  |  |  |  |  |  |
| Level 4+ |  |  |  |  |  |  |  |

Table 2: Impact of enhancements to basic regression approach: the example of employment probability and earnings premiums for FL2 achievers V non-achievers

|  | Column <br> A: Old <br> estimate <br> (basic <br> controls) | Column <br> B: New <br> estimate <br> (basic <br> controls) | New <br> estimate <br> (basic <br> controls <br> +IMD) | New estimate <br> (basic controls <br> +IMD+SSA) | New estimate <br> (basic controls <br> +IMD+SSA <br> +Benefit Hist.) | Column C: New <br> estimate (basic <br> controls+IMD <br> +SSA+Benefit and <br> Employment Hist.) |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Employment <br> after 3 <br> months | 0.087 | 0.052 | 0.052 | 0.052 | 0.049 | 0.023 |
| Earnings <br> after one <br> year | 0.185 | 0.174 | 0.173 | 0.166 | 0.149 | 0.143 |

Table 3: Daily earnings premium of achievers relative to non-achievers

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1{ }^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.021*** | 0.020*** | 0.016*** | 0.020*** | 0.019 |
|  | (0.002) | (0.002) | (0.002) | (0.002) |  |
| Level 2 | 0.004* | 0.007** | 0.013*** | 0.020*** | 0.013 |
|  | (0.002) | (0.002) | (0.002) | (0.002) |  |
| Full Level 2 | 0.143*** | 0.118*** | 0.114*** | 0.107*** | 0.113 |
|  | (0.002) | (0.002) | (0.002) | (0.002) |  |
| Level 3 | -0.005* | 0.005 | 0.038*** | 0.057*** | 0.033 |
|  | (0.002) | (0.003) | (0.003) | (0.003) |  |
| Full Level 3 | 0.063*** | 0.052*** | 0.086*** | 0.118*** | 0.085 |
|  | (0.002) | (0.003) | (0.003) | (0.002) |  |
| Level 4+ | 0.089*** | 0.088*** | 0.086*** | 0.077*** | 0.084 |
|  | (0.003) | (0.004) | (0.004) | (0.004) |  |

Table 4: Raw average daily earnings in year after the end of learning spell

| Spell <br> Participation | Spell Achievement |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No achieve | Below Level 2 | Level <br> 2 | Full Level 2 | Level <br> 3 | Full Level 3 | $\begin{aligned} & \text { Level } \\ & 4+ \end{aligned}$ |
| Below Level 2 | 40.56 | 44.18 |  |  |  |  |  |
| Level 2 | 44.39 | 37.34 | 42.76 |  |  |  |  |
| Full Level 2 | 33.52 | 27.66 | 29.11 | 39.78 |  |  |  |
| Level 3 | 43.37 | 34.88 | 37.45 | 29.53 | 45.33 |  |  |
| Full Level 3 | 32.76 | 28.52 | 27.81 | 28.53 | 26.16 | 31.43 |  |
| Level 4+ | 50.10 | 45.43 | 44.01 | 42.44 | 43.43 | 35.39 | 52.27 |

Table 5: Estimated employment probability premium for achievers over nonachievers

| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3mths | 1yr | 3 yr | 4yr | 5 yr | 3-5 year average |
| Below Level 2 | 0.0007* | 0.003*** | 0.003*** | 0.003*** | 0.002*** | 0.003 |
|  | (0.0003) | (0.0003) | (0.0004) | (0.0005) | (0.0005) |  |
| Level 2 | 0.006*** | 0.009*** | 0.010*** | 0.009*** | 0.009*** | 0.009 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Full Level 2 | 0.023*** | 0.018*** | 0.015*** | 0.017*** | 0.014*** | 0.015 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Level 3 | 0.011*** | 0.010*** | 0.011*** | 0.016*** | 0.015*** | 0.014 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Full Level 3 | 0.048*** | 0.043*** | 0.038*** | 0.043*** | 0.033*** | 0.038 |


|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Achievement | 3mths |  |  |  |  |  |  | 1 yr | 3 yr | 4 yr | 5 yr | average <br> and |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ |  |  |  |  |  |  |  |
| Level 4+ | $0.012^{* * *}$ | $0.011^{* * *}$ | $0.012^{* * *}$ | $0.011^{* * *}$ | $0.011^{* * *}$ | 0.011 |  |  |  |  |  |  |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ |  |  |  |  |  |  |  |

*** significant at the $0.1 \%$ level; ** $1 \%$ and *5\%

Table 6: Raw employment probabilities one year after spell end date

| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | $4+$ |
| Below Level 2 | 0.37 | 0.41 |  |  |  |  |  |
| Level 2 | 0.50 | 0.44 | 0.54 |  |  |  |  |
| Full Level 2 | 0.59 | 0.51 | 0.54 | 0.68 |  |  |  |
| Level 3 | 0.57 | 0.53 | 0.56 | 0.64 | 0.63 |  |  |
| Full Level 3 | 0.61 | 0.59 | 0.59 | 0.67 | 0.57 | 0.69 |  |
| Level 4+ | 0.71 | 0.72 | 0.75 | 0.78 | 0.74 | 0.77 | 0.76 |

Table 7: Estimated probability of Achievers being on Active Benefits, compared to non-achievers

| Achievement | Percentage Point Probability of Achievers V Non-achievers being on Active Benefits |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3mths | $1{ }^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.009*** | 0.0003 | -0.003*** | -0.002*** | -0.003*** | -0.003 |
|  | (0.0003) | (0.0003) | (0.0003) | (0.0003) | (0.0004) |  |
| Level 2 | 0.005*** | $-0.003^{* *}$ | -0.005*** | -0.006*** | -0.006*** | -0.006 |
|  | (0.0004) | (0.0004) | (0.0004) | (0.0004) | (0.0005) |  |
| Full Level 2 | -0.025*** | -0.027*** | -0.022*** | -0.022*** | -0.020*** | -0.021 |
|  | (0.0004) | (0.0004) | (0.0005) | (0.0006) | (0.0008) |  |
| Level 3 | -0.003*** | -0.010*** | -0.010*** | -0.008*** | $-0.008^{* * *}$ | -0.009 |
|  | (0.0004) | (0.0004) | (0.0005) | (0.0005) | (0.0006) |  |
| Full Level 3 | -0.026*** | -0.032*** | -0.021*** | -0.016*** | -0.016*** | -0.018 |
|  | (0.0005) | (0.0005) | (0.0006) | (0.0007) | (0.0008) |  |
| Level 4+ | -0.005*** | -0.010*** | -0.008*** | -0.008*** | -0.009*** | -0.008 |
|  | (0.0007) | (0.0007) | (0.0008) | (0.0009) | (0.0009) |  |

Table 8: Raw proportions on Active Benefits one year after the end of learning spell

| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | $4+$ |


| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | $4+$ |
| Below Level 2 | 0.07 | 0.05 |  |  |  |  |  |
| Level 2 | 0.06 | 0.09 | 0.05 |  |  |  |  |
| Full Level 2 | 0.10 | 0.17 | 0.13 | 0.05 |  |  |  |
| Level 3 | 0.04 | 0.08 | 0.06 | 0.12 | 0.03 |  |  |
| Full Level 3 | 0.06 | 0.08 | 0.08 | 0.11 | 0.07 | 0.03 | 0.02 |
| Level 4+ | 0.04 | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 | 0 |

Table 9: Daily earnings premium of female achievers relative to non-achievers

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | -0.0002 | 0.0008 | -0.005 | 0.002 | -0.001 |
|  | (0.002) | (0.003) | (0.003) | (0.003) |  |
| Level 2 | -0.004 | -0.006* | 0.003 | 0.010** | -0.004 |
|  | (0.003) | (0.003) | (0.003) | (0.003) |  |
| Full Level 2 | 0.120*** | 0.097*** | 0.097*** | 0.087*** | 0.094 |
|  | (0.003) | (0.003) | (0.004) | (0.005) |  |
| Level 3 | -0.033*** | $-0.015^{* * *}$ | 0.025*** | 0.048*** | 0.019 |
|  | (0.003) | (0.04) | (0.004) | (0.004) |  |
| Full Level 3 | 0.045*** | 0.040*** | 0.090*** | 0.122*** | 0.084 |
|  | (0.003) | (0.004) | (0.004) | (0.004) |  |
| Level 4+ | 0.084*** | 0.079*** | 0.075*** | 0.063*** | 0.072 |
|  | (0.005) | (0.005) | (0.006) | (0.006) |  |

Table 10: Daily earnings premium of male achievers relative to non-achievers

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.048*** | 0.046*** | 0.046*** | 0.046*** | 0.046 |
|  | (0.003) | (0.003) | (0.003) | (0.003) |  |
| Level 2 | 0.022*** | 0.028*** | 0.030*** | 0.038*** | 0.032 |
|  | (0.003) | (0.003) | (0.003) | (0.004) |  |
| Full Level 2 | 0.161*** | 0.135*** | 0.129*** | 0.125*** | 0.130 |
|  | (0.002) | (0.003) | (0.004) | (0.004) |  |
| Level 3 | 0.028*** | 0.026*** | 0.050*** | 0.063*** | 0.046 |
|  | (0.004) | (0.004) | (0.004) | (0.004) |  |
| Full Level 3 | 0.088*** | 0.068*** | 0.080*** | 0.113*** | 0.087 |
|  | (0.004) | (0.004) | (0.005) | (0.005) |  |
| Level 4+ | 0.092*** | 0.098*** | 0.100*** | 0.095*** | 0.098 |
|  | (0.005) | (0.006) | (0.006) | (0.007) |  |

Table 11: Raw average daily earnings one year after the end of learning spell for women

| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | 4+ |
| Below Level 2 | 35.60 | 36.33 |  |  |  |  |  |
| Level 2 | 38.40 | 33.58 | 36.84 |  |  |  |  |
| Full Level 2 | 27.83 | 24.19 | 25.69 | 30.60 |  |  |  |
| Level 3 | 37.69 | 31.82 | 33.97 | 25.36 | 37.87 |  |  |
| Full Level 3 | 29.49 | 26.75 | 26.20 | 25.85 | 24.54 | 27.26 |  |
| Level 4+ | 46.04 | 41.87 | 40.93 | 39.23 | 40.16 | 34.95 | 47.74 |

