

## Temporary Jobs in Ireland: Does Class Influence Job Quality?\*

RICHARD LAYTE

PHILIP J. O'CONNELL

HELEN RUSSELL

*The Economic and Social Research Institute, Dublin*

---

*Abstract:* Fixed term and casual employment have become increasingly common in OECD countries in the last decade. Research suggests that non-permanent contracts are associated with lower job quality. This paper examines differentials in three indicators of job quality in Ireland: hourly wage, probability of training and level of autonomy. The paper also examines four hypotheses on job quality derived from transaction cost and insider-outsider theories which suggest an important interaction between social class position, non-permanent employment and job quality. Results show that fixed term and casual contracts are associated with lower earnings, less training and lower autonomy.

### I INTRODUCTION

Employment statistics show that “atypical” employment, by which we mean fixed term, casual or part-time employment, has increased substantially over the last decade and a half in most OECD countries. In fact, in many European countries, much of the employment growth that has been achieved in recent years has been in the form of atypical employment. This growth has been accompanied by increasing concern about the quality of atypical jobs,

\*The research for this paper was carried out under the auspices of the EqualSoc Network of Excellence with funding from the European Commission. The data used were drawn from the 2003 *Changing Workplace Survey* commissioned by the National Centre for Partnership and Performance.

particularly with respect to pay and conditions. A considerable research literature now shows that temporary workers tend to receive lower rates of pay and are less likely to be entitled to occupational pensions and other fringe benefits (Kalleberg, Reskin, and Hudson, 2000; Almond and Rubery, 1998) than permanent full-time employees. This paper examines a narrower form of atypical employment – fixed term and casual contracts, and the impact that this has in the Irish context.

However, the paper also seeks to add to the literature on atypical employment by examining the relationship between contract type and social class. Historically, social class has been defined in a number of different ways, but in recent years it has come to be defined primarily in terms of employment relations and in particular, the implications of employment relations for the determination of contract type. The higher the level of skills and discretion required of employees, the more difficulty employers have in monitoring performance. Given this, it is in the interests of employers to offer longer-term relationships to professional and managerial employees with more fringe benefits, increasing seniority and firm specific investments in human capital. Logically, it can be argued that the same process drives the distribution of fixed term and casual contracts by employers. Where skills, “asset specificity” and transaction costs are high employers have an incentive to offer permanent contracts. Where skills are lower and more readily available in the labour market and transaction costs low, employers have a higher incentive to offer fixed term contracts.

Our interest in the interaction of social class and contract type also stems from the interesting consequences that may ensue from the interaction of high skill, high transaction cost occupations with fixed term contracts. First of all, the class theory above suggests that this combination should be relatively infrequent. However, two important theories of the labour process, notably, transaction cost (Williamson, 1985; Williamson 1994) and insider/outsider theories (Lindbeck and Snower, 1988) offer contradictory prognoses of the results for wages of this combination. Transaction cost theories predict a wage premium and insider/outsider theories a wage penalty. The paper also seeks to examine whether higher skilled employees in fixed-term positions suffer additional penalties in other dimensions of job quality, notably the availability of training and level of autonomy.

The paper unfolds as follows. In the next section we examine recent literature on fixed term and casual employment and developments in the Irish context before turning to conceptual issues in the third section. The third section also sets out the four hypotheses examined in the paper. In the fourth section we outline the data used in this paper. In the fifth section we begin analyses by examining the distribution of different contract types in Ireland.

The sixth section examines the consequences of fixed term and casual employment for job quality in the form of wages, training, autonomy. The seventh section then estimates models of our measures of job quality to examine the independent and interactive effects of social class and contract type. In the eighth and final section we summarise the paper and draw out some conclusions.

## II PREVIOUS RESEARCH ON THE QUALITY OF TEMPORARY JOBS

As Table I shows, the numbers working on fixed term contracts in Ireland actually fell between the mid-1990s and 2004, from a high of 10 per cent in 1995 to 4.1 per cent in 2004, while over the same period, the average incidence of fixed-term contracts across the EU increased from 12 per cent to almost 14 per cent (O'Connell and Russell, 2007). Thus, with respect to this dimension of labour market flexibility the Irish pattern of fixed-term working differs from the European trend. This development has to be put into context. The period between 1993 and 2004 in Ireland was one of remarkable employment growth with total employment increasing by 55 per cent from less than 1.2 million to 1.8 million. In this environment, employers found it difficult to recruit even unskilled labour and this probably meant that employers were more likely to offer permanent or open-ended employment both to ensure supply and in the hope of retaining workers.

Table 1: *Proportion and Change in Fixed Term Contracts (Per Cent of Total Employment) in Selected Countries*

|                | 1995 | 2004 | Change |
|----------------|------|------|--------|
| Ireland        | 10.0 | 4.1  | -5.9   |
| Belgium        | 5.4  | 8.7  | +3.3   |
| Denmark        | 11.6 | 9.5  | -2.1   |
| Germany        | 10.5 | 12.4 | +2.1   |
| Spain          | 35.2 | 32.5 | -2.7   |
| France         | 12.4 | 12.9 | +0.5   |
| Italy          | 7.4  | 11.8 | +4.4   |
| Netherlands    | 11.4 | 14.8 | +3.4   |
| United Kingdom | 7.2  | 6.0  | -1.2   |
| EU 15          | 12.0 | 13.6 | +1.6   |

*Source: Employment in Europe 2006, Annex 2: Key Employment Indicators.*

It should, of course, be recognised that Irish employers may have less need of fixed-term contracts than in some other European countries because of the relative weakness of employment protection legislation for those with

permanent or open ended contracts in Ireland. In this context, it is useful to note that fixed-term contracts in Britain, another country with relatively weak employment protection, fluctuated between 6 per cent and 7 per cent over the past decade. As in Ireland, fixed term employment has not increased in Britain in recent years.

While we can measure the aggregate trends in fixed term employment, little is known about temporary employment in Ireland, and we know little about the quality of temporary jobs in Ireland. Two broad perspectives suggest very different interpretations concerning the relative quality of temporary jobs. The benign approach argues that temporary or fixed-term employment provide a bridge to standard employment contracts. In this view temporary jobs provide work experience and may be important as a port of entry to the regular labour market for school-leavers (Gangl, 2003; McGinnity, Mertens, and Gundert, 2005), as a means of reintegrating labour market outsiders into paid work (Zijl, Van Den Berg, and Heyma, 2004), or as an alternative form of labour force attachment for women who want discontinuous employment in order to allow juxtaposition of childcare with labour market participation (Booth, Francesconi and Frank, 2002).

The alternative, more pessimistic approach, regards temporary jobs as inferior to standard employment, with lower pay, less job security and less access to job-related training (Booth, Francesconi and Frank, 2002). There is also the concern that fixed term workers are less likely to subsequently achieve permanent contracts, leading to long-term insecurity (Gash and McGinnity, 2007; Giesecke and Gross, 2004).

