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THE EFFECTS OF WORKING
TIME, SEGMENTATION
AND LABOUR MARKET
MOBILITY ON WAGES
AND PENSIONS IN IRELAND

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The Effects of Working Time, Segmentation and Labour Market Mobility on Wages and Pensions in Ireland

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Abstract

The widespread increase in part-time working in most OECD countries over recent years has been accompanied by concerns about the quality of part-time jobs. Most existing research on differences in pay and benefits between full- and part-time work tends to focus on the characteristics of part-time workers and the nature of part-time jobs. However, part-time jobs are more open than full-time employment to the unemployed and other labour market 'outsiders', and such labour market mobility can also influence wages. This paper analyses the effects of working-time, gender, labour market segmentation and mobility, on wages and occupational pension benefits in Ireland in 1994. We show that both labour market segmentation and mobility directly influence wages and that controlling for both sets of factors in a wage model eliminates the negative effect of part-time working. We also show that the wage effects of labour market mobility differ by gender and labour market segment. Pension entitlements are strongly influenced by gender, working time, labour market segment and labour market mobility.

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1. Introduction
Part-time working has increased over recent years in most OECD countries, often accounting for a substantial share of employment growth. These developments have been accompanied by increased concern about the quality of part-time jobs, particularly with respect to pay and occupational benefits (Kalleberg, Reskin and Hudson, 2000; Rubery, 1998). Most existing research on part-time working tends to focus on the nature of part-time jobs and the characteristics of part-time workers to analyse differences in pay and benefits between full- and part-time employment. Part-timers tend to receive lower rates of pay and are less likely to be entitled to occupational pensions. These disadvantages reflect the personal characteristics of part-time workers, including education levels, and the sectors and occupations in which part-time work is concentrated.

A more optimistic interpretation of the increase in part-time working derives both from its potential to reduce high unemployment levels and from the fact that part-time jobs appear to be more open than full-time employment to the unemployed and other labour market 'outsiders'. However, if part-time work functions as an important route into employment, then research should pay greater attention to labour market dynamics, focusing not only on current characteristics of jobs and workers, but also on whether part-time workers have entered that status from within or outside the workforce. Thus if a greater proportion of part-timers than full-timers are recent entrants to employment, then some of the wage gap that is often attributed to the personal characteristics of part-time workers or to characteristics of full-time jobs, may be due to labour market mobility. In this paper we analyse differences in two important indicators of the quality of part-time versus full-time work in Ireland, hourly wages and entitlement to occupational pensions, to establish whether these differences can be attributed to differences in working time *per se*; to the characteristics of part-time workers and part-time jobs, or to labour market mobility.

2. Labour Market Trends in Ireland
The issues surrounding part-time working, labour mobility and gender loom large in Ireland given dramatic increases in total employment, in women's employment and in part-time working in recent years. Table 1 shows total employment by gender for the years 1988, 1993 and 1998. Total employment increased by an average of 3.3% per annum over the decade 1988-1998, but, with a booming economy, employment growth was particularly rapid, almost 5% per annum, between 1993-1998. Employment trends have differed between men and women. Total male employment increased only marginally between 1988-1993 and by 3.8% per annum between 1993-1998. Female employment has been much more buoyant, increasing by 3.8% per annum between 1988-1993 and by almost 7% per annum between 1993-1998. These differing trends have given rise to a marked change in the gender balance of

employment in Ireland, and women's share of total employment increased steadily from under 33% in 1988 to almost 40% in 1998 (O'Connell, 2000).

Table 1
Total Employment by Gender, 1988-1998

	Total	Men	Women	Female Share
	(1,000)	*(1,000)*	*(1,000)*	*%*
1988	1111.8	747	364.7	32.8
1993	1183.1	749.4	433.7	36.7
1998	1494.5	899.9	594.6	39.8
Annual percentage change				
1988-93	1.3	0.1	3.8	2.4
1993-98	4.9	3.8	6.9	1.6
1988-98	3.3	1.9	6.0	2.0

Source: Central Statistics Office, 1994, *Labour Force Survey 1993* and
Central Statisitcs Office, 1998, *Quarterly National Household Survey,
First and Second Quarters 1998*

Table 2 shows the trend in part-time working over the period 1983-1997. The share of part-time workers rose from under 7% of total employment in 1983 to over 12% in 1997. For men the proportion of part-timers rose from under 3% to over 5% in 1997 while among women, the increase was from under 16% to 23%.

Table 2
The Incidence of Part-time Working, 1983-1998
(ILO Basis)

	Men	Women	All
	%	%	%
1983	2.7	15.6	6.7
1990	3.4	17.6	8.1
1993	4.8	21.3	10.8
1994	5.1	21.7	11.3
1995	5.4	23.1	12.1
1996	5.0	22.1	11.6
1997	5.4	23.1	12.3

Source: Eurostat *Labour Force Survey*,
and Central Statistics Office, 1997b and 1998

The large majority of part-time workers are women and in 1997 they accounted for well over 70% of all part-time workers. The increase in part-time working, concentrated among women workers, has coincided with a rapid increase in women's employment and labour force participation. The number of women at work increased by almost 45% between 1981 and 1996 and women's labour force participation increased from under 30% in 1981 to 42% in 1998. In this, Ireland is part of a wider

international pattern in which the incidence of part-time work has expanded alongside economic restructuring and/or rapid economic growth. Most part-time work is performed by women, and its growth coincides with increases in women's participation in the labour market generally (OECD, 1998; O'Reilly and Fagan, 1998; Rubery, Smith, Fagan, and Grimshaw, 1998; Rosenfeld and Birkelund, 1995). The recent increase in part-time working in Ireland notwithstanding, Irish rates of part-time working are comparatively low by European standards. In 1997 part-time employment accounted for just over 12% of total employment in Ireland, lower than the EU average of 17%, and well behind the rates in the Netherlands (38%), as well as Sweden, the United Kingdom, and Denmark (all between 22% and 25%) (O'Connell, 2000).

Another important dimension of atypical work, and one which influences labour mobility, is fixed-term temporary employment. In Ireland, the numbers working on fixed term contracts increased somewhat, from 8.5% in 1990 to 9.4% in 1997, while over the same period, the average incidence of fixed-term contracts across the EU increased from 10% to 12% (European Commission, 2000). Thus with regard to both part-time working and temporary contracts, Ireland has participated in a common European trend towards increased flexibility, although the rate of flexibilisation has been slower than elsewhere in Europe, and Irish rates of both part-time and temporary working remained lower than the EU average in the latter half of the 1990s.