Table 12: Raw average daily earnings one year after the end of learning spell for men

| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | 4+ |
| Below Level 2 | 46.69 | 53.17 |  |  |  |  |  |
| Level 2 | 52.53 | 42.86 | 52.21 |  |  |  |  |
| Full Level 2 | 38.85 | 30.39 | 32.70 | 47.21 |  |  |  |
| Level 3 | 50.42 | 39.64 | 42.81 | 32.82 | 54.86 |  |  |
| Full Level 3 | 37.08 | 31.01 | 29.91 | 31.64 | 28.03 | 37.72 |  |
| Level 4+ | 55.00 | 50.93 | 49.44 | 46.60 | 48.45 | 36.01 | 59.53 |

Table 13: Estimated employment probability premium for female achievers over non-achievers

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3-5 year |  |  |  |  |  |  |

Table 14: Estimated employment probability premium for male achievers over nonachievers

| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3 mths | 1 yr | 3 yr | 4yr | 5 yr | 3-5 year average |
| Below Level 2 | 0.0003 | 0.003*** | 0.002** | 0.001 | 0.0002 | 0.001 |
|  | (0.0004) | $(0.0005)$ | (0.0006) | (0.0007) | (0.0008) |  |
| Level 2 | 0.006*** | 0.009*** | 0.008*** | 0.007*** | 0.008*** | 0.008 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Full Level 2 | 0.020*** | 0.011*** | 0.005*** | 0.007*** | 0.002* | 0.005 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Level 3 | 0.013*** | 0.011*** | 0.009*** | 0.011*** | 0.010*** | 0.010 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Full Level 3 | 0.050*** | 0.042*** | 0.035*** | 0.036*** | 0.025*** | 0.032 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Level 4+ | 0.015*** | 0.011*** | 0.011*** | 0.012*** | 0.011*** | 0.011 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |  |

Table 15: Raw employment probabilities one year after spell end date for women

| Spell | No | Below | Level | Full | Level | Full | Level |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | 4+ |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Below Level 2 | 0.38 | 0.40 |  |  |  |  |  |
| Level 2 | 0.51 | 0.47 | 0.55 |  |  |  |  |
| Full Level 2 | 0.59 | 0.50 | 0.55 | 0.70 |  |  |  |
| Level 3 | 0.56 | 0.55 | 0.57 | 0.65 | 0.62 |  |  |
| Full Level 3 | 0.62 | 0.59 | 0.61 | 0.68 | 0.59 | 0.71 |  |
| Level 4+ | 0.71 | 0.73 | 0.76 | 0.79 | 0.74 | 0.78 | 0.77 |

Table 16: Raw employment probabilities one year after spell end date for men

| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | $4+$ |
| Below Level 2 | 0.36 | 0.42 |  |  |  |  |  |
| Level 2 | 0.49 | 0.41 | 0.51 |  |  |  |  |
| Full Level 2 | 0.59 | 0.52 | 0.53 | 0.66 |  |  |  |
| Level 3 | 0.58 | 0.51 | 0.54 | 0.63 | 0.64 |  |  |
| Full Level 3 | 0.60 | 0.58 | 0.57 | 0.67 | 0.56 | 0.67 |  |
| Level 4+ | 0.70 | 0.72 | 0.75 | 0.78 | 0.74 | 0.76 | 0.75 |

Table 17: Daily earnings premium of 19-24 year old achievers relative to non-achievers

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.042*** | 0.053*** | 0.047*** | 0.056*** | 0.052 |
|  | (0.005) | (0.006) | (0.006) | (0.007) |  |
| Level 2 | 0.026*** | 0.043*** | 0.049*** | 0.064*** | 0.052 |
|  | (0.006) | (0.006) | (0.006) | (0.006) |  |
| Full Level 2 | 0.161*** | 0.126*** | 0.098*** | 0.088*** | 0.104 |
|  | (0.004) | (0.005) | (0.005) | (0.006) |  |
| Level 3 | -0.035*** | 0.010 | 0.071*** | 0.099*** | 0.060 |
|  | (0.006) | (0.006) | (0.007) | (0.007) |  |
| Full Level 3 | 0.068*** | 0.083*** | 0.100*** | 0.122*** | 0.102 |
|  | (0.004) | (0.005) | (0.006) | (0.007) |  |
| Level 4+ | 0.100*** | 0.113*** | 0.124*** | 0.106*** | 0.114 |
|  | (0.007) | (0.008) | (0.009) | (0.009) |  |

Table 18: Daily earnings premium of 25+ year old achievers relative to non-achievers

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.017*** | 0.017*** | 0.012*** | 0.014*** | 0.014 |
|  | (0.002) | (0.002) | (0.002) | (0.002) |  |
| Level 2 | 0.005* | 0.005* | 0.008*** | 0.011*** | 0.008 |
|  | (0.002) | (0.002) | (0.002) | (0.003) |  |
| Full Level 2 | 0.107*** | 0.085*** | 0.083*** | 0.076*** | 0.081 |
|  | (0.002) | (0.003) | (0.004) | (0.005) |  |
| Level 3 | 0.007*** | 0.016*** | 0.032*** | 0.040*** | 0.029 |
|  | (0.003) | (0.003) | (0.003) | (0.003) |  |
| Full Level 3 | 0.085*** | 0.087*** | 0.098*** | 0.102*** | 0.096 |
|  | (0.003) | (0.004) | (0.005) | (0.006) |  |
| Level 4+ | 0.075*** | 0.071*** | 0.066*** | 0.060*** | 0.066 |
|  | (0.004) | (0.004) | (0.005) | (0.005) |  |

Table 19: Estimated employment probability premium of 19-24 year old achievers relative to non-achievers

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $3-5$ year |  |  |  |  |  |  |


|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3-5 year |  |  |  |  |  |  |

## Table 20: Estimated employment probability premium of $\mathbf{2 5 +}$ year old achievers relative to non-achievers

\left.|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| 3-5 year |  |  |  |  |  |  |  |  |
| average |  |  |  |  |  |  |  |  |$\right]$

Table 21: Estimated probability of 19-24 year old Achievers being on Active Benefits, compared to non-achievers

| Achievement | Percentage Point Probability of Achievers V Non-achievers being on Active Benefits |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3 mths | $1{ }^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.008*** | -0.003** | -0.002* | -0.001 | 0.0001 | -0.001 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Level 2 | 0.003** | -0.003** | -0.006*** | -0.004*** | -0.007*** | -0.006 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Full Level 2 | $-0.041^{* * *}$ | -0.035*** | -0.023*** | $-0.022^{* * *}$ | $-0.017^{* * *}$ | -0.021 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Level 3 | -0.013*** | -0.017*** | -0.011*** | -0.008*** | -0.008*** | -0.009 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Full Level 3 | -0.039*** | $-0.037 * * *$ | $-0.018^{* * *}$ | $-0.013^{* * *}$ | -0.015*** | -0.015 |


|  | Percentage Point Probability of Achievers V Non-achievers being on Active Benefits |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Achievement | $3 m$ ths | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year <br> average |  |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ |  |  |
| Level 4+ | $-0.005^{* *}$ | $-0.011^{* * *}$ | $-0.011^{* * *}$ | $-0.009^{* * *}$ | $-0.011^{* * *}$ | -0.010 |  |
|  | $(0.002)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ |  |  |

*** significant at the $0.1 \%$ level; ** $1 \%$ and *5\%

Table 22: Estimated probability of 25+ year old Achievers being on Active Benefits, compared to non-achievers

|  | Percentage Point Probability of Achievers V Non-achievers being on Active Benefits |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Achievement | 3mths | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | average <br> avear |
| Below Level 2 | $0.009^{* * *}$ | $0.002^{* * *}$ | $-0.0008^{* *}$ | $-0.0008^{* *}$ | $-0.002^{* * *}$ | -0.001 |
|  | $(0.0003)$ | $(0.0003)$ | $(0.0003)$ | $(0.0003)$ | $(0.0003)$ |  |
| Level 2 | $0.006^{* * *}$ | $-0.001^{* *}$ | $-0.003^{* * *}$ | $-0.004^{* * *}$ | $-0.004^{* * *}$ | -0.004 |
|  | $(0.0004)$ | $(0.0004)$ | $(0.0004)$ | $(0.0004)$ | $(0.0004)$ |  |
| Full Level 2 | $-0.021^{* * *}$ | $-0.021^{* * *}$ | $-0.014^{* * *}$ | $-0.012^{* * *}$ | $-0.009^{* * *}$ | -0.012 |
|  | $(0.0005)$ | $(0.0005)$ | $(0.0006)$ | $(0.0007)$ | $(0.0009)$ |  |
| Level 3 | $-0.002^{* * *}$ | $-0.006^{* * *}$ | $-0.007^{* * *}$ | $-0.005^{* * *}$ | $-0.006^{* * *}$ | -0.006 |
|  | $(0.0005)$ | $(0.0005)$ | $(0.0005)$ | $(0.0005)$ | $(0.0005)$ |  |
| Full Level 3 | $-0.020^{* * *}$ | $-0.020^{* * *}$ | $-0.011^{* * *}$ | $-0.009^{* * *}$ | $-0.009^{* * *}$ | -0.010 |
|  | $(0.0006)$ | $(0.0006)$ | $(0.0007)$ | $(0.0009)$ | $(0.001)$ |  |
| Level 4+ | $-0.005^{* * *}$ | $-0.009^{* * *}$ | $-0.007^{* * *}$ | $-0.007^{* * *}$ | $-0.008^{* * *}$ | -0.007 |
|  | $(0.0007)$ | $(0.0007)$ | $(0.0007)$ | $(0.0007)$ | $(0.0008)$ |  |

*** significant at the $0.1 \%$ level; ${ }^{* *} 1 \%$ and ${ }^{*} 5 \%$
Table 23: Daily earnings premium for Achievers v Non-achievers in the Academic category of learners

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Level 2 | -0.009 | -0.005 | 0.027 | 0.035* | 0.019 |
|  | (0.013) | (0.014) | (0.15) | (0.014) |  |
| Full Level 2 | 0.113*** | 0.083*** | 0.154*** | 0.112*** | 0.116 |
|  | (0.018) | (0.024) | (0.025) | (0.025) |  |
| Level 3 | -0.097*** | -0.046*** | 0.063*** | 0.119*** | 0.045 |
|  | (0.006) | (0.006) | (0.061) | (0.006) |  |
| Full Level 3 | -0.296*** | -0.147*** | 0.023* | 0.135*** | 0.003 |
|  | (0.009) | (0.009) | (0.010) | (0.010) |  |

Table 24: Daily earnings premium for achievers v non-achievers engaged in Vocational Class-room Based Learning