### III THE RELATIONSHIP BETWEEN FIXED TERM/CASUAL CONTRACTS AND SOCIAL CLASS

Social class has been defined in a large number of different ways (Marshall *et al.*, 1988) but one of the more convincing theoretical developments of recent years has been in the work of John Goldthorpe (2000) who draws on the transaction cost theories of Williamson (1985; 1994). Goldthorpe puts forward a causal process based on employment contracts that could account for the empirical observations consistently found using the Erikson/Goldthorpe class typology in terms of employment outcomes. We want to argue here that this insight can also account for the uneven distribution of atypical contracts across the labour market.

Williamson (1985; 1994) has suggested that because employers have inherent problems in monitoring the productivity of employees whose jobs demand high levels of judgement (which he refers to as “asset specificity”),

there is an incentive for them to offer conditions that draw their own interests and those of the employee together. Rather than offering employment contracts with discrete exchanges of money for labour, the most extreme form being the “piece rate”, employers will attempt to establish a more permanent relationship with the employee by offering longer-term benefits such as pensions, increasing seniority and profit sharing.

Goldthorpe (2000) shows how these processes produce the pattern of employment contracts that underlie the EGP class schema. This schema aims “...to differentiate positions within labour markets and production units ..., in terms of the employment relations that they entail” (Erikson and Goldthorpe 1992, p. 37). The schema thus differentiates first and foremost, between employers and the self-employed since they differ fundamentally in terms of the control and authority that they exercise. Among those who are employed, there is a basic differentiation between two ideal-typical employment contracts: the “service” contract and the “labour contract”. If a job has no problems associated with monitoring the quality or quantity of the work done and demands skills that are widely available in the general population, it is efficient for an employer to offer that employee a contract based upon what are termed “labour contract” principles. This means that employment can take the form of short, discrete exchanges of money for time. On the other hand, where monitoring would be difficult (and perhaps impossible if specialist knowledge is required), and moreover may produce negative effects, and asset specificity is high, it is efficient for the employer to offer a “service type” contract where salaried payment, profit, or performance related benefits and a long-term career structure are exchanged for a more multifaceted and diffuse effort in the employers’ best interests. The long-term commitment and profit related salary systems are important aspects of the governance system of the transaction that keeps the interests of the parties aligned.

In the context of the present paper, Goldthorpe’s theory suggests that employers have far less incentive to offer short or fixed term contracts to those carrying out “service” type occupations. This leads to the first of the hypotheses that we will be examining in this paper:

*HYPOTHESIS ONE: there will be an inverse relationship between social class position and the probability of being employed on a fixed-term or casual contract.*

What happens though if employers have to offer short-term contracts to high skill, high discretion employees? Though infrequent this is common in areas such as IT, medicine or legal services where product development times are short or leave of permanent employees needs to be covered. Goldthorpe’s

theory would also suggest a particular form of interaction between social class position and fixed term and casual contracts. Although the service class employment relationship is in essence defined by the desire of the employer to nurture a more long-term relationship, this is clearly not the case where a fixed term or casual contract is offered, unless it is some form of training contract. Such a situation presents employers with a difficult problem. Service class jobs are likely to require the application of specialist knowledge, judgement and autonomy in the interests of the employer, but the temporary nature of the relationship means that they cannot offer job stability, the prospect of future seniority or fringe benefits as an incentive. In this situation it seems logical for employers to use “efficiency wages” (Gintis, 1976; Salop, 1979), i.e a wage premium above the market clearing rate of similar, permanent employees who have more fringe benefits. This points to our second hypothesis:

*HYPOTHESIS TWO: class differentials in wage levels will widen for those holding fixed term or casual contracts compared to their permanent peers.*

Although wage premiums among higher social class groups may be the outcome of combining higher skills with fixed term jobs according to Goldthorpe’s theory, other theories predict a different outcome. Insider-outsider theory (Lindbeck and Snower, 1988) would dictate that increasing length of service would mean that labour turnover costs would increase and monitoring costs would decrease over time making existing employees more attractive than outsiders. The differential between insiders and outsiders would increase more steeply the greater the difficulty of monitoring suggesting that insider-outsider differentials would be largest for service class relationships. Similarly, in service type contracts in managerial or supervisory positions, employees build up firm specific human capital over time that are expensive to replace were they to leave. These bilateral monopolies will form internal labour markets within which existing employees are buffered from the outside labour market. This theoretical position would seem to suggest a third, but contradictory hypothesis to the second above:

*HYPOTHESIS THREE: class differentials in wage levels will narrow for those holding fixed term or casual contracts compared to their permanent peers.*

The two theories above apply specifically to wages, but it is not clear what implication the interaction of class and contract type would have for other dimensions of job quality such as the availability of training and level of

autonomy. The provision of autonomy would seem to be a function of the skills required to carry out a job and the length of current tenure and so should be positively correlated with class and tenure. However, where higher class and short tenure are combined this relationship implies that there will be a consequent reduction in autonomy, but no specific penalty applied.

The Human Capital approach, which regards the provision of training as an investment (see for example Becker, 1975) would expect that the probability of training would be determined by skill level of the employee and the length of the expected relationship, rather than the nature of the relationship. Once again we might expect that a fixed term or casual contract would reduce investment at similar rates across class groups preserving class differentials. This leads us to a fourth hypothesis:

*HYPOTHESIS FOUR: class differentials in autonomy and training will be preserved for those with fixed term and casual contracts compared to their permanent peers.*

At this juncture it is important to set this theoretical discussion within the context of the Irish labour market around the turn of the 21<sup>st</sup> Century (the data used for analysis were collected in 2003 – see the next section). In the five years after 2000 the ILO unemployment rate in Ireland was never more than 4.4 per cent which, incidentally, was identical to the average GNP growth rate. Fitz Gerald (2000) has shown that increasing average educational level in Ireland meant that there was a reducing supply of unskilled labour and this meant that recruitment and employee retention were difficult across the social class scale. This situation may have meant that employers were far less able to offer temporary contracts than they would have been if the labour market was less tight and may mean that we see very little difference in the prevalence of casual and temporary contracts across classes. This situation may also have meant that differences between social class groups with and without a temporary contract were minimised. If so this will evidence itself as no significant interaction between social class and temporary and casual contracts. It could also be asked why employers would offer temporary or casual contracts to service class employees when their interests clearly lay in establishing longer-term relationships with these types of employees. This is certainly the case, but employers may often have no choice but to offer short-term contracts if the project this employee is engaged on is of a short duration itself or an existing service class employee is leaving for a short period that needs to be covered (for maternity leave for example).

We will return to these hypotheses in Section VII when we estimate equations including interactions between social class and contract type.

## IV DATA

This paper draws on the data collected in the nation-wide *Changing Workplace Survey* of employees in the Republic of Ireland commissioned by the National Centre for Partnership and Performance and conducted by the ESRI in 2003 (O'Connell *et al.*, 2004). The survey consists of a nationally representative sample of over 5000 employees and therefore offers a unique and comprehensive picture of the experiences of Irish workers.