In recent decades labour market regulation and industrial relations have moved away from the voluntarist tradition inherited from Britain and closer to the more consensual approach found in other European countries (O'Connell, McGinnity and Russell, forthcoming). This shift has been mainly due to the impetus to comply with EU employment policies and regulations since the 1970s, the introduction of new employment and industrial relations practices in response to the large influx of transnational corporations since the 1960s, and the development of corporatist-style wage and social policy agreements between the social partners since the late 1980s. Labour market regulations introduced during the 1990s extended the coverage of statutory protection to bring part-time workers within the scope of a range of labour legislation covering redundancy, unfair dismissals, holidays, maternity leave and minimum notice. These changes in labour legislation were implemented both to eliminate discrimination against part-time as well as temporary workers and to render non-standard working arrangements more attractive. In more recent years the growth of part-time and other non-standard working arrangements has been regarded as an important component of the solution to labour shortages.

3. The Quality of Part-time Jobs

The growth of part-time working has given rise to increased interest by social scientists as to its implications. Are part-time jobs as good as full-time jobs? One way to distinguish 'good' from 'bad' jobs is to compare their compensation levels, including

earnings and fringe benefits (Kalleberg et al., 2000). In this paper we focus on current wages and entitlement to pensions.[1]

Given differences in working hours, it is inevitable that the weekly or monthly incomes of part-time workers fall well below that of full-timers. Comparative research suggests, however, that part-time workers receive lower hourly wages than their full-time counterparts across a range of countries (OECD, 1999). There is some variation between countries in the extent to which part-timers earn less due to lower *pro-rata* wages for part-timers or to the concentration of part-timers in low-paid occupations and sectors (Gornick and Jacobs, 1996; Fagan and Rubery, 1998, Rosenfeld and Kalleberg, 1990). Empirical evidence of differences in rates of pay between part and full-time workers has been found in descriptive data (Robson, Dex, Wilkinson and Cortes, 1999, Büchtemann and Quack, 1989).

Researchers have also sought to explain wage differences between between full- and part-time workers by regressing vectors of human capital characteristics as well as a series of variables measuring occupational and industrial variables on gross hourly wages. Many analyses have shown that even when the conventional variables which determine wages are controlled for, part-timers still receive lower wages per hour than their full-time colleagues (Gallie, White, Cheng and Tomlinson, 1998; Gornick and Jacobs, 1996; Rubery 1998; Rosenfeld and Kalleberg, 1990).

However, in some countries the wage differential between full- and part-time workers is eliminated with the inclusion of individual and job characteristics. Blank (1990) found that women working part-time in the USA earned more than their full-time equivalents after controlling for selection into the labour market. Galtier (1999) found that wage rates for women working part-time in France were equal to those of full-timers, irrespective of occupation or reasons (voluntary vs involuntary) for working part-time, although she found that part-timers did receive lower returns to education and experience. In Ireland, Barrett, Callan, Doris, O'Neill, Russell, Sweetman and McBride (2000) found no wage differences between part- and full-timers when account was taken of standard human capital variables. Others have argued that the remaining negative wage effects of working part-time are due to unobserved effects of motivation or talent (Hakim, 1991; 1995; 1997). It has been argued that many part-time workers have very loose attachments to their occupations or to the world of work and that it is their different work orientation which accounts for their lower wages.

While the reasons for lower rates of pay in part-time employment remains the subject of ongoing research, there is substantial consensus in the international literature that part-time workers receive lower levels of occupational benefits than their full-time counterparts (Blank, 1990; Kalleberg et al., 2000; Rubery, 1998). The extent to which

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[1] Kalleberg et al. (2000) distinguish good from bad jobs in the U.S. on the basis of three indicators; wages, pension benefits and employer provided health insurance. In the Irish case with universal health care provision supplemented by largely private insurance, employer provision of health insurance is both uncommon and less useful in distinguishing good from bad jobs. We recognise that career prospects are an important additional indicator of job quality, but this would require longitudinal analysis, and we thus regard it as a subject for future research.

part-time workers receive less benefits is reflected in the fact that the labour costs of employing full-time workers far exceed the costs of employing part-timers. Research in the United Kingdom has established that were part-timers awarded similar benefits to full-timers the labour costs would far exceed the costs of equalising the hourly pay of part-timers with full-timers (Lissenburgh, 1996).

Part-time jobs are not, of course, homogenous. A considerable amount of work has applied labour market segmentation approaches to the analysis of the quality of part-time work, and shown that much part-time employment is low skilled and is concentrated in certain occupational or industrial groups (Delsen, 1995; O'Reilly, 1994; Rubery, 1998). In contrast to the human capital model, the segmented labour market approach focuses more on the characteristics of jobs rather than individuals, and thus on the demand, rather than the supply-side, of the labour market. This approach argues that the specific characteristics of different labour market sectors impose structural limitations both on the returns to education and experience and on the career prospects of workers (Doeringer and Piore, 1971; Edwards, Gordon and Reich, 1975). From this perspective, the low levels of compensation of part-time work is due to the concentration of part-time jobs in the secondary sector where wages are low, as are returns to education, skills and experience.

Labour market segments can be defined simply in terms of a dual labour market with the primary market consisting of well paid and secure employment as opposed to jobs in the secondary market which are poorly paid and are of a precarious nature with few or no prospects for upward mobility. Tilly (1996) applies dual labour market theory to the analysis of part-time work in the US, distinguishing between 'retention' part-time jobs used to retain valued and skilled employees, particularly in the primary sector, and secondary part-time jobs with low wages, few benefits and little security. Moving beyond the dualism of early versions the segmentation approach, alternative schema have been developed to take account of more detailed distinctions between labour market segments (Gordon, 1986) and have been applied to earnings data in Ireland (Hughes and Nolan, 1997).

More recent developments of the labour market segmentation approach, while continuing to accord primacy to the demand-side of the labour market, as in earlier versions, have sought to take account also of segmentation of labour supply. One key argument here is that the structure of the labour market is influenced by the sphere of social reproduction, including the household division of labour and income-sharing: the division between male 'breadwinner' roles and female domestic labour and child-rearing roles (Peck, 1996). In this view, there is a match between employers' needs for a flexible workforce in the secondary labour market and patterns of labour force participation which combine or juxtapose work and family roles. Thus, employers may design jobs that are neither full-time nor require full-time or career commitment to match the supply patterns of those, mainly women, seeking to meet family demands in addition to labour force participation (Cebrian, Gash, Moreno, O'Connell, Toharia, 2000; Peck, 1996).