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Below Level 2 | 0.017*** | 0.016*** | 0.013*** | 0.017*** | 0.015 |
|  | (0.002) | (0.002) | (0.002) | (0.002) |  |
| Level 2 | 0.004* | 0.006** | 0.009*** | 0.015*** | 0.010 |
|  | (0.002) | (0.002) | (0.002) | (0.003) |  |
| Full Level 2 | 0.109*** | 0.099*** | 0.114*** | 0.097*** | 0.103 |
|  | (0.004) | (0.005) | (0.006) | (0.007) |  |
| Level 3 | 0.020*** | 0.022*** | 0.030*** | 0.036*** | 0.029 |
|  | (0.003) | (0.003) | (0.003) | (0.003) |  |
| Full Level 3 | 0.019*** | 0.020*** | 0.063*** | 0.091*** | 0.058 |
|  | (0.005) | (0.005) | (0.006) | (0.006) |  |
| Level 4+ | 0.084*** | 0.086*** | 0.086*** | 0.075*** | 0.082 |
|  | (0.004) | (0.004) | (0.004) | (0.005) |  |

Table 25: Daily earnings premium for achievers v non-achievers engaged in Vocational Workplace Based Learning (excluding apprenticeships)

|  | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 3-5 year |  |  |  |  |

Table 26: Estimated employment probability premium for Achievers v Non-achievers in the Academic category of learners

| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3mths | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Level 2 | 0.010*** | 0.006* | 0.008* | 0.010** | 0.011** | 0.010 |
|  | (0.003) | (0.003) | (0.004) | (0.004) | (0.004) |  |
| Full Level 2 | -0.012** | -0.015*** | -0.025*** | -0.021** | -0.026*** | -0.024 |
|  | (0.004) | (0.004) | (0.007) | (0.008) | (0.008) |  |
| Level 3 | 0.005** | 0.006** | 0.013*** | 0.027*** | 0.030*** | 0.023 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |  |
| Full Level 3 | 0.037*** | 0.032*** | 0.026*** | 0.049*** | 0.048*** | 0.041 |
|  | (0.002) | (0.002) | (0.003) | (0.003) | (0.003) |  |

Table 27: Estimated employment probability premium for achievers v non-achievers engaged in Vocational Class-room Based Learning

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 3-5 year |  |  |  |  |  |  |  |  |  |  |  |  |
| achievement | 3 mths |  |  |  |  |  |  | 1 yr | 3 yr | 4 yr | 5 yr | average |
| Below Level 2 | 0.0003 | $0.002^{* * *}$ | $0.003^{* * *}$ | $0.003^{* * *}$ | $0.002^{* * *}$ | 0.003 |  |  |  |  |  |  |
|  | $(0.0003)$ | $(0.0003)$ | $(0.0004)$ | $(0.0005)$ | $(0.0005)$ |  |  |  |  |  |  |  |
| Level 2 | $0.005^{* * *}$ | $0.008^{* * *}$ | $0.009^{* * *}$ | $0.009^{* * *}$ | $0.008^{* * *}$ | 0.009 |  |  |  |  |  |  |
|  | $(0.0004)$ | $(0.0005)$ | $(0.0006)$ | $(0.0006)$ | $(0.0007)$ |  |  |  |  |  |  |  |
| Full Level 2 | $0.013^{* * *}$ | $0.016^{* * *}$ | $0.016^{* * *}$ | $0.020^{* * *}$ | $0.020^{* * *}$ | 0.019 |  |  |  |  |  |  |
|  | $(0.001)$ | $(0.001)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ |  |  |  |  |  |  |  |
| Level 3 | $0.009^{* * *}$ | $0.009^{* * *}$ | $0.008^{* * *}$ | $0.010^{* * *}$ | $0.009^{* * *}$ | 0.009 |  |  |  |  |  |  |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ |  |  |  |  |  |  |  |
| Full Level 3 | $0.052^{* * *}$ | $0.050^{* * *}$ | $0.038^{* * *}$ | $0.040^{* * *}$ | $0.022^{* * *}$ | 0.033 |  |  |  |  |  |  |
|  | $(0.001)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ |  |  |  |  |  |  |  |
| Level 4+ | $0.012^{* * *}$ | $0.011^{* * *}$ | $0.012^{* * *}$ | $0.012^{* * *}$ | $0.011^{* * *}$ | 0.012 |  |  |  |  |  |  |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.002)$ |  |  |  |  |  |  |  |

Table 28: Estimated employment probability premium for achievers v non-achievers engaged in Vocational Class-room Based Learning (excluding apprenticeships)

| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3mths | 1 yr | 3 yr | 4 yr | 5 yr | 3-5 year average |
| Below Level 2 | 0.010*** | 0.017*** | 0.022*** | 0.014*** | 0.015*** | 0.017 |
|  | (0.002) | (0.002) | (0.003) | (0.003) | (0.003) |  |
| Level 2 | 0.024*** | 0.031*** | 0.041*** | 0.011 | 0.013 | 0.022 |
|  | (0.003) | (0.005) | (0.006) | (0.009) | (0.011) |  |
| Full Level 2 | 0.016*** | 0.007*** | 0.005*** | 0.009*** | 0.011*** | 0.008 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |  |
| Level 3 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ |
|  | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ |  |
| Full Level 3 | 0.021*** | 0.015*** | 0.017*** | 0.020*** | 0.021*** | 0.019 |
|  | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) |  |
| Level 4+ | 0.007* | 0.004 | 0.007* | 0.008* | 0.006 | 0.007 |
|  | (0.003) | (0.003) | (0.003) | (0.004) | (0.004) |  |

Table 29: Raw employment probabilities one year after spell end date for 'Academic' qualification category

| Spell <br> Participation | No | Below |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| achieve | Level 2 | Level 2 | Full <br> Level 2 | Level | 3 | Full <br> Level 3 |
| Level 2 | 0.51 | 0.49 | 0.56 |  |  |  |
| Full Level 2 | 0.35 | 0.38 | 0.38 | 0.33 |  |  |
| Level 3 | 0.51 | 0.49 | 0.50 | 0.61 | 0.59 |  |
| Full Level 3 | 0.49 | 0.49 | 0.53 | 0.63 | 0.53 | 0.60 |

Table 30: Raw employment probabilities one year after spell end date for 'Vocational \& Provider' qualification category

| Spell | Spell Achievement |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | No | Below | Level | Full | Level | Full | Level |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | $4+$ |
| Below Level 2 | 0.37 | 0.40 |  |  |  |  |  |
| Level 2 | 0.50 | 0.44 | 0.53 |  |  |  |  |
| Full Level 2 | 0.47 | 0.45 | 0.49 | 0.52 |  |  |  |
| Level 3 | 0.60 | 0.55 | 0.59 | 0.64 | 0.64 |  |  |
| Full Level 3 | 0.53 | 0.55 | 0.57 | 0.63 | 0.62 | 0.66 | 0.76 |
| Level 4+ | 0.70 | 0.72 | 0.74 | 0.78 | 0.74 | 0.77 | 0.7 |

Table 31: Raw employment probabilities one year after spell end date for 'Vocational \& WBL' qualification category (excluding apprenticeships)

| Spell | No | Below | Level | Full | Level | Full | Level |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | achieve | Level 2 | 2 | Level 2 | 3 | Level 3 | $4+$ |
| Below Level 2 | 0.46 | 0.52 |  |  |  |  |  |
| Level 2 | 0.52 | 0.49 | 0.61 |  |  |  |  |
| Full Level 2 | 0.70 | 0.71 | 0.75 | 0.74 |  |  |  |
| Level 3 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ |  |  |
| Full Level 3 | 0.75 | 0.78 | 0.83 | 0.77 | 0.78 | 0.81 |  |
| Level 4+ | 0.75 | 0.81 | 0.85 | 0.81 | 0.82 | 0.81 | 0.80 |

Table 32: Estimated daily earnings premium for apprenticeship achievers v nonachievers

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Full Level 2 apprent. | 0.145*** | 0.120*** | 0.109*** | 0.104*** | 0.111 |
|  | (0.005) | (0.005) | (0.006) | (0.007) |  |
| Full Level 3 apprent. | 0.171*** | 0.162*** | 0.147*** | 0.159*** | 0.156 |
|  | (0.006) | (0.006) | (0.007) | (0.008) |  |

Table 33: Raw average daily earnings in year after the end of apprenticeship learning spell

| Spell Participation | Spell Achievement |  |  |
| :--- | :---: | :---: | :---: |
|  | No achieve | Level 2 | Level 3 |
| FL 2 apprentice | 28.90 | 34.16 |  |
| FL 3 apprentice | 34.95 | 34.97 | 45.54 |

Table 34: Estimated employment probability premium for achievers v nonachievers: apprenticeships

Return to employment probability in time period after spell end

| Achievement | 3 mths | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | $3-5$ year <br> average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| FL 2 apprentice | $0.027^{* * *}$ | $0.019^{* * *}$ | $0.011^{* * *}$ | $0.008^{* * *}$ | -0.001 | 0.006 |
|  | $(0.002)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ | $(0.002)$ |  |
| FL 3 apprentice | $0.028^{* * *}$ | $0.011^{* * *}$ | $0.005^{*}$ | 0.001 | 0.001 | 0.002 |
|  | $(0.002)$ | $(0.002)$ | $(0.002)$ | $(0.003)$ | $(0.003)$ |  |

Table 35: Raw employment probabilities one year after spell end date for apprenticeships

| Spell Participation | Spell Achievement |  |  |
| :--- | :---: | :---: | :---: |
|  | No achieve | Level 2 | Level 3 |
| FL 2 apprentice | 0.60 | 0.73 |  |
| FL 3 apprentice | 0.75 | 0.81 | 0.83 |

Table 36: Estimated probability of achievers being on Active Benefits (job-seeking), compared to non-achievers: apprenticeships

Percentage Point Probability of Achievers V Non-achievers being on Active Benefits

| Achievement | 3 mths | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | $3-5$ year <br> average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| FL 2 apprentice | $-0.032^{* * *}$ | $-0.031^{* * *}$ | $-0.026^{* * *}$ | $-0.025^{* * *}$ | $-0.023^{* * *}$ | -0.025 |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.002)$ | $(0.002)$ |  |
| FL 3 apprentice | $-0.026^{* * *}$ | $-0.022^{* * *}$ | $-0.017^{* * *}$ | $-0.020^{* * *}$ | $-0.019^{* * *}$ | -0.019 |
|  | $(0.001)$ | $(0.001)$ | $(0.001)$ | $(0.002)$ | $(0.002)$ |  |