Fieldwork for the survey was carried out between June and early September 2003 using a telephone methodology. The sample is of individuals living in private households. Three hundred sampling points were selected at random throughout the country and telephone numbers were randomly generated within each area code. Respondents not working as employees were excluded from the sample. A total of 5,198 interviews were completed. This represented a response rate of 46.5 per cent. The data are re-weighted by national population parameters to render them representative of the national population of employees at work in summer 2003.

The definition of all variables used in the analyses are given in Appendix Table A1. The first of three dependent variables used here is net hourly wage. This was collected as a continuous variable with categories as a backup where respondents could not remember the exact amount. These categories were returned to a continuous measure once again using the category mid-points. To remove the impact of differential hours we divide the net income of the respondent by the hours worked in the pay period. As is standard in wage equation modelling the resulting continuous variable was logged for modelling purposes.

The second dependent variable used in the analysis is participation in employer provided training or education in the last two years. This was asked in the questionnaire as a yes/no question and is entered into the analysis as a dummy variable.

Our last dependent variable is the level of autonomy of the job. This was measured using the mean of six questions on the level of influence that the respondent had over their work to which they responded on a scale from "almost always" to "rarely or almost never" coded as 0 to 3. The six questions combined in this scale are shown in full in Appendix Table A1. The resulting scale varied from zero to three. This was transformed for multivariate analysis using a z-score.

The other important variable from the analysis is the social class scale of Robert Erikson and John Goldthorpe known, unsurprisingly, as the EG schema (Erikson and Goldthorpe, 1992). This was constructed using the International Classification of Occupations 1988 plus data on whether the



respondent managed or supervised others as part of their job. The class scale is made up of eleven groupings in its most disaggregated form but we use a five category aggregated version by excluding the self-employed categories and combining smaller class groups for analysis as set out in Appendix Table A1.

## V SOCIAL CLASS DIFFERENTIALS IN THE DISTRIBUTION OF ATYPICAL EMPLOYMENT

The theoretical discussion earlier in this paper suggested that there is less incentive for employers to offer fixed term and casual contracts to employees on “service” type contracts than those on “labour type” contracts. If so our expectation would be that the professional and managerial class would be the least likely to receive fixed term and casual contracts followed by the higher routine non-manual. Atypical contracts should be most common among unskilled manual employees for whom monitoring costs are lowest. Table 2 shows that this is indeed the pattern that we see.

Table 2: *Proportion of Fixed Term and Casual Contracts by Social Class and Sex*

|       |                             | Men   |       |        | Women |       |        | All   |       |        |
|-------|-----------------------------|-------|-------|--------|-------|-------|--------|-------|-------|--------|
|       |                             | Perm  | Fixed | Casual | Perm  | Fixed | Casual | Perm  | Fixed | Casual |
| I.    | Prof. and Managerial Higher | 93.6  | 5.2   | 1.2    | 92.6  | 6.1   | 1.3    | 93.2  | 5.6   | 1.2    |
| II.   | Prof. and Managerial Lower  | 91.7  | 7.2   | 1.1    | 82.8  | 15.4  | 1.8    | 87.5  | 11.1  | 1.4    |
| IIIa. | Routine Non-Manual Higher   | 87.2  | 11.6  | 1.2    | 82.6  | 15.6  | 1.9    | 83.9  | 14.5  | 1.7    |
| IIIb. | Routine Non-Manual Lower    | 71.9  | 17.9  | 10.1   | 69.8  | 22.2  | 8.1    | 70.3  | 21.1  | 8.6    |
| V.    | Technical/Supervisory       | 93.9  | 5.2   | 0.9    | 98.6  | 0.5   | 1.0    | 94.7  | 4.4   | 0.9    |
| VI.   | Skilled Manual              | 87.0  | 11.7  | 1.3    | 72.0  | 23.6  | 4.5    | 83.1  | 14.8  | 2.1    |
| VIIa. | Semi and Unskilled Manual   | 86.2  | 10.2  | 3.6    | 73.4  | 22.9  | 3.8    | 82.9  | 13.4  | 3.6    |
| VIIb. | Agricultural                | 75.6  | 17.0  | 7.4    | 57.6  | 36.7  | 5.7    | 72.0  | 21.0  | 7.0    |
| N     |                             | 2,108 | 228   | 76     | 2,219 | 449   | 109    | 4,327 | 677   | 185    |

*Note:* Class IV in the EG Class schema are self-employed and are not included in any of the analyses in this paper. See Section III.

Professional and managerial employees have the lowest rates, although similar rates are also found among technical employees and supervisors. Rates are considerably higher among all other classes and we actually see very little differentiation between manual and low skilled white-collar employees, with routine non-manual employees just as likely to be employed on fixed or casual contracts. As we saw earlier in the paper, the proportion with an atypical contract tends to be higher among women across all classes, but the differential between men and women is highest among the manual working class groups where women have at least double the probability of having an atypical contract.

As suggested by hypothesis one, it is clear that non-permanent contracts are not evenly distributed across the class scale and that professional and managerial employees are far less likely either to be offered or accept these types of contracts.

So far in this paper we have been assuming that atypical contracts are necessarily worse than permanent employment in terms of job quality. In the next section we put this assumption to the test by examining the impact of contract type on three dimensions of job quality: wages, probability of receiving training and autonomy.

## VI THE IMPACT OF CONTRACT ON JOB QUALITY

Our first measure of job quality is the net hourly wage that the person receives.

Table 3: *Distribution of Fixed Term and Casual Work and Mean Hourly Wages by Type of Contract and Sex*

| <i>Hourly Wages</i>         | <i>Men</i> | <i>Women</i> | <i>All</i> |
|-----------------------------|------------|--------------|------------|
| Permanent ( <i>p</i> )      | 13.17      | 11.22        | 12.31      |
| Fixed Term ( <i>f</i> )     | 10.78      | 9.53         | 10.03      |
| Casual ( <i>c</i> )         | 7.60       | 7.99         | 7.83       |
| <i>Wage Differences</i>     |            |              |            |
| ( <i>p</i> ) – ( <i>f</i> ) | -2.39***   | -1.69***     | -2.28***   |
| ( <i>p</i> ) – ( <i>c</i> ) | -5.57***   | -3.23***     | -4.48***   |
| ( <i>f</i> ) – ( <i>c</i> ) | -3.18**    | -1.54*       | -2.20***   |

Significance Key: \*=P<0.05, \*\*=P<0.01, \*\*\*=P<0.001 *n.s*=Not Significant.

Table 3 shows that being employed on a fixed term or casual contract has a substantial impact on hourly earnings. For men, mean hourly earnings for those on a fixed term contract were €2.39 an hour or 18 per cent lower than

for those on a permanent contract in 2003. The impact of a casual contract was even more pronounced at €5.57 – 42 per cent lower than the earnings of those on permanent contracts. For women the gap for fixed term employees compared to permanent employees was €1.69 or 15 per cent; for casual employees the difference was €3.23 or 29 per cent. Though women are more likely to receive fixed term and casual contracts, from these figures at least, it appears that their impact is proportionately less than for men, although still very substantial.

A major issue for analysts of atypical employees has been the lower access that these employees get to training and career development. Table 4 shows the proportion receiving training either within their organisation or paid for by the organisation that they worked for in the last two years.