Focusing on the supply-side of the labour market calls attention to gender differences in labour market participation. Hakim (1996) shows that entry to part-time jobs is far higher than entry to full-time work because of gender differences in both working time and labour mobility patterns. Women have far higher rates of labour mobility than men, and in most countries the large majority of part-time workers are women. Over time, deregulation of the labour market and the expansion of flexibility has allowed for the expansion of discontinuous employment or intermittent employment – work histories with periods of employment broken by domestic breaks or other periods of non-work other than involuntary unemployment.

More generally, it is argued that part-time employment is more accessible to labour market 'outsiders', groups who are excluded from, or exclude themselves from, full-time continuous employment (Fagan and O'Reilly, 1998; O'Reilly, Cebrian and Lallement, 2000, Schmidt, 1998). This relates to the young and the old, and to those with histories of long-term unemployment, as well as women with domestic responsibilities. This is a more optimistic interpretation of the rise in part-time working which argues that part-time employment may distribute employment opportunities more widely across the labour force, as well as facilitating entry of labour market outsiders (Schmidt, 1998).

While it is true that in many countries, including Ireland, part-time work appears to be more open than the full-time labour market to the unemployed and to other non-employed groups, including women engaged in the domestic sphere, it is unclear to what extent part-time workers actually become integrated into the labour market over the long-term. If it is established that much part-time work is embedded within the confines of the secondary labour market, the perception of part-time work as a 'stepping stone' towards more traditional or more stable forms of employment must be questioned.

Most research on part-time work has tended to focus on the conditions of part-time working as well as the characteristics of part-time workers and the nature of part-time jobs. However, if part-time work represents an important route into employment, then research should pay greater attention to labour market dynamics, focusing not only on current working arrangements but also on whether part-time workers have entered that status from inside or outside the workforce. This calls attention to labour mobility. If a greater proportion of part-timers than full-timers are recent entrants to employment from either unemployment or economic inactivity, then some of the wage gap which is often attributed either to the personal characteristics of part-time workers or to characteristics of part-time jobs, may in fact be due to labour market mobility.

4. The Data
The *Living in Ireland Survey* is the Irish component of the *European Community Household Panel Survey* (ECHP) and is described in detail in Callan and Nolan (1996). The first wave of the survey, collected in 1994, is a nationally representative

sample of over 4,000 households, with almost 10,000 individuals aged 17 years or over. The survey achieved a response rate of 64% and the sample has been re-weighted to correct for non-response on the basis of the number of adults in the population, urban/rural location, age and socio-economic group of the household head, using information from the *Labour Force Survey*. The 1994 wave provides data on a range of individual characteristics, including age, gender, educational attainment, and labour market experience.

Measuring Working-time

For the purposes of identifying part-time workers, the survey makes a basic distinction between: (1) Those whose main activity is work, defined as those who work 15 or more hours in a normal working week; and (2) Those whose main activity is not work but who, nevertheless work for less than 15 hours in a normal week. We have adopted the term 'marginal part-time' to designate this latter working-time category. Most of those who fall into this working time category are women who are also engaged in domestic work, students, retired and other categories. The survey identifies those working less than 30 hours a week as part-time workers, so we have designated those working between 15-30 hours in a normal week as 'part-timers' and those working 30 hours or more as 'full-timers'.

Measuring Labour Mobility

Labour market mobility refers to the transition from one employment status to another over time. The *Living in Ireland Survey* collected retrospective information about labour market status in each month from January 1993. This allows us to identify individuals' dominant labour market situation throughout 1993 and early 1994 and to compare this with their status at time of interview in the second half of 1994. We can distinguish four distinct labour market transition categories of interest:

1. 'Insiders' – those who were in employment for at least 14 months between January 1993 and February 1994, and also employed at the time of interview in mid- to late- 1994. These 'insiders' may have changed jobs in the interim, but they did not change employment status.
2. 'Outsiders' – those who were not in employment (i.e., either unemployed or not economically active) for at least 14 months between January 1993 and mid-1994, but who were in employment at the time of interview in 1994.
3. 'Movers', a residual transitory category, neither employed nor non-employed for 14 months in 1993-1994 - effectively in transition between statuses over the period.[2]

In order to take account of longer-term labour market dynamics, we also exploit an additional set of questions in the LIS which record the number of years since the age

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[2] In other work comparing patterns of labour market mobility and working time among women in Ireland and Spain, we used a nine-month cut-off as the basis for labour mobility variables and found a similar distribution to that reported here for Ireland, suggesting that the distribution of cases among the mobility categories is not particularly sensitive to the cut-off point (Cebrian, Gash, Moreno, O'Connell and Toharia, 2000).

of ten each respondent spent in various labour market statuses, including: employment, unemployment, education, domestic work and other economically inactive states. In this paper we use the proportion of time in employment since age ten as a measure of work experience.

Measuring Wages and Benefits

We analyse two dependent variables in this paper: wages and occupational pension entitlements. In the debate over the quality of non-standard employment, the question of earnings is central. The survey collected detailed information from over 3,600 employees on gross pay received in the last pay period, the length of that pay period and the number of hours worked. Respondents were also asked whether this represented their usual gross wage and hours worked. Combining this information we generated our measure of gross hourly wages.

Earnings, do not however, capture the full variation in job quality. One important aspect of the debate over increased labour market flexibility concerns the impact of part-time working and career interruptions on pension entitlements. On the individual questionnaire, individuals whose main activity is work, those working at least 15 hours per week, were asked whether they were entitled to a pension from their work upon retirement. This allows us to measure entitlement to pensions, unfortunately, however, we have no information on the financial value of such entitlements.

Measuring Labour Market Segmentation

Gordon (1986) developed a 4-category typology of labour market segmentation for the US labour market on the basis of two sets of criteria: (a) occupational sector, coded in terms of relative degrees of skill required, the relative autonomy of workers and the routinisation of their employment; and (b) industrial segment coded according to a core/periphery distinction. The *Independent Primary Professional* sector includes highly skilled workers in core industries who have high degrees of autonomy over their working lives. The *Independent Primary Craft* sector comprises skilled workers in the core industrial segment who exercise some degree of control over their working lives and who have up to two years of occupationally specific training. Workers in the *Subordinate Primary* segment are also involved in non-routinised occupations in core industries, but have slightly less autonomy over their production and are in semi-skilled manual occupations. Finally, workers in the *Secondary* sector are employed within the peripheral industrial segment, work in non-goods producing industries and have highly routinised labour with little or no individual determination over the production process. Occupations within the Secondary sector require less than three months training. Hughes and Nolan (1997) adapted Gordon's typology for Irish occupational and industrial classification systems and applied it to earnings data.