Table 37: Proportion of apprentices on Active Benefits (job-seeking) one year after learning spell ends

| Spell Participation | Spell Achievement |  |  |
| :--- | :---: | :---: | :---: |
|  | No achieve | Level 2 | Level 3 |
| FL 2 apprentice | 0.11 | 0.06 |  |
| FL 3 apprentice | 0.05 | 0.07 | 0.03 |

Table 38: All those with Higher Apprenticeship aim, raw average daily earnings in each year after the end of learning (population size in brackets)

| Tax year after learning | Spell Achievement |  |  |
| :--- | :--- | :--- | :--- |
|  | No achieve | Full |  |
| Level 3 | Level 4+ |  |  |
| $1^{\text {st }}$ Year | $£ 43.67$ | $£ 38.18$ | $£ 45.01$ |
|  | $(82)$ | $(93)$ | $(716)$ |
| $2^{\text {nd }}$ Year | $£ 46.07$ | $£ 38.71$ | $£ 53.09$ |


| Tax year after learning | Spell Achievement |  |  |
| :--- | :--- | :--- | :--- |
|  | No achieve | Full <br> Level 3 | Level 4+ |
|  | $(32)$ | $(14)$ | $(112)$ |
|  | $£ 43.73$ | $£ 67.75$ | $£ 58.76$ |
|  | $(8)$ | $(2)$ | $(12)$ |

Table 39: Returns to daily earnings for L1 and L2 English and Maths achievers [for population of FL 2 and/or FL3 achievers]

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1{ }^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| FL2 Achievers | 0.060*** | 0.035*** | 0.048*** | 0.042*** | 0.042 |
|  | (0.004) | (0.006) | (0.007) | (0.008) |  |
| FL3 Achievers | -0.002 | 0.001 | 0.018*** | 0.017*** | 0.012 |
|  | (0.003) | (0.004) | (0.004) | (0.005) |  |
| FL2 or FL3 Achievers | 0.021*** | 0.015*** | 0.031*** | 0.027*** | 0.024 |
|  | (0.003) | (0.003) | (0.004) | (0.004) |  |

Table 40: Returns to daily earnings for subgroups of L1 and L2 English and Maths achievers [for population of FL 2 achievers]

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1{ }^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5{ }^{\text {th }}$ Year | 3-5 year average |
| Only Literacy Key Skills | 0.029*** | 0.027** | 0.040*** | 0.039*** | 0.035 |
|  | (0.007) | (0.008) | (0.009) | (0.010) |  |
| Only Numeracy Key Skills | 0.018 | 0.016 | 0.016 | 0.018 | 0.017 |
|  | (0.010) | (0.014) | (0.016) | (0.019) |  |
| Literacy and Numeracy Key | 0.060*** | 0.047*** | 0.066*** | 0.066*** | 0.060 |
| Skills | (0.008) | (0.011) | (0.013) | (0.015) |  |
| Only Literacy Certificate | 0.035*** | 0.021 | 0.039 | 0.001 | 0.020 |
|  | (0.010) | (0.016) | (0.025) | (0.037) |  |
| Only Numeracy Certificate | 0.030* | 0.024 | 0.027 | 0.004 | 0.018 |
|  | (0.013) | (0.022) | (0.033) | (0.048) |  |
| Literacy and Numeracy | 0.023 | 0.068* | 0.094* | 0.090 | 0.084 |
| Certificate | (0.017) | (0.032) | (0.047) | (0.070) |  |

Table 41: Returns to daily earnings for subgroups of L1 and L2 English and Maths achievers [for population of FL 3 achievers]

|  | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Achievement | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |


|  | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Achievement | $1^{\text {st }}$ Year |  | $3^{\text {rd }}$ Year |  | $4^{\text {th }}$ Year |  | $5^{\text {th }}$ Year |  | 3-5 year <br> average |
| Only Literacy Key Skills | $-0.010^{*}$ | $0.012^{*}$ | $0.020^{* *}$ | $0.014^{*}$ | 0.015 |  |  |  |  |
|  | $(0.005)$ | $(0.005)$ | $(0.006)$ | $(0.006)$ |  |  |  |  |  |
| Only Numeracy Key Skills | -0.006 | 0.009 | $0.026^{* * *}$ | 0.011 | 0.015 |  |  |  |  |
|  | $(0.006)$ | $(0.007)$ | $(0.007)$ | $(0.008)$ |  |  |  |  |  |
| Literacy and Numeracy Key | $0.037^{* * *}$ | $0.033^{* * *}$ | $0.044^{* * *}$ | $0.033^{* * *}$ | 0.037 |  |  |  |  |
| Skills | $(0.005)$ | $(0.006)$ | $(0.007)$ | $(0.008)$ |  |  |  |  |  |
| Only Literacy Certificate | -0.011 | -0.007 | 0.015 | 0.022 | 0.010 |  |  |  |  |
|  | $(0.012)$ | $(0.018)$ | $(0.022)$ | $(0.028)$ |  |  |  |  |  |
| Only Numeracy Certificate | $-0.049^{* * *}$ | 0.007 | $0.055^{* *}$ | $0.073^{* *}$ | 0.045 |  |  |  |  |
|  | $(0.012)$ | $(0.017)$ | $(0.021)$ | $(0.027)$ |  |  |  |  |  |
| Literacy and Numeracy | $-0.051^{*}$ | -0.004 | -0.005 | 0.035 | 0.009 |  |  |  |  |
| Certificate | $(0.022)$ | $(0.033)$ | $(0.043)$ | $(0.057)$ |  |  |  |  |  |

Table 42: Concentrations of Men and Women across Sector Subject Areas, for Full Level 2 (FL2) and Full Level 3 (FL3) qualifications

| Sector (derived from SSA) | Proportion of Women FL2 | Proportion of Women FL3 |
| :--- | :---: | :---: |
| Adult Social Care | $86 \%$ | $86 \%$ |
| Construction | $1.50 \%$ | $3.60 \%$ |
| Engineer. \& manufacturing | $14.40 \%$ | $4.80 \%$ |
| Inf. \& Comm. Technology | $48 \%$ | $19 \%$ |
| Child devel. \& wellbeing | $97 \%$ | $96 \%$ |
| Customer Service | $62 \%$ | $70 \%$ |
| Hair \& beauty | $94 \%$ | $97 \%$ |
| Hospitality and Catering | $58 \%$ | $62 \%$ |
| Transportation | $7 \%$ | $4 \%$ |
| Business studies | $34 \%$ | $45 \%$ |

Table 43: Estimated daily earnings premiums for female-dominated Sector Subject Areas

## Adult social care

|  | Log Daily Earnings in Tax Year after Spell End |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Achievement | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | Average 3-5 |
| Full Level 2 | $0.185^{* * *}$ | $0.132^{* * *}$ | $0.117^{* * *}$ | $0.099^{* * *}$ | 0.116 |
|  | $(0.006)$ | $(0.008)$ | $(0.009)$ | $(0.011)$ |  |
| Full Level 3 | $0.130^{* * *}$ | $0.101^{* * *}$ | $0.142^{* * *}$ | $0.173^{* * *}$ | 0.139 |
|  | $(0.007)$ | $(0.009)$ | $(0.010)$ | $(0.012)$ |  |

## Child development and wellbeing

|  | Log Daily Earnings in Tax Year after Spell End |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Achievement | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | Average 3-5 |
| Full Level 2 | $0.059^{* * *}$ | $0.060^{* * *}$ | $0.069^{* * *}$ | $0.058^{* *}$ | 0.062 |


| Full Level 3 | $\begin{aligned} & \text { (0.013) } \\ & 0.135^{* * *} \\ & (0.008) \end{aligned}$ | $\begin{aligned} & (0.016) \\ & 0.097^{* * *} \\ & (0.010) \end{aligned}$ | $\begin{aligned} & \text { (0.018) } \\ & 0.109^{* * *} \\ & (0.011) \end{aligned}$ | $\begin{aligned} & \text { (0.019) } \\ & 0.115^{* * *} \\ & (0.012) \\ & \hline \end{aligned}$ | 0.107 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Hair and beauty |  |  |  |  |  |
| Achievement | Log Daily Earnings in Tax Year after Spell End |  |  |  |  |
| Full Level 2 | $\begin{aligned} & \hline 0.096^{* * *} \\ & (0.011) \end{aligned}$ | $\begin{aligned} & \hline 0.098^{* * *} \\ & (0.012) \end{aligned}$ | $\begin{aligned} & \hline 0.076^{* * *} \\ & (0.014) \end{aligned}$ | $\begin{aligned} & \hline 0.058^{* * *} \\ & (0.015) \end{aligned}$ | 0.077 |
| Full Level 3 | $\begin{aligned} & 0.099 * * * \\ & (0.017) \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.087^{* * *} \\ & (0.019) \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.068^{*} * \\ & (0.023) \end{aligned}$ | $\begin{aligned} & 0.056^{*} \\ & (0.024) \end{aligned}$ | 0.070 |

Table 44: Estimated daily earnings premiums for male-dominated Sector Subject Areas

Construction

| Achievement | Log Daily Earnings in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5{ }^{\text {th }}$ Year | Average 3-5 |
| Full Level 2 | 0.212*** | 0.178*** | 0.160*** | 0.131*** | 0.156 |
|  | (0.007) | (0.009) | (0.011) | (0.013) |  |
| Full Level 3 | 0.224*** | 0.165*** | 0.155*** | 0.121*** | 0.147 |
|  | (0.014) | (0.017) | (0.020) | (0.023) |  |
| Engineering and manufacturing |  |  |  |  |  |
| Achievement | Log Daily Earnings in Tax Year after Spell End |  |  |  |  |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | Average 3-5 |
| Full Level 2 | 0.194*** | 0.127*** | 0.117*** | 0.107*** | 0.117 |
|  | (0.006) | (0.008) | (0.009) | (0.010) |  |
| Full Level 3 | 0.229*** | 0.196*** | 0.148*** | 0.136*** | 0.160 |
|  | (0.010) | (0.012) | (0.014) | (0.015) |  |
| Transportation |  |  |  |  |  |
| Achievement | Log Daily Earnings in Tax Year after Spell End |  |  |  |  |
|  | $1^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5{ }^{\text {th }}$ Year | Average 3-5 |
| Full Level 2 | 0.150*** | 0.166*** | 0.163*** | 0.169*** | 0.163 |
|  | (0.009) | (0.011) | (0.013) | (0.015) |  |
| Full Level 3 | 0.239*** | 0.203*** | 0.172*** | 0.202*** | 0.192 |
|  | (0.014) | (0.015) | (0.017) | (0.019) |  |

Table 45: Estimated daily earnings premiums for Sector Subject Areas that are neither male nor female dominated