Table 4: *Proportion Receiving Training in the Last Two Years*

|            | <i>Men</i> | <i>Women</i> | <i>All</i> |
|------------|------------|--------------|------------|
| Permanent  | 51.3(ref)  | 48.5(ref)    | 50.0(ref)  |
| Fixed Term | 40.1**     | 40.4**       | 40.3**     |
| Casual     | 21.5***    | 24.9***      | 23.4***    |
| N          | 2,409      | 2,775        | 5,184      |

Significance Key: \*=P<0.05, \*\*=P<0.01, \*\*\*=P<0.001 *n.s*=Not Significant.

This shows that those respondents with permanent contracts are around 10 per cent more likely to have received training in the last two years than those with fixed term contracts and over twice as likely to have done so than those with casual contracts. These differentials are marginally larger for men but are statistically significant for both sexes.

The NCPP survey asked respondents about a large number of aspects of their job including a battery of six questions which asked about different dimensions of autonomy in their job. As described in Section III these questions were combined into a single measure by taking the mean of responses on a scale from zero to three. The results across sex and contract status are shown in Table 5.

Table 5: *Mean and Median Level of Autonomy by Sex and Contract Type*

|            | <i>Men</i>  |               | <i>Women</i> |               | <i>All</i>  |               |
|------------|-------------|---------------|--------------|---------------|-------------|---------------|
|            | <i>Mean</i> | <i>Median</i> | <i>Mean</i>  | <i>Median</i> | <i>Mean</i> | <i>Median</i> |
| Permanent  | 1.53 (ref)  | 1.50          | 1.46 (ref.)  | 1.50          | 1.50 (ref.) | 1.50          |
| Fixed Term | 1.16***     | 1.17          | 1.16***      | 1.17          | 1.16***     | 1.17          |
| Casual     | 1.08***     | 1.00          | 1.27**       | 1.33          | 1.18***     | 1.17          |
| N          | 2411        | 2776          | 5187         |               |             |               |

Significance Key: \*=P<0.05, \*\*=P<0.01, \*\*\*=P<0.001 *n.s*=Not Significant.

Table 5 shows that permanent employees have a significant advantage over their fixed term or casual peers. Unlike our analyses of wage differences however, fixed term employees do not have an advantage over casual employees in terms of autonomy.

The analyses in this section show clearly that at a bivariate level, fixed-term and casual employment in Ireland are associated with worse job quality. It is entirely possible, however, that these associations are simply the result of other characteristics of those receiving these contracts such as age and level of education or the organisations which employ them such as industrial sector, organisational size and trades union presence. This section has also made no mention of social class, yet if our theoretical analysis earlier is correct there should be a pronounced relationship between class location and job quality. However, to assess the independent role of class and contract type, as well as controlling for these other confounding factors to assess the final three hypotheses of this paper we need to model wage levels, training and autonomy. This is the task of the next section.

## VII MODELLING THE IMPACT OF CONTRACT TYPE ON JOB QUALITY

To examine the hypotheses laid out in Section III we need to estimate a model of our three dependent variables which estimates the impact of being employed with a fixed term or casual contract as well as the impact of social class. Since our two hypotheses also suggest that the impact of atypical contracts will vary significantly by social class we also need to estimate the parameters for the interaction of fixed term and casual employment with social class position. However, it may well be that other factors are correlated with class, contract type and our three dependent variables and this may confound the effect. Age for example is likely to be positively associated with both income and social class whilst young people may also have a higher probability of being employed on fixed and casual contracts. However, a range of other factors may also “explain” the relationship between contract type, income, training and autonomy. Job tenure will be strongly related to income even controlling for age since tenure is positively associated with seniority in an organisation and seniority usually brings higher status and income. The type of organisation may also be very important. Income levels and the availability of training vary significantly across industrial sectors with sectors such as retail, hotel and catering having lower wage rates on average than areas such as finance and business services and so we control for this in the model. The extent of union representation in an organisation also tends to have an impact on wage levels, irrespective of whether the individual

themselves are in a union and so our models include a term for whether trades unions are represented in the organisation. Finally, the size of the organisation may be important. Net of trades union presence, larger organisations are more likely to have developed training systems and to have higher salary levels and recompense. All independent predictors are described in detail in Appendix Table A1.

The dependent variables we use are described in detail in Section IV and Appendix Table A1. Given the relatively small proportion of individuals with fixed term and casual contracts we use combined models for men and women but enter a term for being female. The right hand side of our full model is then:

$$Y = \alpha_i + \beta_1 A_i + \beta_2 HE + \beta_3 T + \beta_4 PT + \beta_5 CT_i + \beta_6 SC_i + \beta_7 S_i + \beta_8 TU_i + \beta_9 NE_i + \beta_{10} SC.CT$$

Where A: Age, HE: Highest Education, T: Tenure, PT: Part-Time, CT: Contract Type, SC: Social Class, S: Industrial Sector, TU: Trades Union Represented, NE: Number of Employees

Our analytic strategy is to first estimate a preliminary model that includes contract type, social class plus individual and organisational variables so as to assess whether class and contract type have independent effects. As shown above, the interaction of class and contract type is then added to this preliminary model to examine hypotheses two, three and four. To estimate the interaction equations we have combined the fixed term and casual contracts into a single category of temporary employees because the number of cases could otherwise be insufficient to support the interaction effects.

Different estimation methods are used to model the continuous measures of wage and autonomy rather than the dichotomous measure of experience of training.  $\log(\text{hourly wage})$  and  $Z(\text{autonomy})$  are estimated using OLS regression. The probability of training in the last two years is estimated using a logistic function.

The full results for all the models estimated can be found in Appendix Tables A2 to A4. Table 6 provides summary results from the main effects equations for each of the three measures of job quality – wages, autonomy and training – presented in the first columns of Tables A2 to A4.

These models show that both class and contract are important to job quality. Employees on fixed-term contracts and casual workers earn less, exercise less autonomy on the job, and are less likely to participate in job-related training than those on permanent contracts, although the effect of being a casual worker on autonomy, while negative, does not achieve

Table 6: *Summary of Effects of Contract and Class on Log (Hourly Wages), Job Autonomy and Job-Related Training*

|  | <i>Log (Wages)</i> |             | <i>Autonomy</i> |             | <i>Training</i> |             |
|--|--------------------|-------------|-----------------|-------------|-----------------|-------------|
|  | <i>B</i>           | <i>Sig.</i> | <i>B</i>        | <i>Sig.</i> | <i>Odds</i>     | <i>Sig.</i> |
| <i>Contract (Ref: Permanent)</i>         |                    |             |                 |             |                 |             |
| Fixed Term Contract                      | -0.06              | **          | -0.21           | ***         | 0.81            | *           |
| Casual Contract                          | -0.16              | ***         | -0.11           | n.s         | 0.53            | **          |
| <i>Class (Ref: Service Class (I+II))</i> |                    |             |                 |             |                 |             |
| Routine Non-Manual Higher IIIa           | -0.18              | ***         | -0.25           | ***         | 0.51            | ***         |
| Routine Non-Manual Lower IIIb            | -0.26              | ***         | -0.58           | ***         | 0.44            | ***         |
| Skilled/Tech/Supervisory V+VI            | -0.14              | ***         | -0.67           | ***         | 0.67            | ***         |
| Unskilled Manual VIIa + VIIb             | -0.28              | ***         | -0.81           | ***         | 0.32            | ***         |

Controlling for: Gender, Age, Education, Tenure in job, Part-time hours, Economic sector and Firm size

Significance Key: \*= $P < 0.05$ , \*\*= $P < 0.01$ , \*\*\*= $P < 0.001$  n.s=Not Significant.

statistical significance. Service class employees earn more, exercise more autonomy, and are more likely to participate in training than other employees, and particularly more so than routine non-manual and annual workers.