In this paper we modify the original four-category typology by aggregating the Craft and Subordinate Primary sectors into an '*Other Primary*' (non-professional) segment to comprise skilled and semi-skilled workers in core industries working with some autonomy in non-routinised occupations. This modification was applied because of limited numbers of cases, particularly among women entering the Independent

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Primary Craft Sector. We tested the implications of this re-classification by estimating wage models employing the original four-category model and found no statistically significant differences between the wage effects of working in the Independent Primary Craft and the Subordinate Primary sectors.[3] This suggests that our modified labour market segmentation schema is not substantively inferior to the more detailed four-category typology for the purposes of the present analysis.

5. Working-time, Labour Mobility and Labour Market Segmentation

Table 3 shows the distribution of employees by gender, working time, labour market segment and mobility status. About 14% of the entire sample were working part-time in 1994, with about 8% working between 15-29 hours per week, and 6% in the marginal category of less than 15 hours per week. About 28% of employees were in the Primary Professional labour market segment, another 40% were in the other, non-professional primary sectors, and 30% in the Secondary labour market. When these aggregates are broken down by gender and working time, substantial differences are evident.

Table 3
Distribution of Employees by Gender, Working-time,
Labour Market Segment and Mobility Status

	Men			Women		
	Full-time	Part-time	Marginal	Full-time	Part-time	Marginal
	%	%	%	%	%	%
Labour Market Segment						
Primary Prof	29.2	12.7	17.1	31.6	18.6	13.0
Other Primary	49.5	32.4	19.6	36.0	25.3	7.2
Secondary	21.3	54.9	63.3	32.4	56.2	79.7
Mobility Status						
Insider	88.7	41.9	11.6	82.4	70.3	3.4
Outsider	4.1	21.7	68.5	7.3	14.2	91.9
Mover	7.2	36.4	19.9	10.4	15.5	4.7
Population N	490784	15015	15064	270750	52771	40330
Sample N	1930	64	63	1161	237	182

Part-timers were predominantly located in the secondary labour market. Among men, 55% of male part-timers and 63% of those working marginal hours were in the secondary sector: among women, the corresponding proportions were 56% and 80%. Part-timers and marginal hours workers of both genders were substantially under-represented in the primary labour market. Thus, while over 31% of full-time women were in the primary sector, 19% of part-timers, and only 13% of those working marginal hours were in this sector. While the distributions of part-time men and women were relatively similar, there was a greater degree of variation between men and women working full-time. For instance 32% of women working full-time worked

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[3] Results available form the authors.

in the secondary labour market, compared to only 21% of men. Men were much more likely than women to work in the non-professional primary sectors.

Table 3 also looks at the distribution of employees according to mobility status by working-time and by gender. Overall, about 80% of employees in 1994 were insiders, having been employed for at least 14 months between January 1993 and mid-1994. About 12% of employees were 'outsiders', having entered employment after having spent at least 14 months in non-employment between the start of 1993 and the middle of 1994. The remaining 9% of those employed in 1994 had moved between employment and non-employment statuses between 1993 and the date of interview in 1994. The vast majority of full-time workers were insiders, having been stable in employment in the recent past – 89% of men and 82% of women. Mobility patterns were quite different among those working less than full-time, and there were marked gender differences. Among male part-timers, only about 40% were insiders, 22% were outsiders and 36% had moved between employment and non-employment over the 1993-1994 period. Women working part-time showed more stability: over 70% were insiders, having been employed for most of the period between early 1993 and mid-1994, 14% were outsiders and 15% were movers. Most employees working marginal hours in 1994 were outsiders: 69% of men, and 92% of women had been in non-employment for most of 1993 to mid 1994. It should be acknowledged that labour market status in the earlier period is defined in terms of principal economic status, so some outsiders may have engaged in some economic activity while their principal status was one of non-employment.

Table 4
Gender by Labour Market Segment and Mobility Status

	Insiders	Movers	Outsiders
Women	%	%	%
Primary Professional	32.7	22.0	10.5
Other Primary	35.8	22.3	18.5
Secondary Sector	31.5	55.6	71.0
Sample N	1120	178	303
Men	%	%	%
Primary Professional	30.9	12.7	11.2
Other Primary	49.9	46.1	28.7
Secondary Sector	19.2	41.3	60.1
Sample N	1732	190	158

Table 4 looks at the distribution of workers according to mobility status by labour market segment, and by gender. First, and most notably, there was a markedly disproportionate number of labour market outsiders in the secondary labour market, 71% of female outsiders and 60% of male outsiders work in the secondary labour market. The corresponding figures for female and male insiders are 32% and 19%,

respectively. There was a near-linear relationship between the propensity to work in the secondary labour market and the relative stability of the worker within the market. So, 'movers'- employees who spent less then fourteen months in any one labour market category - were less likely to work in the secondary labour market than outsiders, and labour market 'insiders' were the least likely to work in the secondary segment. Women were more likely than men to be located in the secondary labour market compared to men in each mobility category. To the extent that the secondary labour market is a low skill, low pay sector, outsiders would appear to be at a distinct disadvantage in terms of access to 'good' jobs, movers are next in line, with slightly less exposure to the secondary labour market, and insiders have the least exposure.

Table 5
Mean Gross Hourly Wage by Working-time, Mobility Status and Labour Market Segment by Gender

	Mean Gross Hourly Wages	
	Men	*Women*
	IR£	IR£
Full-time	7.57	6.41
Part-time	6.29	5.28
Marginal	5.65	4.58
Insider	8.10	6.77
Mover	4.47	4.57
Outsider	3.87	4.04
Primary Professional	11.97	10.01
Other Primary	6.69	5.52
Secondary Sector	4.20	3.78
All	7.50	6.12
Sample N	2058	1588

Table 5 presents mean gross hourly wages by working-time, mobility status, labour market segment and gender. Men earned more than women in each labour market segment and in each working-time category. The analysis of wages by mobility status however presents a different pattern with female outsiders and movers earning slightly more than men. The variation in rates of pay within gender by working-time shows a clear relationship between hours worked and hourly wages: full-timers earned more than part-timers, who earned more than marginal part-timers. Similar relationships are found with respect to labour market segment with the primary professional sector earning on average, 2.7 times the hourly wage of secondary sector workers, and the earnings of other primary workers lying between the two extremes. Finally, mobility status has a strong impact on hourly wages: 'outsiders' received less per hour than 'movers', while insiders, stable in employment, insiders, received the highest gross hourly wage.