Information \& Communication Technology

| Achievement | Percentage Log Daily Earnings Premium in Tax Year after Spell End |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Full Level 2 | 0.077*** | 0.116*** | 0.124*** | 0.125*** | 0.122 |
|  | (0.006) | (0.009) | (0.012) | (0.017) |  |
| Full Level 3 | 0.056*** | -0.037** | -0.013 | 0.069*** | 0.006 |


|  | (0.012) | (0.014) | (0.015) | (0.017) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Customer service |  |  |  |  |  |
| Achievement | $\begin{array}{r} \text { Perc } \\ 1^{\text {st }} \text { Year } \\ \hline \end{array}$ | ge Log Daily $3^{\text {rd }}$ Year | nings Premiu $4^{\text {th }}$ Year | in Tax Year a $5^{\text {th }}$ Year | Spell End 3-5 year average |
| Full Level 2 | $\begin{aligned} & \hline 0.110 * * * \\ & (0.005) \end{aligned}$ | $\begin{aligned} & 0.093^{* * *} \\ & (0.007) \end{aligned}$ | $\begin{aligned} & 0.090^{* * *} \\ & (0.008) \end{aligned}$ | $\begin{aligned} & 0.096^{* * *} \\ & (0.010) \end{aligned}$ | $0.093$ |
| Full Level 3 | $\begin{aligned} & 0.088^{* * *} \\ & (0.009) \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.085^{* * *} \\ & (0.011) \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.083^{* * *} \\ & (0.013) \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.081^{* * *} \\ & (0.015) \\ & \hline \end{aligned}$ | 0.083 |
| Hospitality and Catering |  |  |  |  |  |
| Achievement |  | ge Log Daily $3^{\text {rd }}$ Year | nings Premiu $4^{\text {th }}$ Year | in Tax Year a $5^{\text {th }}$ Year | Spell End 3-5 year average |
| Full Level 2 | $\begin{aligned} & \hline 0.121^{* * *} \\ & (0.007) \end{aligned}$ | $\begin{aligned} & \hline 0.098^{* * *} \\ & (0.009) \end{aligned}$ | $\begin{aligned} & \hline 0.120^{* * *} \\ & (0.011) \end{aligned}$ | $\begin{aligned} & \hline 0.108^{* * *} \\ & (0.012) \end{aligned}$ | 0.109 |
| Full Level 3 | $\begin{aligned} & 0.093^{* *} \\ & (0.011) \end{aligned}$ | $\begin{aligned} & 0.061^{* * *} \\ & (0.013) \end{aligned}$ | $\begin{aligned} & 0.078^{* * *} \\ & (0.014) \end{aligned}$ | $\begin{aligned} & 0.069 * * * \\ & (0.016) \end{aligned}$ | 0.069 |
| Business studies |  |  |  |  |  |
| Achievement |  | ge Log Daily <br> $3^{\text {rd }}$ Year | nings Premi <br> $4^{\text {th }}$ Year | in Tax Year a <br> $5^{\text {th }}$ Year | Spell End 3-5 year average |
| Full Level 2 | $\begin{aligned} & \hline 0.114^{* * *} \\ & (0.008) \end{aligned}$ | $\begin{aligned} & \hline 0.086^{* * *} \\ & (0.011) \end{aligned}$ | $\begin{aligned} & \hline 0.079 * * * \\ & (0.015) \end{aligned}$ | $\begin{aligned} & \hline 0.061^{* *} \\ & (0.022) \end{aligned}$ | 0.075 |
| Full Level 3 | $\begin{aligned} & 0.012 \\ & (0.014) \end{aligned}$ | $\begin{aligned} & -0.015 \\ & (0.017) \end{aligned}$ | $\begin{aligned} & 0.104^{* * *} \\ & (0.020) \end{aligned}$ | $\begin{aligned} & 0.199 * * * \\ & (0.021) \end{aligned}$ | 0.096 |

Table 46: Estimated employment probability premiums for Sectors Subject Areas dominated by women

Adult social care

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average |  |  |  |  |  |  |  |  |  |  |  |  |  |

Child development and wellbeing

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Average |  |  |  |  |  |

Hair and beauty

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Average |  |  |  |  |  |

Table 47: Estimated employment probability premiums for male-dominated Sector Subject Areas

Construction

|  | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Average |  |  |  |  |  |


| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 yr | 3 yr | 4 yr | 5 yr | Average 3-5 |
| Full Level 2 | 0.030*** | 0.015*** | -0.001 | -0.004 | -0.012*** | -0.006 |
|  | (0.002) | (0.002) | (0.003) | (0.003) | (0.003) |  |
| Full Level 3 | 0.062*** | 0.046*** | 0.032*** | 0.030*** | 0.021*** | 0.028 |
|  | (0.004) | (0.004) | (0.005) | (0.005) | (0.006) |  |
| Transportation |  |  |  |  |  |  |
| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
|  |  |  |  |  |  | Average |
|  | 3mths | 1 yr | 3 yr | 4yr | 5 yr | 3-5 |
| Full Level 2 | 0.018*** | 0.010*** | 0.019*** | 0.039*** | 0.029*** | 0.029 |
|  | (0.002) | (0.003) | (0.003) | (0.004) | (0.005) |  |
| Full Level 3 | 0.029*** | -0.001 | -0.005 | -0.003 | -0.016* | -0.008 |
|  | (0.006) | (0.006) | (0.007) | (0.007) | (0.008) |  |

Table 48: Estimated employment probability premiums for Sector Subject Areas that are neither male nor female dominated

Information \& Communication Technology

| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $1^{\text {st }} \text { Year }$ | $3^{\text {rd }} \text { Year }$ | $4^{\text {th }} \text { Year }$ | $5^{\text {th }}$ Year | 3-5 year average |
| Full Level 2 | 0.003 | 0.010*** | -0.011** | -0.023*** | -0.029*** | -0.021 |
|  | (0.002) | (0.002) | (0.003) | (0.004) | (0.005) |  |
| Full Level 3 | $\begin{aligned} & 0.052^{* * *} \\ & (0.004) \end{aligned}$ | $\begin{aligned} & 0.053^{* * *} \\ & (0.004) \end{aligned}$ | $\begin{aligned} & 0.031^{* * *} \\ & (0.005) \end{aligned}$ | $\begin{aligned} & 0.033^{* * *} \\ & (0.006) \end{aligned}$ | $\begin{aligned} & 0.023^{* * *} \\ & (0.006) \end{aligned}$ | 0.029 |

Customer service

| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3mths | $1^{\text {st }} \text { Year }$ | $3^{\text {rd }} \text { Year }$ | $4^{\text {th }} \text { Year }$ | $5^{\text {th }} \text { Year }$ | 3-5 year average |
| Full Level 2 | 0.003** | -0.005** | -0.007** | -0.002 | -0.001 | -0.003 |
|  | (0.001) | (0.002) | (0.002) | (0.003) | (0.003) |  |
| Full Level 3 | 0.0002 | -0.008** | -0.011** | -0.008 | -0.005 | -0.008 |
|  | (0.003) | (0.003) | (0.004) | (0.005) | (0.005) |  |
| Hospitality and Catering |  |  |  |  |  |  |
| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
|  | 3mths | $1^{\text {st }}$ Year | $3{ }^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Full Level 2 | 0.033*** | 0.026*** | 0.024*** | 0.025*** | 0.027*** | 0.025 |
|  | (0.002) | (0.002) | (0.003) | (0.003) | (0.004) |  |
| Full Level 3 | 0.038*** | 0.028*** | 0.025*** | 0.023*** | 0.007 | 0.018 |
|  | (0.004) | (0.004) | (0.005) | (0.005) | (0.006) |  |
| Business studies |  |  |  |  |  |  |
| Achievement | Percentage Point Employment probability Premium in Time Period after Spell End |  |  |  |  |  |
|  | 3 mths | $1{ }^{\text {st }}$ Year | $3^{\text {rd }}$ Year | $4^{\text {th }}$ Year | $5^{\text {th }}$ Year | 3-5 year average |
| Full Level 2 | 0.023*** | 0.012*** | -0.005 | -0.010* | -0.017* | -0.011 |
|  | (0.003) | (0.003) | (0.004) | (0.005) | (0.007) |  |
| Full Level 3 | 0.057*** | 0.056*** | 0.053*** | 0.064*** | 0.055*** | 0.057 |
|  | (0.004) | (0.005) | (0.006) | (0.007) | (0.008) |  |

Table 49: Subjecting our Regression Estimates to Coarsened Exact Matching and Difference-in-differences

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OLS <br> (basic) | OLS (fully specified) | DiD <br> (PT) | $\begin{gathered} \text { DiD } \\ \text { (PGR) } \end{gathered}$ | CEM (no <br> earnings) | $\begin{aligned} & \text { CEM-DiD } \\ & \text { PT (no } \\ & \text { earnings) } \end{aligned}$ | $\begin{gathered} \hline \text { CEM-DiD } \\ \text { PGR (no } \\ \text { earnings) } \end{gathered}$ | CEM (earnings) | $\begin{aligned} & \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ | $\begin{gathered} \text { CEM-DiD } \\ \text { PGR } \\ \text { (earnings) } \end{gathered}$ |
| NVQ2 Men | 22.00 | 14.86 | 9.31 | 6.99 | 14.81 | 9.43 | 7.69 | 10.93 | 11.59 | 11.33 |
| N | 349309 | 349309 | 349309 | 349309 | 349309 | 349309 | 349309 | 349309 | 349309 | 349309 |
| r2_a | 0.014 | 0.121 | 0.041 | 0.008 | 0.107 | 0.040 | 0.007 | 0.107 | 0.042 | 0.008 |
| NVQ2 Women | 11.97 | 11.73 | 8.85 | 7.51 | 12.44 | 9.18 | 7.89 | 9.84 | 11.36 | 11.89 |
| N | 274114 | 274114 | 274114 | 274114 | 274114 | 274114 | 274114 | 274114 | 274114 | 274114 |
| r2_a | 0.005 | 0.109 | 0.028 | 0.009 | 0.106 | 0.025 | 0.006 | 0.106 | 0.027 | 0.007 |
| NVQ3 Men | 20.97 | 14.67 | 8.23 | 6.83 | 16.83 | 9.34 | 8.46 | 13.87 | 11.32 | 11.04 |
| N | 87035 | 87035 | 87035 | 87035 | 87035 | 87035 | 87035 | 87035 | 87035 | 87035 |
| r2_a | 0.016 | 0.156 | 0.138 | 0.031 | 0.144 | 0.135 | 0.027 | 0.147 | 0.138 | 0.029 |
| NVQ3 Women | 11.98 | 13.29 | 10.39 | 9.38 | 13.30 | 10.69 | 9.44 | 12.4 | 11.68 | 12.48 |
| N | 172305 | 172305 | 172305 | 172305 | 172305 | 172305 | 172305 | 172305 | 172305 | 172305 |
| r2_a | 0.005 | 0.008 | 0.045 | 0.012 | 0.093 | 0.043 | 0.009 | 0.096 | 0.043 | 0.010 |