Table 7 gives the summary estimates for our three dependent variables derived from the interaction equations presented in the final columns of Tables A2 to A4 in the Appendix.

The first panel of Table 7 gives the estimates for the equation estimating log hourly wage and shows that among those with permanent contracts there is a clear differentiation between the social class groups with the service class (I+II) enjoying significantly higher hourly rates than all other groups followed by the higher routine non-manual group (IIIa). There is also a consistent contract effect with those with fixed term or casual contracts earning less than those with permanent contracts. However, for those with fixed term or casual contracts the social class differences narrow and become insignificant largely because of the positive interaction between the class and contract variables in the equation. This quite clearly contradicts the predictions of the transaction cost theory set out in Section III and hypothesis two and supports the insider/outsider predictions of hypothesis three.

The second panel of Table 7 shows the results for the model of autonomy. This again shows that there is clear and significant differentiation by both social class and by contract type. Unlike the wage equation, however, there is still social class differentiation between those with fixed-term or casual contracts, although the class differentials are reduced compared to those with permanent contracts. These results support hypothesis four.

Lastly, we examine the third panel of Table 7 which gives the results for

Table 7: *Summary of Interaction Effects Between Contract and Class on Log (Hourly Wages), Job Autonomy and Job-Related Training*

| PANEL 1:                         | <i>Log (wages)</i> |             |                              |             |
|----------------------------------|--------------------|-------------|------------------------------|-------------|
|                                  | <i>Permanent</i>   |             | <i>Fixed-Term and Casual</i> |             |
|                                  | <i>Value</i>       | <i>Sig.</i> | <i>Value</i>                 | <i>Sig.</i> |
| Service Class (I+II)             | 2.38               | <i>Ref.</i> | 2.14                         | <i>Ref.</i> |
| Routine Non-Manual Higher (IIIa) | 2.19               | ***         | 2.11                         | <i>n.s</i>  |
| Routine Non-Manual Lower (IIIb)  | 2.09               | ***         | 2.08                         | <i>n.s</i>  |
| Skilled/Tech/Supervisory (V+VI)  | 2.23               | ***         | 2.21                         | <i>n.s</i>  |
| Unskilled Manual (VIIa + VIIb)   | 2.08               | ***         | 2.08                         | <i>n.s</i>  |

  

| PANEL 2:                         | <i>Z (Autonomy)</i> |             |                              |             |
|----------------------------------|---------------------|-------------|------------------------------|-------------|
|                                  | <i>Permanent</i>    |             | <i>Fixed-Term and Casual</i> |             |
|                                  | <i>Value</i>        | <i>Sig.</i> | <i>Value</i>                 | <i>Sig.</i> |
| Service Class (I+II)             | -0.14               | <i>Ref.</i> | -0.56                        | <i>Ref.</i> |
| Routine Non-Manual Higher (IIIa) | -0.42               | ***         | -0.51                        | <i>n.s</i>  |
| Routine Non-Manual Lower (IIIb)  | -0.77               | ***         | -0.85                        | **          |
| Skilled/Tech/Supervisory (V+VI)  | -0.83               | ***         | -1.00                        | *           |
| Unskilled Manual (VIIa + VIIb)   | -0.97               | ***         | -1.18                        | ***         |

  

| PANEL 3:                         | <i>Odds (Training)</i> |             |                              |             |
|----------------------------------|------------------------|-------------|------------------------------|-------------|
|                                  | <i>Permanent</i>       |             | <i>Fixed-Term and Casual</i> |             |
|                                  | <i>Value</i>           | <i>Sig.</i> | <i>Value</i>                 | <i>Sig.</i> |
| Service Class (I+II)             | 1.00                   | <i>Ref.</i> | 1.00                         | <i>Ref.</i> |
| Routine Non-Manual Higher (IIIa) | 0.49                   | ***         | 0.49                         | <i>n.s</i>  |
| Routine Non-Manual Lower (IIIb)  | 0.46                   | ***         | 0.46                         | **          |
| Skilled/Tech/Supervisory (V+VI)  | 0.67                   | ***         | 0.67                         | <i>n.s</i>  |
| Unskilled Manual (VIIa + VIIb)   | 0.32                   | ***         | 0.32                         | **          |

Controlling for: Gender, Age, Education, Tenure in job, Part-time hours, Economic sector and Firm size

Significance Key: \* = P<0.05, \*\* = P<0.01, \*\*\* = P<0.001 *n.s*=Not Significant.

the equation prediction the probability of training. The patterns here are very similar to those found in the second panel with class differences most pronounced among those with permanent contracts (with probability of training positively associated with class). Those with fixed-term contracts are less likely to receive training, but class differentials are maintained nonetheless. These results provide support for hypothesis four.

## VIII SUMMARY AND CONCLUSIONS

In this paper we have sought to examine four linked hypotheses on the relationship between social class and atypical contracts. Atypical employment and fixed term working in particular have become increasingly common in OECD countries in the last decade and a half. Though rates of fixed term employment have actually halved in Ireland during the last decade, there are still suggestions that fixed term and casual employment may be of poorer quality.

Using data from a nationally representative survey of employees and three different measures of quality, we found that those employed on fixed term and casual contracts do tend to be employed in jobs which have poorer conditions. Controlling for personal and firm characteristics, non-permanent employees receive a significantly lower mean hourly wage. Again controlling for a host of characteristics, those on fixed term contracts are 19 per cent and those on casual contracts 47 per cent less likely to have received training in the last two years compared to the permanently employed. Significant differentials in level of autonomy also emerged.

Together these results underline the lower job quality associated with fixed term and casual employment in particular, even controlling for the characteristics of the individuals themselves and the organisations in which they work. This is important as there tend to be selection effects which draw more disadvantaged individuals into these positions and this can make it difficult to draw any conclusions about the objective qualities of atypical contracts themselves. The implications of these findings depend largely on the extent of mobility out of these positions – that is, are fixed term and casual employment a stepping stone to better employment or a trap? The answer to this question seems to depend on the stage of life at which individuals encounter fixed term positions. Research on those making the transition from education tends to show that fixed term employment acts as a stepping stone into work (Gangl, 2003; McGinnity, Mertens, and Gundert, 2005), whereas fixed term employment later in life can mean a lower probability of moving into a permanent, higher quality job (Gash and McGinnity, 2007; Giesecke and Gross, 2004).