Generally speaking these findings confirm much of the research to date on the marginalised position of women within the labour market, and the unskilled status of much part-time work. However, the findings concerning (a) the relationship between mobility status and labour market segment as well as (b) the level of remuneration associated with different mobility statuses do have important implications for the present debate concerning part-time employment and transitions within the market. The process of mobility within the market has often been presented in a value neutral manner or even in a positive light in terms of the potential to move 'upwards' from a part-time job to a more traditional full-time standard contract (Schmid, 1998, OECD 1998, Lazaro, Molto and Sanchez 1997). Our descriptive analyses above, however, suggest a strong negative association between pay rates and mobility into employment from non-employment.

6. Wage Models

Table 6 shows the sequence of wage equations to analyse the impact of working time, labour mobility and labour market segmentation, while controlling for other relevant individual characteristics, on the gross hourly wages of women employees. Table 7 shows similar models for men.

The first equation includes standard human capital characteristics as well as variables to measure working time to assess the impact of individual attributes on the wage received. Equation (1) shows that part-timers earn about 8 per cent less than full-timers, the reference category, when other characteristics such age, education and experience are taken into account. However, there is no difference in wages between marginal part-time workers and full-time employees. The variables measuring age and education yield conventional results. Young people earn less then the middle-aged reference category and mature employees earn more then their middle-aged juniors. The education variable also yields conventional results with a clear increase in earning power as educational credentials increase - here the reference category is completion of the senior cycle of secondary education. These findings are consistent with existing research on wage differences in Ireland (see, for example, Barrett, Callan and Nolan, 1999). The proportion of time spent in employment is also included to capture any effects of tenure or of previous labour market experience, here the proportion of time spent in work is substantial and highly significant.

Equation (2) introduces labour market segmentation, specifying Primary Professional, and Other Primary sectors, with the Secondary sector as the reference category. The effects of the segmentation variables are as anticipated: women working in the primary labour market earned more per hour than employees in the secondary labour market and there was a substantial wage premium associated with working in the Primary Professional sector. Moreover, inclusion of the labour market segmentation variables reduced the effect of working part-time to non-significance, suggesting that the negative effect of working part-time is due to the concentration of part-time jobs in the secondary labour market, rather than to working time *per se.*

Table 6: Ordinary Least Square Regression Equations on Log of Gross Hourly Wage, Female Employees

Equation:	(1) Coefficient	Std. Error	(2) Coefficient	Std. Error	(3) Coefficient	Std. Error	(4) Coefficient	Std. Error
Constant	1.26 ***	0.04	1.09 ***	0.04	1.16 ***	0.05	1.16 ***	0.05
Part-time	-0.09 *	0.03	-0.03	0.03	-0.03	0.03	-0.02	0.04
Marginal part-time	-0.02	0.04	0.06	0.04	0.16 **	0.05	0.10	0.05
Age <25 yrs.	-0.25 ***	0.03	-0.20 ***	0.03	-0.21 ***	0.03	-0.21 ***	0.03
Age 45 plus	0.08 *	0.03	0.04	0.03	0.04	0.03	0.04	0.03
No qualifications	-0.36 ***	0.04	-0.24 ***	0.04	-0.24 ***	0.04	-0.22 ***	0.04
Lower secondary	-0.25 ***	0.03	-0.20 ***	0.03	-0.20 ***	0.03	-0.19 ***	0.03
Third level	0.55 ***	0.03	0.37 ***	0.03	0.36 ***	0.03	0.36 ***	0.03
Prop. of time at work	0.94 ***	0.07	0.79 ***	0.06	0.68 ***	0.07	0.67 ***	0.07
Primary Professional Labour Market			0.53 ***	0.03	0.52 ***	0.03	0.51 ***	0.04
Other Primary Labour Market			0.26 ***	0.03	0.26 ***	0.03	0.28 ***	0.03
Outsider					-0.15 ***	0.04	-0.12 *	0.05
Mover					-0.03	0.04	-0.02	0.05
Interactions:								
Primary Prof * Part-time							0.03	0.08
Other Primary * Part-time							-0.08	0.07
Primary Prof * Marginal Part-time							0.41 **	0.14
Other Primary * Marginal Part-time							-0.04	0.14
Primary Prof * Mover							0.05	0.09
Other Primary * Mover							-0.07	0.08
Primary Prof * Outsider							-0.12	0.12
Other Primary * Outsider							-0.06	0.08
R^2	0.478		0.562		0.565		0.570	
Adj R^2	0.475		0.559		0.562		0.564	

* P<0.05, ** P <0.01, *** P<0.001

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Table 7: Ordinary Least Square Regression Equations on Log of Gross Hourly Wage, Male Employees

Equation:	(5) Coefficient	Std. Error	(6) Coefficient	Std. Error	(7) Coefficient	Std. Error	(8) Coefficient	Std. Error
Constant	1.30 ***	0.05	1.09 ***	0.06	1.17 ***	0.05	1.12 ***	0.06
Part-time	0.03	0.06	0.09	0.06	0.11	0.06	0.03	0.08
Marginal part-time	0.10	0.06	0.17 **	0.06	0.23 ***	0.06	0.21 **	0.08
Age <25 yrs.	-0.29 ***	0.04	-0.24 ***	0.04	-0.24 ***	0.04	-0.24 ***	0.04
Age 45 plus	0.12 ***	0.03	0.10 **	0.03	0.11 ***	0.03	0.10 ***	0.03
No qualifications	-0.47 ***	0.03	-0.35 ***	0.03	-0.34 ***	0.03	-0.32 ***	0.03
Lower secondary	-0.22 ***	0.03	-0.16 ***	0.03	-0.16 ***	0.03	-0.15 ***	0.03
Third level	0.47 ***	0.03	0.30 ***	0.03	0.29 ***	0.03	0.30 ***	0.03
Prop. of time at work	1.05 ***	0.08	0.88 ***	0.08	0.77 ***	0.07	0.78 ***	0.08
Primary Professional Labour Market			0.55 ***	0.03	0.55 ***	0.03	0.59 ***	0.04
Other Primary Labour Market			0.31 ***	0.02	0.30 ***	0.02	0.34 ***	0.03
Outsider					-0.14 **	0.05	-0.03	0.05
Mover					-0.08 *	0.04	0.07	0.04
Interactions:								
Primary Prof * Part-time							0.42 *	0.18
Other Primary * Part-time							-0.02	0.12
Primary Prof * Marginal Part-time							0.47 **	0.18
Other Primary * Marginal Part-time							-0.30	0.16
Primary Prof * Mover							-0.45 ***	0.11
Other Primary * Mover							-0.14	0.08
Primary Prof * Outsider							-0.40 **	0.14
Other Primary * Outsider							-0.15	0.09
R²	0.477		0.543		0.545		0.552	
Adj R²	0.476		0.540		0.542		0.549	

* P<0.05, ** P <0.01, *** P<0.001

Labour market mobility is added in Equation (3). Outsiders – those who spent at least fourteen months inactive or unemployed in the preceding year and a half - earned about 15% less than insiders, the reference category. Movers – those who moved between employment and non-employment and were not stable in either employment or unemployment/inactivity for a period of fourteen months - do not appear to have been financially disadvantaged when compared to people who were stable in employment. This finding has important implications for debates about labour market flexibility, since it suggests that women who shift between employment and non-employment over a relatively short time span are not disadvantaged in terms of wages compared to those who have been more continuously in employment, but that recent entrants from a more extended period of non-employment do.