Table 50: Estimated Earnings Premiums Returns for various Achiever (A) and Nonachiever (NA) comparisons

|  | NVQ1 MA | NVQ1A | NVQ2 MA | NVQ2 A | NVQ3 MA | NVQ3 A | MVQ4+NA | NVQ4+ ${ }^{\text {a }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NVQ1 NA | / | / | / | / | / | / | / | / |
| NVQ1A | Basic: +12.28\% <br> All contr +9.01\% | / | / | / | / | / | / | / |
| NVQ2 NA | Basic: +15.63\% All contr $\mathbf{+ 1 1 . 1 3 \%}$ | Basic: +3.35\% <br> All contr +2.51\% | / | / | / | / | / | / |
| NVQ2A | / | Basic: +28.08\% <br> All contr +18.09\% | Basic: +24.73\% <br> All contr +15.97\% | / | / | / | / | / |
| NVQ3 NA | / | / | Basic: $+15.77 \%$ All contr $+17.23 \%$ | Basic: -8.96\% All contr $+2.40 \%$ | / | / | / | / |
| NVQ3A | / | / | / | Basic: +4.42\% <br> All contr +18.79\% | Basic: +13.38\% <br> All contr +14.65\% | / | / | / |
| NVQ4+NA | / | / | / | / | Basic: $\mathbf{+ 4 0 . 7 5 \%}$ All contr $+27.69 \%$ | Basic: +2737\% <br> All contr $+17.23 \%$ | / | / |
| NVQ4+A | / | / | / | / | / | Basic: +34.40\% <br> All contr +29.19\% | Basic: +7.04\% <br> All contr +9.27\% | / |

Table 51: Estimated daily earnings premiums for different cohorts of learners whose highest learning aim is Full Level 2 in the relevant year

|  | 1 year | 2 year | 3 year | 4 year | 5 year | 6 year |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FL2 (cohort 2005) | 15.23 | 13.7 | 11.86 | 11.44 | 11.69 | 11.04 | Non-Ach. | 63310 |
| N obs | 88719 | 85498 | 80723 | 80914 | 81935 | 84076 | Achievers | 93334 |
| FL2 (cohort 2006) | 16.84 | 14.4 | 12.62 | 13.68 | 12.51 | 11.62 | Non-Ach. | 57852 |
| N obs | 100690 | 94617 | 94194 | 95109 | 97497 | 95633 | Achievers | 118240 |
| FL2 (cohort 2007) | 16.77 | 13.4 | 12.9 | 11.79 | 10.39 | / | Non-Ach. | 58074 |
| N obs | 102638 | 101393 | 101165 | 103441 | 100908 | / | Achievers | 136253 |
| FL2 (cohort 2008) | 15.09 | 12.67 | 12.36 | 11.79 | / | / | Non-Ach. | 80649 |
| N obs | 155688 | 153376 | 155516 | 150949 | / | / | Achievers | 209731 |
| FL2 (cohort 2009) | 16.34 | 14.53 | 12.68 | / | / | / | Non-Ach. | 103371 |
| $N$ obs | 235092 | 237628 | 229170 | / | / | / | Achievers | 319300 |
| FL2 (cohort 2010) | 13.9 | 11.16 | / | / | / | / | Non-Ach. | 107870 |
| N obs | 337672 | 323569 | / | / | / | / | Achievers | 437347 |
| FL2 (cohort 2011) | 11.72 | / | / | / | / | / | Non-Ach. | 108496 |
| N obs | 355474 | / | / | / | / | / | Achievers | 486706 |

Table 52: Estimated daily earnings premiums for different cohorts of learners whose highest learning aim is Full Level 3 in the relevant year

|  | $\mathbf{1}$ year | $\mathbf{2}$ year | $\mathbf{3}$ year | $\mathbf{4}$ year | $\mathbf{5}$ year | $\mathbf{6}$ year |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| FL3 (cohort 2005) | 1.13 | -2.9 | 3.11 | 6.66 | 11.48 | 12.25 | Non-Ach. | 46032 |
| N obs | 102636 | 100410 | 101503 | 104880 | 109317 | 113268 | Achievers | 126245 |
|  |  |  |  |  |  |  |  |  |
| FL3 (cohort 2006) | 3.71 | 0.35 | 3.23 | 8.84 | 12.97 | 12.8 | Non-Ach. | 45737 |


| Nobs | 1 year 125506 | 2 year <br> 121852 | 3 year <br> 127612 | 4 year 135186 | 5 year 140430 | 6 year <br> 138589 | Achievers | 165950 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FL3 (cohort 2007) | 2.8 | -1.31 | 4.7 | 10.94 | 13.72 | / | Non-Ach. | 42503 |
| N obs | 141437 | 142321 | 152473 | 161197 | 159407 | / | Achievers | 206804 |
| FL3 (cohort 2008) | 4.17 | 2.27 | 7.09 | 11.8 | / | / | Non-Ach. | 43956 |
| N obs | 148366 | 149392 | 158950 | 157117 | / | / | Achievers | 231700 |
| FL3 (cohort 2009) | 14.12 | 9.64 | 12.97 | / | / | / | Non-Ach. | 50781 |
| N obs | 190403 | 195797 | 192290 | / | / | / | Achievers | 271825 |
| FL3 (cohort 2010) | 11.79 | 7.99 | / | / | / | / | Non-Ach. | 57804 |
| N obs | 251856 | 240828 | / | 1 | / | / | Achievers | 342865 |
| FL3 (cohort 2011) | 6.25 | / | / | / | / | / | Non-Ach. | 65186 |
| N obs | 261912 | 1 | 1 | 1 | 1 | 1 | Achievers | 379744 |

Table 53: Estimated daily earnings premiums for different cohorts of learners whose highest learning aim is Level 3 Apprenticeship in the relevant year

|  | 1 year | 2 year | 3 year | 4 year | 5 year | 6 year |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FL3 Appr. (cohort 2005) | 14.78 | 10.34 | 14.86 | 13.94 | 15.59 | 16.13 | Non-Ach. | 46032 |
| N obs | 12833 | 12319 | 11798 | 11881 | 12218 | 12664 | Achievers | 126245 |
| FL3 Appr. (cohort 2006) | 17.35 | 14.3 | 15.62 | 14.73 | 15.42 | 15.89 | Non-Ach. | 45737 |
| N obs | 19596 | 18679 | 18658 | 19324 | 20005 | 19823 | Achievers | 165950 |
| FL3 Appr. (cohort 2007) | 16.45 | 16.97 | 16.98 | 17.99 | 15.05 | / | Non-Ach. | 42503 |
| N obs | 24623 | 24444 | 25043 | 26033 | 25608 | / | Achievers | 206804 |
| FL3 Appr. (cohort 2008) | 13.24 | 16.45 | 14.42 | 12.91 | / | / | Non-Ach. | 43956 |
| N obs | 29716 | 29910 | 31046 | 30487 | / | / | Achievers | 231700 |
| FL3 Appr. (cohort 2009) | 19.74 | 15.89 | 17.76 | / | / | / | Non-Ach. | 50781 |
| N obs | 35559 | 36639 | 35735 | / | / | / | Achievers | 271825 |
| FL3 Appr. (cohort 2010) | 16.13 | 12.59 | / | / | / | / | Non-Ach. | 57804 |
| N obs | 50501 | 48604 | / | / | / | / | Achievers | 342865 |
| FL3 Appr. (cohort 2011) | 13.74 | / | / | / | / | / | Non-Ach. | 65186 |
| N obs | 57934 | 1 | 1 | , | 1 | 1 | Achievers | 379744 |

Table 54: Coarsened Exact Matching and Difference-in-differences for a population of NVQ2 Men with an expected learning spell duration of less than 6 months

|  | Year 1 |  |  |  | Year 3 |  |  | Year 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
|  |  |  |  | CEM-DiD |  |  | CEM-DiD |  |  | CEM-DiD |
|  | empl. <br> prob. | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \\ \hline \end{gathered}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \\ \hline \end{gathered}$ |
| NVQ2 Men (<1 month contr) | -2.02 | 28.96 | 18.30 | 18.94 | 22.56 | 12.23 | 12.07 | 15.32 | 6.53 | 13.74 |
| $N$ | 79056 | 44719 | 44719 | 44719 | 6692 | 6692 | 6692 | 491 | 491 | 491 |
| r2_a | 0.613 | 0.007 | 0.152 | 0.052 | 0.009 | 0.130 | 0.085 | 0.007 | 0.252 | 0.251 |
| NVQ2 Men (<6 months contr) | -0.81 | 30.41 | 21.22 | 19.12 | 27.57 | 17.78 | 15.69 | 14.22 | 4.15 | 15.25 |
| $N$ | 102084 | 60039 | 60039 | 60039 | 9249 | 9249 | 9249 | 766 | 766 | 766 |
| r2_a | 0.006 | 0.022 | 0.149 | 0.045 | 0.029 | 0.132 | 0.071 | 0.011 | 0.152 | 0.109 |
| NVQ2 Men (>6 months contr) | 0.21 | 21.68 | 13.77 | 9.59 | 18.87 | 11.80 | 7.56 | 0.43 | -3.36 | 10.86 |
| $N$ | 87602 | 50168 | 50168 | 50168 | 7245 | 7245 | 7245 | 3226 | 3226 | 543 |
| r2_a | 0.596 | 0.005 | 0.138 | 0.045 | 0.006 | 0.125 | 0.081 | 0.001 | 0.194 | 0.095 |
| NVQ2 Men (all contr) | -0.33 | 27.97 | 19.52 | 16.26 | 25.62 | 16.66 | 13.22 | 11.14 | 1.54 | 7.64 |
| N | 108219 | 63561 | 63561 | 63561 | 9901 | 9901 | 9901 | 9872 | 9872 | 867 |
| r2_a | 0.573 | 0.023 | 0.146 | 0.043 | 0.028 | 0.132 | 0.069 | 0.006 | 0.149 | 0.108 |