Of course it may be that fixed and casual employment has a differential impact along other dimensions. The paper sought to examine the interaction between non-permanent employment and social class. Bivariate analyses of this relationship showed that those outside of the professional and managerial class were far more likely to be employed on fixed-term and casual contracts and thus to be employed under significantly worse conditions.

The paper also sought to examine two specific hypotheses about the



interaction of social class and contract type. John Goldthorpe (2000) using the transaction cost economics of Oliver Williamson (1985, 1994) has shown that service class workers gain and retain greater stability and recompense because of the difficulties employers have in monitoring their productivity. Where employers do not offer such stability, as with fixed term contracts, we would expect that this would attract a wage premium. Under this hypothesis, those in fixed term contracts for service class employees should attract higher earnings than their class peers with permanent contracts.

However, a very different prediction arises from insider-outsider theory as conceptualised by (Lindbeck and Snower, 1988). Insider-outsider theory holds that labour turnover costs mean that “insiders” in an organisation are able to derive higher pay rates than “outsiders” and entrants and, moreover, that this insider premium becomes larger the more senior the position, both in terms of job duration and occupational position. The implication is clear – insider-outsider theory would suggest that service class employees on fixed term or casual contracts will attract a higher wage penalty than fixed term employees in other classes.

Results showed quite conclusively that the insider-outsider model gained more support, with the service class group suffering a pronounced penalty in terms of wage rates when employed by fixed term contract relative to the other social classes. Class differentials were largely preserved, however, for the probability of training and level of autonomy.

## REFERENCES

- ALMOND, P. and J. RUBERY, 1998. “The Gender Impact of Recent European Trends in Wage Determination”, *Work, Employment and Society*, Vol. 12, No. 4, pp. 675-693.
- BECKER, G. 1975. *Human Capital*, 2nd Edition, New York: Columbia University Press.
- BOOTH, A., M. FRANCESCONI and J. FRANK, 2002. “Temporary Jobs: Stepping Stones or Dead Ends?”, *The Economic Journal*, Vol.112, pp. 189-213.
- ERIKSON, R. and J. H. GOLDTHORPE, 1992. “The Constant Flux: A Study of Class Mobility in Industrial Societies”, Oxford: Oxford University Press.
- EUROPEAN COMMISSION, 2006. *Employment in Europe, 2006*. Luxemburg: Office of Official Publications of the European Communities.
- FITZ GERALD, J., 2005. “The Story of Ireland’s Failure - and Belated Success” in B. Nolan, P. J O’Connell and C. T. Whelan (eds.), *Bust to Boom? The Irish Experience of Growth and Inequality*, Dublin: Institute of Public Administration.
- GANGL, M., 2003. “The Only Way is Up? Employment Protection and Job Mobility Among Recent Entrants to European Labour Markets”, *European Sociological Review*, Vol. 19, pp.429-449.
- GASH, V. and F. MCGINNITY, 2007, “Fixed-term contracts: the new European inequality? Comparing Men and Women in West Germany and France”, *Socio-Economic Review*, Vol. 1, No. 1, pp. 1-30.

- GIESECKE, J. and M. GROSS, 2004. "External Labour Market Flexibility and Social Inequality", *European Societies*, Vol. 6, pp. 347-382.
- GINTIS H., 1976. "The Nature of Labor Exchange and the Theory of Capitalist Production", *Review of Radical Political Economics*, Vol. 8, No. 2, pp. 36-54.
- GOLDTHORPE, J. H., 2000. *Social Class and the Differentiation of Employment Contracts* in J. H. Goldthorpe, "On Sociology: Volume Two – Illustrations and Retrospect", Stanford, California: Stanford University Press, Unpublished Work.
- KALLEBERG, A. L., B. F. RESKIN and K. HUDSON, 2000. "Bad Jobs in America: Standard and Nonstandard Employment Relations and Job Quality in the United States", *American Sociological Review*, Vol.65, pp. 256-278.
- LINDBECK, A. and D. J. SNOWER, 1988. *The Insider-Outsider Theory Of Employment and Unemployment*, Cambridge, Mass.: MIT Press.
- MARSHALL, G., H. NEWBY, D. ROSE and C. VOGLER, 1988. *Social Class in Modern Britain*, London: Hutchinson.
- MCGINNITY, F., A. MERTENS and S. GUNDERT, 2005. "A Bad Start? Fixed-term Contracts and the Transition from Education to Work in West Germany", *European Sociological Review*, Vol. 21, No. 4.
- O'CONNELL, P., H. RUSSELL, J. WILLIAMS and S. BLACKWELL, 2004. *The Changing Workplace: A Survey of Employees' Views and Experiences*, Dublin: The Economic and Social Research Institute/NCPP.
- O'CONNELL, P. and H. RUSSELL, 2007. *Employment and Quality of Work*, in T. Fahey, H. Russell, and C. T. Whelan (eds.), *Best of Times? The Social Impact of the Celtic Tiger*, Dublin: The Institute of Public Administration.
- SALOP, STEVEN C., 1979. "A Model of the Natural Rate of Unemployment," *American Economic Review*, March, Vol. 69, pp. 117-125.
- WILLIAMSON, O. E., 1985. *The Economic Institutions Of Capitalism*, New York: Free Press.
- WILLIAMSON, O. E. 1994, "The Economics And Sociology Of Organisations" in G. Farkas and P. England (eds.), *Industries, Firms and Jobs*, New York: Aldine de Gruyter.
- ZIJL, M., G. VAN DEN BERG, and A. HEYMA, 2004. *Stepping-Stones for the Unemployed: The Effect of Temporary Jobs on the Duration Until Regular Work*. 2004. Uppsala, Institute for Labour Market Policy Evaluation.