We also investigated whether differences within the outsider and mover categories had differential wage effects. Arguably, the key issue here is 'distance' from the work force, so among the outsiders we differentiated between those who had been unemployed for 14 months in 1993-1994 versus those had not been economically active. Similarly, among movers we distinguished between those who had moved between employment and unemployment, versus those who had moved between employment and economic inactivity. The results of that analysis, dissagregating within both outsiders and movers, are shown in Appendix Table 1. While the results suggest that unemployment may have had a greater negative impact on wages than inactivity, F-tests show no statistically significant differences between the coefficients, so we retain the more aggregated specification reported in Table 6 above.

With the addition of the mobility variables the effect of working part-time (15-30 hours per week) remains negative and non-significant. However, the positive effect of working marginal part-time (less than 15 hours) becomes significant, indicating that when both mobility between labour market statuses and job characteristics are controlled for, marginal part-timers earned more per hour than their full-time colleagues.

The addition of the mobility and sectoral variables also affects the other coefficients somewhat; the effect of age is attenuated for those under the age of 25 and eliminated for those over the age of 45. The coefficients for education are also reduced somewhat, although they remain statistically significant. The effect of proportion of time at work also becomes somewhat attenuated, as might be expected with the addition of the mobility variables.

In order to cater for additional non-linearities in the wage models, Equation (4) introduces eight interaction terms to disaggregate the effects for different working hours and mobility statuses between the primary professional and other primary labour market sectors. The interaction variables had little effect for female employees save for the multiplicative effect of marginal part-time employment and working in the professional primary sector. Inclusion of this term eliminated the main effect of working marginal part-time hours found in Equation (3), suggesting that the effect in

the earlier model is attributable to the higher earnings of those working very short hours in the professional primary labour market segment. No other interaction terms are significant in the female wage equation, although, as we show below, this is not the case for male employees.

Table 7 shows wage equations for male employees. Equation (5) shows no significant wage effects of different working time categories when human capital variables are controlled for. Here men differ from women, among whom there is a negative effect of working part-time (see Equation (1)). The effects of the age and education variables are similar to those in the women's model, as is the positive effect of the amount of time spent in work, indicating that the model in all other respects is substantively plausible.

Equation (6) adds labour market sectors. As in the female wage equation, labour market segment is a strong predictor of hourly wages, with primary professional workers earning about 50% more than secondary sector workers, and other primary sector workers earning about 30% more than secondary sector workers. With the inclusion of labour market segmentation, the effect of marginal-part-time hours becomes positive and significant, suggesting that men working very short hours may enjoy a wage premium when we take account of the both personal and job-related characteristics. The effects of other variables in the model, including age, education and work experience are somewhat reduced with the inclusion of labour market segmentation.

Equation (7) adds the two mobility variables. Outsiders earned less than men who were stable in employment, as was the case in the women's models, but, in contrast to women, male movers also suffered a wage penalty of about 8%. When mobility is taken account of, other effects in the model remain robust, including the positive effect of marginal part-time hours, although, as in the female model, the effect of previous work experience is reduced.

The introduction of the interaction terms in Equation (8) reveals a somewhat more complex pattern among men than was found among women, and the main differences occur in the primary professional labour market. First, men working less than full time in the primary professional labour market enjoy a substantial wage premium, amounting to about 42% in the case of those working 15-29 hours per week, and about 47% among those working less than 15 hours per week. Men working part-time and marginal part-time hours in the other primary sectors show no wage difference, compared to those working in the secondary sector, although the main effect of marginal part-time hours remains. Second, in the interaction model the effects of the mobility variables are entirely confined to the professional primary sector and the main effects of the mobility variables are reduced to non-significance. Thus, among men, entering employment after a lengthy period of non-employment, or moving between employment statuses in the recent past, carries a wage penalty of the order of 40% or more in the primary professional sector, but not elsewhere in the labour market. The non-significance of the main mobility terms, and of their interactions

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with other labour market sectors, indicates that men working outside of the professional primary labour market do not suffer a wage penalty due to entry from non-employment, or to a chequered employment history in the recent past. This pattern of findings suggests a strong structuring effect of labour market segmentation on the effects of working-time and labour mobility on the earnings of male workers, and that, for these purposes, the most important line of demarcation is that between the primary professional sector and all others. These findings are entirely consistent with the central thrust of the labour market segmentation approach. The wage premium associated with part-time working in the primary professional sector reflects the advantaged nature of those positions, while the wage penalty associated with entry to the primary professional sector from outside of stable employment reflects the manner in which wages in the primary professional sector are structured to reward experience and loyalty – at least, it would appear, among men.

Selection Bias

Existing research on wages suggest the need to investigate assumptions of randomisation on the variables of interest. This is seen to be particularly pertinent in estimations of female wages given their low rates of participation (only 33% of the women of working age in our sample were engaged in paid work). It is argued that there could be an underlying process of selection between women who are in paid employment and those who remain in home duties and that these underlying differences may distort the estimated effects of the variables in the wage equations.

To correct the estimates for possible selection effects in the women's wage we employed a standard two-step Heckman correction procedure. This involves the generation of an equation of the selection process followed by a wage model. The selection process was modelled as a function of the probability of being in employment, the instrumental variables which were thought to impinge upon such a probability include: the presence of children, the presence of children under the age of five years and the value of other household income. The inclusion of corrections for possible selection bias did not alter the findings of the simpler model reported in Table 6 (See Appendix Table 2).

Discussion

Typically multivariate analyses of hourly wages of part-timers relative to full-timers have regressed human capital characteristics as well as variables to control for occupational and industrial variation and concluded that part-timers received lower wages on average than full-timers. Our research explicitly models the effects of labour market segmentation and mobility on that relationship. The introduction of the labour market segmentation and mobility variables has two important effects on our wage equations. First, their introduction eliminates the negative wage effects of part-time working, suggesting any residual wage penalty associated with part-time working should in fact be attributed to labour market segmentation and to the greater openness of part-time work to those outside of the workforce, rather than to part-time work itself. Second, labour market mobility itself influences wages, but it affects men and women differently. Among women, outsiders, those who entered employment

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after a relatively long period of non-employment, suffer a wage penalty compared to those who had been stable in employment over the previous eighteen months. However, women appear to suffer no wage penalty for having moved between labour market statuses over the previous eighteen months. Among men, on the other hand, the negative effects of either entry to work from a lengthy period of non-employment or from a period of turbulence in labour market attachment in the previous eighteen months, are confined to those working in the primary labour market.