Table 55: Coarsened Exact Matching and Difference-in-differences for a population of NVQ2 Women with an expected learning spell duration of less than 6 months

|  | Year 1 |  |  |  | Year 3 |  |  | Year 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
|  | empl. <br> prob. | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{aligned} & \hline \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{aligned} & \hline \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{aligned} & \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ |
| NVQ2 Women (<1 month contr) | -3.48 | 18.86 | 23.65 | 20.15 | 6.01 | 9.23 | 14.72 | N/A | N/A | N/A |
| N | 18384 | 9630 | 9630 | 9630 | 1548 | 1548 | 1548 | N/A | N/A | N/A |
| r2_a | 0.631 | 0.004 | 0.180 | 0.036 | 0.001 | 0.182 | 0.072 | N/A | N/A | N/A |
| NVQ2 Women (<6 months contr) | -1.12 | 10.79 | 14.23 | 12.32 | 6.30 | 8.44 | 9.41 | 0.47 | 12.02 | 7.13 |
| N | 30754 | 17693 | 17693 | 17693 | 3073 | 3073 | 3073 | 435 | 435 | 435 |
| r2_a | 0.607 | 0.003 | 0.181 | 0.032 | 0.002 | 0.159 | 0.038 | 0.001 | 0.206 | 0.125 |
| NVQ2 Women (>6 months contr) | 3.10 | -4.49 | 3.82 | 0.91 | -3.70 | 1.58 | 3.30 | N/A | N/A | N/A |
| N | 23548 | 12761 | 12761 | 12761 | 2120 | 2120 | 2120 | N/A | N/A | N/A |
| r2_a | 0.622 | 0.001 | 0.183 | 0.028 | 0.001 | 0.178 | 0.049 | N/A | N/A | N/A |
| NVQ2 Women (all contr) | -0.25 | 8.19 | 11.03 | 10.11 | 5.88 | 7.01 | 8.13 | 5.19 | 14.88 | 14.35 |
| N | 33835 | 19691 | 19691 | 19691 | 3472 | 3472 | 3472 | 497 | 497 | 497 |
| r2_a | 0.593 | 0.002 | 0.173 | 0.026 | 0.002 | 0.157 | 0.044 | 0.001 | 0.191 | 0.108 |

Table 56: Coarsened Exact Matching and Difference-in-differences for a population of NVQ2 Men with an expected learning spell duration between 6 months and 1 year

|  | Year 1 |  |  |  | Year 3 |  |  | Year 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (0) | (1) | (2) | $\frac{(9)}{\text { CEM-DiD }}$ | (1) | (2) |  | (1) | (2) | (9) |
|  |  |  |  |  |  | CEM-DiD |  |  |  | CEM-DiD |
|  | empl. <br> prob. | OLS <br> (basic) | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \\ \hline \end{gathered}$ |
| NVQ2 Men (<1 month contr) | -0.01 | 29.79 | 17.30 | 16.34 | 25.35 | 15.48 | 14.78 | 21.23 | 15.46 | 14.25 |
| N | 640812 | 227284 | 227284 | 227284 | 92304 | 92304 | 92304 | 22632 | 22632 | 22632 |
| r2_a | 0.567 | 0.006 | 0.181 | 0.094 | 0.005 | 0.127 | 0.130 | 0.005 | 0.113 | 0.168 |
| NVQ2 Men (<6 months contr) | 0.81 | 29.16 | 17.21 | 14.81 | 24.97 | 15.42 | 13.67 | 21.19 | 14.29 | 11.95 |
| N | 810322 | 316944 | 316944 | 316944 | 135497 | 135497 | 135497 | 35036 | 35036 | 35036 |
| r2_a | 0.561 | 0.019 | 0.175 | 0.077 | 0.016 | 0.132 | 0.109 | 0.016 | 0.119 | 0.147 |
| NVQ2 Men (>6 months contr) | 1.15 | 17.97 | 10.65 | 8.44 | 14.53 | 8.81 | 7.73 | 16.83 | 11.88 | 9.09 |
| N | 777003 | 301756 | 301756 | 301756 | 129469 | 129469 | 129469 | 31958 | 31958 | 31958 |
| r2_a | 0.553 | 0.006 | 0.164 | 0.080 | 0.005 | 0.119 | 0.115 | 0.007 | 0.111 | 0.157 |
| NVQ2 Men (all contr) | 1.11 | 24.36 | 14.48 | 11.81 | 20.41 | 12.50 | 10.79 | 19.63 | 13.42 | 10.43 |
| N | 903959 | 354886 | 354886 | 354886 | 154744 | 154744 | 154744 | 39966 | 39966 | 39966 |
| r2_a | 0.546 | 0.018 | 0.173 | 0.072 | 0.015 | 0.131 | 0.106 | 0.016 | 0.116 | 0.144 |

Table 57: Coarsened Exact Matching and Difference-in-differences for a population of NVQ2 Women with an expected duration between 6 months and 1 year

|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | empl. prob. | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | CEM-DiD PT (earnings) | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | CEM-DiD PT (earnings) | $\begin{gathered} \text { OLS } \\ \text { (basic) } \\ \hline \end{gathered}$ | OLS (fully specified) | $\begin{aligned} & \hline \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ |
| NVQ2 Women (<1 month contr) | 0.97 | 15.95 | 14.38 | 14.97 | 10.30 | 13.57 | 15.56 | 9.33 | 13.17 | 15.10 |
| N | 477969 | 211502 | 211502 | 211502 | 88393 | 88393 | 88393 | 25144 | 25144 | 25144 |
| r2_a | 0.511 | 0.002 | 0.128 | 0.046 | 0.001 | 0.095 | 0.064 | 0.001 | 0.078 | 0.084 |
| NVQ2 Women (<6 months contr) | 1.49 | 16.42 | 14.78 | 16.50 | 10.53 | 12.44 | 14.31 | 8.50 | 12.10 | 16.99 |
| N | 625676 | 290537 | 290537 | 290537 | 126349 | 126349 | 126349 | 37818 | 37818 | 37818 |
| r2_a | 0.511 | 0.007 | 0.121 | 0.044 | 0.004 | 0.093 | 0.061 | 0.003 | 0.077 | 0.086 |
| NVQ2 Women (>6 months contr) | 2.63 | 12.01 | 11.74 | 11.95 | 5.61 | 8.81 | 9.51 | 6.90 | 9.37 | 7.63 |
| N | 581593 | 266911 | 266911 | 266911 | 115914 | 115914 | 115914 | 33421 | 33421 | 33421 |
| r2_a | 0.498 | 0.003 | 0.122 | 0.041 | 0.001 | 0.093 | 0.059 | 0.001 | 0.078 | 0.078 |
| NVQ2 Women (all contr) | 1.97 | 14.88 | 13.46 | 14.35 | 8.82 | 10.79 | 12.22 | 8.24 | 10.98 | 13.10 |
| N | 706851 | 327359 | 327359 | 327359 | 146156 | 146156 | 146156 | 43653 | 43653 | 43653 |
| r2_a | 0.499 | 0.008 | 0.121 | 0.041 | 0.003 | 0.009 | 0.058 | 0.003 | 0.078 | 0.079 |

Table 58: Coarsened Exact Matching and Difference-in-differences for a population of NVQ2 Men with an expected duration of over 1 year

|  | Year 1 |  |  |  | Year 3 |  |  | Year 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
|  | empl. prob. | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{aligned} & \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{aligned} & \hline \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{aligned} & \text { CEM-DiD } \\ & \text { PT } \\ & \text { (earnings) } \end{aligned}$ |
| NVQ2 Men (<1 month contr) | 12.72 | 28.55 | 21.79 | 39.18 | 9.17 | 6.52 | 29.86 | N/A | N/A | N/A |
| N | 34143 | 2446 | 2446 | 2446 | 1963 | 1963 | 1963 | N/A | N/A | N/A |
| r2_a | 0.567 | 0.007 | 0.216 | 0.119 | 0.001 | 0.140 | 0.173 | N/A | N/A | N/A |
| NVQ2 Men (<6 months contr) | 7.00 | 37.78 | 23.29 | 18.67 | 34.36 | 22.70 | 19.37 | 27.82 | 16.26 | 17.10 |
| N | 70156 | 16742 | 16742 | 16742 | 14494 | 14494 | 14494 | 5502 | 5502 | 5502 |
| r2_a | 0.382 | 0.029 | 0.197 | 0.122 | 0.026 | 0.133 | 0.162 | 0.022 | 0.138 | 0.189 |
| NVQ2 Men (>6 months contr) | 3.85 | 21.40 | 15.11 | 14.19 | 16.91 | 12.46 | 12.87 | 14.81 | 7.83 | 2.01 |
| N | 80094 | 21415 | 21415 | 21415 | 18364 | 18364 | 18364 | 6776 | 6776 | 6776 |
| r2_a | 0.367 | 0.012 | 0.200 | 0.128 | 0.135 | 0.135 | 0.170 | 0.006 | 0.157 | 0.203 |
| NVQ2 Men (all contr) | 4.91 | 29.04 | 18.01 | 14.68 | 24.86 | 16.50 | 14.33 | 22.17 | 11.95 | 4.86 |
| N | 90945 | 25289 | 25289 | 25289 | 21735 | 21735 | 21735 | 8343 | 8343 | 8343 |
| r2_a | 0.376 | 0.028 | 0.204 | 0.116 | 0.021 | 0.141 | 0.155 | 0.019 | 0.153 | 0.187 |

Table 59: Coarsened Exact Matching and Difference-in-differences for a population of NVQ2 Women with an expected duration of over 1 year

|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CEM-DiD |  |  |  |  | CEM-DiD |  |  |  | CEM-DiD |
|  | empl. <br> prob. | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ |
| NVQ2 Women (<1 month contr) | 13.29 | 26.52 | 21.25 | 33.68 | 17.80 | 11.13 | 28.66 | 19.83 | 12.24 | 23.73 |
| N | 108293 | 11243 | 11243 | 11243 | 7161 | 7161 | 7161 | 2708 | 2708 | 2708 |
| r2_a | 0.231 | 0.005 | 0.103 | 0.140 | 0.003 | 0.104 | 0.157 | 0.004 | 0.117 | 0.166 |
| NVQ2 Women (<6 months contr) | 10.49 | 22.59 | 14.63 | 20.77 | 17.94 | 10.70 | 18.86 | 19.53 | 9.88 | 16.70 |
| $N$ | 152005 | 24815 | 24815 | 24815 | 18387 | 18387 | 18387 | 7780 | 7780 | 7780 |
| r2_a | 0.285 | 0.012 | 0.133 | 0.114 | 0.009 | 0.122 | 0.129 | 0.013 | 0.128 | 0.129 |
| NVQ2 Women (>6 months contr) | 5.22 | 8.77 | 6.06 | 9.33 | 7.84 | 5.37 | 8.81 | 8.87 | 5.36 | 7.78 |
| $N$ | 150967 | 25225 | 25225 | 25225 | 18645 | 18645 | 18645 | 7486 | 7486 | 7486 |
| r2_a | 0.264 | 0.002 | 0.141 | 0.116 | 0.002 | 0.132 | 0.130 | 0.003 | 0.123 | 0.120 |
| NVQ2 Women (all contr) | 7.96 | 16.53 | 9.94 | 14.76 | 13.45 | 7.66 | 12.89 | 15.28 | 7.60 | 13.30 |
| $N$ | 183415 | 31701 | 31701 | 31701 | 23881 | 23881 | 23881 | 10160 | 10160 | 10160 |
| r2_a | 0.289 | 0.009 | 0.136 | 0.106 | 0.007 | 0.127 | 0.119 | 0.010 | 0.122 | 0.117 |