Appendix Table A1

| <i>Variable</i>                                      | <i>Definition</i>  |
|--|--|
| Log Hourly Wages                                     | Net hourly wage in Euro, logged  |
| Received education or training over the last 2 years | =1 if yes, 0=otherwise   |
| Level of Autonomy                                    | Mean of outcomes almost always=3, often=2, sometimes=1, rarely or never=0 from questions: <ul style="list-style-type: none"> <li>● “You decide how much work you do or how fast you work during the day”.</li> <li>● “Your manager decides the specific tasks you will do from day to day”.</li> <li>● “You decide when you can take a break during the working day”.</li> <li>● “Your manager monitors your work performance”.</li> <li>● “You have to get you manager’s OK before you try to change anything with the way you do your work”.</li> <li>● “You can decide to take on new work or new contracts or initiate new projects”.</li> </ul> |
| Age 25-39 years                                      | =1 if aged 25-39 years, =0 otherwise   |
| Age 40-54 years                                      | =1 if aged 40-54 years, =0 otherwise   |
| Age 55+ years  | =1 if aged 55+ years, =0 otherwise   |
| Female   | =1 if female, =0 otherwise (Base Category = male)  |
| Lower Secondary                                      | =1 if highest level of education completed is lower secondary (i.e., Intermediate/Junior Certificate), =0 otherwise  |
| Upper Secondary                                      | =1 if highest level of education completed is upper secondary (i.e., Leaving Certificate), =0 otherwise.   |
| Third Level  | =1 if highest level of education completed is third level (i.e., diploma, primary degree or higher degree), =0 otherwise.<br>(Base Category = highest level of education completed is primary level.)  |
| Tenure <1 Year                                       | =1 if tenure in present job<1 year, =0 otherwise   |
| Tenure <5 Years                                      | =1 if tenure in present job >1 and <5 years, =0 otherwise.<br>(Base Category = Tenure 5+ years.)   |
| Part-Time  | =1 if weekly hours worked 1 to 29 hours, =0 otherwise.<br>(Base Category = weekly hours 30+.)  |
| Fixed Term Contract                                  | =1 if employed on temporary contract, =0 otherwise.  |
| Casual Contract                                      | =1 if employed on a casual contract, =0 otherwise.<br>(Base category=employed on permanent contract.)  |
| Social Class IIIa                                    | =1 if Erikson/Goldthorpe class IIIa, =0 otherwise.   |
| Social Class IIIb                                    | =1 if Erikson/Goldthorpe class IIIb, =0 otherwise.   |
| Social Class V or VI                                 | =1 if Erikson/Goldthorpe class V or VI, =0 otherwise.  |
| Social Class VIIa or VIIb                            | =1 if Erikson/Goldthorpe class VIIa or VIIb, =0 otherwise.<br>(Base category=Erikson/Goldthorpe class I or II.)  |

Appendix Table A1 (*cont'd*)

| <i>Variable</i>           | <i>Definition</i>  |
|---------------------------|--|
| Construction Sector       | =1 if employed in construction sector , =0 otherwise.  |
| Retail Sector             | =1 if employed in retail sector , =0 otherwise.  |
| Hotel and Catering        | =1 if employed in hotel and catering sector , =0 otherwise.  |
| Transport                 | =1 if employed in transport sector , =0 otherwise.   |
| Finance and Bus. Services | =1 if employed in finance and business sector , =0 otherwise.  |
| Public Administration     | =1 if employed in public administration, =0 otherwise.   |
| Education                 | =1 if employed in education sector , =0 otherwise.   |
| Health Care               | =1 if employed in healthcare, =0 otherwise.  |
| Other Services            | =1 if employed in other services , =0 otherwise.<br>(Base category=manufacturing sector and primary extraction.) |
| Employer recognises TU    | =1 if employer recognises a trade union in workplace, =0 otherwise.  |
| 5 to 20 Employees         | =1 if workplace has 5 to 20 employees, =0 otherwise.   |
| 21-100 Employees          | =1 if workplace has 21 to 100 employees, =0 otherwise.   |
| 101-500 Employees         | =1 if workplace has 101 to 500 employees, =0 otherwise.  |
| 500+ Employees            | =1 if workplace has 500+ employees, =0 otherwise.<br>(Base category=1 to 4 employees.)                           |

Appendix Table A2: *OLS Regression of (Log) Hourly Earnings by Sex*

|  | <i>Model 1</i> |             | <i>Model 2</i> |             |
|--|----------------|-------------|----------------|-------------|
|  | <i>B</i>       | <i>Sig.</i> | <i>B</i>       | <i>Sig.</i> |
| Female                                   | -0.17          | ***         | -0.16          | ***         |
| Age 25 to 39 years                       | 0.17           | ***         | 0.17           | ***         |
| Age 40 to 54 years                       | 0.20           | ***         | 0.20           | ***         |
| Age 55+ years                            | 0.19           | ***         | 0.20           | ***         |
| Lower 2 <sup>nd</sup> Education          | 0.12           | ***         | 0.12           | ***         |
| Higher 2 <sup>nd</sup> Education         | 0.19           | ***         | 0.19           | ***         |
| Third Level Education                    | 0.31           | ***         | 0.31           | ***         |
| Tenure <1 Year                           | -0.11          | ***         | -0.11          | ***         |
| Tenure <5 Years                          | -0.07          | ***         | -0.07          | ***         |
| Part-Time                                | 0.17           | ***         | 0.16           | ***         |
| Fixed Term Contract                      | -0.06          | **          |                |             |
| Casual Contract                          | -0.16          | ***         |                |             |
| Fixed-term or Casual Contract            |                |             | -0.24          | ***         |
| Routine Non-Manual Higher IIIa           | -0.18          | ***         | -0.19          | ***         |
| Routine Non-Manual Lower IIIb            | -0.26          | ***         | -0.29          | ***         |
| Skilled/Tech/Supervisory V+VI            | -0.14          | ***         | -0.15          | ***         |
| Unskilled Manual VIIa + VIIb             | -0.28          | ***         | -0.30          | ***         |
| Construction Sector                      | 0.12           | ***         | 0.11           | ***         |
| Retail Sector                            | -0.06          | **          | -0.06          | **          |
| Hotel and Catering                       | -0.09          | **          | -0.09          | ***         |
| Transport                                | 0.06           | *           | 0.06           | *           |
| Finance and Bus. Services                | 0.09           | ***         | 0.09           | ***         |
| Public Administration                    | 0.03           | n.s         | 0.03           | n.s         |
| Education                                | 0.11           | ***         | 0.13           | ***         |
| Health Care                              | -0.03          | n.s         | -0.02          | n.s         |
| Other Services                           | -0.10          | ***         | -0.10          | ***         |
| Employer Recognises TU.                  | -0.10          | ***         | -0.10          | ***         |
| 5 to 20 Employees                        | 0.02           | n.s         | 0.02           | n.s         |
| 21-100 Employees                         | 0.08           | ***         | 0.09           | ***         |
| 101-500 Employees                        | 0.07           | ***         | 0.07           | ***         |
| 500+ Employees                           | 0.08           | ***         | 0.08           | ***         |
| Social Class IIIa*Fixed or Casual        |                |             | 0.16           | **          |
| Social Class IIIb*Fixed or Casual        |                |             | 0.23           | ***         |
| Social Class IIIa V+VI*Fixed or Casual   |                |             | 0.22           | ***         |
| Social Class VIIa + VIIb*Fixed or Casual |                |             | 0.24           | ***         |
| Constant                                 | 2.37           | ***         | 2.38           | ***         |
| N  | 4,708          |             | 4,708          |             |
| Adj. R <sup>2</sup>                      | 0.3739         |             | 0.3778         |             |

Reference Categories are: age 17 to 24 years, primary education alone, tenure in job of 5+ years, full-time, permanent contract, professional or managerial class, manufacturing industrial sector, non-recognition of trades union, less than 4 employees.