7. Pension Entitlements

Occupational pensions represent important and valuable work-related benefits that bear directly on welfare at the later stages of the lifecycle. Table 8 shows the incidence of employer-sponsored pension entitlements by working-time and gender. Full-time workers have greater levels of entitlement to pensions than part-timers and men overall have greater entitlements than women. About 58% of men and 48% of women working-full-time are entitled to pensions, while only 6% and 8% of men and women part-timers are entitled to this form of work related benefit. Here again we can ask whether these differences are due to working time *per se*, to characteristics of individuals working part-time, or to the nature of part-time jobs. These questions are addressed in multivariate framework in the logistic regression models reported in Table 9.

Table 8
Incidence of Pension Entitlement among Employees

	Full-time	Part-time
Women	47.6	8.4
Men	57.8	5.7

The dependent variable is a dichotomous variable identifying pension entitlement. Given that the dependent variable is dichotomous, a binary logistic regression is estimated for the probability of receiving a pension. The models exclude marginal part-time workers because employees who worked for less than 15 hours a week were not queried on their pension entitlements.

Equation (9) analyses the probability of pension entitlement among women as a function of working-time, labour market mobility, labour market segment, age and education. The model replicates in many ways the dynamics at work in the wage equations. The model clearly shows that part-timers are less likely to receive pension entitlements than full-time employees even when other relevant variables are controlled for. Thus, even if part-time working does not itself entail lower wage rates, it is associated with lower rates of pension entitlement. The effects of previous labour market status are also strong and clear: both outsiders and movers are much less likely than workers who are stable in employment to be entitled to occupational pensions. Similarly the proportion of life-time spent in employment also has a strong and

positive effect on pension entitlement. Young people have lower entitlements to pensions than those who are in the 25-44 year age group, but the older age group (aged 45+) does not differ from the middle-age group. Higher levels of education are associated with higher rates of pension entitlements. As anticipated, labour market segment is also related to pension entitlement, with all those in the primary labour market segments more likely to be entitled to pensions than those working in the secondary labour market.[4] The pension model for females was tested for selection bias using a maximum-likelihood probit estimation with selection (Van de Ven and Van Pragg, 1981) but the adjusted model did not alter the findings (see Appendix Table 3).

Table 9
Binary Logistic Regression Equations on Pension Entitlement

	Equation (9) Women		Equation (10) Men	
	Coefficient	Std. Error	Coefficient	Std. Error
Constant	-2.33 ***	0.31	-3.02 ***	0.35
Part-time	-1.49 ***	0.22	-1.8 ***	0.5
<25 yrs.	-0.51 *	0.2	-0.74 **	0.23
45 plus	-0.16	0.19	0.21	0.17
No qualifications	-0.56 *	0.26	-0.9 ***	0.2
Intercertificate	-0.41 *	0.2	-1.02 ***	0.16
Third level	0.65 ***	0.18	0.87 ***	0.2
Prop. of time at work	2.92 ***	0.46	3.93 ***	0.52
Primary Professional	1.66 **	0.19	1.6 **	0.19
Other Professional	1.22 **	0.17	1.69 ***	0.15
Outsider	-1.22 ***	0.41	-1.36 ***	0.47
Mover	-1.05 ***	0.28	-1.16 ***	0.30
N of Observations	1418		2012	
Pseudo R^2	0.285		0.330	

Equation (10) estimates the same model for male employees. In general the pattern of effects is similar. The higher intercept in the male equation reflects the gender difference in pension entitlement shown in Table 8. Part-timers and both outsiders and movers are less likely to have pension entitlements than full-timers even when the usual predictive variables are controlled for. The variables measuring age, education and labour market segment were all found to have similar impacts on the probabilities of receiving a pension as was found in the female equation.

8. Conclusions
The widespread increase in part-time working in most OECD countries over recent years has been accompanied by concerns about the quality of part-time jobs,

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[4] Further analyses were conducted using a similar set of interaction terms to those used in the wage equations, but their effects were non-significant and added nothing to the analysis.

particularly with respect to differential pay and conditions. Much of that concern with differential compensation levels stems from the fact that part-time work is highly gendered, with most part-time work being done by women, is low skilled and is concentrated in the secondary labour market.

In this paper we empirically examined the importance of labour market segmentation for differences in compensation between full and part-time employees. We also introduced an important new dimension to the debate, noting that part-time work is much more open to the unemployed and other non-employed groups. We argued that if labour market mobility influences compensation, and if a greater proportion of part-timers than full-timers are recent entrants, then some of the gap in wages and occupational benefits between full- and part-time workers usually attributed either to the personal characteristics of part-time workers, or to characteristics of part-time jobs, may in fact be due to labour market mobility.

We explored these issues by drawing on the 1994 *Living in Ireland Survey*. Our findings suggest that labour market segmentation and labour market dynamics are very influential in determining workers' compensation. The introduction of variables measuring labour market segmentation and mobility has two effects on our models of hourly wages. First, their introduction eliminates the negative wage effects of part-time working, suggesting that wage penalties apparently associated with part-time working should in fact be attributed to labour market segmentation and to the greater openness of part-time work to those outside of the workforce, rather than to part-time work itself. Second, labour market mobility itself influences wages, but it affects men and women differently. Among women, outsiders, those who entered employment after an extended period of non-employment in the recent past, suffer a wage penalty compared to those who have been stable in employment. However, women appear to suffer no wage penalty for having moved between labour market statuses over the previous eighteen months. Among men, on the other hand, the negative effects of either entry to work from a lengthy period of non-employment or from a period of turbulence in labour market attachment in the previous eighteen months, are confined to those working in the primary labour market.

Our model of pension entitlement shows clearly that part-time workers are much less likely to be entitled to occupational pensions than their full-time counterparts, even when personal and job characteristics are controlled for. Labour market mobility also has a negative impact on pension entitlements: both outsiders and movers were found to be much less likely than workers who are stable in employment to be entitled to pensions.

The implications of our findings are several. First, there is little evidence to suggest that lower wages among part-time workers are due to working-time *per se*: wage differentials between full- and part-time work appear to be due to the combined influences of the personal characteristics of part-time workers, the secondary labour market segment in which much of part-time work is concentrated, and the fact that most part-time jobs are more accessible to outsiders to the labour market.