Table 60: Coarsened Exact Matching and Difference-in-differences for a population of NVQ3 Men with an expected duration of less than 1 year

|  | Year 1 |  |  |  | Year 3 |  |  | Year 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
|  |  |  |  | CEM-DiD |  |  | CEM-DiD |  |  | CEM-DiD |
|  | empl. <br> prob. | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ |
| NVQ2 Men (<1 month contr) | -2.35 | 23.83 | 16.62 | 13.13 | 29.33 | 24.23 | 21.05 | N/A | N/A | N/A |
| $N$ | 31055 | 12196 | 12196 | 12196 | 1963 | 1963 | 1569 | N/A | N/A | N/A |
| r2_a | 0.501 | 0.008 | 0.218 | 0.142 | 0.029 | 0.196 | 0.179 | N/A | N/A | N/A |
| NVQ2 Men (<6 months contr) | 0.44 | 22.57 | 15.23 | 13.58 | 27.25 | 19.02 | 15.35 | N/A | N/A | N/A |
| $N$ | 53199 | 25849 | 25849 | 25849 | 3553 | 3553 | 3553 | N/A | N/A | N/A |
| r2_a | 0.518 | 0.016 | 0.176 | 0.123 | 0.038 | 0.162 | 0.176 | N/A | N/A | N/A |
| NVQ2 Men (>6 months contr) | 1.97 | 13.05 | 10.40 | 9.10 | 21.89 | 11.51 | 4.79 | N/A | N/A | N/A |
| $N$ | 48374 | 22373 | 22373 | 22373 | 2697 | 2697 | 2697 | N/A | N/A | N/A |
| r2_a | 0.502 | 0.004 | 0.166 | 0.120 | 0.013 | 0.158 | 0.145 | N/A | N/A | N/A |
| NVQ2 Men (all contr) | 0.94 | 18.66 | 13.29 | 11.73 | 26.34 | 17.44 | 15.57 | N/A | N/A | N/A |
| $N$ | 62476 | 31113 | 31113 | 31113 | 4360 | 4360 | 4360 | N/A | N/A | N/A |
| r2_a | 0.505 | 0.014 | 0.164 | 0.113 | 0.037 | 0.154 | 0.169 | N/A | N/A | N/A |

Table 61: Coarsened Exact Matching and Difference-in-differences for a population of NVQ3 Women with an expected duration of less than 1 year

|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | empl. <br> prob. | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) |  | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) |  | $\begin{gathered} \text { OLS } \\ \text { (basic) } \\ \hline \end{gathered}$ | OLS (fully specified) |  |
| NVQ2 Women (<1 month contr) | 2.73 | 6.62 | 11.20 | 13.42 | 18.71 | 11.00 | 15.49 | N/A | N/A | N/A |
| $N$ | 72340 | 27877 | 27877 | 27877 | 2732 | 2732 | 2732 | N/A | N/A | N/A |
| r2_a | 0.367 | 0.001 | 0.285 | 0.137 | 0.014 | 0.184 | 0.152 | N/A | N/A | N/A |
| NVQ2 Women (<6 months contr) | 1.73 | 6.55 | 11.69 | 14.54 | 15.68 | 11.08 | 18.91 | 17.74 | 10.85 | 13.81 |
| N | 104103 | 48052 | 48052 | 48052 | 5919 | 5919 | 5919 | 1172 | 1172 | 1172 |
| r2_a | 0.390 | 0.001 | 0.216 | 0.106 | 0.014 | 0.135 | 0.111 | 0.017 | 0.112 | 0.076 |
| NVQ2 Women (>6 months contr) | 1.88 | 1.42 | 7.72 | 7.48 | 11.58 | 9.60 | 7.73 | N/A | N/A | N/A |
| N | 99177 | 45087 | 45087 | 45087 | 4204 | 4204 | 4204 | N/A | N/A | N/A |
| r2_a | 0.383 | 0.001 | 0.226 | 0.109 | 0.002 | 0.150 | 0.113 | N/A | N/A | N/A |
| NVQ2 Women (all contr) | 1.81 | 4.08 | 9.41 | 11.95 | 14.22 | 9.85 | 15.06 | 14.70 | 10.24 | 9.39 |
| N | 118075 | 55793 | 55793 | 55793 | 7075 | 7075 | 7075 | 1497 | 1497 | 1497 |
| r2_a | 0.393 | 0.001 | 0.199 | 0.094 | 0.012 | 0.125 | 0.101 | 0.011 | 0.102 | 0.087 |

Table 62: Coarsened Exact Matching and Difference-in-differences for a population of NVQ3 Men with an expected duration of over 1 year

|  | Year 1 |  |  |  | Year 3 |  |  | Year 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
|  |  |  |  | CEM-DiD |  |  | CEM-DiD |  |  | CEM-DiD |
|  | empl | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ | $\begin{aligned} & \text { OLS } \\ & \text { (basic) } \end{aligned}$ | OLS (fully specified) | $\begin{gathered} \text { PT } \\ \text { (earnings) } \end{gathered}$ |
| NVQ2 Men (<1 month contr) | 10.31 | 32.57 | 22.39 | 19.42 | 29.93 | 21.15 | 21.30 | 25.94 | 16.88 | 20.46 |
| N | 146204 | 30030 | 30030 | 30030 | 12076 | 12076 | 12076 | 2814 | 2814 | 2814 |
| r2_a | 0.218 | 0.008 | 0.182 | 0.259 | 0.011 | 0.151 | 0.253 | 0.014 | 0.160 | 0.189 |
| NVQ2 Men (<6 months contr) | ) 6.70 | 29.84 | 21.73 | 24.19 | 28.96 | 21.82 | 24.34 | 24.52 | 18.04 | 15.45 |
| N | 213696 | 64182 | 64182 | 64182 | 28902 | 28902 | 28902 | 8249 | 8249 | 8249 |
| r2_a | 0.255 | 0.022 | 0.177 | 0.216 | 0.028 | 0.150 | 0.220 | 0.030 | 0.141 | 0.175 |
| NVQ2 Men (>6 months contr) | ) 4.34 | 19.33 | 16.39 | 18.58 | 19.93 | 16.59 | 16.67 | 17.16 | 14.07 | 8.21 |
| N | 234811 | 72163 | 72163 | 72163 | 33187 | 33187 | 33187 | 9658 | 9658 | 9658 |
| r2_a | 0.250 | 0.011 | 0.164 | 0.203 | 0.016 | 0.132 | 0.210 | 0.017 | 0.123 | 0.189 |
| NVQ2 Men (all contr) | 5.06 | 24.06 | 18.81 | 20.92 | 24.05 | 18.97 | 19.73 | 21.08 | 15.88 | 11.10 |
| N | 259648 | 82295 | 82295 | 82295 | 38870 | 38870 | 38870 | 12112 | 12112 | 12112 |
| r2_a | 0.261 | 0.023 | 0.167 | 0.192 | 0.028 | 0.141 | 0.197 | 0.028 | 0.128 | 0.167 |

Table 63: Coarsened Exact Matching and Difference-in-differences for a population of NVQ3 Women with an expected duration of over 1 year

|  | (0) | (1) | (2) | (9) | (1) | (2) | (9) | (1) | (2) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | empl. prob. | $\begin{gathered} \text { OLS } \\ \text { (basic) } \end{gathered}$ | OLS (fully specified) |  | $\begin{gathered} \text { OLS } \\ \text { (basic) } \\ \hline \end{gathered}$ | OLS (fully specified) |  | $\begin{gathered} \text { OLS } \\ \text { (basic) } \\ \hline \end{gathered}$ | OLS (fully specified) |  |
| NVQ2 Women (<1 month contr) | 4.02 | 14.89 | 19.81 | 23.23 | 12.15 | 17.40 | 18.07 | 9.25 | 16.86 | 26.63 |
| N | 285920 | 95089 | 95089 | 95089 | 41344 | 41344 | 41344 | 12556 | 12556 | 12556 |
| r2_a | 0.368 | 0.001 | 0.068 | 0.069 | 0.001 | 0.065 | 0.088 | 0.001 | 0.073 | 0.086 |
| NVQ2 Women (<6 months contr) | 2.88 | 17.84 | 19.42 | 22.64 | 14.61 | 16.00 | 16.66 | 12.98 | 14.93 | 14.48 |
| N | 377003 | 144399 | 144399 | 144399 | 72871 | 72871 | 72871 | 24102 | 24102 | 24102 |
| r2_a | 0.384 | 0.006 | 0.089 | 0.073 | 0.005 | 0.082 | 0.091 | 0.005 | 0.071 | 0.085 |
| NVQ2 Women (>6 months contr) | 3.20 | 10.25 | 13.22 | 15.65 | 8.71 | 11.24 | 12.82 | 11.26 | 13.71 | 11.15 |
| N | 403133 | 155835 | 155835 | 155835 | 80698 | 80698 | 80698 | 26689 | 26689 | 26689 |
| r2_a | 0.378 | 0.003 | 0.088 | 0.068 | 0.002 | 0.079 | 0.086 | 0.004 | 0.072 | 0.076 |
| NVQ2 Women (all contr) | 3.04 | 14.04 | 15.50 | 18.43 | 11.66 | 12.88 | 14.17 | 12.31 | 13.66 | 12.10 |
| N | 442674 | 173509 | 173509 | 173509 | 91326 | 91326 | 91326 | 31121 | 31121 | 31121 |
| r2_a | 0.388 | 0.007 | 0.091 | 0.070 | 0.005 | 0.081 | 0.084 | 0.007 | 0.072 | 0.075 |

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