Appendix Table A3: *OLS Regression of (Z)Autonomy*

|  | <i>Model 1</i> |             | <i>Model 2</i> |             |
|--|----------------|-------------|----------------|-------------|
|  | <i>B</i>       | <i>Sig.</i> | <i>B</i>       | <i>Sig.</i> |
| Female                                   | -0.17          | ***         | -0.17          | ***         |
| Age 25 to 39 years                       | 0.32           | ***         | 0.33           | ***         |
| Age 40 to 54 years                       | 0.52           | ***         | 0.52           | ***         |
| Age 55+ years                            | 0.66           | ***         | 0.66           | ***         |
| Lower 2 <sup>nd</sup> Education          | -0.04          | n.s         | -0.04          | n.s         |
| Higher 2 <sup>nd</sup> Education         | 0.06           | n.s         | 0.06           | n.s         |
| Third Level Education                    | 0.18           | **          | 0.19           | ***         |
| Tenure <1 Year                           | -0.18          | ***         | -0.18          | ***         |
| Tenure <5 Years                          | -0.11          | ***         | -0.11          | **          |
| Part-Time                                | -0.04          | n.s         | -0.04          | n.s         |
| Fixed Term Contract                      | -0.21          | ***         |                |             |
| Casual Contract                          | -0.11          | n.s         |                |             |
| Fixed-term or Casual Contract            |                |             | -0.41          | ***         |
| Routine Non Manual Higher IIIa           | -0.25          | ***         | -0.28          | ***         |
| Routine Non Manual Lower IIIb            | -0.58          | ***         | -0.63          | ***         |
| Skilled/Tech/Supervisory V+VI            | -0.67          | ***         | -0.69          | ***         |
| Unskilled Manual VIIa + VIIb             | -0.81          | ***         | -0.83          | ***         |
| Construction Sector                      | 0.05           | n.s         | 0.04           | n.s         |
| Retail Sector                            | 0.19           | ***         | 0.19           | ***         |
| Hotel and Catering                       | 0.19           | **          | 0.20           | **          |
| Transport                                | 0.10           | n.s         | 0.10           | n.s         |
| Finance and Bus. Services                | 0.15           | **          | 0.15           | **          |
| Public Administration                    | -0.07          | n.s         | -0.07          | n.s         |
| Education                                | 0.08           | n.s         | 0.10           | n.s         |
| Health Care                              | 0.02           | n.s         | 0.03           | n.s         |
| Other Services                           | 0.37           | ***         | 0.36           | ***         |
| Employer Recognises TU.                  | 0.17           | ***         | 0.17           | ***         |
| 5 to 20 Employees                        | 0.02           | n.s         | 0.02           | n.s         |
| 21-100 Employees                         | 0.11           | **          | 0.12           | **          |
| 101-500 Employees                        | 0.01           | n.s         | 0.01           | n.s         |
| 500+ Employees                           | -0.14          | ***         | -0.15          | ***         |
| Social Class IIIa*Fixed or Casual        |                |             | 0.33           | *           |
| Social Class IIIb*Fixed or Casual        |                |             | 0.34           | **          |
| Social Class IIIa V+VI*Fixed or Casual   |                |             | 0.25           | n.s         |
| Social Class VIIa + VIIb*Fixed or Casual |                |             | 0.20           | *           |
| Constant                                 | -0.16          | n.s         | -0.14          | n.s         |
| N  | 5,022          |             | 5,022          |             |
| Adj. R <sup>2</sup>                      | 0.2383         |             | 0.2397         |             |

Reference Categories are: age 17 to 24 years, primary education alone, tenure in job of 5+ years, full-time, permanent contract, professional or managerial class, manufacturing industrial sector, non-recognition of trades union, less than 4 employees.

Appendix Table A4: *Logit Regression of Probability of Employer Provided Training in the Last Two Years*

|  | <i>Model 1</i> |             | <i>Model 2</i> |             |
|--|----------------|-------------|----------------|-------------|
|  | <i>B</i>       | <i>Sig.</i> | <i>B</i>       | <i>Sig.</i> |
| Female                                   | 0.92           | n.s         | 0.92           | n.s         |
| Age 25 to 39 years                       | 0.76           | **          | 0.76           | **          |
| Age 40 to 54 years                       | 0.60           | ***         | 0.60           | ***         |
| Age 55+ years                            | 0.41           | ***         | 0.42           | ***         |
| Lower 2 <sup>nd</sup> Education          | 1.01           | n.s         | 1.01           | n.s         |
| Higher 2 <sup>nd</sup> Education         | 1.30           | *           | 1.31           | *           |
| Third Level Education                    | 1.44           | **          | 1.45           | **          |
| Tenure <1 Year                           | 0.76           | *           | 0.76           | **          |
| Tenure <5 Years                          | 1.27           | **          | 1.27           | **          |
| Part-Time                                | 0.98           | n.s         | 0.97           | n.s         |
| Fixed Term Contract                      | 0.81           | *           |                |             |
| Casual Contract                          | 0.53           | **          |                |             |
| Fixed-term or Casual Contract            |                |             | 0.70           | n.s         |
| Routine Non Manual Higher IIIa           | 0.51           | ***         | 0.49           | ***         |
| Routine Non Manual Lower IIIb            | 0.44           | ***         | 0.46           | ***         |
| Skilled/Tech/Supervisory V+VI            | 0.67           | ***         | 0.67           | ***         |
| Unskilled Manual VIIa + VIIb             | 0.32           | ***         | 0.32           | ***         |
| Construction Sector                      | 1.21           | n.s         | 1.21           | n.s         |
| Retail Sector                            | 0.91           | n.s         | 0.91           | n.s         |
| Hotel and Catering                       | 0.83           | n.s         | 0.82           | n.s         |
| Transport                                | 1.43           | *           | 1.44           | *           |
| Finance and Bus. Services                | 1.16           | n.s         | 1.16           | n.s         |
| Public Administration                    | 1.46           | *           | 1.45           | *           |
| Education                                | 0.79           | n.s         | 0.80           | n.s         |
| Health Care                              | 1.33           | *           | 1.35           | *           |
| Other Services                           | 1.00           | n.s         | 0.98           | n.s         |
| Employer Recognises TU.                  | 0.65           | ***         | 0.64           | ***         |
| 5 to 20 Employees                        | 0.68           | **          | 0.68           | **          |
| 21-100 Employees                         | 1.17           | n.s         | 1.18           | n.s         |
| 101-500 Employees                        | 1.39           | **          | 1.40           | **          |
| 500+ Employees                           | 1.67           | ***         | 1.67           | ***         |
| Social Class IIIa*Fixed or Casual        |                |             | 1.45           | n.s         |
| Social Class IIIb*Fixed or Casual        |                |             | 0.93           | n.s         |
| Social Class IIIa V+VI*Fixed or Casual   |                |             | 0.98           | n.s         |
| Social Class VIIa + VIIb*Fixed or Casual |                |             | 1.21           | n.s         |
| N  | 5,019          |             | 5,019          |             |
| Pseudo R <sup>2</sup>                    | 0.0957         |             | 0.0957         |             |
| Zero Slopes Log-Likelihood               | -3588.7        |             | -3588.7        |             |
| Final Log-Likelihood                     | -3142.0        |             | -3142.3        |             |

Reference Categories are: age 17 to 24 years, primary education alone, tenure in job of 5+ years, full-time, permanent contract, professional or managerial class, manufacturing industrial sector, non-recognition of trades union, less than 4 employees.