Second, the finding that labour market mobility may entail wage penalties serves to qualify the more optimistic interpretations of increased labour market flexibility as a solution to social exclusion. Entry to the labour market after an extended period of non-employment carries a wage penalty for women, irrespective of the nature of the job they enter, and for men who enter the primary professional labour market. Shifting between labour market statuses does not appear to entail a wage penalty for women, but it does for men working in the primary professional labour market.

Third, this finding of differential effects of labour mobility by gender and labour market segment does make sense if one accepts the segmented labour market approach, but the finding also contributes new insights into the dynamics of different labour market segments. Given the specific character of the primary labour market, particularly its higher wages, barriers to entry and rewards for job-tenure, new comers to this market will be at a disadvantage to others within it. On the other hand, given what is known about the secondary labour market segment, its open character, its low wages and limited autonomy, previous market status is less likely to impinge upon an individuals' wage.

Fourth, even if part-time hours do not in themselves entail lower wage rates, part-time jobs are less likely to offer pension benefits. Entitlement to occupational pensions is also strongly affected by labour market mobility as well as by labour market segmentation. These findings that part-time working and labour mobility are associated with lower entitlement to pensions, carry important implications for the interpretation of increased labour market flexibility, since lack of occupational pension benefits undermines the long-run security of workers.

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Appendix Table 1
Disaggregating Mobility Status

	Equation (3a) Women		Equation (7a)	
	Coefficient	Std. Error	Coefficient	Std. Error
Constant	1.36 ***	0.05	1.39 ***	0.06
Marginal part-time	0.09 +	0.05	0.19 **	0.07
Part-time	-0.08 *	0.03	0.05	0.06
<25 yrs.	-0.26 ***	0.03	-0.29 ***	0.04
45 plus	0.08 *	0.03	0.15 ***	0.03
No qualifications	-0.35 ***	0.04	-0.46 ***	0.03
Lower secondary	-0.25 ***	0.03	-0.22 ***	0.03
Third level	0.54 ***	0.03	0.46 ***	0.03
Prop. of time at work	0.78 ***	0.08	0.91 ***	0.09
Outsider - unemployed	-0.25 **	0.09	-0.14 +	0.08
Outsider - Inactive	-0.19 ***	0.05	-0.21 ***	0.06
Mover - employment	-0.07 +	0.04	-0.10 *	0.04
Mover - non-employment			-0.08	0.33
R^2	0.484		0.481	
Adj R^2	0.481		0.478	
+ $P < 0.10$, * $P<0.05$, ** $P <0.01$, *** $P<0.001$				

Appendix Table 2
Heckman Selection Equation for Wage Equations (3) and (4)

Women	Equation (3b)		Equation (4b)	
	Coefficient	Std. Error	Coefficient	Std. Error
Constant	1.13	0.06	1.14	0.06
Marginal part-time	0.25 **	0.08	0.20 *	0.10
Part-time	0.01	0.04	0.00	0.04
<25 yrs.	-0.19 ***	0.03	-0.19 ***	0.03
45 plus	0.02	0.03	0.02	0.03
No qualifications	-0.24 ***	0.04	-0.23 ***	0.04
Lower Secondary	-0.21 ***	0.03	-0.20 ***	0.03
Third level	0.35 ***	0.03	0.35 ***	0.03
Prop. of time at work	0.67 ***	0.07	0.67 ***	0.07
Primary Professional	0.54 ***	0.03	0.52 ***	0.03
Other Primary	0.27 ***	0.03	0.26 ***	0.03
Outsider	-0.22 **	0.07	-0.20 *	0.08
Mover	-0.05	0.04	-0.06	0.04
Outsider*Primary Professional			-0.09	0.13
Outsider*Other Primary			0.03	0.10
Marginal Part-time*Primary Prof			0.36 *	0.16
Marginal Part-time*Other Primary			-0.12	0.16
Constant	0.73 ***	0.13	0.85 ***	6.15
child	-0.09 ***	0.03	-0.09 ***	-3.53
Child under 5 years	-0.30 ***	0.07	-0.26	-3.97
Other Income	0.00	0.00	0.00 ***	-1.24
Marginal part-time	3.47 ***	0.16	4.12 ***	18.99
Part-time	1.59 ***	0.13	1.57 ***	11.98
<25 yrs.	0.40 ***	0.10	0.38 ***	3.75
45 plus	-0.72 ***	0.08	-0.67 ***	-7.83
No qualifications	-0.34 ***	0.09	-0.37 ***	-3.79
Lower Secondary	-0.27 **	0.08	-0.26 **	-3.19
Third level	0.25 **	0.09	0.21 *	2.39
Prop. of time at work	-0.08	0.19	-0.05	-0.28
Primary Professional	0.59 ***	0.09	0.40 ***	3.97
Other Primary.	0.94 ***	0.08	0.63 ***	6.64
Outsider	-2.15 ***	0.10	-2.43 ***	-22.86
Mover	-0.81 ***	0.10	-0.85 ***	-8.41
Outsider*Primary Professional			2.09 ***	5.16
Outsider*Other Primary			1.81 ***	7.70
Marginal Part-time*Primary Prof			-3.32 ***	-6.30
Marginal Part-time*Other Primary			-3.26 ***	-7.26
Model Summary				
Rho	0.185	0.123	0.179	0.132
Sigma	0.414	0.008	0.413	0.008
Lambda	0.077	0.052	0.074	0.055
N of Observations	4,960		4,960	
Log Likelihood	-1982.39		-1914.59	

Appendix Table 3
Maximum-likelihood Probit Estimation
with Selection for Pension Equation (7)

Equation (7b)	Coefficient	Std. Error
Constant	-0.98 *	0.40
Part-time	-0.71 ***	0.14
<25 yrs.	-0.27 *	0.11
45 plus	-0.10	0.11
No qualifications	-0.32 *	0.15
Intercertificate	-0.22 *	0.11
Third level	0.38 ***	0.10
Prop. of time at work	1.61 ***	0.28
Outsider	-1.12 ***	0.20
Mover	-0.56 ***	0.15
Indep. Primary Professional	0.93 ***	0.12
Other Primary	0.70 ***	0.10
Instrumental Variables		
Any Children	-0.15 ***	0.01
Children under Five Years	0.20 ***	0.04
Other Household Income	0.00 ***	0.00
Constant	-0.36 ***	0.03
Model Summary		
Number of Observations	4960.00	
Initial –2 Log Likelihood	-3740.00	
-2 Log Likelihood	-3739.31	
Rho	-0.31	0.26
Chi ^{2}	1.15	
P > Chi^2	0.29	